

**SUPPLEMENTAL SITE INSPECTION REPORT FOR PER- AND
POLYFLUOROALKYL SUBSTANCES AT
CAMP BONNEVILLE,
VANCOUVER, WASHINGTON**

577

CAMP BONNEVILLE

Prepared for:



U.S. ARMY

**Office of the Deputy Assistant Secretary of the Army for Environment,
Safety and Occupational Health (ODASA [ESOH]),
Base Realignment and Closure (BRAC)**

**Final
June 2026**

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LIST OF ACRONYMS AND ABBREVIATIONS

AFFF	Aqueous Film-Forming Foam
amsl	Above Mean Sea Level
AOPI	Area of Potential Interest
Army	U.S. Army
ASD	Assistant Secretary of Defense
bgs	Below Ground Surface
BRAC	Base Realignment and Closure
BRAC95	1995 Base Realignment and Closure Commission
BCRRT	Bonneville Conservation Restoration and Renewal Team LLC
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CoC	Chain-of-Custody
CSM	Conceptual Site Model
DERP	Defense Environmental Restoration Program
DI	Deionized
DL	Detection Limit
DO	Dissolved Oxygen
DoD	U.S. Department of Defense
DQCR	Daily Quality Control Report
DQO	Data Quality Objective
DUA	Data Usability Assessment
EIS	Extracted Internal Standard
FBI	Federal Bureau of Investigation
GPS	Global Positioning System
HDPE	High-Density Polyethylene
HFPO-DA	Hexafluoropropylene Oxide Dimer Acid
HQ	Hazard Quotient
ID	Identifier
IDW	Investigation-Derived Waste
IPaC	Information for Planning and Consultation
LC/MS/MS	Liquid Chromatography with Tandem Mass Spectrometry
LCS	Laboratory Control Sample
LOD	Limit of Detection
LRA	Local Redevelopment Authority
LUC	Land Use Control
MEC	Munitions and Explosives of Concern
MDL	Method Detection Limit
MPC	Measurement Performance Criteria
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
ODASA (ESOH)	Office of the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health
ORP	Oxygen-Reduction Potential
P.E.	Professional Engineer
P.G.	Professional Geologist
PA	Preliminary Assessment
PFAS	Per- and Polyfluoroalkyl Substances
PFBA	Perfluorobutanoic Acid
PFBS	Perfluorobutane Sulfonate
PFDA	Perfluorodecanoic Acid

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

PFHxA	Perfluorohexanoic Acid
PFHxS	Perfluorohexane Sulfonate
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PFPrA	Perfluoropropanoic Acid
PMP	Project Management Professional
PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control
QSM	Quality Systems Manual
REM	Registered Environmental Manager
RSL	Regional Screening Level
SDG	Sample Delivery Group
SI	Site Inspection
SSI	Supplemental Site Inspection
SL	Screening Level
SOP	Standard Operating Procedure
T&E	Threatened and Endangered
TCLP	Toxicity Characteristic Leaching Procedure
TFSI	Bis(trifluoromethylsulfonyl)amine
UFP-QAPP	Uniform Federal Policy-Quality Assurance Project Plan
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
UXO	Unexploded Ordnance
WDNR	Washington State Department of Natural Resources
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

The U.S. Army (Army) is conducting Preliminary Assessments (PAs) and Site Inspections (SIs) to determine the use, storage, disposal, or release of per- and polyfluoroalkyl substances (PFAS) at multiple Base Realignment and Closure (BRAC) installations, nationwide. This report documents SI activities conducted for four areas of potential interest (AOPIs) at the former Camp Bonneville in Vancouver, Washington. Building 1864 Fire Station, Building 4483 Fire Station, and Wash Racks 1 and 2 were identified as AOPIs during the PA phase for investigation through multimedia sampling in an SI phase to determine whether a PFAS release occurred. Based on the results of the SI (Leidos 2023a) and in response to the U.S. Environmental Protection Agency (USEPA) review of the SI Report, Camp Bonneville was determined to warrant further investigation in an Supplemental SI (SSI) with the inclusion of Landfill 4/Demolition Area 1 as an additional AOPI. Activities were completed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 United States Code [U.S.C.] §9601, et seq.); the Defense Environmental Restoration Program (DERP, 10 U.S.C. §2700, et seq.); the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 Code of Federal Regulations [CFR] Part 300); Army and U.S. Department of Defense (DoD) policy and guidance; and USEPA guidance.

The PA (Leidos 2023b) identified areas where PFAS-containing materials were used, stored, and/or disposed of, or areas where known or suspected releases to the environment occurred. Based on recommendations from the PA, soil, groundwater, sediment, and/or surface water samples were collected at the three AOPIs to determine the presence or absence of PFAS in the environment. The SI fieldwork was conducted in June 2023 and documented in a final report dated December 2023 (Leidos 2023a). The field investigation at Camp Bonneville was conducted in accordance with the Programmatic Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP) (Leidos 2022a) and Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c). Samples collected during the SI were analyzed for PFAS using procedures compliant with the DoD Quality Systems Manual (QSM) Version 5.4, Table B-15 (DoD 2021) and the laboratory standard operating procedure (SOP).

To further characterize and determine the presence/absence of PFAS at Camp Bonneville and address data gaps identified during regulatory review of the SI Report, this SSI used the findings from the PA/SI in conjunction with SSI sampling data for each AOPI to determine whether PFAS have been released to the environment and whether a release has affected or may affect specific human health targets. Samples collected during this SSI were analyzed for PFAS using procedures compliant with USEPA Method 1633A, in addition to requirements listed in the DoD QSM Version 6.0, Table B-24 (DoD 2023) and the laboratory SOP.

To determine if future investigation was warranted at each AOPI, this SSI followed established USEPA guidance and DoD policy and guidance for perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorodecanoic acid (PFDA), perfluorobutanoic acid (PFBA), perfluorobutanesulfonic acid (PFBS), perfluorononanoic acid (PFNA), perfluorohexanoic acid (PFHxA), perfluorohexanesulfonic acid (PFHxS), bis(trifluoromethylsulfonyl)amine (TFSI), hexafluoropropylene oxide dimer acid (HFPO-DA), and perfluoropropanoic acid (PFPrA) (DoD 2025b). Samples collected during this SSI were compared to risk screening levels (SLs) established as the residential scenario SLs calculated using the USEPA regional screening level (RSL) calculator for soil and the tap water criteria for groundwater and published in the 2025 Assistant Secretary of Defense (ASD) Memorandum (DoD 2025a). HFPO-DA was not screened against the RSL in this SSI, in accordance with DoD policy, because it is not considered to be related to Army activities at Camp Bonneville and was not detected above the limit of detection (LOD) during the SI. Similarly, TFSI and PFPrA were not evaluated in this SSI because there are no current USEPA-approved analytical methods for these two compounds. Since PFAS are a large grouping consisting of thousands of individual chemicals, PFOS, PFOA, PFBA, PFBS, PFNA, PFHxA, PFHxS, and PFDA all together will be referred to as “Target PFAS” in this report.

Conceptual site models (CSMs) were developed during the PA, updated in the SI, and then further refined in the SSI for each AOPI where Target PFAS were detected at concentrations exceeding the LOD. The updated CSMs detail site geological conditions; determine primary and secondary release mechanisms; identify potential human receptors; and detail complete, potentially complete, and incomplete exposure pathways for current and reasonably anticipated future exposure scenarios.

Target PFAS were detected at concentrations greater than the LODs in soil at three AOPIs and in groundwater at one AOPI. PFAS concentrations exceeded SLs in soil at two AOPIs (Table ES-1). Although Target PFAS were detected at concentrations greater than the January 2025 SLs at the Building 1864 Fire Station AOPI during the June 2023 SI (i.e., CBV-1864-02), no exceedances were observed in additional monitoring wells installed during the SSI. At the Building 1864 Fire Station, Building 4483 Fire Station, and Wash Racks 1 and 2 AOPIs, Target PFAS were not detected in surface water or sediment in the tributaries to Lacamas Creek. Target PFAS were not detected in the existing monitoring wells at the Landfill 4/Demolition Area 1 AOPI and along the southwestern boundary. Concentrations of PFOS and PFOA exceeded SLs. Concentrations of PFBA and PFHxS were detected at concentrations less than the SLs, and PFBS, PFNA, PFHxA, and PFDA were not detected at any AOPI. Figure ES-1 depicts the facility-wide map of AOPIs and Target PFAS groundwater results, including the distribution of SL exceedances and proximity to facility boundaries.

The following two AOPIs are recommended for further investigation based on Target PFAS concentrations greater than the SLs (Table ES-1):

- Building 4483 Fire Station
- Wash Racks 1 and 2.

Further investigation is not recommended for the presence of PFAS potentially migrating offsite (i.e., nature and extent), because Target PFAS were not detected in groundwater near the southwestern boundary of the installation.

Table ES-1. Summary of AOPIs and Recommendations for Further Investigation

AOPI Name	Exceedance of SLs		Recommendation
	Groundwater	Soil	
Building 1864 Fire Station	No	No	Further investigation not recommended
Building 4483 Fire Station	–	Yes	Further investigation recommended
Wash Racks 1 and 2	–	Yes	Further investigation recommended
Landfill 4/Demolition Area 1	No	–	Further investigation not recommended

Highlighted values include AOPIs with a recommendation for further investigation.

– Not Collected

1. INTRODUCTION

The U.S. Army (Army) is conducting Preliminary Assessments (PAs, 40 Code of Federal Regulations [CFR] §300.420(b)) and Site Inspections (SIs, 40 CFR §300.420(c)) to investigate the presence or release of per- and polyfluoroalkyl substances (PFAS), by investigating the use, storage, or disposal of PFAS at multiple Base Realignment and Closure (BRAC) installations, nationwide. This Supplemental Site Inspection (SSI) is focused on the former Camp Bonneville near Vancouver, Washington, and was conducted in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 United States Code [U.S.C.] §9601 et seq.); the Defense Environmental Restoration Program (DERP, 10 U.S.C. §2701 et seq.); the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 CFR Part 300); Army and U.S. Department of Defense (DoD) policy and guidance; and U.S. Environmental Protection Agency (USEPA) guidance. The former Camp Bonneville is not on the National Priorities List, and the Army is responsible for compliance with CERCLA in accordance with Executive Order 12580, as amended.

Based on results of the Camp Bonneville PFAS PA (Leidos 2023b), three areas of potential interest (AOPIs) were identified for investigation through multimedia sampling in an SI to determine whether a PFAS release occurred. Camp Bonneville is in Clark County, near Vancouver, Washington, as shown in Figure 1-1. The entire Camp Bonneville is referred to as the “site,” “facility,” or “installation” throughout this document. Any references to “offsite” refers to areas that are outside the original boundary of Camp Bonneville.

Three AOPIs were investigated during the Camp Bonneville SI along with downgradient groundwater to determine the presence or absence of PFAS in the environment. The three AOPIs included in the SI were the Building 1864 Fire Station, Building 4483 Fire Station, and Wash Racks 1 and 2. The SI fieldwork was conducted in June 2023 and documented in a final report dated October 2023 (Leidos 2023a). Target PFAS were detected in samples collected from all four locations sampled for groundwater, including at the Building 1864 Fire Station and Wash Racks 1 and 2 AOPIs (Leidos 2023a). Perfluorooctanoic acid (PFOA) was detected at 4.9 ng/L, below the screening level (SL) at the time of SI, in one sample collected from the Building 1864 Fire Station AOPI. Target PFAS were detected in two surface soil samples collected at the Building 1864 Fire Station and Building 4483 Fire Station AOPIs. Perfluorooctanesulfonic acid (PFOS) exceeded the SL in one surface soil sample collected from the Building 4483 Fire Station AOPI. Target PFAS were not detected in any subsurface soil samples. Surface water samples were collected from three locations at the Building 1864 Fire Station and Wash Racks 1 and 2 AOPIs. Target PFAS were detected in the sample collected from the Wash Racks 1 and 2 AOPI. Sediment samples were collected from four locations across the three AOPIs. Target PFAS were detected in samples from the two sediment samples collected from the Building 1864 Fire Station and Wash Racks 1 and 2 AOPIs.

Based on results of the Camp Bonneville PA (Leidos 2023b) and the Camp Bonneville PFAS SI (Leidos 2023a), and in response to Washington State Department of Ecology’s review of the SI Report, Camp Bonneville was determined to warrant further investigation in an SSI.

1.1 CAMP BONNEVILLE DESCRIPTION

Camp Bonneville is in Clark County, Washington, near Vancouver, and was established in 1909 with 309 leased acres as a drill field and rifle range for Vancouver Barracks (Woodward-Clyde 1997). In 1912, the facilities were expanded to include a target range and a road leading to the installation. Use of the facility continued until 1915 when the lease expired, and the Army moved their training activities to Oregon (USACE 1997). In 1918, the Army returned to Camp Bonneville and obtained the original 309 acres, along with an additional 2,711 acres, through purchase and condemnation. The Bonneville cantonment was established in the late 1920s and was used primarily as barracks facilities (EEI 2010). The Killpack cantonment was built and occupied by the Civilian Conservation Corps in 1935. In 1955, the Army arranged to lease an additional 840 acres, in two separate parcels, from the Washington State Department of Natural

Resources (WDNR) to expand the training facilities at Camp Bonneville. The Army returned 20 acres of the leased land to WDNR in 1957 (Woodward-Clyde 1997). In 1959, the responsibility for Camp Bonneville changed from Vancouver Barracks to Fort Lewis, when the former became a sub-installation of the latter (URS 2000).

Camp Bonneville was placed on the list of facilities scheduled for closure under the 1995 Base Realignment and Closure Commission (BRAC95). In 1996, all active military training units ceased operations at the camp. All out-grants for use of the facilities were canceled except for the Federal Bureau of Investigation (FBI) firing range (EEI 2010).

Clark County has an interlocal, short-term lease agreement with WDNR, which establishes a forward operating base for helicopter operations. WDNR's helicopter operations at Camp Bonneville assist its efforts to mitigate and improve response times for wildfires in the area. WDNR has been using Camp Bonneville to conduct these operations since 2019 (CCPW 2022a). The agreement includes adequate space for a helicopter, a fuel truck, and Building T-1980 to house crew members and limits WDNR's access of Camp Bonneville to only the barracks, parking area, and airfield near the main camp entrance (CCPW 2022a).

During the PA records reviews, interviews, aerial photographic analysis, and site reconnaissance, Leidos investigated available documentation and physical evidence for areas having a potential historical PFAS release. The sites evaluated include an airstrip, fire stations, landfills, hazardous waste disposal areas, wastewater treatment plants (WWTPs), pesticide facilities, maintenance shops, open burning/open detonation areas, wash racks, and historical building fires. The Camp Bonneville PFAS PA recommended three AOPIs for further investigation in an SI due to known or potential historical PFAS use, storage, and/or release due to Army activities. Based on the results of the Camp Bonneville SI Report, an additional AOPI (Landfill 4/Demolition Area 1) was identified due to the potential of PFAS-containing materials being present in these areas during historical operations.

In addition to the AOPIs, the site boundary was identified for further investigation because Target PFAS exceeding the SLs were observed in soil and groundwater upgradient of Lacamas Creek at the Building 4483 Fire Station and Building 1864 Fire Station AOPIs. Investigation of the tributaries along Lacamas Creek surface water and existing monitoring wells along southwestern boundary was planned to identify potential off-post migration of PFAS in surface water and groundwater.

The AOPIs, as well as the dates of operation and sizes of each area, are presented in Table 1-1 and illustrated in Figure 1-2.

Table 1-1. List of AOPIs at Camp Bonneville

AOPI Name	Dates of Operation	Size (acres)	Rationale
Building 1864 Fire Station	Late 1940s to late 1970s	0.06	PFOA (4.9 ng/L) was detected in groundwater at concentrations exceeding SLs later adopted by DoD. In addition, the analytical method used during the 2023 SI did not provide data for the full list of 40 PFAS chemicals that can be analyzed using USEPA Method 1633A.

Table 1-1. List of AOPIs at Camp Bonneville (Continued)

AOPI Name	Dates of Operation	Size (acres)	Rationale
Building 4483 Fire Station	Late 1980s to 2007	0.16	PFOS and PFOA were detected at concentrations exceeding their respective SLs in surface soil samples. Data gaps present from lack of groundwater samples. In addition, the analytical method used in the SI did not provide data for the full list of 40 PFAS chemicals that can be analyzed using USEPA Method 1633A.
Wash Racks 1 and 2	1978 to 1994 (Wash Rack 1) Unknown to 1980s (Wash Rack 2)	0.03 (Wash Rack 1) 0.01 (Wash Rack 2)	Data gaps present from lack of groundwater samples due to hitting refusal. In addition, the analytical method used in the SI did not provide data for the full list of 40 PFAS chemicals that can be analyzed using USEPA Method 1633A.
Landfill 4/ Demolition Area 1	Mid-1960s to late 1960s	Unknown	Due to the confirmed presence of PFAS at Fire Station Building 1864 and Fire Station Building 4483, Landfill 4/Demolition Area 1 may have accepted PFAS-containing waste.

1.2 SCOPE AND OBJECTIVES

The overall objective of the SSI is to further characterize and determine the presence or absence of PFAS at Camp Bonneville and address data gaps identified during the regulatory review of the SI Report (Leidos 2023c). This SSI Report uses the findings from the PA and SI in conjunction with soil and groundwater sampling data to determine whether PFAS have been released to the environment and whether a release has affected or may affect human health. The data quality objectives (DQOs) for the SSI are detailed on Worksheet #11 of the Final Programmatic Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP) (Leidos 2022b), which is included in Appendix A of the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). Furthermore, this SSI Report evaluates and summarizes the need for additional investigation (40 CFR §300.420(c)(1)).

Specifically, this SSI determines the presence or absence of PFAS in groundwater at Landfill 4/ Demolition Area 1, further investigates the presence of PFAS in soil, groundwater, surface water and sediment at the Building 1864 Fire Station, Building 4483 Fire Station, and Wash Racks 1 and 2 AOPIs, and provides recommendations for further investigation in a Remedial Investigation or determines if no further action is required.

The SSI is designed to supplement and update information in the Camp Bonneville SI Report (Leidos 2023a) based on new information gathered during subsequent scoping evaluations. The SSI addendum scope included preparation of project planning documents, field investigation, validation and management of analytical data, comparison of analytical data to the Assistant Secretary of Defense (ASD) SLs published in the 2025 ASD Memorandum (DoD 2025), and documentation of the investigation results. The SLs established by the 2025 ASD Memorandum (DoD 2025) were adopted after the completion of the SI, thus resulting in an exceedance of Target PFAS in groundwater at the Building 1864 Former Fire Station AOPI. To verify the results of the SI, additional monitoring wells were installed during the SSI to confirm

presence or absence of Target PFAS downgradient from the location of the groundwater exceedance. Additionally, samples collected during the SSI were analyzed using USEPA Method 1633A to further verify the results of the SI. This SSI was conducted in accordance with the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). The field activities followed site-specific sampling and health and safety protocols, as identified in the Programmatic Accident Prevention Plan (Leidos 2022b) and the Camp Bonneville Site Safety and Health Plan (Appendix A of the Camp Bonneville SI UFP-QAPP Addendum [Leidos 2023c]).

1.3 REPORT ORGANIZATION

The contents of the remaining sections of this SSI Report are summarized below:

- **Section 2. Environmental Setting**—This section discusses the environmental setting at Camp Bonneville. Demographics, land use, geology, hydrogeology, hydrology, soil, and climate are described.
- **Section 3. Field Investigation Activities**—This section provides field procedures followed during the implementation of the SSI.
- **Section 4. Data Analysis and Quality Assurance Summary**—This section describes the laboratory chemical analysis program for the investigation. Sample handling procedures, laboratory equipment calibration, laboratory analytical methods, data reporting and validation, and sample data quality assurance (QA)/quality control (QC) are discussed.
- **Section 5. Site Inspection Screening Levels**—This section presents the Target PFAS with SLs outlined in the 2025 ASD Memorandum (DoD 2025a) and the SLs to which SSI results are compared.
- **Section 6. Site Inspection Results**—This section presents the data gathered during the SSI activities and updated conceptual site models (CSMs).
- **Section 7. Conclusions and Recommendations**—This section summarizes the SSI conclusions and presents recommendations for the Camp Bonneville AOPIs.
- **Section 8. References**—This section lists the references that were used in the preparation of this report.
- **Appendices**—Appendices A through H include data from field activities or related assessments:
 - Appendix A. Daily Quality Control Reports (DQCRs)
 - Appendix B. Photograph Log
 - Appendix C. Field Activity Logs
 - Appendix D. Boring Logs
 - Appendix E. Sampling Forms, Well Development Forms, and Calibration Logs
 - Appendix F. Investigation-Derived Waste (IDW) Documents
 - Appendix G. Data Usability Assessment (DUA)
 - Appendix H. Data Presentation Tables
 - Appendix I. SI Results Figures.

2. ENVIRONMENTAL SETTING

This section provides general information about Camp Bonneville, including the site location, operational history, current and projected land use, climate, topography, geology, hydrogeology, surface water hydrology, potable wells within a 4-mile radius of the installation, and applicable ecological receptors.

2.1 SITE LOCATION

Camp Bonneville is a former Army facility in Clark County, Washington, approximately 12 miles east of Vancouver, Washington (Figure 1-1). Camp Bonneville was originally composed of 3,020 acres owned by the U.S. Army and 820 acres leased from WDNR. It is on the western slope of the Cascade Mountains in the Lacamas Creek Valley. The installation is mostly forested, except for the approximately 30 acres that comprise the Bonneville and Killpack cantonment areas near the installation's former main entrance. The property surrounding Camp Bonneville is zoned for agriculture, rural residential, and forestry uses (LRA 2005). Camp Bonneville is bounded to the northeast by the WDNR-managed Yacolt Burn State Forest, and the Livingston Quarry gravel mining operation is located along the southern boundary of the site. Figure 2-1 depicts the Camp Bonneville site features.

2.2 SITE OPERATIONAL HISTORY

Camp Bonneville was established with 309 leased acres in 1909 as a drill field and rifle range for Vancouver Barracks (Woodward-Clyde 1997). In 1912, the facilities were expanded to include a target range and a road leading to the installation. Use of the facility continued until 1915 when the lease expired, and the Army moved their training activities to Oregon (USACE 1997). In 1918, the Army returned to Camp Bonneville and obtained the original 309 acres, along with an additional 2,711 acres through purchase and condemnation. The Bonneville cantonment was established in the late 1920s and used primarily as barracks facilities (EEI 2010). The Killpack cantonment was built and occupied by the Civilian Conservation Corps in 1935. In 1955, the Army arranged to lease an additional 840 acres, in two separate parcels, from WDNR to expand the training facilities at Camp Bonneville. The Army returned 20 acres of the leased land to WDNR in 1957 (Woodward-Clyde 1997). In 1959, the responsibility for Camp Bonneville changed from Vancouver Barracks to Fort Lewis, when the former became a sub-installation of the latter (URS 2000).

The mission of Camp Bonneville was to provide a training camp for active U.S. Army, U.S. Army Reserve, U.S. National Guard, U.S. Marine Corps Reserve, U.S. Navy Reserve, U.S. Coast Guard Reserve units, and other DoD Reserve personnel (Woodward-Clyde 1997). Military training activities at Camp Bonneville have varied depending on the unit using the facility but generally have included the use of the various firing ranges and training areas. Other military training activities conducted at Camp Bonneville have involved troop maneuvers, encampments, field tactical training, and vehicle support. The facility was also used to house Italian prisoners of war during World War II. When it was not needed for military training activities, Camp Bonneville was used until the 1980s by local civic and nonprofit organizations for retreats and picnics, as a Boy Scout camp, and as a location for high school environmental studies (Woodward-Clyde 1997). Until the mid-1990s, Camp Bonneville was also used by Federal, state, and local law enforcement agencies for firearms training and practice, and general training purposes (URS 2000). The FBI currently owns and manages training facilities that they constructed at Camp Bonneville in 1995.

Camp Bonneville was placed on the list of facilities scheduled for closure under BRAC95. In 1996, all active military training units ceased operations at the camp. All out-grants for use of the facilities were canceled except for the FBI firing range (EEI 2010).

2.3 DEMOGRAPHICS, PROPERTY TRANSFER, AND LAND USE

Camp Bonneville is approximately 12 miles east of Vancouver, in rural Clark County. The smaller cities of Camas and Washougal are approximately 6 miles to the south of the installation. Clark County is the fastest growing county in Washington, with a 2020 estimated population of 503,311 (U.S. Census Bureau 2020). In 2020, the U.S. Census reported a population 190,915 for the city of Vancouver, with approximately 26,065 people residing in Camas and 17,039 in Washougal (U.S. Census Bureau 2020). The nearest town is the unincorporated community of Proebstel, which is approximately 2 miles west of the installation.

In 1995, Camp Bonneville was placed on the list of facilities scheduled for realignment under the BRAC program. The three parcels that comprise the BRAC property at Camp Bonneville were transferred via a conservation conveyance. In September 2006, the Army transferred ownership of the 3,020-acre Early Transfer Parcel to Clark County (U.S. Army 2012). This initial transfer did not include the remaining 820 acres of Camp Bonneville that were owned by WDNR and leased to the Army. The WDNR parcels were conveyed to Clark County in June 2009. In both cases, Clark County immediately transferred ownership of the land by quitclaim deed to the Bonneville Conservation Restoration and Renewal Team LLC (BCRRT) for the management of remedial actions at the site, including removal of hazardous wastes and unexploded ordnance (UXO) (BCRRT 2007). Clark County subsequently took over site management and cleanup obligations when BCRRT conveyed ownership of the land by quitclaim deed to Clark County in December 2011 (U.S. Army 2012).

Camp Bonneville is currently closed to the public until remedial actions at the site are complete. As the authorized local redevelopment authority (LRA), Clark County plans to reuse the site for recreation. The County's reuse plan has nine specific components: regional park, law enforcement training center, rustic retreat center/outdoor school, Native American culture center, Clark College environmental education, trails and nature area, FBI firing range, timber resource management area, and habitat restoration (LRA 2005).

Clark County has an interlocal, short-term lease agreement with WDNR, which establishes a forward operating base for helicopter operations. WDNR's helicopter operations at Camp Bonneville assist its efforts to mitigate and improve response times for wildfires in the area. WDNR has been using Camp Bonneville to conduct these operations since 2019 (CCPW 2022a). The agreement includes adequate space for a helicopter, a fuel truck, and Buildings 4155 and 4348 to temporarily house crew members and limits WDNR's access of Camp Bonneville to only the barracks, parking area, and airfield near the main camp entrance (CCPW 2022a).

The land use surrounding Camp Bonneville is predominantly agricultural farming, rural residential, and forestry. Although the current zoning of neighboring properties requires a minimum 5-acre lot size, many of the residences near the facility were approved on much smaller lots prior to the adoption of the current standards (LRA 2005).

2.4 TOPOGRAPHY

Camp Bonneville is on the western slope of the Cascade Mountains in the Lacamas Creek Valley, where the terrain is generally covered with undergrowth and large stands of coniferous timber (Woodward-Clyde 1997). The western portion of Camp Bonneville consists of low hills and low plains of the Lacamas Creek valley. Elevations range from approximately 300 feet above mean sea level (amsl) in Lacamas Creek at the southwestern corner of the site to 1,000 and 1,400 feet amsl along the moderately steep ridges within the installation boundary to the northwest and southeast, respectively (U.S. Geological Survey National Elevation Dataset, as depicted in Figure 2-1).

2.5 GEOLOGY

Camp Bonneville is located along the structural and physiographic margin between the western foothills of the southern Cascade Mountains and the Portland-Vancouver Basin. The geology in the vicinity of Camp Bonneville is primarily known from geologic mapping performed by Mundorff (1964), Phillips (1987), and Evarts (2006).

The geology at Camp Bonneville can be divided into three general areas that correspond approximately to topographic divisions. The area west of Lacamas Creek is composed of a series of predominantly gravel and semi-consolidated conglomerate with scattered lenses and stringers of sand (Troutdale Formation). The Troutdale Formation includes two distinct members – the Upper and Lower Troutdale. The Upper Troutdale is a coarse-grained sandstone and granule conglomerate composed of basaltic debris, cobbles, and conglomerate beds. The Lower Troutdale (Conglomerate Unit) is a stratified conglomerate with small pebbles and cobbles with abundant lenses of arkosic to basaltic sandstone stringers.

The Sandy River Mudstone unit lies unconformably beneath the Troutdale formation, consisting of semi-consolidated, well-bedded mudstones predominantly composed of sand, mud, and clay. Underlying the Sandy River Mudstone and comprising the area to the north and east of Lacamas Creek are andesite and basalt flows and flow breccia of the Elkhorn Mountain Flow.

The surficial geology along the bottomland of Lacamas Creek is composed of Holocene-age alluvium consisting of unconsolidated silt, sand, gravel valley fill, with some clay (Evarts 2006; Mundorff 1964; Phillips 1987). The Bonneville Cantonment lies within the alluvium deposits of Lacamas Creek. At the Landfill 4 location, the alluvium and Lower Conglomerate Troutdale unit have been exposed.

Previous geologic studies identified the bedrock beneath Camp Bonneville as the Lower Troutdale unit. More recent investigations have renamed the Lower Troutdale as the Conglomerate Unit of the Troutdale Formation to distinguish it from the Sandy River Mudstone. The Lower Troutdale Formation underlying the northwestern portions of Camp Bonneville is the result of deposition of western flowing streams that crossed the Cascade Range, including the ancestral Columbia River (Evarts 2006). Considerable variation exists in the lithology and thickness of the Troutdale Formation. According to regional logs, the Lower (Conglomerate Unit) Troutdale Formation in the vicinity of the installation is approximately 150 feet thick and consists of cemented sand, gravel, sandy clay, and boulders. It is underlain by up to 150 feet of the Sandy River Mudstone, which contains considerably more clay interspersed with sandy and gravelly layers (Evarts 2006). The Killpack Cantonment is underlain by the Sandy River Mudstone.

2.6 HYDROGEOLOGY

Camp Bonneville lies within the Portland Basin, which is defined as the area bounded by the Tualatin Mountains to the west, the Lewis River to the north, the foothills of the Cascade Range to the east, and the Clackamas River to the south. The Columbia and Willamette Rivers flow through the area and are major discharge areas for the groundwater system (McFarland and Morgan 1996). The following eight hydrogeologic units comprise the Portland Basin aquifer system:

- Unconsolidated sedimentary aquifer (sea level)
- Troutdale gravel aquifer
- Confining unit 1
- Troutdale sandstone aquifer
- Confining unit 2
- Sand and gravel aquifer

- Older rocks
- An undifferentiated fine-grained unit that occurs where the Troutdale sandstone and the sand and gravel aquifer are absent.

The Troutdale gravel aquifer that underlies the western portion of Camp Bonneville is generally considered an important and productive aquifer in the Portland Basin and commonly serves as source water for municipal, industrial, and irrigation supplies (McFarland and Morgan 1996). USEPA has designated the Troutdale aquifer a “sole source aquifer” (USEPA 2006). USEPA defines a sole or principal source as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer and for which no alternative source or combination of alternative drinking water sources exist that could physically, legally, and economically supply those dependent upon the aquifer. The Troutdale aquifer system provides approximately 99.4 percent of the available drinking water to the residents living within its area, and no other drinking water sources are available that would be economically feasible to supply these residents (USEPA 2006). During PFAS investigations, depth to groundwater was encountered from 7 feet below ground surface (bgs) at the Former Fire Station Building 1864 AOPI to 43 feet bgs at Landfill 4/Demolition Area 1 AOPI.

Groundwater recharge within the Portland Basin primarily comes from precipitation and streamflow (McFarland and Morgan 1996). Water also enters the system at significant rates in more urban areas from runoff into dry wells and onsite waste disposal systems. Groundwater movement within the Portland Basin is generally controlled by topography (Mundorff 1964), with groundwater flow moving from upland areas downgradient to local, intermediate, or regional discharge areas, such as streams and springs (McFarland and Morgan 1996). The groundwater at Camp Bonneville typically follows the local topography and flows from higher elevations toward Lacamas Creek, with discharges to Lacamas Creek and its tributaries (EEI 2012).

2.7 SURFACE WATER HYDROLOGY

Camp Bonneville lies within the Lacamas Creek watershed and drainage basin. The principal surface water feature is Lacamas Creek, which flows southward from the confluence of the North and East Forks in the north-central part of Camp Bonneville. The creek is also fed by David and Buck Creeks, which drain the southeastern portion of the installation. Lacamas Creek exits the site in the southwestern corner, discharging to Lacamas Lake, which in turn drains into the Columbia River near Camas, Washington (Hart Crowser 1999). Two artificial impoundments of Lacamas Creek, with a total surface area of less than 4,600 ft², were created to support a trout sports fishery. Since base closure, the impoundments have been drained (Calibre 2005).

2.8 WATER USAGE

Camp Bonneville currently has two non-potable supply wells: a 385-foot well at the Bonneville cantonment and a 193-foot well at the Killpack cantonment (ESE 1983). The supply wells are considered non-potable due to deed restrictions in place that prohibit potable water use at Camp Bonneville. An additional well with a depth of 516 feet may have also been present historically at the Killpack cantonment (Mundorff 1964). Well water is pumped and stored in reservoirs for distribution at the cantonments to provide non-potable water only. An additional non-potable well was reportedly drilled at the FBI range in 1998, extending to a depth of 105 feet (BCRRT 2007). The locations of non-potable wells are shown in Figure 2-1. According to personnel interviews, potable water for the installation is carried in as needed. Deed restrictions are in place prohibiting groundwater use at Landfill 4/Demolition Area 1 and limiting the use of the existing water systems at the Bonneville and Killpack cantonments to non-potable water only (U.S. Army 2006).

Groundwater at Camp Bonneville typically follows the local topography and flows from higher elevations toward Lacamas Creek. According to regional information (Mundorff 1964) and the depths of wells at the property, local water supply wells typically extend into the Troutdale Formation or underlying bedrock and obtain groundwater from depths 150 to 500 feet bgs. A search of the Clark County Geographic Information Services water well database (<https://gis.clark.wa.gov/gishome/>) resulted in 2,267 domestic water wells located within 4 miles of the installation boundary. The wells within 4 miles of Camp Bonneville include 9 Group A public water system wells; 205 Group B public water system wells; 57 irrigation wells; 858 individual water system wells; and 1,138 unclassified water system wells.

2.9 ECOLOGICAL PROFILE

The Lacamas Creek valley floor consists of open grassy fields, light to densely vegetated areas, and wetland plants near areas with small drainages and depressions in the floodplain of Lacamas Creek (LRA 2005). The existing vegetation around Camp Bonneville is primarily young conifer forest, although patches of mature conifer and a mix of conifer and deciduous forest are also found within the boundaries of the installation. The installation is located at the edge of prairie habitat that extends into the foothills of the south Cascade Mountains, although no undisturbed tracts of this habitat remain (LRA 2005).

Douglas fir (*Pseudotsuga menziesii*) stands predominate the coniferous forest habitat, and individual western red cedars (*Thuja plicata*) and hemlock trees (*Tsuga heterophylla*) are scattered in drainage locations throughout, with understory species such as vine maple (*Acer circinatum*), salmonberry (*Rubus spectabilis*), elderberry (*Sambucus nigra*), hazelnut (*Corylus avellana*), salal (*Gaultheria shallon*), and sword fern (*Polystichum munitum*) (LRA 2005). Mixed habitat communities of coniferous and deciduous trees are within the area and contain patches of Garry oak (*Quercus garryana*) from the former woodland communities and tree species such as cottonwood (*Populus fremontii*), crabapple (*Malus Fusca*), red alder (*Alnus rubra*), Oregon ash (*Fraxinus latifolia*), Douglas fir, big leaf maple (*Acer macrophyllum*), and willow (*Salix lucida*) (Pentec 1995, as cited in EEI 2010). These mixed habitats have understory species such as Indian plum (*Oemleria cerasiformis*), snowberry (*Symphoricarpos albus*), vine maple (*Acer circinatum*), and lady fern (*Athyrium filix-femina*) (LRA 2005, Parsons 2004).

The state-listed threatened hairy-stemmed checker-mallow (*Sidalcea hirtipes*) has been identified onsite (Pentec 1995, as cited in EEI 2010). In addition, dense sedge (*Carex densa*), Hall's aster (*Symphyotrichum hallii*), Oregon coyote-thistle (*Eryngium petiolatum*), and Western wahoo (*Euonymus occidentalis*) are present along Lacamas Creek (EEI 2010) and are identified as sensitive, vulnerable, or declining plants that could become threatened or endangered in Washington (WDNR 2021).

Clark County is currently working effectively to manage Camp Bonneville's forests to support a diversity of plants and animals. As part of this program, the county is working to control a number of non-native species at the installation, including bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), herb Robert (*Geranium robertianum*), meadow knapweed (*Centaurea pratensis*), mouse-ear hawkweed (*Hieracium pilosella*), non-native blackberry (*Rubus armeniacus* and *Rubus laciniatus*), Queen Anne's lace (*Daucus carota*), Scotch broom (*Cytisus scoparius*), and tansy ragwort (*Jacobaea vulgaris*) (CCPW 2022b).

The majority of Camp Bonneville is forested, interspersed with streams and open fields. This provides quality habitat for all forms and a large diversity of wildlife, including mammals, birds, reptiles, amphibians, and aquatic life (BCRRT 2007). Several species of small mammals and birds reside on the site including cottontail rabbits, ground squirrels, mice, and shrews. Large mammals such as deer, bears, and cougars are also present at Camp Bonneville (BCRRT 2007).

The U.S. Fish and Wildlife Service Environmental Online Conservation System Information for Planning and Consultation (IPaC) tool was used to identify federally listed species, critical habitats, and other sensitive resources potentially present at Camp Bonneville. The IPaC tool identified eight threatened and endangered (T&E) species, including one mammal, three bird, one reptile, one fish, and two insect species,

as potentially occurring on Camp Bonneville (USFWS 2025). The T&E listed and proposed species consist of the gray wolf (*Canis lupus*), marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), yellow-billed cuckoo (*Coccyzus americanus*), northwestern pond turtle (*Actinemys marmorata*), bull trout (*Salvelinus confluentus*), monarch butterfly (*Danaus plexippus*), and Suckley's cuckoo bumble bee (*Bombus suckleyi*) (USFWS 2025). These species are listed as potentially occurring; however, there are no recent T&E species surveys of Camp Bonneville confirming the presence or absence of the T&E species.

2.10 CLIMATE

The closest major city to Camp Bonneville is Vancouver, Washington, where the summers are short, warm, dry, and clear while the winters are cold, wet, and overcast. Humidity in this area is rare, with the highest chance of a muggy day being in August. August and September are the warmest months of the year in Vancouver, with the highest temperature occurring in August at a monthly average temperature of 70.1°F (Table 2-1). However, the humidity levels are low and relatively constant year-round. The coldest period in Vancouver occurs in January, with an average temperature of 40.6°F (NWS 2025).

The climate at Camp Bonneville is mild with an average annual temperature ranging from 34°F in the winter to 80°F in the summer. The average rainfall is approximately 41 inches per year, with the highest amount of rain falling in December. At Camp Bonneville, the average annual mean temperature is 55.2°F and the average total precipitation is 77.17 inches (NWS 2025).

Table 2-1. Average High, Mean, and Low Temperatures for Vancouver, Washington

Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
High Temp (°F)	47.2	50.5	55.9	61.5	68.8	74.6	81.9	82.4	75.9	64.2	53.1	46.5	63.6
Mean Temp (°F)	40.9	42.6	47.1	51.7	58.5	64.0	69.7	70.1	64.3	54.8	46.0	40.7	54.3
Low Temp (°F)	34.7	34.7	38.3	42.0	48.2	53.4	57.6	57.9	52.6	45.5	38.9	34.9	44.9

Source: <https://www.weather.gov/wrh/Climate?wfo=pqr>

3. FIELD INVESTIGATION ACTIVITIES

This section provides field procedures followed during the implementation of the SSI (40 CFR §300.420(c)(4)(i)). The principal guidance documents used for the Camp Bonneville SSI were consistent with the requirements presented in the *Army Guidance for Addressing Releases of PFAS* (U.S. Army 2018).

3.1 SITE INSPECTION DATA QUALITY OBJECTIVES

The DQOs were developed to define the problem at the AOPIs, identify the necessary decisions, specify decision-making rules and the level of confidence necessary to resolve the problem, identify the number of samples necessary to support the decision, and obtain agreement from the decision makers before the sampling program was initiated. The Camp Bonneville sample locations were determined based on current site conditions (i.e., groundwater flow direction); presence of site media (e.g., sediment and surface water may not be sampled at a given site); historical data (e.g., suspected location of PFAS release); and historical activities (e.g., remedial activities, disposal of potentially contaminated materials). The project stakeholders concurred that selected sampling schemes would be representative of site conditions prior to initiation of field investigation activities. The field investigation at Camp Bonneville was conducted in accordance with the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). The field activities, including any variances or deviations, are described below.

3.2 SAMPLE DESIGN AND RATIONALE

Four AOPIs were investigated during the Camp Bonneville SSI to determine the presence or absence of PFAS in the environment. Information inputs from the preliminary CSMs presented on Worksheet #10 of the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025) were the basis for sample design at each AOPI. All samples were analyzed for 40 PFAS using USEPA Method 1633A and compliant with the DoD Quality Systems Manual (QSM) Version 6.0, Table B-24 (DoD 2025b), which included the Target PFAS list of PFOS, PFOA, perfluorobutanoic acid (PFBA), perfluorobutane sulfonate (PFBS), perfluorononanoic acid (PFNA), perfluorohexanoic acid (PFHxA), perfluorohexane sulfonate (PFHxS), and perfluorodecanoic acid (PFDA). Hexafluoropropylene oxide dimer acid (HFPO-DA) was not screened against the regional screening level (RSL) in this SSI, in accordance with DoD policy, because it is not considered a Target PFAS related to Army activity and was not detected above the limit of detection (LOD) during the SI. Similarly, bis(trifluoromethylsulfonyl)amine (TFSI) and perfluoropropanoic acid (PFPrA) are not considered Target PFAS for the SSI because there are no current USEPA-approved analytical methods for these two compounds, and these compounds are largely associated with industrial manufacturing and not likely related to Army activities.

The general approach for the determination of the presence or absence of PFAS at an AOPI employed during this SSI consisted of the collection of three soil samples (one surface and two subsurface soil samples) from soil borings at the AOPI and the collection of groundwater samples from temporary or existing monitoring wells within or proximal to the AOPI. Soil sampling was not performed at the Landfill 4/Demolition Area 1 AOPI since the Army's approach at this time does not include intrusive activities within landfills.

Each location that was sampled, with a unique set of coordinates, was assigned a specific site location: CBV-XXXX-##.

Where:

- XXXX = abbreviation for the AOPI being sampled
- ## = the sequential number of each sample location within the AOPI.

Each sample that was collected received a unique sample number, related to the site identifier (ID) above, using the following format: CBXXXX##-ZZzz.

Where:

- XXXX = abbreviation for the AOPI being sampled
- ## = the sequential number of each sample location within the AOPI
- ZZ = sample media (i.e., GW = grab groundwater, SS = surface soil, SB = subsurface soil, SW = surface water, SD = sediment)
- zz = the location number within the AOPI (per the site location ID above).

QA/QC samples were denoted according to the sample type. Rinsate blanks and field duplicate, samples were denoted by appending “RB” and “FD,” respectively, to the parent sample ID. Field blanks and potable/source water blanks were named using the format of CB-YY-yy.

Where:

- YY = FB (field blank) or SRC (source blank)
- yy = sequential number of each type of blank sample collected.

3.3 FIELD INVESTIGATION ACTIVITIES

SI field activities were conducted from June 6 to June 11, and June 16, 2023. The sample locations and methods used during the previous SI are described in the Final Camp Bonneville SI (Leidos 2023a). Sampling procedures adhered to the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c).

Sampling activities at Camp Bonneville during the SI included collecting surface and subsurface soil samples from soil borings, groundwater samples from temporary monitoring wells, and surface water and sediment samples where these media were present. Samples were analyzed for 26 PFAS by liquid chromatography with tandem mass spectrometry (LC/MS/MS) compliant with Table B-15 of DoD QSM Version 5.4 (DoD 2021) to determine the presence or absence of Target PFAS.

SSI field activities were conducted from September 2 to September 6, 2025, and September 18 to September 23, 2025. The sample locations and methods used during the previous SI are described in the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). Sampling procedures adhered to the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025), and relevant information is summarized below.

Sampling activities at Camp Bonneville during the SSI included collecting surface and subsurface soil samples from soil borings, groundwater samples from temporary monitoring wells, and sediment and surface water samples where these media were present. Samples were analyzed for 40 PFAS by LC/MS/MS compliant with QSM Version 6.0, Table B-24 (DoD 2025b) to determine the presence or absence of Target PFAS.

A total of 66 samples, excluding QA/QC, were collected among the four AOPIs, including 12 existing monitoring well groundwater samples, 3 temporary monitoring well groundwater samples, 13 surface soil

samples, 26 subsurface soil samples, 6 surface water samples, and 6 sediment samples. A breakdown of samples collected at each AOPI is provided in Table 3-1. Prior to beginning sampling, site reconnaissance and utility clearance were conducted. Soil, sediment, and surface water samples were collected at one AOPI before moving to the next AOPI. Groundwater samples were collected at two of the AOPIs once sufficient water was present for collection. Any variances or deviations in sampling procedure, such as moving a location due to site conditions, were discussed with the project team and communicated in DQCRs (Appendix A). Field procedures and any deviations are discussed in the following sections. Photographs of SSI field activities are provided in Appendix B. Task Team Activity Logs were completed daily and are compiled in Appendix C. Boring Logs are compiled in Appendix D. Sampling Logs, Well Development Logs, and Calibration Log Sheets are compiled in Appendix E.

Table 3-1. Camp Bonneville AOPI SSI Sample Collection

AOPI Name	Groundwater Samples	Soil Samples	Surface Water Samples	Sediment Samples
Building 1864 Fire Station	5	5 SS / 10 SB	3	3
Building 4483 Fire Station	0	6 SS / 12 SB	1	1
Wash Racks 1 and 2	0	2 SS / 4 SB	2	2
Landfill 4/Demolition Area 1	5	0 SS / 0 SB	0	0
SW Boundary*	5	0 SS / 0 SB	0	0
Total	15	13 SS / 26 SB	6	6

* = Not included as an AOPI

SS = Surface Soil Sample

SB = Subsurface Soil Sample

3.4 FIELD PROCEDURES

The following sections describe utility clearance, munitions and explosives of concern (MEC) avoidance, bulk source water sampling, soil boring installation and sampling, groundwater sampling, surface water and sediment sampling, equipment calibration, location survey, and deviations and field change requests. Specific details regarding each of these activities are documented on Task Team Activity Log Sheets that are provided in Appendix C.

Because many materials routinely used during environmental investigations can potentially contain PFAS, the field crew conducted SSI activities in accordance with the PFAS sampling standard operating procedure (SOP) presented in Appendix A of the Programmatic UFP-QAPP (Leidos 2022a). Procedures include requirements for equipment, containers, handling, and sampling, including PFAS-specific requirements, to ensure that sample contamination does not occur during collection and transport.

3.4.1 Utility Clearance

Prior to initiating intrusive activities, the site was verified to be free of underground utilities. The Field Manager coordinated underground utility clearances through BRAC and WA811 “Call Before You Dig.” Other utility clearance activities included consulting individual utility companies (as needed), reviewing available as-built drawings, walking the areas to verify that utilities were marked, looking for signs of unidentified utilities (including overhead utilities), and completion of a Subsurface Clearance Checklist prior to initiating drilling operations. Prior to conducting powered drilling within 25 feet of known or suspected subsurface utilities, boreholes were excavated to a minimum of 5 feet bgs using a low-impact technique (i.e., hand auger) that will not damage the utility.

3.4.2 MEC Avoidance

A certified UXO technician conducted a survey (visual and magnetometer) prior to all intrusive work to preclude disturbing subsurface MEC. MEC avoidance operations were conducted in accordance with the

DoD Explosives Safety Board Technical Paper 18, June 24, 2020, and Appendix A of the Camp Bonneville Site Safety and Health Plan (Appendix A of the SI UFP-QAPP Addendum [Leidos 2023c]).

3.4.3 *PFAS-Free Source Water Sampling*

Prior to beginning work, one source water sample (CBV-SRC-01) was collected on July 21, 2025, for PFAS analysis to determine if the source water was PFAS-free and could be used for drilling and decontamination. Sample CBV-SRC-01 was collected from a non-potable supply well located north of the Killpack cantonment. Water sources were purged for a minimum of 1 minute prior to filling high-density polyethylene (HDPE) bottles. Water from the non-potable supply well was determined to be PFAS-free (i.e., PFAS were not detected at concentrations exceeding the LOD) and was used as a drilling and decontamination water source during field sampling.

3.4.4 *Soil Boring Installation and Sampling*

All soil samples were collected in accordance with the procedures outlined in the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). QC samples, including, duplicates and rinsate blanks, were also collected.

Sonic drilling technology was used to advance boreholes into the first water-bearing zone within soil. Soil samples were collected through sonic drilling with some surface samples being collected with a stainless steel hand auger. Each soil core was logged for lithology in accordance with U.S. Army Corps of Engineers (USACE) guidance (ASTM International D2488 [ASTM 2017]) and recorded on a boring log (provided in Appendix D). Soil sample intervals were homogenized in disposable HDPE bags prior to placing the soil into HDPE sample bottles. Sample bottles were labeled and sealed in zip-lock bags and placed on wet ice for cooling to $\leq 6^{\circ}\text{C}$. Additional details on protocols for obtaining soil samples are outlined on Worksheet #18 and the Leidos SOP “Soil Sampling” provided in the Programmatic UFP-QAPP (Leidos 2022a).

Three soil samples were collected from each soil boring advanced at each AOPI. During the advancement of the soil borings, soil cuttings were evaluated for recording lithology and documenting visual observations. The interval from which the samples for laboratory analysis were collected was recorded on the boring log. Surface soil samples were collected as grab samples from 1-foot intervals based on the presence of native soil. Subsurface soil samples were collected as grab samples from 2-foot intervals down to a total depth of 10 feet. Soil boring CBV-WR12-06 was drilled to a total depth of 80 feet bgs and no groundwater was encountered due to an impermeable clay that persists throughout the Killpack cantonment.

Soil borings were abandoned following sample collection by backfilling the borehole with a grout slurry conforming to the requirements of OAR 690-240-0475. Surface restoration was completed to match the surrounding surface (e.g., concrete, asphalt, grass).

3.4.5 *Groundwater Sampling and Well Development*

Groundwater from existing wells and newly installed temporary wells at Camp Bonneville was sampled by the low-flow drawdown method using a peristaltic pump. All groundwater samples were collected in accordance with the procedures outlined in the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). QC samples, including equipment blanks and duplicates were also collected.

Temporary wells were used for the collection of groundwater from boreholes drilled using sonic drilling technology. The temporary wells were installed using a 2-inch polyvinyl chloride screen and riser. The slot size of the well screen used for temporary wells was 0.010 inches and were a maximum of 10 feet in length.

Once in place, a filter pack consisting of #2/12 sand was added to surround the well screen to reduce sediments and allowed water to fill to a sufficient volume for sampling. Groundwater elevation data collected from the three temporary wells installed at the Former Fire Station Building 1864 AOPI were used to infer groundwater flow direction.

Prior to commencing low-flow drawdown methods, temporary and existing monitoring wells were purged of at least three well volumes using a non-PFAS-containing submersible pump (i.e. PFAS-free Monsoon pump or similar). Monitoring well development was completed after a minimum of 48 hours following well installation for each newly installed monitoring well. During the purge and sampling the pump intake was positioned near the middle of the screened interval of the well to ensure that standing water was removed and fresh formation water was drawn into the well. Samples were collected once water quality parameters (pH, temperature, conductivity, dissolved oxygen [DO], oxidation-reduction potential [ORP], and turbidity) met the stabilization criteria established in the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). Calibrated field instruments were used to collect water quality parameters (i.e., temperature, specific conductivity, pH, DO, turbidity, and ORP). Prior to sampling, static water level measurements were collected to the nearest 0.01 foot using an electronic water level meter. Following completion of monitoring well purging and stabilization, samples were collected in laboratory-supplied HDPE bottles. All samples were collected and handled while wearing clean, non-powdered, disposable nitrile gloves. Sample bottles were labeled and sealed in zip-lock bags and placed on wet ice for cooling to $\leq 6^{\circ}\text{C}$. New, clean nitrile gloves were donned prior to each new sample collection. Sample containers were labeled with the following information: site name, sample ID, date and time of sample collection, name of sampler, sample preservation, and type of analysis (i.e., PFAS). Sampling activities were recorded on the Sampling Log, Well Development Log, and Calibration Log Sheets compiled in Appendix E.

All open boreholes and temporary wells were abandoned in accordance with the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). Open boreholes were abandoned by backfilling the borehole from the bottom to the surface with a grout slurry conforming to the requirements of OAR 690-240-0475. Surface completion matched the surrounding surface (e.g., gravel, grass).

3.4.6 Surface Water and Sediment Sampling

All surface water and sediment samples were collected in accordance with the procedures outlined in the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). QC samples, including equipment blanks and duplicates were also collected.

Surface water samples were collected from the selected locations by submerging the bottles below the water surface, while avoiding sediment agitation. Sediment samples were collected directly from the selected locations from 0 to 6 inches bgs using a nitrile-gloved hand. Each sediment sample was homogenized in a disposable HDPE bag prior to placing the sediment into laboratory-supplied HDPE sample bottles. Sample containers were labeled, sealed in zip-lock bags, and placed on wet ice for cooling to $\leq 6^{\circ}\text{C}$.

Water quality parameters (pH, temperature, conductivity, DO, ORP, and turbidity) were measured and recorded on the surface water/sediment sampling form. Observations made during surface water and sediment sampling were recorded on the sediment/surface water sampling forms provided in Appendix E.

3.4.7 Equipment Calibration

Water quality instruments (i.e., Horiba U-52) used during groundwater sampling and the photoionization detector used during drilling activities were calibrated daily per Worksheet #22 of the Programmatic UFP-QAPP (Leidos 2022a) against known standards in accordance with the manufacturer's instructions and documented on the calibration logs provided in Appendix E.

3.4.8 Location Survey

Environmental sample locations and notable site features were located and mapped using a portable Trimble global positioning system (GPS) unit capable of achieving ± 3 feet accurate results. GPS data were transferred for use in ArcGIS mapping applications during data evaluation and reporting.

3.4.9 Deviations and Field Change Requests

No instances of field modification impacting project scope and/or data usability/quality were encountered during the SSI fieldwork. The following minor deviations from the planned sample quantities and locations in the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025) were observed during field activities and summarized for USACE in daily field notes:

- The quantities of samples varied from Table 17-1 of the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). The deviation in sample quantities is a result of actual field conditions, including impermeable clays and lack of groundwater.
 - The Camp Bonneville SSI UFP-QAPP (Leidos 2025) outlines only one subsurface soil sample to be collected from 3 to 5 feet bgs at soil boring location CBV-1864-11. A surface soil sample and an additional subsurface soil sample were collected at CBV-1864-11.
 - On September 21, 2025, borehole CBV-WR12-06 was advanced in the Wash Racks 1 and 2 AOPI with an objective to obtain a groundwater sample within the AOPI. Soils recovered during advancement of CBV-WR12-06 consisted of a very hard fat clay to 50 feet bgs followed by a stiff lean clay to 80 feet bgs. Moist or saturated conditions were not observed in the borehole and it was abandoned at 80 feet bgs. Subsequent soil borings collected across the AOPI confirmed these lithographic conditions. During the SI, groundwater downgradient of Wash Rack 2 was encountered at 13 feet bgs (location CBV-WR12-04); however, this condition was not observed within the boundary of Wash Rack 1 or Wash Rack 2 (Leidos 2023a). Groundwater was not encountered during drilling activities at the time of the SSI. Recovered soils in the AOPI suggest low permeability conditions that do not store water. Infiltration of the impermeable clay layer may occur in shallow soil at isolated locations but is not regularly observed throughout the AOPI and a saturated zone is not present. A potential surface release at the Wash Racks 1 and 2 AOPI would likely be restricted to surface runoff or shallow soils without a pathway to migrate to deeper water through the observed thickness of impermeable clay. Army and Washington State Department of Ecology stakeholders concurred with this finding on September 23, 2025. Due to the presence of a layer of impermeable clay extending to 80 feet bgs and no visible indication of moisture, one groundwater sample from the Former Fire Station Building 4483 AOPI was not collected and two groundwater samples from Wash Racks 1 and 2 were not collected.

3.5 DECONTAMINATION PROCEDURES

To ensure that chemical analysis results reflect the actual concentrations at sample locations, the non-dedicated, reusable equipment used in sampling activities was rigorously cleaned and decontaminated between sample locations in accordance with the Programmatic UFP-QAPP (Leidos 2022a), Camp Bonneville SI UFP-QAPP Addendum (Leidos 2023c), and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). The non-disposable sampling equipment used to conduct sampling activities (e.g., hand augers, water level meters, drill rods, small non-dedicated tools) was decontaminated before sampling activities began, between locations, between sampling events, and after sampling activities were completed. Wastewater generated from decontamination activities was handled as IDW.

The decontamination process included an initial scrub with a laboratory-grade, phosphate-free, biodegradable detergent (e.g., Liquinox®) and supplied PFAS-free deionized (DI) water to remove

particulate matter and surface film. Equipment was scrubbed using polyethylene or polyvinyl chloride brushes. Following this scrub, the equipment was then rinsed twice in separate bins containing PFAS-free source water and PFAS-free DI water. Decontaminated sampling equipment was wrapped in thin sheets of HDPE to prevent subsequent contamination if being stored and not used immediately.

3.6 DISPOSITION OF FIELD INVESTIGATION-DERIVED WASTE

The IDW generated during the SSI at Camp Bonneville included solids (soil, sediment, and disposables) and liquids (decontamination rinse water and well purge water). These materials were managed in accordance with the IDW Management Plan provided in Appendix B of the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025).

All IDW generated at Camp Bonneville was placed in United Nations-rated, 55-gallon drums for storage, transport, and disposal. Permanent labels for the drums included a unique container number, a description of the contents (i.e., soil or wastewater), the fill date, the source location, the generator's name (i.e., Camp Bonneville), and a telephone number for the generator's point of contact (e.g., the Army BRAC Environmental Coordinator). Each bucket or carboy used to temporarily store liquid IDW before it was transferred to a 55-gallon drum was marked "Non-potable Water" or "Decontamination Waste" to comply with requirements of the IDW Management Plan.

The contents of the IDW drums were sampled for characterization and profiling. A solid waste sample was composited by collecting aliquots from the solid waste drums using a decontaminated stainless steel hand auger. The solids were homogenized in an HDPE plastic bag and then placed into laboratory-supplied sample containers. Solid, non-regulated waste and general refuse, including disposable, non-recyclable HDPE bailers, temporary well material, and personal protective equipment (PPE), were contained in separate drums. For drums containing liquid IDW, nitrile gloves were donned and sample bottles were filled directly from the drum. The waste hauler (US Ecology) was contacted prior to sampling to determine parameters required for disposal of waste potentially containing PFAS. The waste hauler provided guidance to analyze for suspected contaminants based on site history and previous investigations. The sample was analyzed for PFAS, toxicity characteristic leaching procedure (TCLP) volatile organic compounds, TCLP semivolatile organic compounds, TCLP metals, TCLP pesticides, TCLP herbicides, pH, and flashpoint. The sample results indicated the waste was non-hazardous.

On December 5, 2025, Republic/EQ Industrial Services removed the solid and liquid IDW waste drums from Camp Bonneville for disposal. Solid waste was disposed of at Coffin Butte Landfill (Company 4125), 28972 Coffin Butte Road, Corvallis, OR, 97339. Liquid waste was disposed of at US Ecology Idaho, 20400 Lemley Road, Grand View, ID, 83624. Copies of the waste manifest and certificates of disposal are included in Appendix F.

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4. DATA ANALYSIS AND QUALITY ASSURANCE SUMMARY

This section summarizes the QA/QC program and laboratory chemical analysis program implemented as part of the Camp Bonneville SSI field activities (40 CFR §300.420(c)(4)). Additional information on these procedures is presented in the Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025).

Merit Laboratories, Inc., in East Lansing, Michigan, was the analytical laboratory under contract for the analysis of PFAS during the Camp Bonneville SSI field activities. Sections 4.1 through 4.4 summarize sample handling procedures, laboratory analytical methods, data QA/QC, data reporting and validation, and sample QA/QC. A QA summary of the analytical data is presented in Section 4.5. Appendix G provides the DUA, which details the quality and usability of the SSI analytical data and the process performed to evaluate the data for compliance with established QC criteria.

4.1 SAMPLE HANDLING PROCEDURES

A critical aspect of sample collection and analysis protocols is the maintenance of strict chain-of-custody (CoC) procedures, which include tracking and documentation during sample collection, shipment, and laboratory processing. The Sample Manager was responsible for sample custody until the samples were properly packaged, documented, and released to the commercial carrier. The laboratory was responsible for sample custody thereafter in accordance with approved procedures.

4.1.1 *Chain-of-Custody Record*

CoC forms were used to document the traceability and integrity of all samples from the point of collection to the laboratory by maintaining a record of sample collection, shipment, and receipt by the laboratory. A CoC form was filled out and was signed and dated by each sample custodian.

Shipping containers were sealed with custody tape. Sealed coolers were transported to the commercial carrier for overnight delivery to the laboratory. The air bill number, written on the CoC form, acted as the custody documentation while the sealed coolers were in the possession of the commercial carrier. The CoC form was placed in a resealable plastic bag and taped to the inside lid of the cooler.

When the possession of samples was transferred, the individual relinquishing the samples and the individual receiving the samples signed, dated, and noted the time of transferal on the CoC. This record represents the official documentation for all transferal of sample custody until the samples arrived at the laboratory.

4.1.2 *Laboratory Sample Receipt*

All samples received by the Laboratory Sample Custodian or designee were checked for proper preservation (e.g., pH, temperature of coolant blank above 2°C or below 6°C); integrity (e.g., leaking, broken bottles); and proper, complete, and accurate documentation and ID of the samples. The temperature of the coolant blank was noted. No insufficiencies and/or discrepancies were noted.

Samples received at the laboratory were logged into the laboratory computer database. Initial entries included field sample number, date of receipt, and analyses required. As samples were received, they were assigned a laboratory sample ID number. The sample custodian labeled each container with its sample ID number, and the samples then were transferred to their designated storage areas.

Samples received by the laboratory were considered to be physical evidence and were handled according to USEPA procedural safeguards. In addition, all data generated from the sample analyses, including all associated calibrations, method blanks, and other supporting QC analyses, were identified with the project name, project number, and sample delivery group (SDG) designation. All data were maintained under the proper custody. The laboratory provided complete security for samples, analyses, and data.

4.2 LABORATORY ANALYTICAL METHODS

The chemical analysis program for the Camp Bonneville SSI conforms to the analytical requirements presented in the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025) for the chemical analysis of field investigation samples. All samples were analyzed for PFAS using LC/MS/MS procedures compliant with DoD QSM Version 6.0, Table B-24 (DoD 2023) and the laboratory SOP.

4.3 DATA QUALITY ASSURANCE/QUALITY CONTROL

This section presents the QA/QC procedures applied during sampling and laboratory analysis. This discussion includes laboratory QA/QC (Section 4.3.1) and field QA/QC (Section 4.3.2) procedures. Details on the results of the QC samples (field and laboratory) are presented in the DUA (Appendix G).

4.3.1 Laboratory Quality Assurance/Quality Control

Samples were analyzed for PFAS using LC/MS/MS in compliance with DoD QSM Version 6.0, Table B-24 (DoD 2022). QC checks included holding times, method blanks, calibration standards, extracted internal standards (EISs), laboratory control samples (LCSs), and detection limits. The acceptance criteria and laboratory SOP are provided in the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025).

Method Blanks—Method blanks were used to monitor the possibility of laboratory-induced contamination by running a volume of approved reagent water through the entire analytical scheme (i.e., extraction, concentration, analysis). Blank requirements are specified in the DoD QSM Version 6.0, Table B-24 (DoD 2023) and the laboratory SOP.

Laboratory Control Samples—LCSs were analyzed to evaluate the accuracy of the analysis in the absence of sample matrix impacts. A known concentration of select compounds were added to the LCS. The spiked samples were analyzed in the same manner as the environmental samples. Accuracy was expressed as the percent recovery of each added compound. An LCS was analyzed with each SDG.

4.3.2 Field Quality Assurance/Quality Control

Table 4-1 summarizes the frequency of field QC samples that were collected during the Camp Bonneville field investigation. The requirements for field QC were established on Worksheet #20 of the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025).

Table 4-1. Frequency of Field QC Samples for Camp Bonneville Field Investigation

QC Sample	Frequency
Field Blank	1 per water source used as final rinse of equipment
Source Water Blank	1 per bulk rinse water source
Equipment Rinsate Blank	1 for every 10 or fewer investigative samples
Field Duplicate	for every 10 or fewer investigative samples

4.4 DATA REPORTING AND VALIDATION

The Leidos QA Manager or designee initiated a validation of the analytical data packages. One hundred percent of the data were validated using objective criteria taken from the requirements of the Programmatic UFP-QAPP (Leidos 2022a) and DoD QSM Version 6.0 (DoD 2023) and qualified in accordance with DoD Data Validation Guidelines Module 6 (DoD 2022) and the revised table for sample qualification in the presence of blank contamination (DoD 2023).

Reported laboratory data were reviewed in accordance with DoD QSM Stage 2B validation guidelines to ensure that the QC results fell within appropriate QC limits for holding times, blank contamination, EISs, calibrations, LCSs, non-extracted internal standards, and ion ratios. Any data validation qualifiers resulting from outlier QC results were applied and a data validation report, as previously described, was prepared. In addition, 10 percent of the data were validated in accordance with DoD QSM Stage 4 guidelines, and analytical results were checked and recalculated from raw data.

Equipment rinsate blanks and field blanks were associated with the corresponding environmental samples. These blanks were evaluated following the same criteria as method blanks, and the associated environmental samples were appropriately qualified as needed. After the data validation for the project was completed, a project DUA (Appendix G) was prepared.

4.5 QUALITY ASSURANCE SUMMARY

A comprehensive QA/QC program was implemented during the sampling event in August and September 2025 at Camp Bonneville. Samples and associated QC samples (e.g., field duplicates, equipment rinsate blanks, source water blanks) were collected and analyzed for PFAS using methods specified in the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025). Consistent with the data quality requirements established in the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025) and DQOs, all sample data and associated QC data were evaluated during the review and validation process. Individual sample results were qualified, as necessary, to designate usability of the data toward meeting project objectives. Data qualifiers were applied as appropriate (approximately 4680 data points were evaluated), based on deviations from the measurement performance criteria in the Programmatic UFP-QAPP (Leidos 2022a). Results of the validation are provided in the DUA (Appendix G). The analyses associated with each data quality indicator are summarized below, with details of the results of the QC checks provided in the DUA (Appendix G).

4.5.1 Precision

Precision was evaluated by the analysis of field duplicate samples and the relative percent difference between the duplicate spike results. QC results associated with analytical precision met measurement performance criteria (MPC).

4.5.2 Accuracy

Bias introduced due to blank contamination (in method, instrument, or field blanks) and any impact on accuracy were evaluated during validation. Analytical accuracy was measured through the use of LCSs, isotope dilution standards, initial and continuing calibration, and target compound quantitation requirements. Continuing calibration verification recoveries (> upper control limit but <150%) resulted in eighteen data points qualified as estimated during validation. Results that were qualified based on QC samples associated with accuracy that did not meet MPC were considered estimated but usable for evaluating project objectives.

4.5.3 Sensitivity

Sensitivity requirements were evaluated against minimum required limits of quantitation and LODs in the Programmatic UFP-QAPP (Leidos 2022a), and these criteria were met.

4.5.4 Representativeness

Representativeness was satisfied by ensuring that the Programmatic UFP-QAPP (Leidos 2022a) and Camp Bonneville SSI UFP-QAPP Addendum (Leidos 2025) protocols were followed, appropriate sampling techniques were used, established analytical procedures were implemented, and analytical

holding times of the samples were not exceeded with few exceptions. USEPA Method 1633A for the analysis of PFAS identify shortened sample holding times for four PFAS in aqueous samples and one PFAS in soil or sediment. Laboratories are unlikely to extract/analyze samples before these shortened holding times are exceeded. In total, 213 results were qualified as estimated. Based on an overall evaluation of sample collection and receipt, holding times, and precision and accuracy, the samples collected during the Camp Bonneville SSI sampling and analysis event are considered to be representative of the environmental conditions.

4.5.5 Comparability

Comparability was achieved by using consistent, documented, and Programmatic UFP-QAPP approved methods and meeting project accuracy and precision objectives. Based on the results of QC samples that assessed precision and accuracy assessment, along with the use of established method criteria (i.e., DoD QSM Version 6.0, Table B-24 [DoD 2023]), the data collected during the Camp Bonneville SSI are considered to meet project objectives for comparability.

4.5.6 Completeness

Completeness measures the amount of valid data obtained from the sampling and analysis effort. For analytical data to be usable, each data point must be validated and meet criteria without significant non-conformance. The DQOs for the Camp Bonneville SSI were set at 90 percent for field sampling and laboratory completeness. All proposed soil samples were collected. Three proposed temporary groundwater well locations could not be sampled due to the presence of an impermeable clay layer extending to 80 feet bgs and no visible indication of moisture. Field completeness was 96 percent. Based on the evaluation of the laboratory QC results, usable data for samples submitted resulted in 100 percent laboratory completeness.

4.5.7 Data Usability Assessment

Data that have been qualified as estimated (UJ) during validation indicate accuracy, precision, or sensitivity QC measurements may have exceeded criteria, but the results are considered valid and usable for the evaluation of project objectives.

5. SUPPLEMENTAL SITE INSPECTION SCREENING LEVELS

Detected concentrations of the Target PFAS in samples collected during this SSI are compared to risk-based SLs for DoD investigations documented on the PFAS Task Force website (DoD 2025b). The PFAS on the Office of the Secretary of Defense website are the RSLs included in and accepted for DoD investigations of PFAS and are calculated using the USEPA RSL calculator for soil and the tap water criteria for groundwater set at a target hazard quotient (HQ) of 0.1. These SLs (Table 5-1) are used to evaluate the data and determine if future investigation is warranted at each AOPI.

HFPO-DA was not screened against the RSL in this SSI, in accordance with DoD policy, because it is not considered a Target PFAS related to Army activity and was not detected above the LOD during the SI. Similarly, TFSI and PFPrA are not considered Target PFAS for the SSI because there are no current USEPA-approved analytical methods for these two compounds, and these compounds are largely associated with industrial manufacturing and not likely related to Army activities.

Table 5-1. Screening Levels from the 2025 ASD Memorandum

Chemical	Residential Tap Water HQ = 0.1 (ng/L or ppt)	Residential Soil HQ = 0.1 (µg/kg or ppb)
PFBA	1,800	7,800
PFBS	600	1,900
PFDA	0.52	0.06
PFHxA	990	3,200
PFHxS	10	130
PFNA	5.9	19
PFOA	4.0	0.070
PFOS	4.0	0.63

Note: The residential tap water SLs are used to evaluate groundwater and surface water data. The residential soil SLs are used to evaluate soil and sediment data. Laboratory results are reported to two significant figures.

ppb = Parts per Billion

ppt = Parts per Trillion

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6. SUPPLEMENTAL SITE INSPECTION RESULTS

This section presents the background, summary of analytical results, and a CSM for each AOPI at Camp Bonneville where Target PFAS were detected. Sampled media and QA/QC samples were analyzed for the list of 40 PFAS specified in the SSI UFP-QAPP Addendum (Leidos 2025). The sample results discussed below by AOPI focus on eight of the Target PFAS outlined in the 2025 ASD Memorandum (DoD 2025): PFOS, PFOA, PFBA, PFBS, PFNA, PFHxA, PFHxS, and PFDA. HFPO-DA was not screened against the RSL in the SSI, in accordance with DoD policy, because it is not considered a Target PFAS related to Army activity and was not detected above the LOD during the SI. Similarly, TFSI and PFPrA are not considered Target PFAS for the SSI because there are no current USEPA-approved analytical methods for these two compounds, and these compounds are largely associated with industrial manufacturing and not likely related to Army activities. HFPO-DA was not included in CSMs for each AOPI since Target PFAS were not detected at concentrations exceeding the LOD during the SI and SSI. Analytical data presentation tables for all PFAS analyzed using approved methods are provided in Appendix H.

6.1 CONCEPTUAL SITE MODELS

The preliminary CSMs developed for each AOPI during the PA and SI were further refined for each AOPI where Target PFAS were detected at concentrations greater than the LOD in sampled media. Based on the SSI sample results, CSMs presented for each AOPI represent the current understanding of site conditions with respect to known or suspected sources of PFAS-containing materials, potential transport mechanisms and migration pathways, and potentially exposed current and reasonably anticipated future human receptors.

The CSMs evaluate ingestion, dermal contact, and inhalation exposure routes for human receptors. Ecological receptors are not evaluated in this SSI. With the exception of PFBA, the human health SLs are less than the soil ecological SLs for PFAS (Grippo et al. 2024). The PFBA human health SL (7,800 µg/kg) and ecological SL (2,980 µg/kg) are both well above the maximum detected concentration of PFBA in the soil in this SSI (0.1 µg/kg). As a result, use of only the human health SLs in determining if further evaluation is required for an AOPI is considered protective of ecological receptors.

Exposure pathways describe the course a chemical takes from the source to the exposed individual (USEPA 1989). The exposure pathways are evaluated as complete, potentially complete, or incomplete in the CSMs presented in figures in each AOPI-specific CSM section. In the absence of toxicity information for the inhalation route, the inhalation exposure pathway of PFAS (via dust) is considered potentially complete for soil where Target PFAS are detected. The remaining exposure pathway designations are determined as follows:

- **Complete** – Human exposure pathways are considered complete if there is 1) a source and mechanism of chemical release; 2) a retention or transport medium (or media); 3) a point of potential human contact with the contaminated medium (the exposure point); and 4) an exposure route (e.g., ingestion, dermal contact, or inhalation).
- **Potentially Complete** – Human exposure pathways are considered potentially complete if Target PFAS have been detected and could migrate from the AOPI source area to offsite groundwater that is used for drinking water. Exposure pathways are also potentially complete for media where existing land use controls (LUCs) are in place for non-PFAS because the LUCs are not specific to Target PFAS.
- **Incomplete** – Human exposure pathways are considered incomplete for media where any one or more of the four criteria for a complete pathway are not met.

Multiple LUCs are in place at Camp Bonneville including restrictions of residential use, groundwater access and use, excavation and land disturbances, and the restriction of public access by way of a perimeter fence and signage. LUCs that apply to the AOPIs are discussed in the relevant AOPI sections below.

6.2 BUILDING 1864 FIRE STATION AOPI

The following subsections describe the background, sampling results, CSM, and recommendation for the Building 1864 Fire Station AOPI.

6.2.1 AOPI Background

The Building 1864 Fire Station is in the Bonneville cantonment and was reportedly constructed during the late 1940s. The building was used as a fire house, a fire equipment shed, and for fire truck storage from the late 1940s until the late 1970s. Building 1864 was used for pesticide mixing and storage between 1977 and 1980, before becoming a roads and grounds shop. The building had one drive-in bay and contained an interior sink that discharged to a dry well along the eastern side of the building. In June and August 2000, soil in front of the building was excavated to 2.5 feet bgs (URS 2004). In approximately 2015, the building collapsed, and the debris remains onsite. Ownership of the building was transferred from the Army to Clark County, and then BCRRT assumed ownership from Clark County in September 2006. BCRRT conveyed ownership of the building back to Clark County in December 2011. Based on the operational time frame of the fire station and because aqueous film-forming foam (AFFF) was stored and used on the fire trucks at Camp Bonneville, PFAS-containing materials may have been used, stored, and/or released at the Building 1864 Fire Station AOPI.

During the June 2023 SI fieldwork, nine soil samples and one QC duplicate sample were collected at three soil borings. One surface soil and two subsurface soil samples were collected at each boring. Two groundwater samples were collected at two temporary wells. One monitoring well was located within the suspected release area, and another monitoring well was located downgradient from the suspected release area. Due to slow recharging groundwater and tight clay, groundwater samples from temporary well CBV-1864-02 were collected once sufficient volume was present. One collocated surface water and sediment sample and one collocated QC duplicate sample were collected at an unnamed creek downgradient from the suspected release area.

Target PFAS were not detected in soil or groundwater at concentrations greater than the SLs at the time of the SI. In addition, Target PFAS were not detected at concentrations greater than the LODs in surface water and sediment samples collected at the Building 1864 Fire Station AOPI. However, concentrations of PFOA (4.9 ng/L) in the SI temporary groundwater well CBV-1864-02 exceeded the SLs adopted in January 2025. Variances in drilling methods and temporary well construction may account for anomalous data observed during the 2023 SI. Extremely low groundwater recovery at this temporary well location during the SI may not represent the local groundwater conditions further evaluated during the SSI. SI results for Target PFAS and the range of Target PFAS exceeding the January 2025 SLs at the Building 1864 Fire Station AOPI are presented in Appendix I.

6.2.2 SSI Sampling and Results

Soil, groundwater, surface water, and sediment samples were collected at the Building 1864 Fire Station AOPI at the following locations (Figure 6-1):

- Fifteen soil samples and one QC duplicate sample were collected at five soil borings (CBV-1864-04, CBV-1864-05, CBV-1864-06, CBV-1864-07, and CBV-1864-11) located within the suspected release area. One surface soil and two subsurface soil samples were collected from each boring.
- Five groundwater samples were collected at three temporary wells within the suspected release area (CBV-1864-04, CBV-1864-06, and CBV-1864-07) and two existing monitoring wells (PM-MW01

and PM-MW02). Monitoring well PM-MW01 was located upgradient of the suspected release area and PM-MW02 was located downgradient of the suspected release area.

- Three collocated surface water and sediment sample and two QC duplicate samples were collected at an unnamed creek downgradient from the suspected release area at locations CBV-1864-08, CBV-1864-09, and CBV-1864-10.

The Target PFAS analytical results for soil, groundwater, surface water, and sediment samples collected at the Building 1864 Fire Station AOPI are summarized below and presented in Table 6-1 and Figure 6-2.

6.2.2.1 Soil

PFOS and PFBA were detected at concentrations less than the SLs in surface soil samples collected at three locations within the suspected release area (CBV-1864-05, CBV-1864-07, and CBV-1864-11). Target PFAS were not detected in any other soil samples.

PFOA, PFHxA, PFHxS, PFBS, PFNA, and PFDA were not detected at concentrations greater than the LODs in any soil samples collected at the Building 1864 Fire Station AOPI.

6.2.2.2 Groundwater

PFOA was detected in groundwater at concentrations less than the SL within the suspected release area at CBV-1864-04. Target PFAS were not detected in any other groundwater samples.

PFOS, PFHxA, PFHxS, PFBS, PFNA, and PFDA were not detected at concentrations greater than the LODs in groundwater samples collected at the Building 1864 Fire Station AOPI.

6.2.2.3 Surface Water

Target PFAS were not detected at concentrations greater than the LODs in surface water samples collected at the Building 1864 Fire Station AOPI.

6.2.2.4 Sediment

Target PFAS were not detected at concentrations greater than the LODs in sediment samples collected at the Building 1864 Fire Station AOPI.

6.2.3 CSM

The Building 1864 Fire Station AOPI is approximately 0.06 acres and is a collapsed structure surrounded by grass, soil, and gravel that slopes to the south. The ground surface elevation is approximately 360 feet amsl. Based on prior investigations, groundwater flows to the southeast (URS 2004). Groundwater was encountered between 12.5 and 19 feet bgs during the June 2023 SI (Leidos 2023a). During the SSI, groundwater was encountered at approximately 10 to 21 feet bgs. Groundwater samples collected at Building 1864 were from the surficial aquifer system and not the deeper Troutdale Aquifer used for potable water supplies. The Troutdale Aquifer is typically deeper than 100 feet from the ground surface. Surface water runoff flows to the south, and a small unnamed creek that flows south toward Lacamas Creek is approximately 100 feet east of Building 1864.

Due to the storage and use of AFFF on the Camp Bonneville fire trucks, the surface soil at the AOPI is the source medium for potential PFAS contamination. The primary release mechanism is the potential release of PFAS to surface soils related to the emergency response operations at the Building 1864 Fire Station AOPI. The secondary contaminant migration and fate and transport considerations include downward contaminant migration from soil to groundwater via desorption and dissolution. Constituents could migrate to surface water due to runoff, dissolution, and adsorption from stormwater and recharge to groundwater from surface water.

Current land use at Camp Bonneville is restricted to the conservation of natural resources. Public access is restricted until all remedial actions necessary to protect human health and the environment have been completed; however, future use is expected to include recreation. Due to the current and future land use at Camp Bonneville, the human receptors considered in the CSM are onsite workers (e.g., maintenance or park workers) with the potential to work at the AOPI, onsite construction workers, future recreators evaluated for off-AOPI but on-post recreation, and off-post residents living in the vicinity of the former Camp Bonneville.

Onsite workers are not likely to engage in soil-intrusive activities and are assumed to be exposed only to surface soil while performing routine maintenance and grounds keeping. Likewise, on-post recreators are assumed to be exposed only to surface soil. Therefore, the surface soil exposure pathways are complete for the onsite worker and future on-post recreator while the subsurface soil exposure pathways are incomplete. Construction workers are assumed to be exposed to subsurface soil during digging and excavating activities, making the surface and subsurface soil exposure pathways complete. Soil exposure pathways for off-post residents are incomplete because migration of soil is not expected.

Groundwater is not currently used for drinking water and deed restrictions, not related to PFAS, limit future groundwater use to non-potable water only at the AOPI for the duration of the restrictions. Because of this, the groundwater exposure pathways for onsite workers and future on-post recreators at the Building 1864 Fire Station AOPI are considered potentially complete for the duration of the restrictions. Likewise, the groundwater ingestion exposure pathway for onsite construction workers is potentially complete for the duration of the use restrictions. However, the dermal contact exposure pathway for construction workers is complete because the depth to groundwater is within the typical construction zone and workers are expected to contact shallow groundwater during digging and excavation activities. Although drinking water wells are immediately downgradient from Camp Bonneville and Target PFAS were detected in onsite groundwater, there is no evidence of contamination moving off-post. Therefore, the groundwater exposure pathways for off-post residents are incomplete.

Surface water and sediment are not present within the AOPI boundary surrounding the former fire station foundation; making the exposure pathways for onsite workers and onsite construction workers incomplete. Surface water runoff flows to the south, and a small unnamed creek that flows south toward Lacamas Creek is approximately 100 feet east of Building 1864. No on-post surface water features are known to be used as a potable water source; however, no restrictions are in place preventing the use of surface water for drinking water. There is no evidence of a release to surface water and sediment, making the exposure pathways for future on-post recreators incomplete. Likewise, because there is no evidence of a release to surface water and sediment, the exposure pathways for off-post residents are incomplete despite the surface water drainage network eventually discharging off-post.

Figure 6-3 presents the CSM for the Building 1864 Fire Station AOPI.

6.2.4 Recommendation

Target PFAS were not detected in soil, sediment, or surface water at concentrations greater than the SLs in either the SI or SSI; therefore, further investigation of these media is not recommended. Despite the SL exceedance of PFOA at CBV-1864-02, the sampling of three temporary wells installed during the SSI and two existing permanent wells provided adequate coverage to document a wider release has not occurred at this AOPI. Additionally, other Target PFAS identified in CBV-1864-02 during the SI were also absent in the five samples collected during the SSI. Further investigation of groundwater is also not recommended.

Table 6-1. Target PFAS Results and Screening for the Building 1864 Fire Station AOPI

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Soil			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-1864-04	CB186404-SS01	0–1	9/20/2025	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.095 U	0.095 U	0.095 U
	CB186404-SB01	4–6	9/20/2025	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.093 U	0.093 U	0.093 U
	CB186404-SB02	8–10	9/20/2025	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.098 U	0.098 U	0.098 U
CBV-1864-05	CB186405-SS01	0–1	9/20/2025	0.037 U	0.1 J	0.037 U	0.037 U	0.037 U	0.085 U	0.22	0.085 U
	CB186405-SB01	4–6	9/20/2025	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.11 U	0.11 U	0.11 U
	CB186405-SB02	8–10	9/20/2025	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.098 U	0.098 U	0.098 U
CBV-1864-06	CB186406-SS01FD	0–1	9/19/2025	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.1 U	0.1 U	0.1 U
	CB186406-SS01	0–1	9/19/2025	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.094 U	0.094 U	0.094 U
	CB186406-SB01	4–6	9/19/2025	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.098 U	0.098 U	0.098 U
	CB186406-SB02	8–10	9/19/2025	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.11 U	0.11 U	0.11 U
CBV-1864-07	CB186407-SS01	0–1	9/19/2025	0.035 U	0.057 J	0.035 U	0.035 U	0.035 U	0.081 U	0.16	0.081 U
	CB186407-SB01	4–6	9/19/2025	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.074 U	0.074 U	0.074 U
	CB186407-SB02	8–10	9/19/2025	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.095 U	0.095 U	0.095 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Sediment			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-1864-08	CB186408-SD01	0–0.5	9/6/2025	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.1 U	0.1 U	0.1 U
CBV-1864-09	CB186409-SD01	0–0.5	9/6/2025	0.057 U	0.057 U	0.057 U	0.057 U	0.057 U	0.13 U	0.13 U	0.13 U
CBV-1864-10	CB186410-SD01	0–0.5	9/6/2025	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.14 U	0.14 U	0.14 U
	CB186410-SD01FD	0–0.5	9/6/2025	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.11 U	0.11 U	0.11 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Groundwater			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
CBV-1864-04	CB186404-GW01	24	9/21/2025	1.4 U	0.61 U	1.4 U	0.61 U	0.61 U	1.4 U	1.4 U	0.61 U
CBV-1864-06	CB186406-GW01	25	9/20/2025	1.5 U	0.68 U	1.5 U	0.68 U	0.68 U	1.5 U	1.5 U	0.69 J
CBV-1864-07	CB186407-GW01	25	9/20/2025	1.5 U	0.64 U	1.5 U	0.64 U	0.64 U	1.5 U	1.5 U	0.64 U
PM-MW01	PM-MW01-GW-202509	28	9/5/2025	1.5 U	0.66 U	1.5 U	0.66 U	0.66 U	1.5 U	1.5 U	0.66 U
PM-MW02	PM-MW02-GW-202509	20	9/5/2025	1.4 U	0.63 U	1.4 U	0.63 U	0.63 U	1.4 U	1.4 U	0.63 U

Table 6-1. Target PFAS Results and Screening for the Building 1864 Fire Station AOPI (Continued)

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Surface Water			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
CBV-1864-08	CB186408-SW01	–	9/6/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U
CBV-1864-09	CB186409-SW01	–	9/6/2025	1.5 U	0.65 U	1.5 U	0.65 U	0.65 U	1.5 U	1.5 U	0.65 U
	CB186409-SW01FD	–	9/6/2025	1.8 U	0.78 U	1.8 U	0.78 U	0.78 U	1.8 U	1.8 U	0.78 U
CBV-1864-10	CB186410-SW01	–	9/6/2025	1.6 U	0.72 U	1.6 U	0.72 U	0.72 U	1.6 U	1.6 U	0.72 U

The SLs are the DoD-approved residential scenario RSLs calculated using the USEPA RSL calculator for soil and tap water using an HQ = 0.1, as documented on the PFAS Task Force website (DoD 2025b).

Bolded values denote detected concentrations.

FD = Field duplicate sample.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

6.3 BUILDING 4483 FIRE STATION AOPI

The following subsections describe the background, sampling results, CSM, and recommendation for the Building 4483 Fire Station AOPI.

6.3.1 AOPI Background

Building 4483 is in the Killpack cantonment and operated as a fire station from the late 1980s until approximately 2007. The original Building 4483 was constructed as a shed garage sometime prior to 1946 and was located parallel to the main road through the installation, adjacent to Building 4475. Based on the available aerial imagery, the original building was demolished by 1990. In 1993, Building 4483 was replaced by a second building with the same number approximately 30 feet north of the original building footprint. Ownership of Building 4483 was transferred from the Army to Clark County, and then BCRRT assumed ownership from Clark County in September 2006. BCRRT conveyed ownership of the building back to Clark County in December 2011. The building is currently being used for vehicle and equipment storage. According to personnel interviews, AFFF was historically stored on the fire truck that was kept at the fire station as part of a fire protection contract with the local Clark County Fire District. Up to 20 gallons of AFFF were stored on the fire truck in 5-gallon buckets.

During the June 2023 SI fieldwork, nine soil samples and one QC duplicate sample were collected at four soil borings. One sediment sample was collected at a drainage ditch downgradient from the suspected release area. Surface water was not present in the ditch, so a sample was not collected. Two groundwater samples were planned for the Building 4483 AOPI but were not collected due to insufficient groundwater and slow recharge. Two additional groundwater samples were attempted downgradient from the Building 4483 Fire Station and the Wash Racks 1 and 2 AOPIs during a second mobilization; however, neither yielded a viable sample.

PFOS was detected at concentrations exceeding the SL in one surface soil sample collected within the suspected release area. In addition, PFOS was detected at a concentration less than the SL in the sediment sample collected downgradient from the suspected release area. No other Target PFAS were detected at concentrations greater than the LODs at the time of the SI; however, concentrations of PFOA in soil exceeded the SLs adopted in January 2025. SI results for Target PFAS and the range of Target PFAS exceeding the January 2025 SLs at the Building 4483 Fire Station AOPI are presented in Appendix I.

6.3.2 SSI Sampling and Results

Soil, surface water, and sediment samples were collected at the Building 4483 Fire Station AOPI at the following locations (Figure 6-4):

- Eighteen soil samples and two QC duplicate samples were collected at six soil borings (CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, and CBV-4483-10) located within the suspected release area. One surface soil and two subsurface soil samples were collected from each boring.
- One collocated surface water and sediment sample was collected at an unnamed creek cross/upgradient from the suspected release area at location CBV-4483-11.

Groundwater samples were not collected at the Building 4483 Fire Station AOPI due to a layer of impermeable clay that was encountered between 2 and 10 feet bgs. No moisture or groundwater was observed down to 10 feet bgs. Further discussion of this deviation can be found in Section 3.4.9.

The Target PFAS analytical results for soil, surface water, and sediment samples collected at the Building 4483 Fire Station AOPI are summarized below and presented in Table 6-2 and Figure 6-5.

6.3.2.1 Soil

PFOS, PFOA, PFBA, and PFHxS were detected in soil at the Building 4483 Fire Station AOPI, with concentrations of PFOA exceeding the SL within the suspected release area at location CBV-4483-07.

PFOA was detected at 0.12 µg/kg in surface soil at location CBV-4483-07, which exceeds the SL of 0.07 µg/kg. In addition, PFOS, PFBA, and PFHxS were detected at concentrations less than the SLs in surface soil at CBV-4483-07.

PFOS was detected at concentrations less than the SL in surface soil collected at CBV-4483-08 and CBV-4483-10, and PFBA was detected at concentrations less than the SL in surface soil collected at CBV-4483-09 and CBV-4483-10. Target PFAS were not detected in any other surface and subsurface soil samples at the Building 4483 Fire Station AOPI.

PFBS, PFNA, PFHxA, and PFDA were not detected at concentrations greater than the LODs in soil collected at the Building 4483 Fire Station AOPI.

6.3.2.2 Surface Water

Target PFAS were not detected at concentrations greater than the LODs in surface water samples collected at the Building 4483 Fire Station AOPI.

6.3.2.3 Sediment

Target PFAS were not detected at concentrations greater than the LODs in sediment samples collected at the Building 4483 Fire Station AOPI.

6.3.3 CSM

The Building 4483 Fire Station AOPI is approximately 0.16 acres. Building 4483 has one drive-in bay and a concrete floor. The exterior ground surface is partially vegetated, dirt, and gravel and slopes to the southwest. The ground surface elevation is approximately 365 feet amsl. Based on prior investigations, groundwater flows to the southeast and the depth to groundwater is expected to be within 16 feet bgs (URS 2004). During the SI, groundwater samples were not collected at the Building 4483 Fire Station AOPI due to insufficient water and slow recharge in borings advanced to the depth of refusal between 20 and 25 feet bgs. Groundwater was not encountered during drilling activities at the time of the SSI due to the presence of an impermeable clay layer. Infiltration of the impermeable clay layer may occur in shallow soil at isolated locations but is not regularly observed throughout the AOPI and a saturated zone is not present. A drainage ditch is located along the western side of Building 4483, extends behind (south of) Building 4483, and continues southwest along a gravel driveway leading to the shop office area before connecting with the drainage ditch along the main road. A small unnamed stream is located approximately 50 feet east of Building 4483, adjacent to the former location of Wash Rack 1. The stream flows into a culvert that emerges below the gravel pad of the shop office area and then flows above ground for approximately 15 feet before entering another culvert running south under the road and then continuing south toward Lacamas Creek.

Due to the potential storage and use of AFFF on the Camp Bonneville fire trucks, the surface soil at the AOPI is the source medium for potential PFAS contamination. The primary release mechanism is the potential release of PFAS to surface soils related to the emergency response operations at the Building 4483 Fire Station AOPI. The secondary contaminant migration and fate and transport considerations include downward contaminant migration from soil to groundwater via desorption and dissolution. Constituents could migrate to surface water due to runoff, dissolution, and adsorption from stormwater and recharge to groundwater from surface water.

Current land use at Camp Bonneville is restricted to the conservation of natural resources. Public access is restricted until all remedial actions necessary to protect human health and the environment have been completed; however, future use is expected to include recreation. Due to the current and future land use at Camp Bonneville, the human receptors considered in the CSM are onsite workers (e.g., maintenance or park workers) with the potential to work at the AOPI, onsite construction workers, future recreators evaluated for off-AOPI but on-post recreation, and off-post residents living in the vicinity of the former Camp Bonneville.

Onsite workers are not likely to engage in soil-intrusive activities and are assumed to be exposed only to surface soil while performing routine maintenance and grounds keeping. Likewise, on-post recreators are assumed to be exposed only to surface soil. Therefore, the surface soil exposure pathways are complete for the onsite worker and future on-post recreator while the subsurface soil exposure pathways are incomplete. Construction workers are assumed to be exposed to subsurface soil during digging and excavating activities, making the surface and subsurface soil exposure pathways complete. Soil exposure pathways for off-post residents are incomplete because migration of soil is not expected.

Groundwater is not currently used for drinking water and deed restrictions, not related to PFAS, limit future groundwater use to non-potable water only at the AOPI for the duration of the restrictions. Additionally, a layer of impermeable clay extends to 80 feet bgs at the adjacent Wash Racks 1 and 2 AOPI. Lean clay with a stiff and dry composition was observed starting at the surface and continued down to 2 feet bgs. Fat clay with a very stiff and dry composition was observed between 2 to 10 feet bgs before the boring was terminated. The groundwater exposure pathways for onsite receptors at the Building 4483 Fire Station AOPI are considered incomplete. Because the depth to groundwater is deeper than the typical construction zone (i.e., greater than 15 feet bgs), construction workers are not expected to contact shallow groundwater while working and the groundwater pathway for dermal contact is incomplete. In addition, although drinking water wells are immediately downgradient from Camp Bonneville and Target PFAS were detected in onsite groundwater, there is no evidence of contamination moving off-post. Therefore, the groundwater exposure pathways for off-post residents are incomplete.

Surface water and sediment are not present within the AOPI boundary, making the exposure pathways for onsite workers and onsite construction workers incomplete. A drainage ditch is located along the western side of Building 4483 that continues southwest along a gravel driveway leading to the shop office area before connecting with the drainage ditch along the main road. A small unnamed stream is located approximately 50 feet east of Building 4483, adjacent to the former location of Wash Rack 1. The stream flows into a culvert that emerges below the gravel pad of the shop office area and then flows aboveground for approximately 15 feet before entering another culvert running south under the road and then continuing south toward Lacamas Creek. No on-post surface water features are known to be used as a potable water source; however, no restrictions are in place preventing the use of surface water for drinking water. There is no evidence of a release to surface water and sediment, making the exposure pathways for future on-post recreators incomplete. Likewise, because there is no evidence of a release to surface water and sediment, the exposure pathways for off-post residents are incomplete despite the surface water drainage network eventually discharging off-post.

Figure 6-6 presents the CSM for the Building 4483 Fire Station AOPI.

6.3.4 Recommendation

Target PFAS were detected in soil at concentrations greater than the SLs; therefore, further investigation is recommended.

Table 6-2. Target PFAS Results and Screening for the Building 4483 Fire Station AOPI

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Soil			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-4483-05	CB448305-SS01	0–1	9/22/2025	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.083 U	0.083 U	0.083 U
	CB448305-SB01	4–6	9/22/2025	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.098 U	0.098 U	0.098 U
	CB448305-SB02	8–10	9/22/2025	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12 U	0.12 U	0.12 U
CBV-4483-06	CB448306-SS01	0–1	9/22/2025	0.036 U	0.036 U	0.036 U	0.036 U	0.036 U	0.082 U	0.082 U	0.082 U
	CB448306-SB01	4–6	9/22/2025	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.11 U	0.11 U	0.11 U
	CB448306-SB02	8–10	9/22/2025	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.11 U	0.11 U	0.11 U
CBV-4483-07	CB448307-SS01	0–1	9/22/2025	0.04 U	0.083 J	0.04 U	0.063 J	0.04 U	0.092 U	0.61	0.12
	CB448307-SB01	4–6	9/22/2025	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.096 U	0.096 U	0.096 U
	CB448307-SB02	8–10	9/22/2025	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.11 U	0.11 U	0.11 U
CBV-4483-08	CB448308-SS01	0–1	9/22/2025	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.092 U	0.1 J	0.092 U
	CB448308-SB01	4–6	9/22/2025	0.041 U	0.041 U	0.041 U	0.041 U	0.041 U	0.094 U	0.094 U	0.094 U
	CB448308-SB02	8–10	9/22/2025	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.11 U	0.11 U	0.11 U
CBV-4483-09	CB448309-SS01	0–1	9/22/2025	0.036 U	0.051 J	0.036 U	0.036 U	0.036 U	0.082 U	0.082 U	0.082 U
	CB448309-SB01	4–6	9/22/2025	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.1 U	0.1 U	0.1 U
	CB448309-SB01FD	4–6	9/22/2025	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.098 U	0.098 U	0.098 U
	CB448309-SB02	8–10	9/22/2025	0.049 U	0.049 U	0.049 U	0.049 U	0.049 U	0.11 U	0.11 U	0.11 U
CBV-4483-10	CB448310-SS01	0–1	9/22/2025	0.038 U	0.081 J	0.038 U	0.038 U	0.038 U	0.086 U	0.11	0.086 U
	CB448310-SB01	4–6	9/22/2025	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.11 U	0.11 U	0.11 U
	CB448310-SB01FD	4–6	9/22/2025	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.11 U	0.11 U	0.11 U
	CB448310-SB02	8–10	9/22/2025	0.046 U	0.046 U	0.046 U	0.046 U	0.046 U	0.11 U	0.11 U	0.11 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Sediment			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-4483-11	CB448311-SD01	0–0.5	9/6/2025	0.064 U	0.064 U	0.064 U	0.064 U	0.064 U	0.15 U	0.15 U	0.15 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Surface Water			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
CBV-4483-11	CB448311-SW01	–	9/6/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U

The SLs are the DoD-approved residential scenario RSLs calculated using the USEPA RSL calculator for soil and tap water using an HQ = 0.1, as documented on the PFAS Task Force website (DoD 2025b).

Bolded values denote detected concentrations.

Highlighted values indicate a value equal to or exceeding the screening level.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

FD = Field duplicate sample.

6.4 WASH RACKS 1 AND 2 AOPI

The following subsections describe the background, sampling results, CSM, and recommendation for the Wash Racks 1 and 2 AOPI.

6.4.1 AOPI Background

Wash Rack 1 was immediately west of Building 4475. It consisted of a wooden two-track vehicle ramp that was used for vehicle washing between 1978 and circa 1994 (EEI 2010). In June 2000, Wash Rack 1 was dismantled and the soil beneath was excavated to 3.5 feet bgs (URS 2004). Wash Rack 2, also referred to as the vehicle maintenance rack, was at the northeastern corner of the shop office area, adjacent to Building 4476. It was constructed of two parallel wooden timbers with gravel in between, and it was used as a wash rack and vehicle maintenance rack until it was deconstructed in the 1980s (Woodward-Clyde 1997). Ownership of the property associated with Wash Racks 1 and 2 was transferred from the Army to Clark County, and then BCRRT assumed ownership from Clark County in September 2006. BCRRT conveyed ownership of the property back to Clark County in December 2011. AFFF is reported to have been present on the fire truck at the adjacent Building 4483 Fire Station. Wash Racks 1 and 2 are being considered a single AOPI due to their proximity and similar use and because these facilities may have received PFAS-containing AFFF during fire truck cleaning activities.

During the June 2023 SI fieldwork, eight soil samples and one QC duplicate sample were collected at three soil borings. One groundwater sample and one QC duplicate were collected at a temporary monitoring well located side gradient of Wash Rack 1 and downgradient from the suspected release area of Wash Rack 2. One collocated surface water and sediment sample was collected downgradient from the suspected release area. Two additional groundwater samples were attempted downgradient from the Building 4483 Fire Station and the Wash Racks 1 and 2 AOPI during a second mobilization; however, neither yielded a viable sample.

Target PFAS were not detected at concentrations greater than the LOD in any soil samples collected at the Wash Racks 1 and 2 AOPI. PFOS, PFBA, PFHxA, and PFHxS were detected at concentrations less than the SLs downgradient from the suspected release area. SI results for Target PFAS and the range of Target PFAS exceeding the January 2025 SLs at the Wash Racks 1 and 2 AOPI are presented in Appendix I.

6.4.2 SSI Sampling and Results

Soil, surface water, and sediment samples were collected at the Wash Racks 1 and 2 AOPI at the following locations (Figure 6-7):

- Six soil samples and one QC duplicate sample were collected at two soil borings (CBV-WR12-06 and CBV-WR12-07) located within the suspected release area. One surface soil and two subsurface soil samples were collected from each boring.
- Two collocated surface water and sediment samples were collected downgradient from the suspected release area at locations CBV-WR12-08 and CBV-WR12-09.

Groundwater samples were not collected at the Wash Racks 1 and 2 AOPI due to a layer of impermeable clay that extended to 80 feet bgs. Further discussion of this deviation can be found in Section 3.4.9.

The Target PFAS analytical results for soil, surface water, and sediment samples collected at the Wash Racks 1 and 2 AOPI are summarized below and presented in Table 6-3 and Figure 6-8.

6.4.2.1 Soil

PFOS, PFOA, PFBA, and PFHxS were detected in soil at the Wash Racks 1 and 2 AOPI, with concentrations of PFOS and PFOA exceeding the SL within the suspected release area at location CBV-WR12-07.

PFOS was detected at 0.96 µg/kg and PFOA was detected at 0.095 µg/kg (estimated) in surface soil at sampling location CBV-WR12-07, which exceed the SLs of 0.63 and 0.070 µg/kg, respectively. PFBA was detected at concentrations less than the SL in surface soil at location CBV-WR12-07. In addition, PFOS and PFHxS were detected at concentrations less than the SLs in shallow subsurface soil (4-6 feet bgs) at location CBV-WR12-07. Target PFAS were not detected in any other soil samples collected at the Wash Racks 1 and 2 AOPI.

PFBS, PFHxA, PFNA, and PFDA were not detected at concentrations greater than the LODs in soil collected at the Wash Racks 1 and 2 AOPI.

6.4.2.2 Surface Water

Target PFAS were not detected at concentrations greater than the LODs in surface water samples collected at the Wash Racks 1 and 2 AOPI.

6.4.2.3 Sediment

Target PFAS were not detected at concentrations greater than the LODs in sediment samples collected at the Wash Racks 1 and 2 AOPI.

6.4.3 CSM

Wash Rack 1 is approximately 0.03 acres and is in a partially vegetated, dirt and gravel open storage area, which is enclosed within the chain-link fence that surrounds the shop office area. Wash Rack 2 is approximately 0.01 acres and is in a partially open clearing that has been revegetated with a mixture of tall grasses, brush, and trees. The ground surface elevation at the Wash Racks 1 and 2 AOPI is approximately 365 feet amsl. During the SI, groundwater downgradient of Wash Rack 2 was encountered at 13 feet bgs (location CBV-WR12-04); however, this condition was not observed within the boundary of Wash Rack 1 or Wash Rack 2 (Leidos 2023a). Groundwater was not encountered during drilling activities at the time of the SSI. The SSI explored soil to a depth of 80 feet bgs which was characteristic of impermeable clay. Infiltration of the impermeable clay layer may occur in shallow soil at isolated locations but is not regularly observed throughout the AOPI and a saturated zone is not present.

Surface water runoff from Wash Rack 1 flows toward the road and into an unnamed stream that crosses the Killpack cantonment. The stream flows into a culvert that emerges below the gravel pad of the shop office area and then flows aboveground for approximately 15 feet before entering another culvert running south under the road and then continuing south toward Lacamas Creek. The ground surface at Wash Rack 2 slopes to the south toward the road. Surface water from Wash Rack 2 flows toward a ditch that runs along the northern side of the road and joins the stream and runs under the road through the same culvert.

Due to the washing of fire trucks that stored and used AFFF, the surface soil at the AOPI is the source medium for potential PFAS contamination. The primary release mechanism is the potential release of PFAS to surface soils related to washing fire trucks at the Wash Racks 1 and 2 AOPI. The secondary contaminant migration and fate and transport considerations include downward contaminant migration from soil to groundwater via desorption and dissolution. Constituents could migrate to surface water due to runoff, dissolution, and adsorption from stormwater and recharge to groundwater from surface water.

Current land use at Camp Bonneville is restricted to the conservation of natural resources. Public access is restricted until hazardous waste and MEC remediation is complete; however, future use is expected to include recreation. Due to the current and future land use at Camp Bonneville, the human receptors considered in the CSM are onsite workers (e.g., maintenance or park workers) with the potential to work at the AOPI, onsite construction workers, future recreators evaluated for off-AOPI but on-post recreation, and off-post residents living in the vicinity of the former Camp Bonneville.

Onsite workers are not likely to engage in soil-intrusive activities and are assumed to be exposed only to surface soil while performing routine maintenance and grounds keeping. Likewise, on-post recreators are assumed to be exposed only to surface soil. Therefore, the surface soil exposure pathways are complete for the onsite worker and future on-post recreator while the subsurface soil exposure pathways are incomplete. Construction workers are assumed to be exposed to subsurface soil during digging and excavating activities, making the surface and subsurface soil exposure pathways complete. Soil exposure pathways for off-post residents are incomplete because migration of soil is not expected.

Groundwater is not currently used for drinking water and deed restrictions, not related to PFAS, limit future groundwater use to non-potable water only at the AOPI for the duration of the restrictions. Additionally, a layer of impermeable clay extends to 80 feet bgs. At boring location CBV-WR12-06, fat clay with a very stiff and dry composition was observed starting at the surface and continued down to 50 feet bgs. Lean clay with a stiff and dry composition was observed between 50 to 80 feet bgs before the boring was terminated. The groundwater exposure pathways for onsite receptors at the Wash Racks 1 and 2 AOPI are considered incomplete. The dermal contact exposure pathway for construction workers is also incomplete due to the depth to groundwater and usage restrictions in place. Although drinking water wells are immediately downgradient from Camp Bonneville and Target PFAS were detected in onsite groundwater, there is no evidence of contamination moving off-post. Therefore, the groundwater exposure pathways for off-post residents are incomplete.

Surface water and sediment are not present within the AOPI boundary, making the exposure pathways for onsite workers and onsite construction workers incomplete. Surface water runoff from Wash Rack 1 flows toward the road and into an unnamed stream that crosses the Killpack cantonment. The stream flows into a culvert that emerges below the gravel pad of the shop office area and then flows aboveground for approximately 15 feet before entering another culvert running south under the road and then continuing south toward Lacamas Creek. The ground surface at Wash Rack 2 slopes to the south toward the road. Surface water from Wash Rack 2 flows toward a ditch that runs along the northern side of the road and joins the stream and runs under the road through the same culvert. No on-post surface water features are known to be used as a potable water source; however, no restrictions are in place preventing the use of surface water for drinking water. There is no evidence of a release to surface water and sediment, making the exposure pathways for future on-post recreators incomplete. Likewise, because there is no evidence of a release to surface water and sediment, the exposure pathways for off-post residents are incomplete despite the surface water drainage network eventually discharging off-post.

Figure 6-9 presents the CSM for the Wash Racks 1 and 2 AOPI.

6.4.4 Recommendation

Target PFAS were detected in soil at concentrations greater than the SLs; therefore, further investigation is recommended.

Table 6-3. Target PFAS Results and Screening for the Wash Racks 1 and 2 AOPI

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Soil			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-WR12-06	CBWR1206-SS01	0–1	9/20/2025	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.11 U	0.11 U	0.11 U
	CBWR1206-SB01	4–6	9/20/2025	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.1 U	0.1 U	0.1 U
	CBWR1206-SB02	8–10	9/20/2025	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.11 U	0.11 U	0.11 U
CBV-WR12-07	CBWR1207-SS01FD	0–1	9/21/2025	0.037 U	0.062 J	0.037 U	0.037 U	0.037 U	0.084 U	0.87	0.095 J
	CBWR1207-SS01	0–1	9/21/2025	0.038 U	0.084 J	0.038 U	0.038 U	0.038 U	0.086 U	0.96	0.086 U
	CBWR1207-SB01	4–6	9/21/2025	0.047 U	0.047 U	0.047 U	0.14	0.047 U	0.11 U	0.25	0.11 U
	CBWR1207-SB02	8–10	9/21/2025	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.11 U	0.11 U	0.11 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Sediment			Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
			Screening Levels	1900	7800	0.06	130	3200	19	0.63	0.070
CBV-WR12-08	CBWR1208-SD01	0–0.5	9/6/2025	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.14 U	0.14 U	0.14 U
CBV-WR12-09	CBWR1209-SD01	0–0.5	9/6/2025	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.25 U	0.25 U	0.25 U

Location ID	Sample ID	Depth (feet)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Surface Water			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
CBV-WR12-08	CBWR1208-SW01	–	9/6/2025	1.5 U	0.65 U	1.5 U	0.65 U	0.65 U	1.5 U	1.5 U	0.65 U
CBV-WR12-09	CBWR1209-SW01	–	9/6/2025	1.4 U	0.63 U	1.4 U	0.63 U	0.63 U	1.4 U	1.4 U	0.63 U

The SLs are the DoD-approved residential scenario RSLs calculated using the USEPA RSL calculator for soil and tap water using an HQ = 0.1, as documented on the PFAS Task Force website (DoD 2025b).

Bolded values denote detected concentrations.

Highlighted values indicate a value equal to or exceeding the screening level.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

FD = Field duplicate sample.

6.5 LANDFILL 4/DEMOLITION AREA 1 AOPI

The following subsections describe the background, sampling results, CSM, and recommendation for the Landfill 4/Demolition Area 1 AOPI.

6.5.1 AOPI Background

Landfill 4 was reportedly used by Vancouver Barracks for disposal of building demolition debris in the mid-1960s (Woodward-Clyde 1997). Surface debris at the landfill consisted primarily of metal scraps, such as wiring, metal shards, and automobile parts. Demolition Area 1 was collocated with Landfill 4, and use of the area began in the late 1960s. According to an interview conducted for the Environmental Baseline Survey, the landfill was also used for the disposal of firearms; however, the time frame for this disposal was not reported. Several groups and agencies have used Demolition Area 1 for training and disposal operations for a wide range of UXO, accelerants, and miscellaneous explosives, including the Army; Portland Air National Guard; the Bureau of Alcohol, Tobacco, and Firearms; local fire departments; and law enforcement (BCRRT 2009). Landfill material encountered during a 2004 interim removal action at Landfill 4 included remnants of burned military flares, rocket mortars, practice ordnance, ammunition, casings, civilian fireworks, and other ordnance-like items and munitions debris (EEI 2012). The interim removal action also included the excavation, sampling, and disposal of approximately 16,500 tons of landfill debris, obviously stained or contaminated soil, and visually uncontaminated landfill soil (TetraTech 2006). Sampling of groundwater at Landfill 4/Demolition 1 is performed quarterly for explosives and VOCs (PBS 2025).

No evidence of PFAS waste disposal was identified through interviews, record reviews, and site visits during the PA. Debris with potentially PFAS-containing materials may have been disposed of at Landfill 4/Demolition Area 1 during operational periods. Due to the confirmed presence of PFAS at the Fire Station Building 1864 and Fire Station Building 4483 AOPIs, Landfill 4/Demolition Area 1 may have accepted PFAS-containing waste; therefore, investigation in an SSI was warranted.

6.5.2 SSI Sampling and Results

Groundwater samples were collected at the Landfill 4/Demolition Area 1 AOPI at the following locations (Figure 6-10):

- Five groundwater samples were collected at five existing monitoring wells. Four monitoring wells were within the suspected release area (L4MW04A, L4MW05A, L4MW09A, and L4MW09B), and one monitoring well (L4MW07B) was located downgradient from the suspected release area.

Soil was not collected at the Landfill 4/Demolition Area AOPI because the Army's approach at this time does not include intrusive activities within landfills. Surface water and sediment are not present at the AOPI.

The Target PFAS analytical results for groundwater at the Landfill 4/Demolition Area 1 AOPI are summarized below and presented in Table 6-4 and Figure 6-11.

6.5.2.1 Groundwater

Target PFAS were not detected at concentrations greater than the LODs in groundwater samples collected at the Landfill 4/Demolition Area 1 AOPI.

6.5.3 CSM

The ground surface elevation of Landfill 4/Demolition Area 1 is 515 feet amsl. This landfill is in the north-central part of the installation and underlies Demolition Area 1. The site was previously reported to contain several patches of soil with a pinkish-red hue that were generally devoid of vegetation. The cause

of the discoloration is unknown; however, it is consistent with similarly discolored surface soil that has been reported at sites with explosives contamination (SWT 1999). During SSI fieldwork, this area was observed to consist of grassy, maintained vegetative cover. Shallow groundwater beneath the AOPI is encountered between 23 and 31 feet bgs, and the flow direction is moving to the west/southwest based on the proximity of North Fork Lacamas Creek and the general groundwater gradient in the area (PBS 2025). During the SSI, groundwater was encountered at approximately 25 to 43 feet bgs. Groundwater samples collected at Landfill 4/Demolition Area 1 were from a geologically isolated shallow groundwater system and not the Troutdale Aquifer used for potable water supplies. The Troutdale Aquifer is typically deeper than 100 feet from the ground surface.

No evidence of PFAS waste disposal was identified through interviews, record reviews, and site visits during the PA (Leidos 2023b). Debris with potentially PFAS-containing materials may have been disposed of at Landfill 4/Demolition Area 1 during operational periods. Due to the confirmed presence of PFAS at the Fire Station Building 1864 and Fire Station Building 4483 AOPIs, Landfill 4/Demolition Area 1 may have accepted PFAS-containing waste. Due to the potential disposal of PFAS-containing materials, the soil at the AOPI is the source medium for potential PFAS contamination. The primary release mechanism is the potential release of PFAS to soils related to materials disposal at the Landfill 4/Demolition Area 1 AOPI. The secondary contaminant migration and fate and transport considerations include downward contaminant migration from soil to groundwater via desorption and dissolution.

Current land use at Camp Bonneville is restricted to the conservation of natural resources. Public access is restricted until all remedial actions necessary to protect human health and the environment have been completed; however, future use is expected to include recreation. Due to the current and future land use at Camp Bonneville, the human receptors considered in the CSM are onsite workers (e.g., maintenance or park workers) with the potential to work at the AOPI, onsite construction workers, future recreators evaluated for off-AOPI but on-post recreation, and off-post residents living in the vicinity of the former Camp Bonneville.

Onsite workers are not likely to engage in soil-intrusive activities and are assumed to be exposed only to surface soil while performing routine maintenance and grounds keeping. Likewise, on-post recreators are assumed to be exposed only to surface soil. Therefore, the surface soil exposure pathways are complete for the onsite worker and future on-post recreator while the subsurface soil exposure pathways are incomplete. The soil exposure pathways for construction workers are incomplete due to the restriction on intrusive activities at Landfill 4/Demolition Area 1. Soil exposure pathways for off-post residents are incomplete because migration of soil is not expected.

Groundwater is not currently used for drinking water and deed restrictions, not related to PFAS, limit future groundwater use to non-potable water only at the AOPI for the duration of the restrictions (BCRRT 2011). The groundwater exposure pathways for onsite receptors at the Landfill 4/Demolition Area 1 AOPI are considered incomplete for the duration of the restrictions. Because the depth to groundwater is deeper than the typical construction zone (i.e., greater than 15 feet bgs), construction workers are not expected to contact shallow groundwater while working and the groundwater pathway for dermal contact is incomplete. In addition, although drinking water wells are immediately downgradient from Camp Bonneville and Target PFAS were detected in onsite groundwater, there is no evidence of contamination migrating in the off-post direction. Therefore, the groundwater exposure pathways for off-post residents are incomplete.

Figure 6-12 presents the CSM for the Landfill 4/Demolition Area 1 AOPI.

6.5.4 Recommendation

Target PFAS were not detected at concentrations greater than the SLs; therefore, further investigation is not recommended.

Table 6-4. Target PFAS Results and Screening for the Landfill 4/Demolition Area 1 AOPI

Location ID	Sample ID	Depth (ft)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Groundwater			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
L4MW04A	L4MW04A-GW-202509	44	9/6/2025	1.4 U	0.61 U	1.4 U	0.61 U	0.61 U	1.4 U	1.4 U	0.61 U
L4MW05A	L4MW05A-GW-202509	34	9/6/2025	1.5 U	0.67 U	1.5 U	0.67 U	0.67 U	1.5 U	1.5 U	0.67 U
L4MW07B	L4MW07B-GW-202509	57	9/5/2025	1.4 U	0.59 U	1.4 U	0.59 U	0.59 U	1.4 U	1.4 U	0.59 U
	L4MW07B-GW-202509FD	57	9/5/2025	1.4 U	0.61 U	1.4 U	0.61 U	0.61 U	1.4 U	1.4 U	0.61 U
L4MW09A	L4MW09A-GW-202509	40	9/6/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U
L4MW09B	L4MW09B-GW-202509	75	9/6/2025	1.4 U	0.59 U	1.4 U	0.59 U	0.59 U	1.4 U	1.4 U	0.59 U

The SLs are the DoD-approved residential scenario RSLs calculated using the USEPA RSL calculator for soil and tap water using an HQ = 0.1, as documented on the PFAS Task Force website (DoD 2025b).

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

FD = Field duplicate sample.

6.6 SUPPLEMENTARY ASSESSMENT OF BOUNDARY MIGRATION POTENTIAL

The following subsections describe the rationale and results of supplementary groundwater samples collected near the Camp Bonneville facility boundary and provide recommendations based on results.

6.6.1 Background and Purpose

Target PFAS exceeding the SLs were observed in soil and groundwater upgradient of Lacamas Creek at the Building 4483 Fire Station and Building 1864 Fire Station AOPIs during the June 2023 SI (Leidos 2023a). As a result, an investigation of the tributaries to Lacamas Creek surface water and existing monitoring wells along the southwestern boundary was conducted to identify potential off-post migration of PFAS in surface water and groundwater. The location of Lacamas Creek is shown in Figure 6-13.

6.6.2 SSI Sampling and Results

Figure 6-13 presents the locations of perimeter groundwater samples collected during the SSI at Camp Bonneville. In addition to the AOPI-specific surface water and sediment locations described previously, five existing perimeter monitoring wells near the Camp Bonneville boundary were sampled to evaluate conditions near the southwestern boundary of the site. LCMW01D was sampled at 40 feet bgs, LCMW01S and LCMW09S were sampled at 21 feet bgs, LCMW02S was sampled at 15 feet bgs, and LCMW04S was sampled at 14 feet bgs.

The Target PFAS analytical results for the boundary groundwater samples are summarized below and presented in Table 6-5 and Figure 6-14.

6.6.2.1 Groundwater

Target PFAS were not detected at concentrations greater than the LODs in any groundwater samples collected at the southwestern boundary of Camp Bonneville.

6.6.3 Recommendation

Target PFAS were not detected in groundwater at the southwestern boundary; therefore, further investigation is not recommended.

Table 6-5. Target PFAS Results and Screening for the Southwest Boundary Assessment

Location ID	Sample ID	Depth (ft)	Sample Date	PFBS	PFBA	PFDA	PFHxS	PFHxA	PFNA	PFOS	PFOA
Groundwater			Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
			Screening Levels	600	1800	0.52	10	990	5.9	4.0	4.0
LCMW01D	LCMW01D-GW-202509	40	9/5/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U
LCMW01S	LCMW01S-GW-202509	21	9/5/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U
LCMW02S	LCMW02S-GW-202509	15	9/5/2025	1.4 U	0.63 U	1.4 U	0.63 U	0.63 U	1.4 U	1.4 U	0.63 U
LCMW04S	LCMW04S-GW-202509	14	9/5/2025	1.4 U	0.63 U	1.4 U	0.63 U	0.63 U	1.4 U	1.4 U	0.63 U
LCMW09S	LCMW09S-GW-202509	21	9/4/2025	1.4 U	0.61 U	1.4 U	0.61 U	0.61 U	1.4 U	1.4 U	0.61 U
	LCMW09S-GW-202509FD	21	9/4/2025	1.4 U	0.60 U	1.4 U	0.60 U	0.60 U	1.4 U	1.4 U	0.60 U

The SLs are the DoD-approved residential scenario RSLs calculated using the USEPA RSL calculator for soil and tap water using an HQ = 0.1, as documented on the PFAS Task Force website (DoD 2025b).

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

FD = Field duplicate sample.

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7. CONCLUSIONS AND RECOMMENDATIONS

An SI is conducted when the PFAS PA determines an AOPI exists based on probable use, storage, and/or disposal of PFAS-containing materials. The SI includes multimedia sampling at AOPIs to determine whether a release has occurred. The SI may conclude further investigation is warranted, a removal action is required to address immediate threats, or no further action is required (40 CFR §300.420(5)). SI field activities were conducted in July 2023 with a final report issued in December 2023. This SSI is designed to supplement and update information in the Camp Bonneville SI Report (Leidos 2023a) based on new information gathered during subsequent scoping evaluations. The SSI addendum scope included preparation of project planning documents, field investigation, validation and management of analytical data, comparison of analytical data to the ASD SLs published in the 2025 ASD Memorandum (DoD 2025a), and documentation of the investigation results. The SLs established by the 2025 ASD Memorandum (DoD 2025a) were adopted after the completion of the SI, thus resulting in an exceedance of Target PFAS in groundwater at the Building 1864 Former Fire Station AOPI. To verify the results of the SI, additional monitoring wells were installed during the SSI to confirm presence or absence of Target PFAS downgradient from the location of the groundwater exceedance. Additionally, samples collected during the SSI were analyzed using USEPA Method 1633A to further verify the results of the SI. This SSI Report used the findings from the PFAS PA/SI in conjunction with soil and groundwater sampling data for each AOPI to further characterize and determine the presence/absence of PFAS at Camp Bonneville, determine whether a release has affected or may affect specific human health targets, and address data gaps identified during the regulatory review of the Camp Bonneville PFAS SI Report.

Before the SI sampling, a preliminary CSM was developed in the PFAS PA for each AOPI based on an evaluation of existing records, personnel interviews, and site reconnaissance. The preliminary CSMs were refined during the SI and SSI and identified potential human receptors and exposure pathways for groundwater and surface water that is known to be used, or could realistically be used in the future, as a source of drinking water and identified potential soil and sediment exposure pathways. All AOPIs were sampled during the SSI at Camp Bonneville to further evaluate PFAS-related releases and identify the presence or absence of Target PFAS.

PFOA was detected in soil at concentrations greater than the SL at both the Building 4483 Fire Station and Wash Racks 1 and 2 AOPIs. PFOS was also detected at concentrations greater than the SL at the Wash Racks 1 and 2 AOPI. All soil SL exceedances were limited to surface soil collected at CBV-4483-07 and CBV-WR12-07). In addition, PFBA and PFHxS, were detected in soil at concentrations less than the SLs at one or more AOPI. PFBS, PFNA, PFHxA, and PFDA were not detected at concentrations greater than the LOD in any soil samples collected at Camp Bonneville.

Target PFAS were detected in groundwater samples collected at one AOPI. PFOA was detected at concentrations less than the SL at the Building 1864 Fire Station AOPI. Although PFOA was detected at concentrations greater than the January 2025 SLs at the Building 1864 Fire Station AOPI during the June 2023 SI (i.e., CBV-1864-02), no exceedances were observed in additional monitoring wells installed during the SSI. Target PFAS were not detected in groundwater at any other location.

The CSMs were updated for each AOPI where Target PFAS were detected at concentrations greater than the LODs. The updated CSMs detail site geological conditions; determine primary and secondary release mechanisms; identify potential human receptors; and detail complete, potentially complete, and incomplete exposure pathways for current and reasonably anticipated future exposure scenarios.

Complete exposure pathways for surface soil are present at all AOPIs and subsurface soil exposure pathways are complete for the construction worker at all AOPIs. The inhalation exposure pathway is considered potentially complete at all AOPIs because there is no toxicity information available for the inhalation route.

Groundwater is not currently used for drinking water and deed restrictions, not related to PFAS, limit future groundwater use to non-potable water only at the AOPIs for the duration of the restrictions. The groundwater exposure pathways for onsite receptors at all four AOPIs are considered incomplete. However, the groundwater pathway for dermal contact is complete at the Building 1864 Fire Station AOPI because the depth to groundwater is within the typical construction zone and workers are expected to contact shallow groundwater during digging and excavation activities. The groundwater pathway for dermal contact is incomplete at the Building 4483 Fire Station and Landfill 4/Demolition Area 1 AOPIs because the depth to groundwater is deeper than the typical construction zone (i.e., >15 feet bgs). Samples collected were from the surficial aquifer system and not the deeper Troutdale Aquifer used for potable water supplies. The Troutdale Aquifer is typically deeper than 100 feet from the ground surface. Groundwater exposure pathways for off-post residents are incomplete because although there are drinking water wells immediately downgradient from Camp Bonneville and Target PFAS were detected in on-post groundwater, there is no evidence of contamination migrating off-post.

Surface water and sediment are not present within the boundaries of any AOPI, making the exposure pathways for onsite receptors incomplete at all four AOPIs. No on-post surface water features are known to be used as a potable water source; however, no restrictions are in place preventing the use of surface water for drinking water. There is no evidence of a release to surface water and sediment, making the exposure pathways for future on-post recreators incomplete. Likewise, because there is no evidence of a release to surface water and sediment, the exposure pathways for off-post residents are incomplete despite the surface water drainage network eventually discharging off-post.

Although groundwater was collected at the Wash Racks 1 and 2 AOPI during the June 2023 SI, this condition was not observed within the boundary of Wash Rack 1 or Wash Rack 2 (Leidos 2023a). Groundwater was not collected at the AOPI during the SSI due to the presence of an impermeable clay layer containing insufficient water for sample collection down to 80 feet bgs. Recovered soils in the AOPI suggest low permeability conditions that does not store water. Infiltration of the impermeable clay layer may occur in shallow soil at isolated locations but is not regularly observed throughout the AOPI and a saturated zone is not present. A potential surface release at the Wash Racks 1 and 2 AOPI would likely be restricted to surface runoff or shallow soils without a pathway to migrate to deeper water through the observed thickness of impermeable clay. Similarly, groundwater was not collected at the Building 4483 Fire Station AOPI due to the same conditions, resulting in a potential data gap. Both the Building 4483 Fire Station and Wash Racks 1 and 2 AOPIs are recommended for further investigation because detected concentrations of Target PFAS in soil exceed the SLs, and collection of downgradient groundwater may be warranted in future investigations to eliminate any potential data gaps.

Target PFAS were not detected in surface water or sediment in the tributaries to Lacamas Creek or in existing monitoring wells along the southwestern boundary, and further investigation is not recommended for the presence of PFAS potentially migrating offsite (i.e., nature and extent).

For PFAS with RSLs below the method detection limit (MDL) that do not have a maximum contaminant level, the method's pooled MDL is used to establish consistent and measurable values. The detection limit (DL) and LOD for PFDA in groundwater in the SSI UFP-QAPP was 0.98 ng/L and 1.6 ng/L, respectively. Since both the DL and LOD exceed the pooled MDL and DoD screening value, non-detect values for PFDA in groundwater cannot be used to determine presence or absence. Detected values between the DL and the LOD (J flags) can confirm presence in groundwater with a 99 percent level of confidence.

SSI sampling results were compared to the DoD-approved SLs presented in Section 5 to determine if further investigation is warranted at each AOPI as follows:

- If the maximum detected concentration for a given analyte in soil or groundwater exceeds the SL, it is concluded that further investigation is warranted.

- If the maximum detected concentration is less than the SL, it is concluded that further investigation is not warranted.

Table 7-1 summarizes the conclusions and recommendations for each AOPI. None of the AOPIs are recommended for further investigation or evaluation.

Table 7-1. Summary of PFAS Detected and Recommendations

AOPI	Detection of PFBA, PFBS, PFDA, PFHxA, PFHxS, PFNA, PFOS, and/or PFOA				Recommendation and Rationale
	Groundwater	Soil	Surface Water	Sediment	
Building 1864 Fire Station	Detected	Detected	Not Detected	Not Detected	January 2025 SLs were exceeded during the SI. SLs were not exceeded during the SSI; further investigation not recommended
Building 4483 Fire Station	–	Exceeds SL	Not Detected	Not Detected	SLs were exceeded; further investigation recommended
Wash Racks 1 and 2	–	Exceeds SL	Not Detected	Not Detected	SLs were exceeded; further investigation recommended
Landfill 4/ Demolition Area 1	Not Detected	–	–	–	SLs were not exceeded; further investigation not recommended

Highlighted values include AOPIs with a recommendation for further investigation.

– Not Collected

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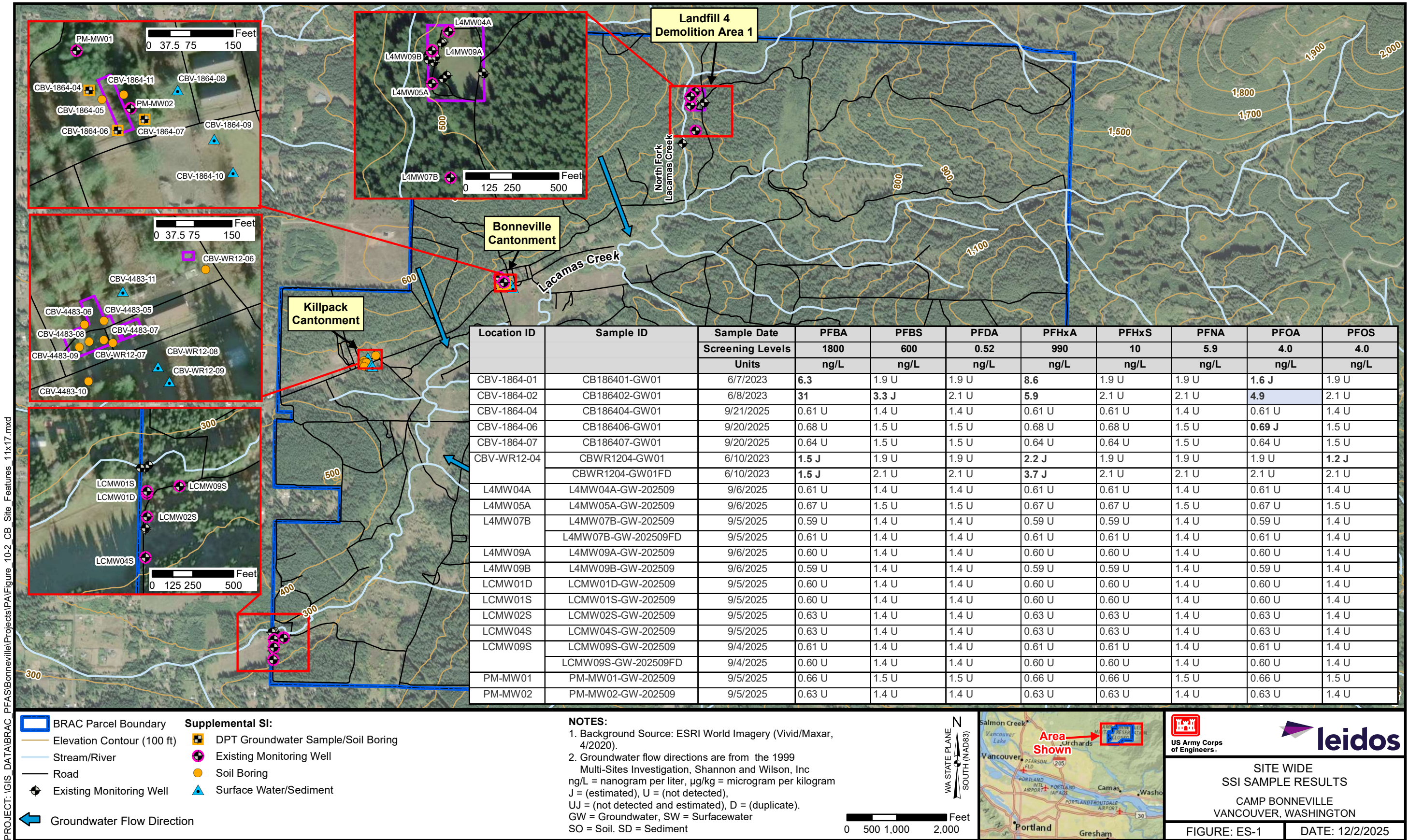
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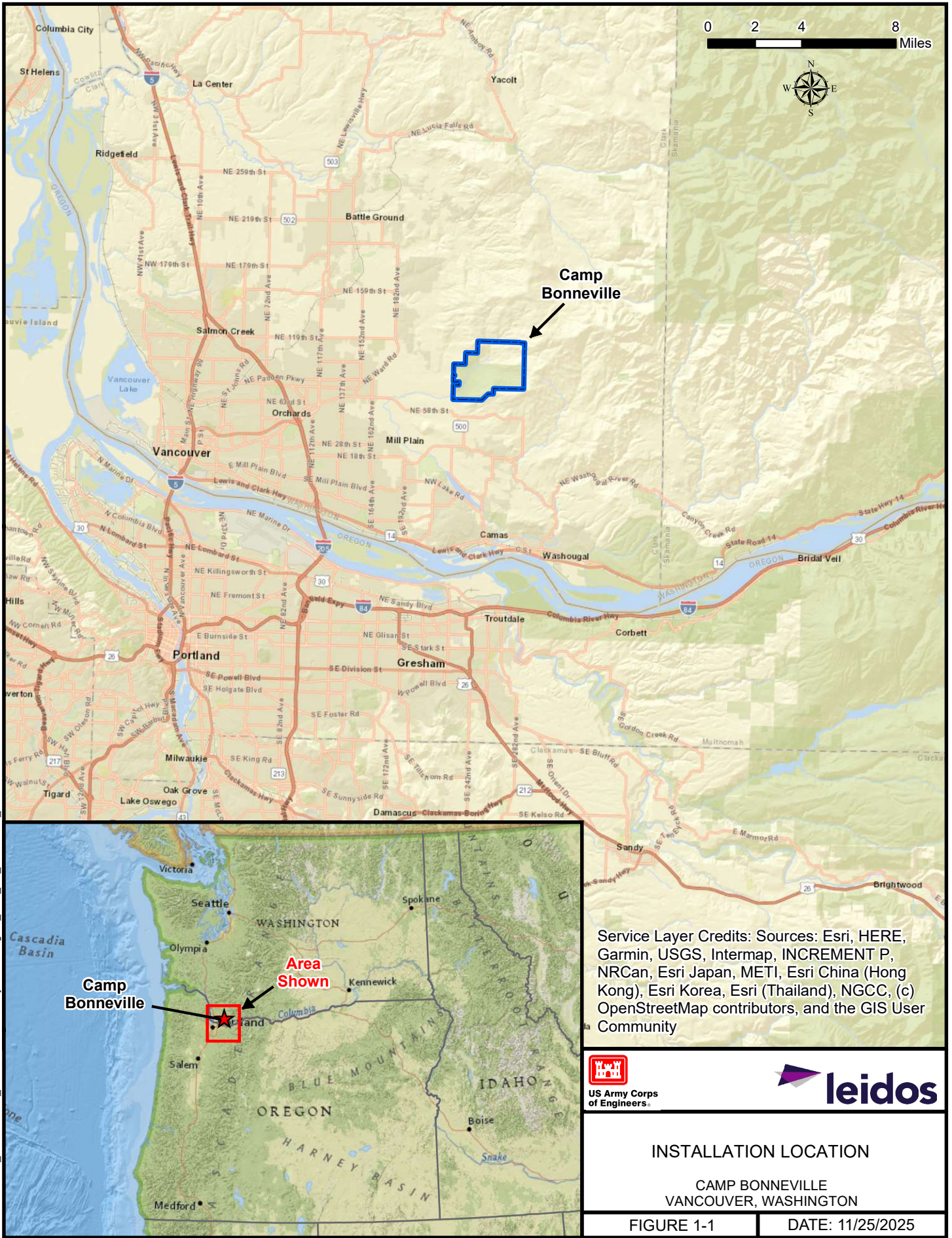
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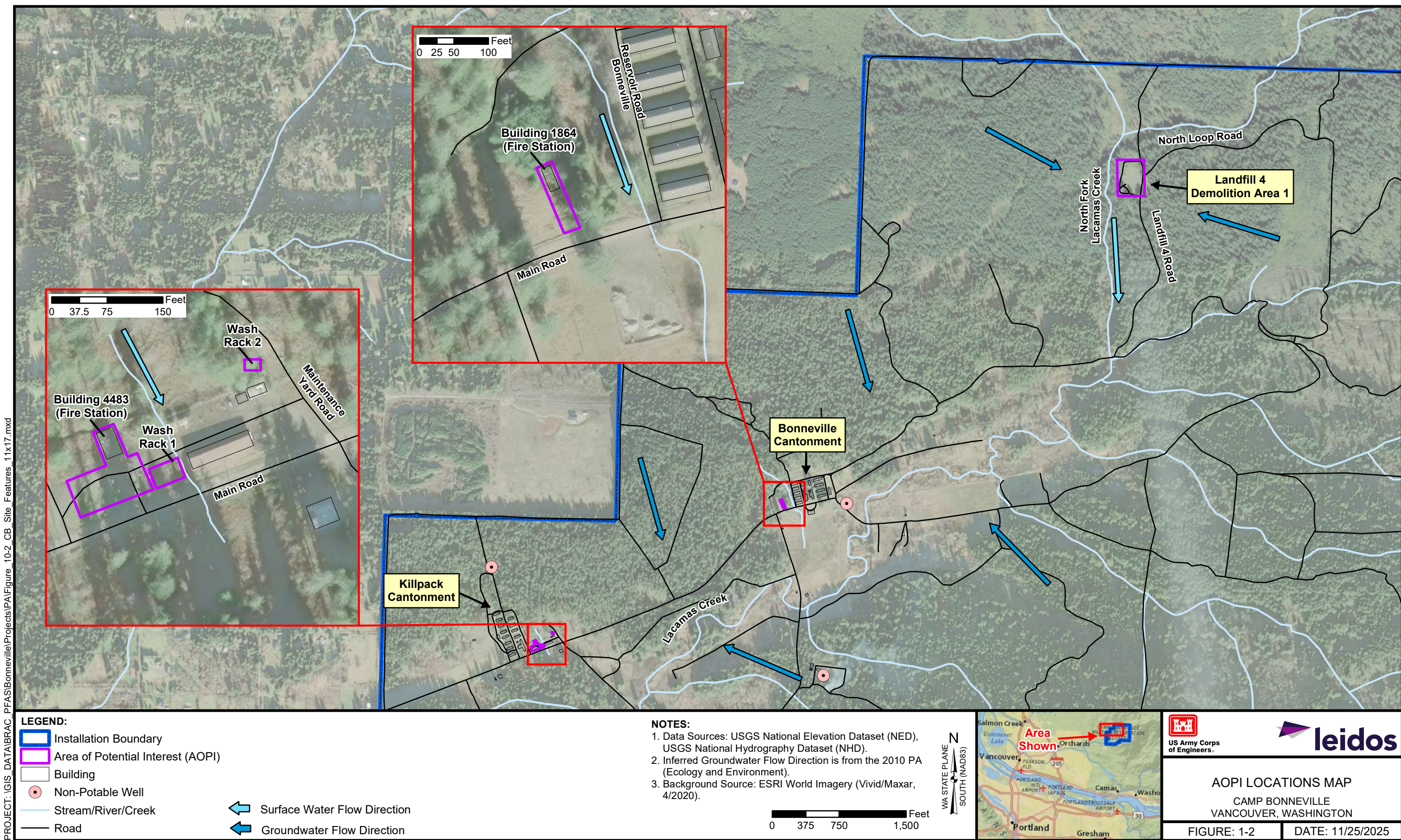
Location ID	Sample ID	Sample Date	PFBA	PFBS	PFDA	PFHxA	PFHxS	PFNA	PFOA	PFOS
			1800	600	0.52	990	10	5.9	4.0	4.0
			Screening Levels	Screening Levels	Screening Levels	Screening Levels	Screening Levels	Screening Levels	Screening Levels	Screening Levels
		Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L
CBV-1864-01	CB186401-GW01	6/7/2023	6.3	1.9 U	1.9 U	8.6	1.9 U	1.9 U	1.6 J	1.9 U
CBV-1864-02	CB186402-GW01	6/8/2023	31	3.3 J	2.1 U	5.9	2.1 U	2.1 U	4.9	2.1 U
CBV-1864-04	CB186404-GW01	9/21/2025	0.61 U	1.4 U	1.4 U	0.61 U	0.61 U	1.4 U	0.61 U	1.4 U
CBV-1864-06	CB186406-GW01	9/20/2025	0.68 U	1.5 U	1.5 U	0.68 U	0.68 U	1.5 U	0.69 J	1.5 U
CBV-1864-07	CB186407-GW01	9/20/2025	0.64 U	1.5 U	1.5 U	0.64 U	0.64 U	1.5 U	0.64 U	1.5 U
CBV-WR12-04	CBWR1204-GW01	6/10/2023	1.5 J	1.9 U	1.9 U	2.2 J	1.9 U	1.9 U	1.9 U	1.2 J
	CBWR1204-GW01FD	6/10/2023	1.5 J	2.1 U	2.1 U	3.7 J	2.1 U	2.1 U	2.1 U	2.1 U
L4MW04A	L4MW04A-GW-202509	9/6/2025	0.61 U	1.4 U	1.4 U	0.61 U	0.61 U	1.4 U	0.61 U	1.4 U
L4MW05A	L4MW05A-GW-202509	9/6/2025	0.67 U	1.5 U	1.5 U	0.67 U	0.67 U	1.5 U	0.67 U	1.5 U
L4MW07B	L4MW07B-GW-202509	9/5/2025	0.59 U	1.4 U	1.4 U	0.59 U	0.59 U	1.4 U	0.59 U	1.4 U
	L4MW07B-GW-202509FD	9/5/2025	0.61 U	1.4 U	1.4 U	0.61 U	0.61 U	1.4 U	0.61 U	1.4 U
L4MW09A	L4MW09A-GW-202509	9/6/2025	0.60 U	1.4 U	1.4 U	0.60 U	0.60 U	1.4 U	0.60 U	1.4 U
L4MW09B	L4MW09B-GW-202509	9/6/2025	0.59 U	1.4 U	1.4 U	0.59 U	0.59 U	1.4 U	0.59 U	1.4 U
LCMW01D	LCMW01D-GW-202509	9/5/2025	0.60 U	1.4 U	1.4 U	0.60 U	0.60 U	1.4 U	0.60 U	1.4 U
LCMW01S	LCMW01S-GW-202509	9/5/2025	0.60 U	1.4 U	1.4 U	0.60 U	0.60 U	1.4 U	0.60 U	1.4 U
LCMW02S	LCMW02S-GW-202509	9/5/2025	0.63 U	1.4 U	1.4 U	0.63 U	0.63 U	1.4 U	0.63 U	1.4 U
LCMW04S	LCMW04S-GW-202509	9/5/2025	0.63 U	1.4 U	1.4 U	0.63 U	0.63 U	1.4 U	0.63 U	1.4 U
LCMW09S	LCMW09S-GW-202509	9/4/2025	0.61 U	1.4 U	1.4 U	0.61 U	0.61 U	1.4 U	0.61 U	1.4 U
	LCMW09S-GW-202509FD	9/4/2025	0.60 U	1.4 U	1.4 U	0.60 U	0.60 U	1.4 U	0.60 U	1.4 U
PM-MW01	PM-MW01-GW-202509	9/5/2025	0.66 U	1.5 U	1.5 U	0.66 U	0.66 U	1.5 U	0.66 U	1.5 U
PM-MW02	PM-MW02-GW-202509	9/5/2025	0.63 U	1.4 U	1.4 U	0.63 U	0.63 U	1.4 U	0.63 U	1.4 U

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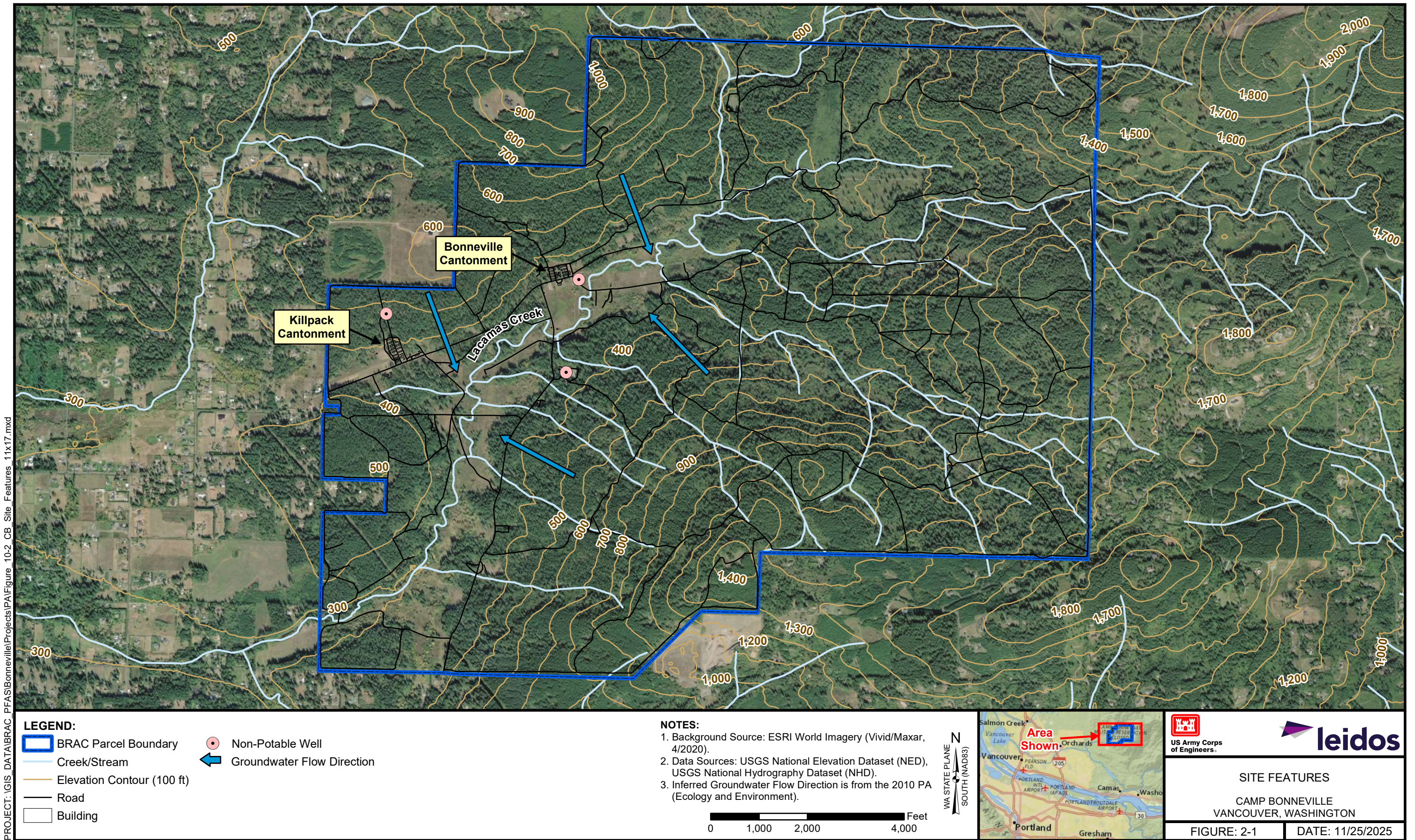


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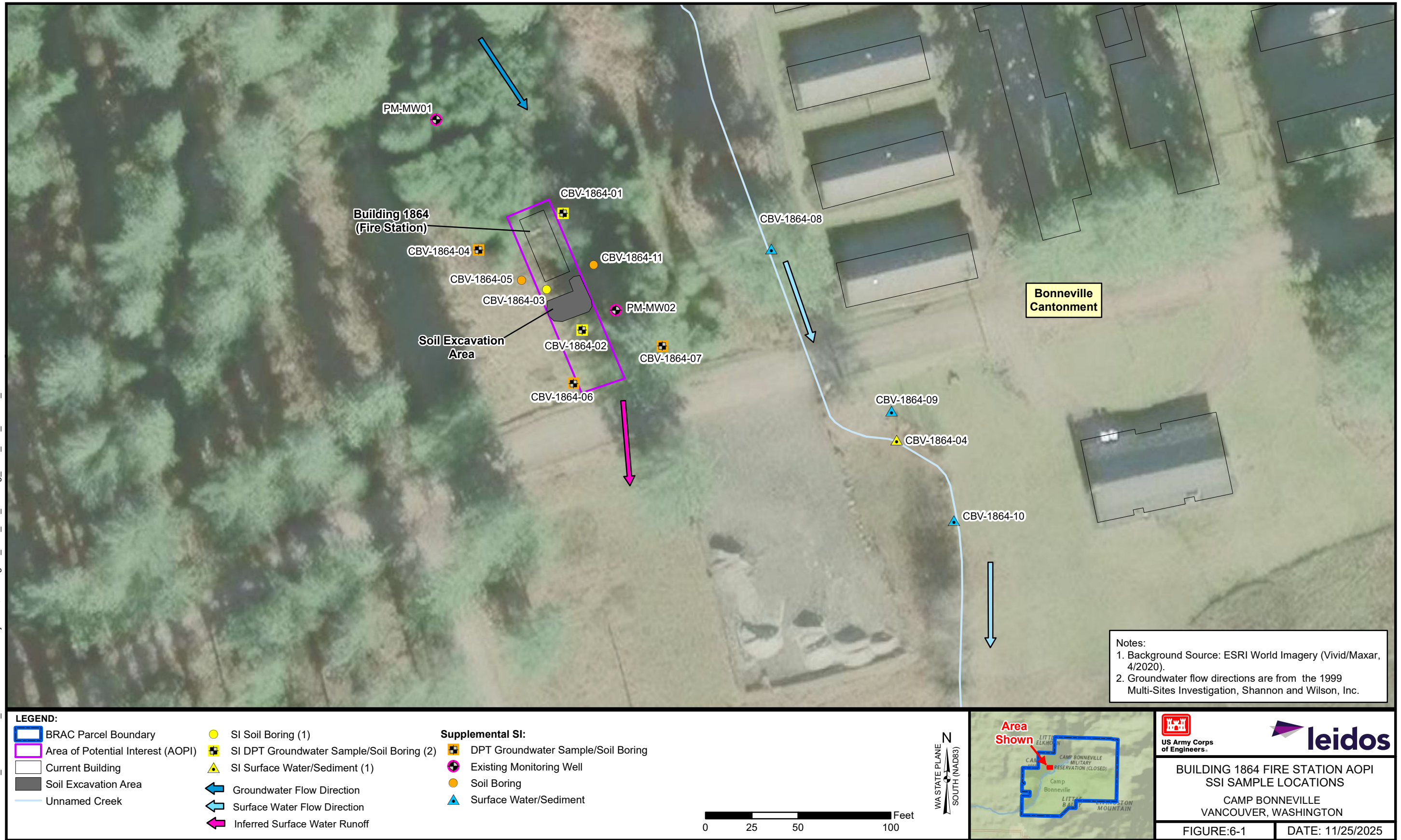
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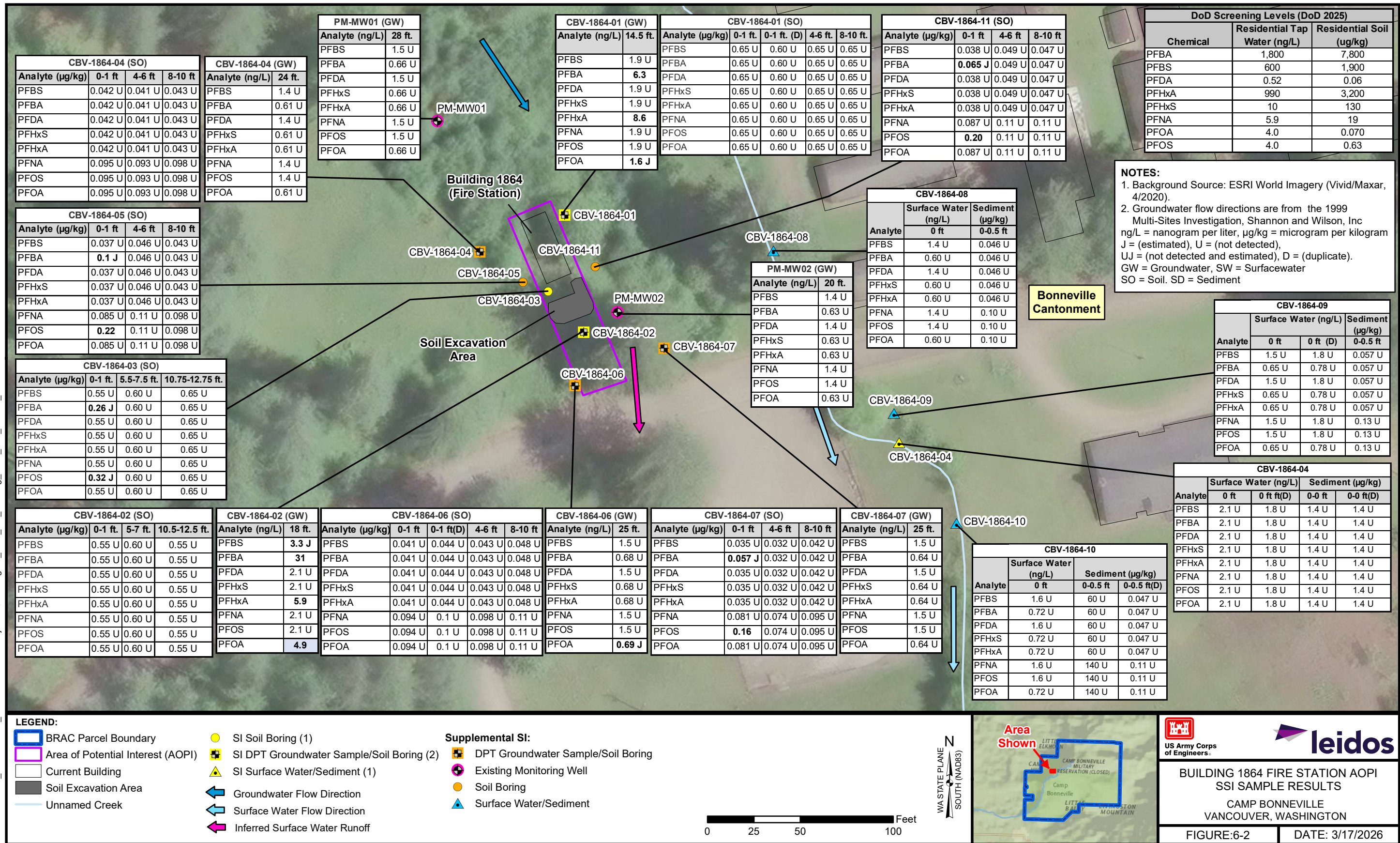


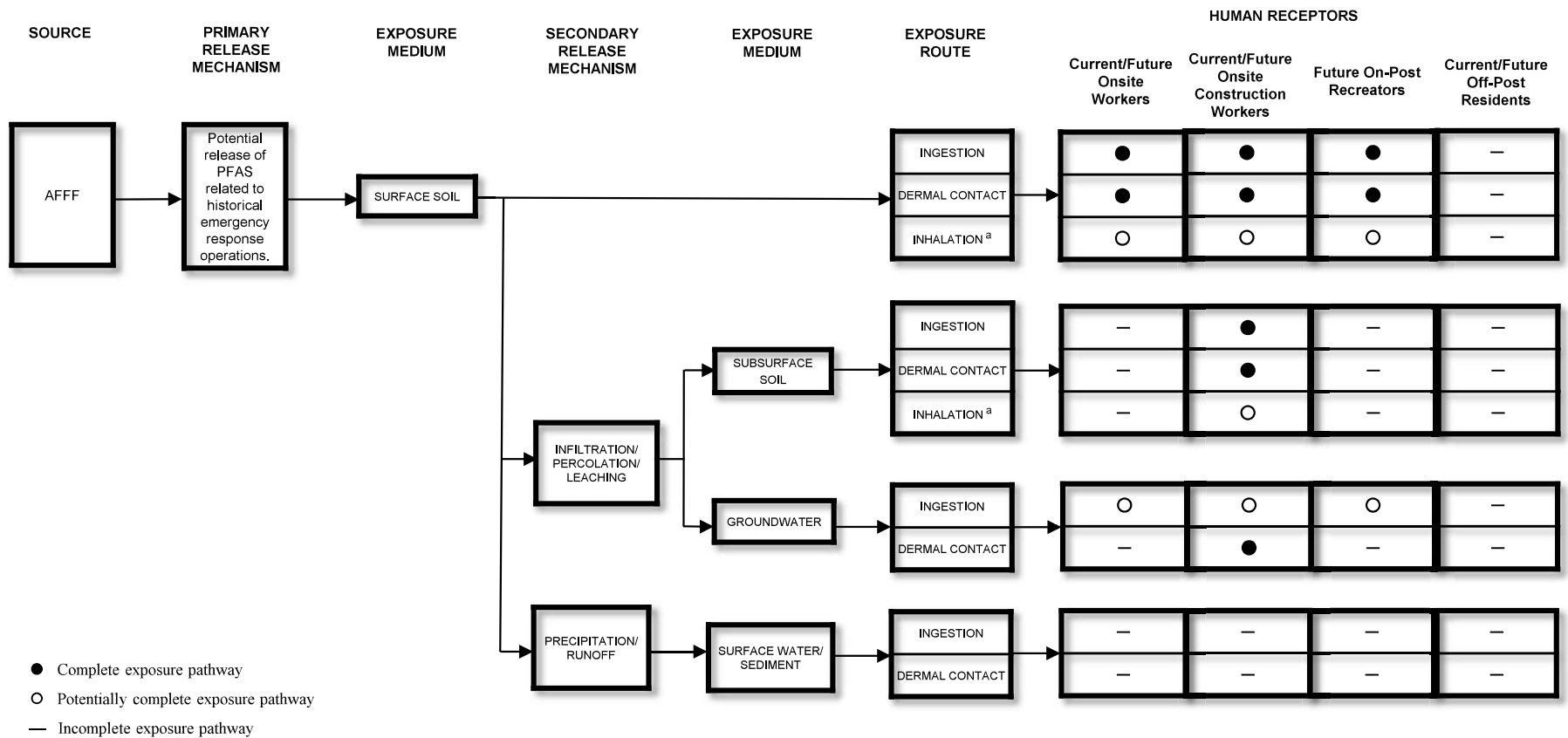
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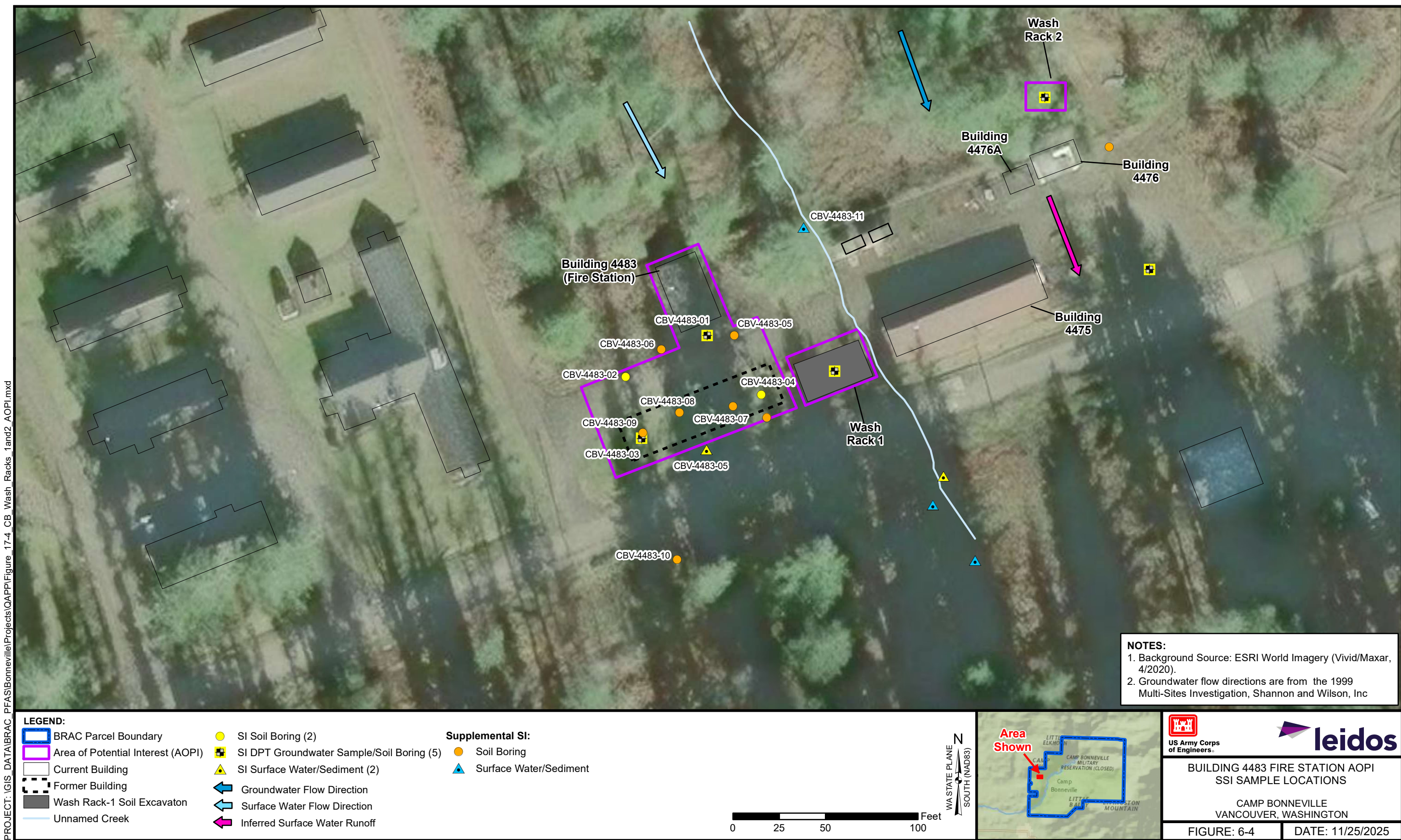


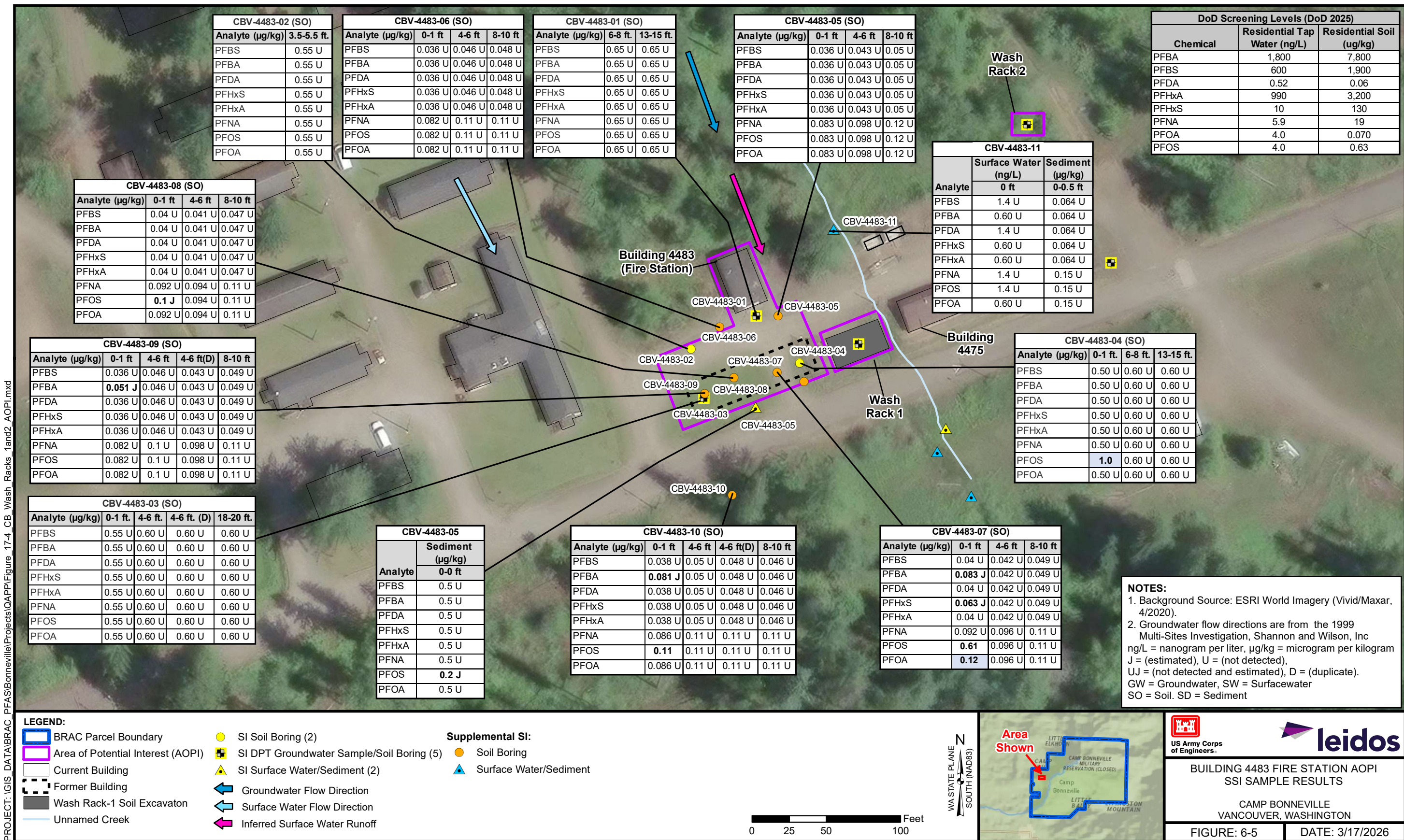
^a Inhalation of PFAS is considered potentially complete because no toxicity information is available for the inhalation route.

Figure 6-3. Human Health CSM for Building 1864 Fire Station AOP

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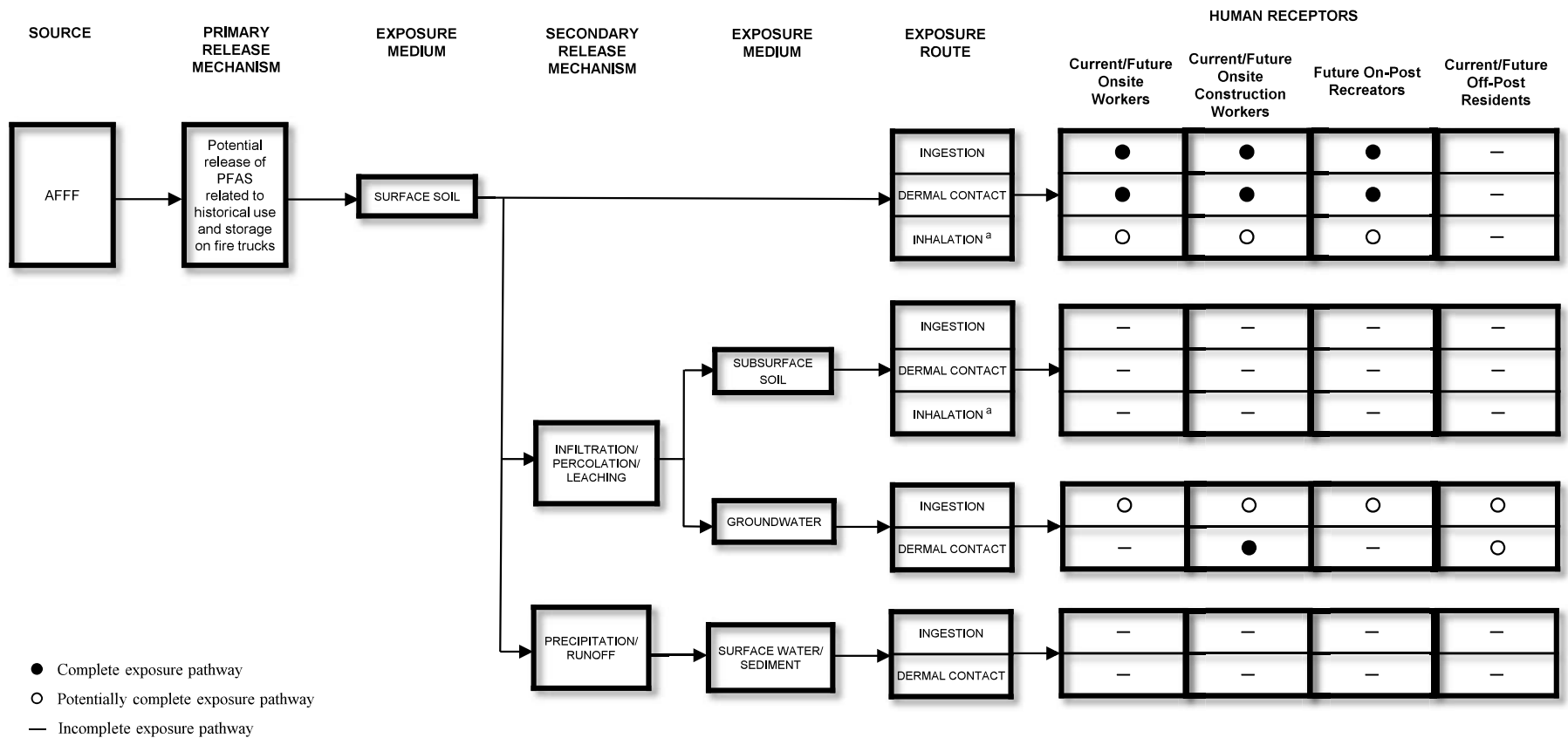


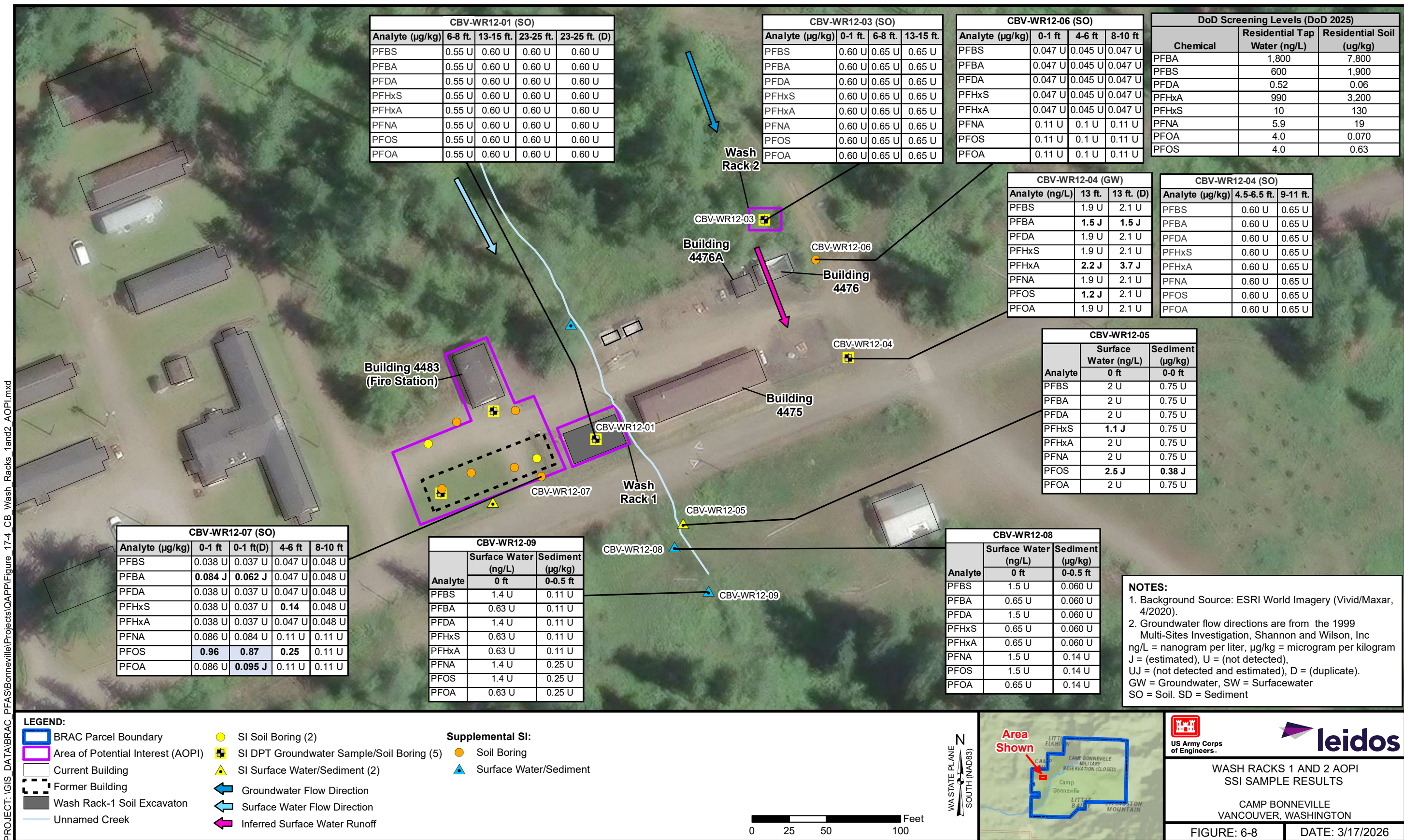
Figure 6-6. Human Health CSM for Building 4483 Fire Station AOP

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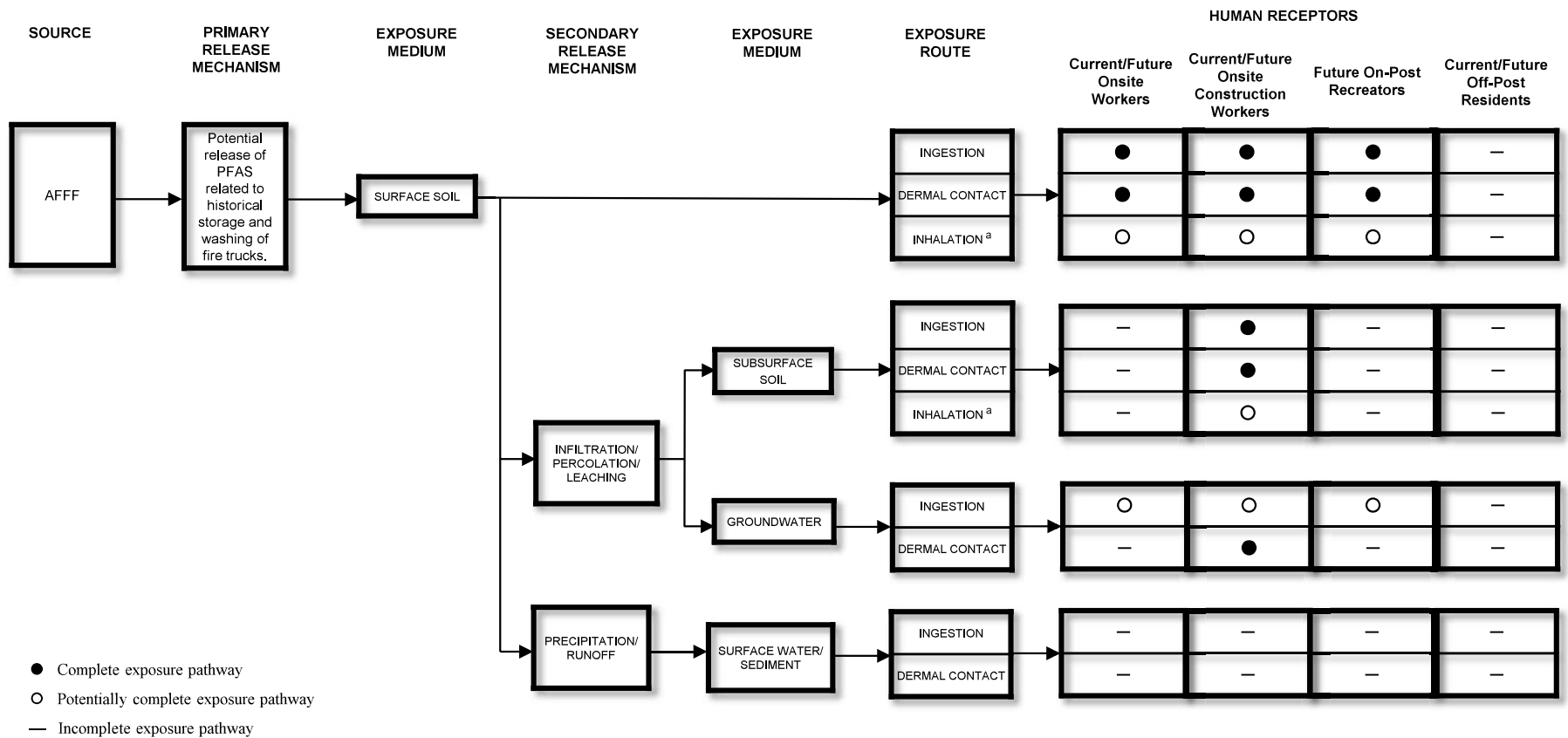
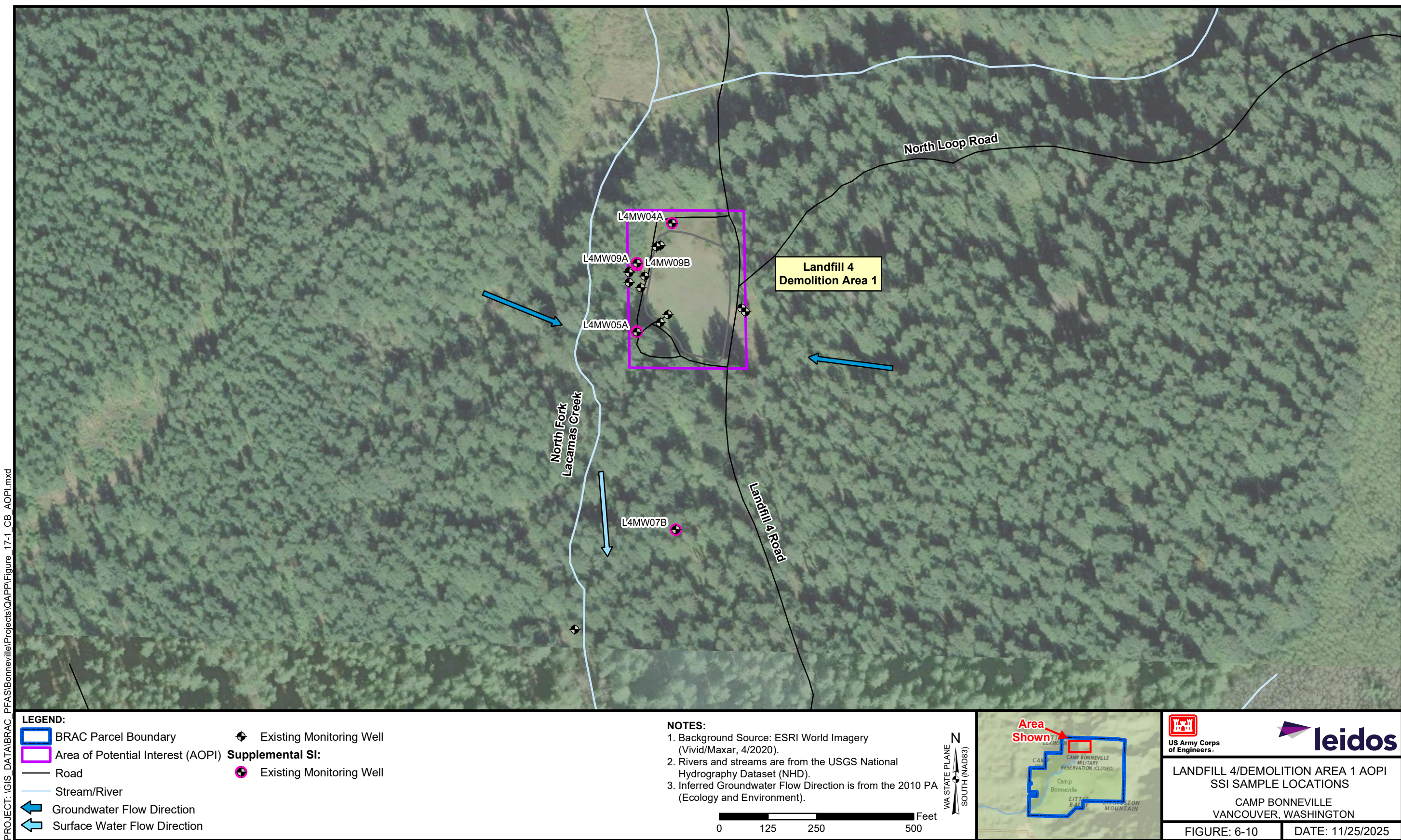


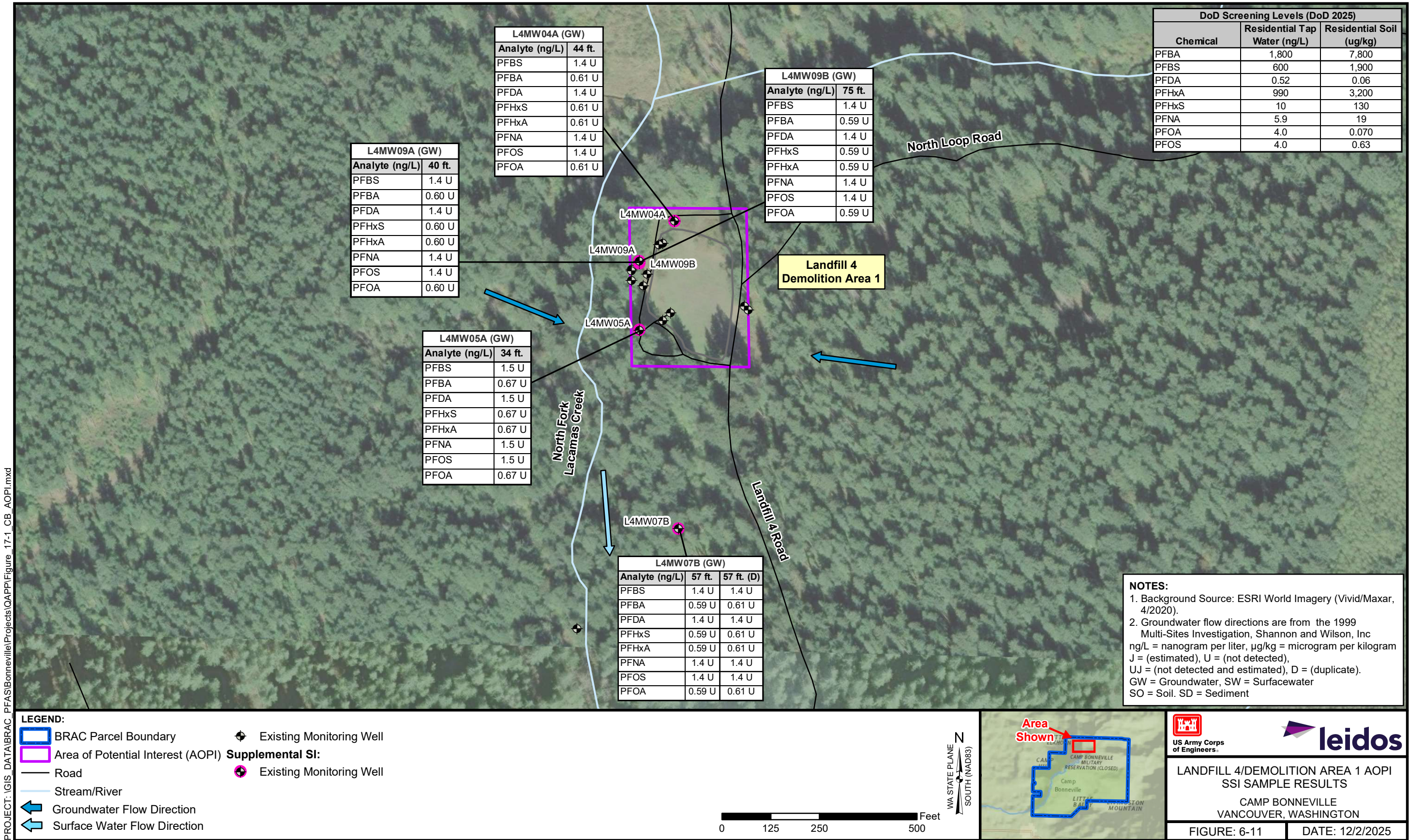
Figure 6-9. Human Health CSM for Wash Racks 1 and 2 AOP1

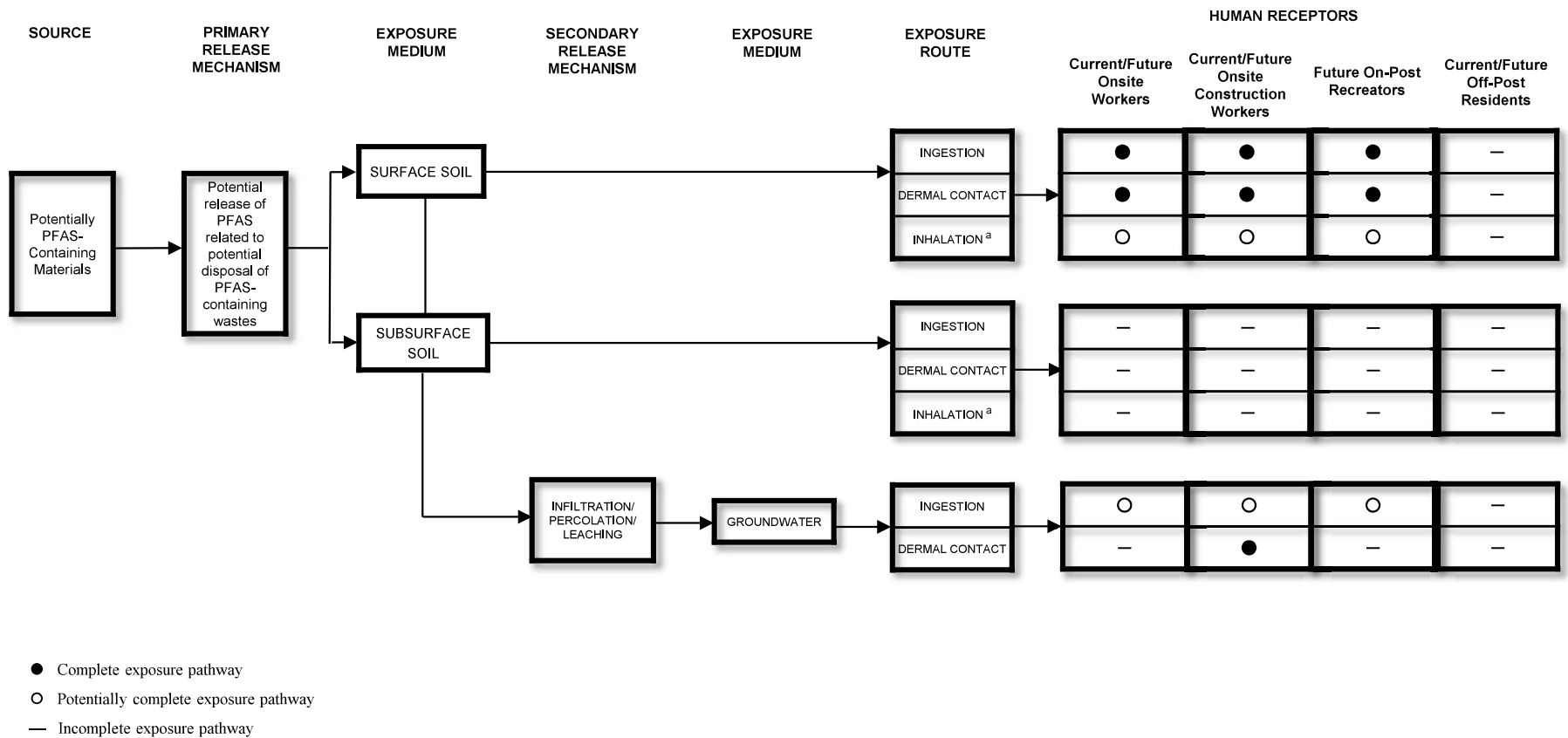
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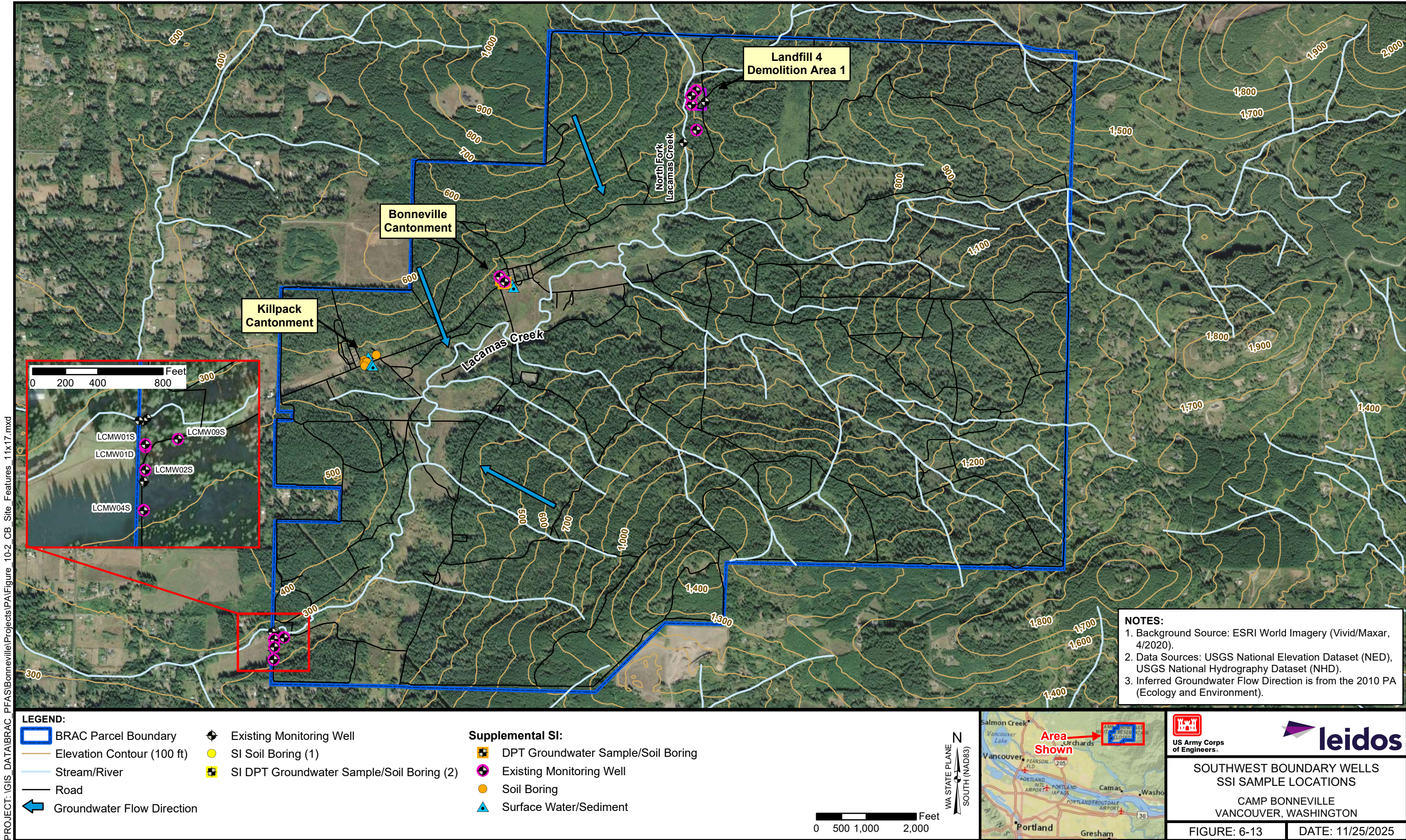




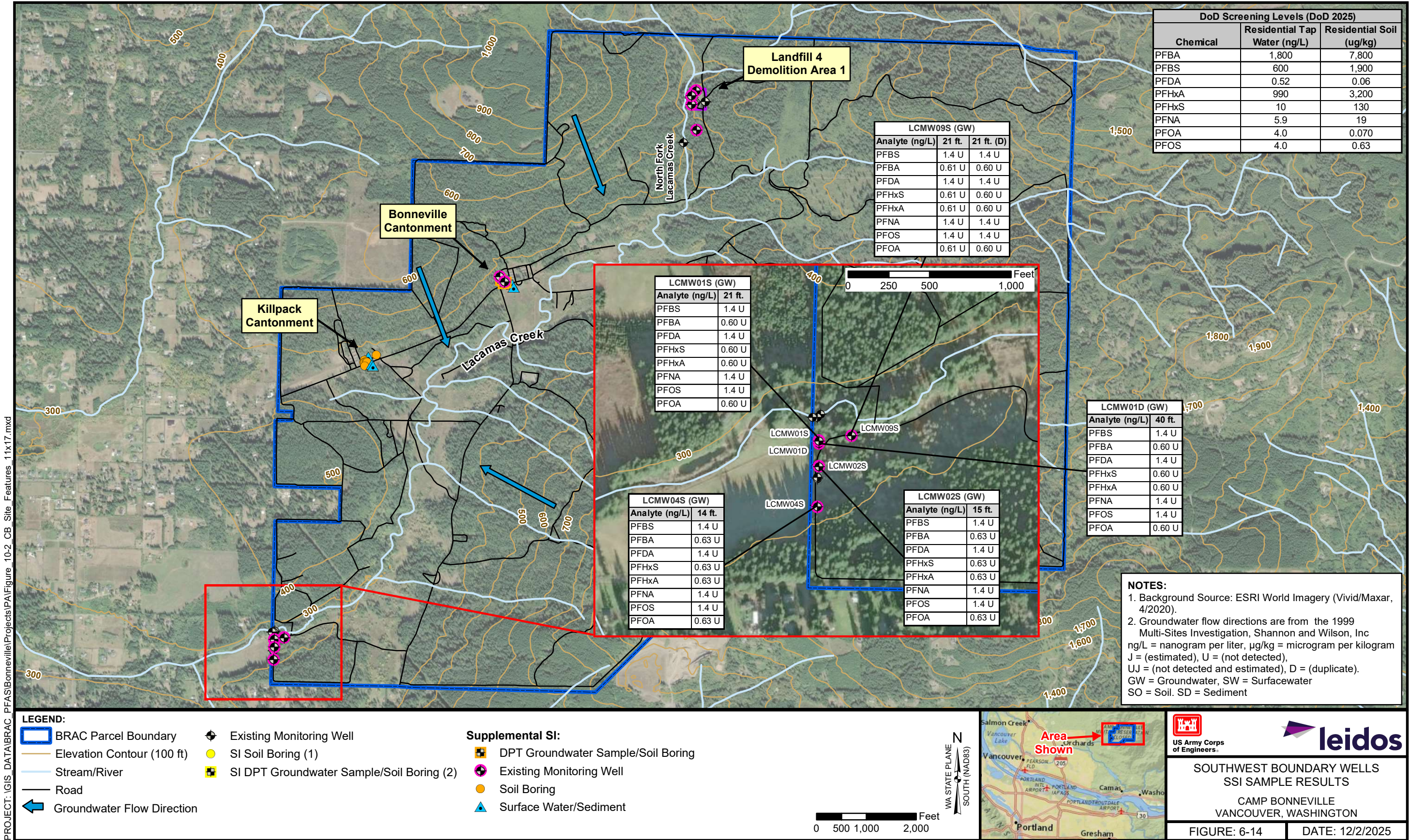
^a Inhalation of PFAS is considered potentially complete because no toxicity information is available for the inhalation route.

Figure 6-12. Human Health CSM for Landfill 4/Demolition Area 1 AOPI

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APPENDIX A
DAILY FIELD SUMMARY NOTES

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BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON				DAY/DATE: Tuesday September 2, 2025		
				REPORT NO.: DQCR-CBV-001		
				WEATHER: Temp <u> 88 </u> (high) <u> 60 </u> (low) Precipitation <u> 0.00 </u> in. (past 24 hours)		
DAILY QUALITY CONTROL REPORT (DQCR)				PRIMARY TASK: Mobilization, Well Development		
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	3	13.5	Mobilization, Well Development			
Gregory Drilling	--	--				
Cox Environmental	--	--				
Oneida	--	--				
EQIS	--	--				
USACE	--	--				
Total	3	13.5				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team mobilized and arrived onsite at 1245. Conducted safety briefing with Betsy Wing (Clark County) at the Killpack HQ. Leidos and Clark Co. personnel visited each AOPI and identified existing monitoring well locations. Leidos personnel completed well development at LCMW09S.						
Significant accomplishments/samples collected:						
Leidos Team mobilized to the site and staged equipment/supplies. Completed well development at location LCMW09S.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team will be onsite at 0730 to continue developing existing monitoring wells at the SW boundary, Landfill 4, and the Former Fire Station 1864.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/2/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Wednesday September 3, 2025			
			REPORT NO.: DQCR-CBV-002			
			WEATHER: Temp <u>83</u> (high) <u>65</u> (low) Precipitation <u>0.00</u> in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR) CONTRACT NO.: W912DR-28-D-0003			PRIMARY TASK: Staking/Flagging, Well Development			
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	3	27.0	Staking/Flagging, Well Development			
Gregory Drilling	--	--				
Cox Environmental	--	--				
Oneida	--	--				
EQIS	--	--				
USACE	--	--				
Total	3	27.0				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team mobilized and arrived onsite at 0720. Leidos personnel conducted daily safety meeting and calibrated equipment. Leidos personnel completed well development at LCMW01S, LCMW01D, LCMW02S, LCMW04S, L4MW07B, PM-MW01, and PM-MW02. Leidos personnel staked and flagged boring and temporary well drilling locations.						
Significant accomplishments/samples collected:						
Completed well development at location LCMW01S, LCMW01D, LCMW02S, LCMW04S, L4MW07B, PM-MW01, and PM-MW02. Staked and flagged boring and temporary well drilling locations.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team will be onsite at 0730 to continue developing existing monitoring wells at Landfill 4. Leidos personnel will begin groundwater sampling at LCMW09S.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/3/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Thursday September 4, 2025			
			REPORT NO.: DQCR-CBV-003			
			WEATHER: Temp <u>86</u> (high) <u>63</u> (low) Precipitation <u>0.00</u> in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR) CONTRACT NO.: W912DR-28-D-0003			PRIMARY TASK: Well Development, Goundwater Sampling			
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	3	27.0	Well Development, Groundwater Sampling			
Gregory Drilling	--	--				
Cox Environmental	--	--				
Oneida	--	--				
EQIS	--	--				
USACE	--	--				
Total	3	27.0				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
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Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team mobilized and arrived onsite at 0730. Leidos personnel conducted daily safety meeting and calibrated equipment. Leidos personnel completed well development at LCMW04A, LCMW05A, LCMW09A, and L4MW09B.						
Significant accomplishments/samples collected:						
Completed well development at locations LCMW04A, LCMW05A, LCMW09A, and L4MW09B. Completed groundwater sampling at location LCMW09S.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team will be onsite at 0730 to begin groundwater sampling at the SW boundary and Former Fire Station Building 1864. Leidos personnel will begin groundwater sampling at LCMW01S.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/4/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Friday September 5, 2025			
			REPORT NO.: DQCR-CBV-004			
			WEATHER: Temp <u>82</u> (high) <u>60</u> (low) Precipitation <u>0.00</u> in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Goundwater Sampling			
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	3	27.0	Groundwater Sampling			
Gregory Drilling	--	--				
Cox Environmental	--	--				
Oneida	--	--				
EQIS	--	--				
USACE	--	--				
Total	3	27.0				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team mobilized and arrived onsite at 0730. Leidos personnel conducted daily safety meeting and calibrated equipment. Leidos personnel completed groundwater sampling at LCMW01D, LCMW01S, LCMW02S, LCMW04S, L4MW07B, PM-MW01, and PM-MW02.						
Significant accomplishments/samples collected:						
Completed groundwater sampling at locations LCMW01D, LCMW01S, LCMW02S, LCMW04S, L4MW07B, PM-MW01, and PM-MW02.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team will be onsite at 0730 to continue groundwater sampling at Landfill 4. Leidos personnel will begin groundwater sampling at L4MW05A. Leidos personnel will collect surface water and sediment samples.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/5/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Saturday September 6, 2025			
			REPORT NO.: DQCR-CBV-005			
			WEATHER: Temp <u> 74 </u> (high) <u> 61 </u> (low) Precipitation <u> 0.00 </u> in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Goundwater Sampling, Surface Water/Sediment Sampling			
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	3	27.0	Groundwater Sampling, Surface Water/Sediment Sampling			
Gregory Drilling	--	--				
Cox Environmental	--	--				
Oneida	--	--				
EQIS	--	--				
USACE	--	--				
Total	3	27.0				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
--	--	--	--	--	--	--
--	--	--	--	--	--	--
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team mobilized and arrived onsite at 0730. Leidos personnel conducted daily safety meeting and calibrated equipment. Leidos personnel completed groundwater sampling at L4MW04A, L4MW05A, L4MW09A, and L4MW09B. Leidos personnel completed surface water and sediment sampling at CBV-1864-08, CBV-1864-09, CBV-1864-10, CBV-4483-11, CBV-WR12-08, and CBV-WR12-09.						
Significant accomplishments/samples collected:						
Completed groundwater sampling at L4MW04A, L4MW05A, L4MW09A, and L4MW09B. Completed surface water and sediment sampling at CBV-1864-08, CBV-1864-09, CBV-1864-10, CBV-4483-11, CBV-WR12-08, and CBV-WR12-09.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team will remobilize to the site on Tuesday (9/16) to begin sonic drilling activities.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/6/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Thursday September 18, 2025			
			REPORT NO.: DQCR-CBV-006			
			WEATHER: Temp ___79___ (high) ___56___ (low) Precipitation ___0.00___ in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR) CONTRACT NO.: W912DR-28-D-0003			PRIMARY TASK: Mobilization, Decontamination, UXO Avoidance			
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	2	17.0	Mobilization, H&S Meeting			
Gregory Drilling	3	31.5	Mobilization, Decontamination			
Cox Environmental	1	10.5	Mobilization			
Oneida	1	6.5	Mobilization, UXO Avoidance			
EQIS	--	--				
USACE	--	--				
Total	7	65.5				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
TSI 150CC Sonic Drill Rig	9/18/2025	--	9/18/2025	5.25	0	0
United Rental - Forklift	9/18/2025	--	9/18/2025	5.25	0	0
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos and Oneida UXO qualified personnel mobilized and arrived onsite at 1100. Leidos, Cox Environmental, and Gregory personnel mobilized and arrived onsite at 1445. Leidos personnel conducted safety meeting with Betsy Wing (Clark County) at 1530. Gregory personnel set up decontamination pad and loaded PFAS-free source water into poly totes. Leidos Team, Oneida, Cox Environmental, and Gregory personnel began UXO avoidance procedures and low-impact clearance at CBV-1864-07.						
Significant accomplishments/samples collected:						
Mobilized drilling equipment and supplies to the site. Conducted safety briefing meeting and discussed UXO avoidance procedures. Set up decontamination pad and staged drilling equipment. Began low-impact clearance at CBV-1864-07.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team, Cox Environmental, Oneida, and Gregory personnel will be onsite at 0700 to begin sonic drilling at CBV-1864-07. Leidos Team will continue UXO avoidance and low-impact clearance at CBV-1864-06.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/18/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Friday September 19, 2025				
			REPORT NO.: DQCR-CBV-007				
			WEATHER: Temp ___ 81 ___ (high) ___ 53 ___ (low) Precipitation ___ 0.00 ___ in. (past 24 hours)				
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Sonic Drilling, Temporary Well Installation, Decontamination, Soil Sampling, Low-impact Clearance/UXO Avoidance				
CONTRACT NO.: W912DR-28-D-0003							
Contract/Subcontractor/Government Personnel on site:							
EMPLOYER	No.	Man Hours	Location / Type of Work				
Leidos	2	17.0	Low-impact Clearance, Soil Sampling				
Gregory Drilling	3	30.75	Sonic Drilling, Low-impact Clearance, Well Installation, Decontamination				
Cox Environmental	1	10.5	Low-impact Clearance, Soil Sampling, Boring Logs				
Oneida	1	6.5	UXO Avoidance				
EQIS	--	--					
USACE	--	--					
WDOE	--	--					
Total	7	64.8					
Operating Equipment (not hand tools):							
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair	
TSI 150CC Sonic Drill Rig	9/18/2025	--	9/18/2025	10	0	0	
United Rental - Forklift	9/18/2025	--	9/18/2025	10	0	0	
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)							
Leidos Team, Cox Environmental, and Oneida personnel arrived onsite at 0700. Gregory personnel arrived onsite at 0715. Leidos and Gregory personnel signed in at the Range HQ and conducted the daily safety meeting. Leidos Team, Cox Environmental, Oneida, and Gregory personnel continued low-impact clearance and UXO avoidance procedures at the Former Fire Station 1864, Former Fire Station 4483, and Wash Racks 1 & 2. Leidos, Cox Environmental, and Gregory personnel completed drilling, soil sampling, and temporary well installation at CBV-1864-06 and CBV-1864-07. Leidos, Cox Environmental, and Gregory personnel completed drilling and soil sampling at CBV-1864-11.							
Significant accomplishments/samples collected:							
Completed low-impact clearance and UXO avoidance procedures at CBV-1864-05, CBV-1864-06, CBV-1864-07, CBV-1864-11, CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, CBV-4483-10, and CBV-WR12-07. Completed drilling, soil sampling, and temporary well installation at CBV-1864-06 and CBV-1864-07. Completed drilling and soil sampling at CBV-1864-11.							
Surveillance activities, including actions taken:							
None.							
Job Safety (Report violations, corrective instructions given, and corrective actions taken):							
None.							
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):							
None.							
Future Field Activities:							
Leidos Team, Cox Environmental, Oneida, and Gregory personnel will be onsite at 0700 to begin sonic drilling at CBV-1864-04 and CBV-1864-05. Leidos Team will continue low-impact clearance at CBV-WR12-06.							
Problems Encountered and Resolutions Developed:							
None.							
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.							
Ryan Caffey					9/19/2025		
Leidos Umatilla SSI Task Manager		Signature			Date		

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Saturday September 20, 2025			
			REPORT NO.: DQCR-CBV-008			
			WEATHER: Temp <u> 78 </u> (high) <u> 52 </u> (low) Precipitation <u> 0.00 </u> in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Sonic Drilling, Temporary Well Installation, Decontamination, Soil Sampling, Low-impact Clearance/UXO Avoidance			
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	2	19.0	Low-impact Clearance, Soil Sampling			
Gregory Drilling	3	27.75	Sonic Drilling, Low-impact Clearance, Well Installation, Decontamination			
Cox Environmental	1	9.25	Low-impact Clearance, Soil Sampling, Boring Logs			
Oneida	1	9.25	UXO Avoidance			
EQIS	--	--				
USACE	--	--				
WDOE	--	--				
Total	7	65.3				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
TSI 150CC Sonic Drill Rig	9/18/2025	--	9/18/2025	8.5	0	0
United Rental - Forklift	9/18/2025	--	9/18/2025	8.5	0	0
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team, Oneida, Cox Environmental, and Gregory personnel arrived onsite at 0700. Leidos, Oneida, Cox Environmental, and Gregory personnel signed in at the Range HQ and conducted the daily safety meeting. Leidos Team, Oneida, Cox Environmental, and Gregory personnel continued low-impact clearance and UXO avoidance procedures at the Former Fire Station 4483 and Wash Racks 1 & 2. Leidos, Oneida, Cox Environmental, and Gregory personnel completed drilling, soil sampling, and temporary well installation at CBV-1864-04. Leidos, Oneida, Cox Environmental, and Gregory personnel completed drilling and soil sampling at CBV-1864-05 and CBV-WR12-06. Leidos personnel completed grab groundwater sampling at CBV-1864-04, CBV-1864-06, and CBV-1864-07. Gregory personnel drilled down to 38' bgs. at CBV-WR12-06.						
Significant accomplishments/samples collected:						
Completed low-impact clearance and UXO avoidance procedures at CBV-4483-05, CBV-4483-06, and CBV-WR12-06. Completed drilling, soil sampling, and temporary well installation at CBV-1864-04. Completed drilling and soil sampling at CBV-1864-05 and CBV-WR12-06. Completed grab groundwater sampling at CBV-1864-04, CBV-1864-06, and CBV-1864-07.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team and Gregory personnel will be onsite at 0800 to continue sonic drilling and temporary well installation at CBV-WR12-06.						
Problems Encountered and Resolutions Developed:						
Gregory personnel halted drilling activities at 1530 due to broken bolts on the sonic drill head. Gregory personnel secured the borehole and demobilized at 1615 to purchase new bolts for repairs the next morning. CBV-WR12-06 consists of extremely tight clay material and no sign of groundwater has been observed down to 38' bgs.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/20/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Sunday September 21, 2025			
			REPORT NO.: DQCR-CBV-009			
			WEATHER: Temp ___66___ (high) ___53___ (low) Precipitation ___0.45___ in. (past 24 hours)			
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Sonic Drilling, Decontamination, Soil Sampling, Abandonment, UXO Avoidance			
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	1	9.3	H&S, Boring Logs			
Gregory Drilling	3	27.75	Sonic Drilling, Abandonment, Decontamination			
Cox Environmental	1	9.25	Boring Logs			
Oneida	1	9.25	UXO Avoidance			
EQIS	--	--				
USACE	--	--				
WDOE	--	--				
Total	6	55.5				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
TSI 150CC Sonic Drill Rig	9/18/2025	--	9/18/2025	9	0	0
United Rental - Forklift	9/18/2025	--	9/18/2025	9	0	0
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos, Oneida, Cox Environmental, and Gregory personnel arrived onsite at 0800. Leidos, Oneida, Cox Environmental, and Gregory personnel signed in at the Range HQ and conducted the daily safety meeting. Leidos, Oneida, Cox Environmental, and Gregory personnel continued drilling down to 80' bgs. at CBV-WR12-06. Gregory personnel completed grouting and abandonment at CBV-1864-04, CBV-1864-05, CBV-1864-06, CBV-1864-07, CBV-1864-11, and CBV-WR12-06.						
Significant accomplishments/samples collected:						
Completed drilling down to 80' bgs at CBV-WR12-06. Completed grouting and abandonment at CBV-1864-04, CBV-1864-05, CBV-1864-06, CBV-1864-07, CBV-1864-11, and CBV-WR12-06.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
Leidos Team, Oneida, Cox Environmental, and Gregory personnel will be onsite at 0700 to continue sonic drilling at CBV-4483-10.						
Problems Encountered and Resolutions Developed:						
On 9/21 the Leidos team advanced borehole CBV-WR12-06 in the Wash Racks 1 and 2 AOPI with an objective to obtain a groundwater sample within the wash rack area. Soils recovered during advancement of CBV-WR12-06 consisted of a very hard fat clay to 50 ft bgs followed by a stiff lean clay to 80 ft bgs. Moist or saturated conditions were not observed in the borehole and it was abandoned at 80 ft bgs. During the SI the AOPI was explored to a depth of approximately 25 ft bgs where refusal was encountered and moist/saturated conditions were not observed. Recovered soils in the AOPI suggest low permeability conditions that does not store water. A potential surface release at the Wash Racks 1 and 2 AOPI would likely be restricted to surface run-off or shallow soils without a pathway to migrate to deeper water through the observed thickness of impermeably clay. Therefore, Leidos proposes that the investigation be limited to surficial soils at the AOPI within the top 10 feet.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/21/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON			DAY/DATE: Monday September 22, 2025				
			REPORT NO.: DQCR-CBV-010				
			WEATHER: Temp ___76___ (high) ___46___ (low) Precipitation ___0.00___ in. (past 24 hours)				
DAILY QUALITY CONTROL REPORT (DQCR)			PRIMARY TASK: Sonic Drilling, Decontamination, Soil Sampling, Abandonment, UXO Avoidance				
CONTRACT NO.: W912DR-28-D-0003							
Contract/Subcontractor/Government Personnel on site:							
EMPLOYER	No.	Man Hours	Location / Type of Work				
Leidos	1	8.0	Soil Sampling, Boring Logs				
Gregory Drilling	3	22.5	Sonic Drilling, Abandonment, Decontamination				
Cox Environmental	1	8	Soil Sampling, Boring Logs				
Oneida	1	7.5	UXO Avoidance				
EQIS	--	--					
USACE	--	--					
WDOE	--	--					
Total	6	46.0					
Operating Equipment (not hand tools):							
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair	
TSI 150CC Sonic Drill Rig	9/18/2025	--	9/18/2025	9	0	0	
United Rental - Forklift	9/18/2025	--	9/18/2025	9	0	0	
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)							
Leidos Team and Gregory personnel arrived onsite at 0700. Leidos and Gregory personnel signed in at the Range HQ and conducted the daily safety meeting. Leidos Team and Gregory personnel completed drilling and soil sampling at CBV-WR12-07, CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, and CBV-4483-10. Gregory personnel completed grouting and abandonment at CBV-WR12-07, CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, and CBV-4483-10.							
Significant accomplishments/samples collected:							
Completed drilling and soil sampling at CBV-WR12-07, CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, and CBV-4483-10. Completed grouting and abandonment at CBV-WR12-07, CBV-4483-05, CBV-4483-06, CBV-4483-07, CBV-4483-08, CBV-4483-09, and CBV-4483-10.							
Surveillance activities, including actions taken:							
None.							
Job Safety (Report violations, corrective instructions given, and corrective actions taken):							
None.							
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):							
None.							
Future Field Activities:							
Leidos Team and Gregory personnel will be onsite at 0800 to continue demobilization procedures.							
Problems Encountered and Resolutions Developed:							
Leidos Team and Gregory personnel encountered hard fat clay at CBV-WR12-07 and CBV-4483-10. Due to the tight/fat clay material and the lack of visible moisture, the boreholes were abandoned and temporary wells were not installed.							
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.							
Ryan Caffey					9/22/2025		
Leidos Umatilla SSI Task Manager		Signature			Date		

BRAC PFAS SUPPLEMENTAL SITE INSPECTION CAMP BONNEVILLE WASHINGTON				DAY/DATE: Tuesday September 23, 2025 REPORT NO.: DQCR-CBV-011 WEATHER: Temp <u> 78 </u> (high) <u> 50 </u> (low) Precipitation <u> 0.00 </u> in. (past 24 hours)		
DAILY QUALITY CONTROL REPORT (DQCR)				PRIMARY TASK: Demobilization, IDW Storage Management		
CONTRACT NO.: W912DR-28-D-0003						
Contract/Subcontractor/Government Personnel on site:						
EMPLOYER	No.	Man Hours	Location / Type of Work			
Leidos	1	5.0	Demobilization, IDW Storage Management			
Gregory Drilling	3	12	Demobilization, IDW Storage Management			
Cox Environmental	1	4	Demobilization, IDW Storage Management			
Oneida	1	4	Demobilization			
EQIS	--	--				
USACE	--	--				
WDOE	--	--				
Total	6	25.0				
Operating Equipment (not hand tools):						
Equipment	Date of Arrival	Date of Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
TSI 150CC Sonic Drill Rig	9/18/2025	9/23/2025	9/18/2025	0	0	0
United Rental - Forklift	9/18/2025	9/23/2025	9/18/2025	0	0	0
Summary of Field Activities: (Indicate location and description of work performed by prime and/or subcontractors)						
Leidos Team and Gregory personnel arrived onsite at 0900. Leidos and Gregory personnel signed in at the Range HQ and conducted the daily safety meeting. Leidos Team and Gregory personnel organized and loaded equipment for demobilization. Leidos and Gregory personnel organized and managed IDW drums at the parking lot south of the Former Fire Station 1864. Leidos personnel returned keys/supplies with Betsy Wing (Clark County) and signed out at the Range HQ. Leidos Team and Gregory personnel demobilized from the site at 1300.						
Significant accomplishments/samples collected:						
Completed securing the IDW storage area. Demobilized from the site.						
Surveillance activities, including actions taken:						
None.						
Job Safety (Report violations, corrective instructions given, and corrective actions taken):						
None.						
Oversight Remarks (Instructions received or given, conflict(s) in work plans and or specifications):						
None.						
Future Field Activities:						
All drilling and sampling activities completed. EQIS will be onsite for waste disposal once IDW is characterized.						
Problems Encountered and Resolutions Developed:						
None.						
Contractors Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.						
Ryan Caffey					9/23/2025	
Leidos Umatilla SSI Task Manager		Signature			Date	

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APPENDIX B

PHOTOGRAPH LOG

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Photograph B-1. Sonic drilling and soil sampling activities at Building 1864 Former Fire Station location CBV-1864-07



Photograph B-2. Sonic drilling and soil sampling activities at Building 1864 Former Fire Station location CBV-1864-06



Photograph B-3. Sonic drilling and soil sampling activities at Wash Racks 1 and 2 location CBV-WR12-06



Photograph B-4. Tight/dense clay encountered at Wash Racks 1 and 2 location CBV-WR12-06



Photograph B-5. Sonic drilling and soil sampling activities at Building 4483 Former Fire Station location CBV-4483-05



Photograph B-6. Tight/dense clay encountered at CBV-4483-07



Photograph B-7. Building 1864 Former Fire Station foundation and debris



Photograph B-8. IDW storage area in gravel lot south of Building 1864 Former Fire Station

APPENDIX C
FIELD ACTIVITY LOGS

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TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/18/25

Page 1 of 1

Task Team Members:

M. Cox

D. Hendricks

R. Caffey

R. Rice

T. Hatch

J. Frazo / T. Brown

Narrative (include time and location):

1430 Arrive Camp Bonneville from Inatilla OK

Meet at Range HQ to sign in

I get OJO safety meeting.

1500 site visit to see well where we will get water, 1864 & 4483.

1505 Driller on site - Begins unloading

1610 Put tote at well & begin filling it.

There is not enough head pressure to fill tote while it is in truck. Flows approx 2gpm while in ground @ ~3' AGS.

1625 Set rig up at 1864 - OK

1630 Drop off trailers, tubing & other equip at storage bldg.

1745 Tote 3/4 full - set to auto to fill over night.

1800 leave site.

amst
g/h/dex

Daily Weather Condition: A.M.

P.M.

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/19/25

Page 1 of 2

Task Team Members:

M. Lax

R. Caffey

R. Rice

T. Hatch

D. Hendricks

J. Frago / T. Brown

Narrative (include time and location):

0630 Arrive CBY

Note: We could not hand auger through the gravel. D. Hendricks is getting a dig bar.

R. Rice is on site SUV.

0720 Drillers on site HHS briefing.

0815 Hand auger to 5' BGS. set up drilling.

0905 Begin drilling - soils recorded on well log.

0915 Calibrate PID 0.0 ppm $\Rightarrow$ 0.1 ppm precal.

100 ppm $\Rightarrow$ 107 ppm real

Adjust to 0.0 ppm: 100 ppm.

postcal 0.0 ppm $\Rightarrow$ 0.9 ppm.

0930 Begin 0-10' BGS.

Drillers do not have drums or materials yet. Put soils on plastic to transfer later.

1115 TD 30' Build well w/ 10' screen.

(5) bags total for temp well.

1310 Drillers decon: now equip to 1864-11

1315 steam cleaner want start.

1335 Pressure washer running again. Battery is dead.

1400 Drill 1864-11 0-10'.

run 9/19/25

Daily Weather Condition:

A.M.

49°F Dew Pt 49°F Humidity 95%

on 9/19
P.M.

wind calm H 82°F / L 51°F 50% precip

Recorded By:

[Signature]
(Signature)

QC Checked by:

[Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/19/25

Page 2 of 2

Task Team Members:

me pgi
me
9/19/25

Narrative (include time and location):

1435 soils collected at ①-1, 4-6, 8-10
in both 1864-107 & 1864-11
1440 Set pit 1864-106
1455 Begin drilling.
1540 Finish to 30' BGS
1600 Finish clearing out 7" to 30'
set well w/ 10' screen.
1640 Finish well - move rods (equipment to deco.
1655 Deco rods
1715 Move drums to LDW storage area.
(4) drums total.
1735 Finish at site
1745 Check tote at well & turn switch to
auto.
1750 leave CBM

amt
9/19/25

Daily Weather Condition: A.M. _____

P.M. _____

Recorded By: amt
(Signature)

QC Checked by: [Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/20/25

Page 1 of 3

Task Team Members:

M. Cox	R. Caffey
D. Hendricks	T. Hatch
R. Rice	J. Frigo T. Brown

Narrative (include time and location):

0630 Arrive C.B.V.
 0700 Porters: others on site.
 0725 H.S. briefing
 0740 Mac to set up at 1804-04.
 This will be another temp well.
 0750 1804-06 wc=14.07 BGS
 0800 1804-07 wc=10.85 BGS
 0815 Begin drilling
 Calibrate Honeywell Mini PAE 2000
 SN: 592.60179
 Isobutylene 100ppm exp 6/29
 Lot # 25-3404 Field Instruments
 0.0 ppm => 0.0 ppm
 100 ppm => 100.0 ppm
 Collect 0-1, 4-6, 8-10'
 0910 Set well in 7" casing 20-30'
 0930 Put 10' screen. rizer etc. 4in.
 cleaned out to 30' BGS
 0945 Add (5) bags of sand.
 0950 (2) drums IDW generated at 04

[Signature]
9/20/25

Daily Weather Condition: 7 A.M. 92°F sunny 12m Pt. 51°F

Humidity 99% wind E 2 mph
 H 79°F / L 56°F 5% precip

Recorded By: *[Signature]*
 (Signature)

QC Checked by: *[Signature]*
 (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/26/25

Page 2 of 3

Task Team Members:

See pg 1

Narrative (include time and location):

0955 Trip out of the hole and
down rods / looking.

1010 Driller yoke break.

1045 Move equipment to set up at
1364-05.

1055 Begin 05 0-10

1105 Trip up 0-10
collect 0-1

1-6

8-10

1115 Driller break down site in 20 cm.

1150 move to WR1206 to do a
Temp well.

1300 Set up at WR12-06

Raffey states that in 2003 the
DPT rig could only get to 30' if
there was no water. We will start
with 40 BGS in check for moisture

1320 Begin drilling 0-10

1410 10-20

1430 20-30

1455 30-40

1520 Run 7" to 30'

Daily Weather Condition: A.M.

No cell reception to check

1 P.M.

76°F sunny feels like 9/26/25
76°F

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/20/25

Page 3 of 3

Task Team Members:

See pg 1

9/20/25

Narrative (include time and location):

1535 clean at 7" - 6"

1540 All the bolts in the sonic head sheared.

1550 Drillers do not have more bolts so we will break down site for tomorrow.

1630 leave site.

9/20/25

Daily Weather Condition:

A.M.
P.M.

1535: 79°F
Dew Pt. 53°F

Sunny feels like 79°F
Humidity 42%
wind under 5mph.

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/21/25

Page 1 of 2

Task Team Members:

M. Cox
R. Caffey
R. Rice

T Hatch
T. Brown
J. Frago

Narrative (include time and location):

0800 Arrive CBV - sign in at HQ
HIS briefing.
0830 Drillers have bolts to fix head that sheared.
*The formation is very tight clay with a little moisture so far.
0850 Calibrate MR 3000 precal readings
00 ppm $\Rightarrow$ 0.0 ppm
100 ppm $\Rightarrow$ 100.3 ppm
cal check complete.
0935 30 L/D recovered.
0940 continue to 50' BUS.
1000 TD 46' trip out sample -
clay is too tight to go 10' in.
1020 Run 7" to 48' BUS
1100 lean clay at 50-60' clay
continue to 70' to see if water.
1125 Trip out 70' sample.
1140 60-70' lean clay in day
1145 Run 7" to 70'

arrived 9/21/25

Daily Weather Condition: 8 A.M. 57°F cloudy feels like 57°F

P.M. 72°F / 48°F 55% precip
near 100% humidity

Recorded By: *[Signature]*
(Signature)

QC Checked by: *[Signature]*
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/21/25

Page 2 of 2

Task Team Members:

see pg 1

9/21/25

Narrative (include time and location):

1210 The formation is too tight for 7" - trip it out and then try to run it back down so it doesn't get stuck.

1225 7" back in ground to 70' BGS.

1230 clearing out 7" with 6"

1300 lean clay 70-80 dry

1400 R. Caffrey has spoken with the PM and decided to put screen in from 70-80' to see if water comes into hole. They will discuss plan with regulators tomorrow.

1500 Dillers finish grouting (1.5) bags per each temp well ; (3) bags for soil borings.

R. Caffrey, V. Peterson, T. Runkle decide that no need to set temp wells in fat clay. Abandon WR06 & only do soil sampling in remaining borings.

9/21/25

Daily Weather Condition:

9/21/25

64°F Partly cloudy wind 7 mph NW

12 P.M. Humidity 59% Precip 0%

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/21/25

Page 3 of 3

Task Team Members:

See pg 1

sketches

Narrative (include time and location):

1530 Drillers abandon WRD6 -
M. Cox to discuss w/ indicator &
tables.

1600 Drillers continue grouting and
tripping out casing.

1615 (4) batches of grout (8) bags.

Drillers clean up site & move equipment
to get ready for next boring. Remaining
bags will be 10'.

1715 Drillers finish at site cleaning and decommissioning
equipment.

1730 leave site.

sketches

9/21/25

Daily Weather Condition:

70°F Fair wind 7 mph NNW

3:15 P.M.

Humidity 72%

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/22/25

Page 1 of 2

Task Team Members:

M. Cox	T. Hatch
R. Caffey	J. Frigo
R. Rice	T. Brown

Narrative (include time and location):

0700 Airline CBV - met at gate.
 weather: 50°F Partly Cloudy
 Humidity H 93% / L 39%
 Pressure H 30.15 / L 30.04
 DewPT H 48°F / L 48°F
 Temp H 77°F / L 51°F
 wind NW 1-8 mph
 A lot will be doing (?) soil borings to 10'
 starting with CBV-4483-10
 0745 Calibrate MR 3000
 Preset 0.0 ppm → 0.0 ppm
 100 ppm → 102.5 ppm
 Adjust / Calibrate
 0.0 ppm → 0.0 ppm
 100 ppm → 99.1 ppm
 0800 Begin 0-10' BGS
 0815 10' recovered 0-10'
 Collect 0-1, 1-6, 8-10
 0850 Begin 0-10 MR 12-07
 0905 10' recovered. collect 0-1, 4-6
 8-10

Amity 9/22/25

Daily Weather Condition: 7 A.M. 50°F Partly Cloudy wind NW 1-8 mph
 9/22 P.M.

Recorded By: Amity (Signature) QC Checked by: (Signature)

TASK TEAM ACTIVITY

EET PROJECT

NAME: BRAC SSI at Camp Bonleville

Date: (mm/dd/yy): 9/22/25

Page 2 of 2

Task Team Members:

see pg 1

9/22/25

Narrative (include time and location):

0925 Set up at 4483 07

0930 collect 10' recovered 0-1, 4-6, 8-10

0935 Set up at 4483-08

0945 collect 0-1, 4-6, 8-10 10' rec'd.

0955 Set up at 4483-09

1010 collect 10' recovered 0-1, 4-6, 8-10

1015 Set up at 4483-06

1025 collect 10' recovered 0-1, 4-6, 8-10

1040 Set up at 4483-05

1055 collect 0-1, 4-6, 8-10 10' recovered.

1115 Driller start to break down site.

1345 Mon Drums: great holes.
continue breaking down site

(6) bags of great total at 4483

1400 All bags are grouted to surface.

1500 finish up packing/cleaning equipment to
store in warehouse.

1515. Leave site.

over

9/22/25

Daily Weather Condition:

A.M.

73°F Fair

wind 9 mph WNW

3 P.M.

humidity 62%

feels like 75°F

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/23/25

Page 1 of 1

Task Team Members:

M. Cox

R. Caffey

R. Rice

T. Habel

T. Brown

S. Frago

Narrative (include time and location):

1000 Arrive CBV. We will not be doing additional drilling today.

1015 Clean up site for demo.

1045 label drums / organize

WA 01

WA 01

WA 02

WA 03

WA 04

So 01, 02, 03, 04, 05, 06, 07

08, 09, 10, 11, 12, 13, 14, 15, 16, 17

72 total

1115 QA log books.

1200 Take boxes to Fed Ex.

ANNA

9/23/25

Daily Weather Condition: 10 A.M. 67°F Sunny Feels like 67°F

P.M. 11/23

H 85°F / L 55°F

Recorded By:

ANNA
(Signature)

QC Checked by:

[Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 9/2/2025

Page 1 of 1

Task Team Members:

R. Caffey

G. Barnett

C. James

Narrative (include time and location):

1145 - Leidos personnel meet @ Home Depot in Vancouver, WA.

1230 - Leidos personnel onsite @ Killpack HQ building.

Met with Betsy Wling (Clark County) to conduct site safety meeting and transfer well keys.

1330 - Leidos and Clark Co. personnel take 4x4 to tour the site and identify the existing monitoring wells along the SSI boundary and Landfill 4.

1400 - Leidos personnel unload equipment/supplies/drums at parking lot near FFS 1864.

1420 - Leidos Team begin well development @ LCMW09S. Removed dedicated pump and stored in contractor bag.

1500 - Leidos Team completes well development @ LCMW09S. Mobilize back to Killpack to unload equipment.

1515 - Leidos offsite to ship Umatilla sample casks

Daily Weather Condition: A.M. 70's F, N 3 mph, Sunny

P.M. 88 F, N 2 mph, Sunny

Recorded By: [Signature] (Signature)

QC Checked by: [Signature] 9/16/25 (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/03/25

Page 1 of 2

Task Team Members:

R. Caffey
G. Barrett
C. James

cc 9/3

Narrative (include time and location):

0720 - Leidos Team onsite

0730 - R. Caffey conducts safety talk, Leidos personnel calibrate equipment and load supplies for well development. R. Caffey speaks w/ Kevin (Clark Co.) and checks out radio and well keys. R. Caffey speaks w/ Betsy Wing (Clark Co.) to talk about schedule/plan.

0900 - Leidos Team deems equipment using PFAS-free source water from pump house north of Kilpack HQ. Leidos Team mobilizes to LCMW01S to begin well development

0940 - Leidos Team completes well development @ LCMW01S

0950 - R. Caffey mobilizes to PM-MW02 to set up for well development. R. Caffey asks Betsy (Clark Co.) to ask about Master lock keys. Instructed to use bolt cutters to cut locks and access wells near FES 1864.

1000 - R. Caffey begins development @ PM-MW02

1020 - Leidos Team ^{begins} ~~completes~~ well development @ LCMW01D

1030 - R. Caffey completes well development @ PM-MW02

1100 - Leidos Team completes well development @ LCMW01D.

R. Caffey begins well development @ PM-MW01

1135 - R. Caffey completes well development @ PM-MW01

1200 - Leidos Team begins well development @ LCMW07S

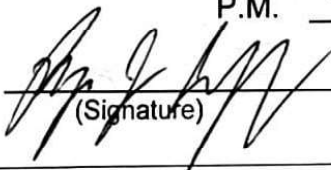
1230 - Leidos Team completes well development @ LCMW07S. R

Caffey stakes soil, G.W. and S&SD locations

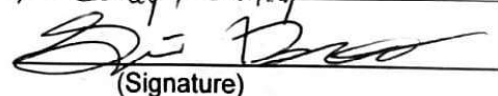
Daily Weather Condition: A.M. 70's °F, N 2mph, Sunny

P.M. 80's °F, N 3mph, Cloudy / Sunny

Recorded By:


(Signature)

QC Checked by:


(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/03/25

Page 2 of 2

Task Team Members:

See page 1
cc 9/3

cc 9/3

Narrative (include time and location):

1320 - Leidos Team begin well development @ LCMW045

1410 - Leidos Team cc 9/3 complete well development @ LCMW045.

1430 - R. Caffey begin well development @ L4MW07B at the southern end of landfill 4

1500 - Leidos Team grabs supplies from R. Caffey and mobilize to Kilpack buildings to assemble bottle sets.

1540 - R. Caffey completes well development @ L4MW07B and mobilizes to drums to unload purge water.

1610 - R. Caffey mobilizes to Kilpack buildings to off load equipment

1630 - Leidos offsite.

cc 9/3

Daily Weather Condition: A.M. See page of 1

P.M. See page of 1

Recorded By: [Signature]
(Signature)

QC Checked by: [Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/04/25

Page 1 of 1

Task Team Members:

R. Caffey

G. Barnett

C. Sames

Narrative (include time and location):

0730 - Leidos arrive and sign in @ Range HQ

0745 - Leidos Team conducts safety meeting and calibrate equipment inside Killpack building

0815 - Leidos mobilize to landfill 4 to continue well development.

0830 - Leidos Team begins well development @ L4MW05A

0940 - Leidos Team completes well development @ L4MW05A

R. Caffey drives to front gate to meet w/ Betsy Wing (Clark Co.)

1000 - Leidos Team mobilizes to L4MW09A to begin well development.

1045 - Leidos Team complete well development @ L4MW09A

1100 - Leidos Team begin well development @ L4MW09B

1205 - Leidos Team completes well development @ L4MW09B

1240 - Leidos Team begins well development @ L4MW04A

1300 - R. Caffey mobilizes to Killpack building to pick up GW sample bottles and per pump. Leidos Team completes development @ 1330

1410 - Leidos Team begins groundwater sampling @ LCMW09S -

1500 - Leidos Team collected LCMW09S-GW-202509 from 21' bag @ 1500. Collected FD.

1530 - Leidos Team mobilize to Killpack building to unload equipment. Unloaded purge water into drums.

1600 - Leidos Team offsite.

cc a/s

Daily Weather Condition:

A.M. 60's °F, NE 2mph, Cloudy / Rain

P.M. 83 °F, N 2mph, Sunny

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/05/2025

Page 1 of 2

Task Team Members:

R. Caffey
G. Barrett
C. James

21 9/5

Narrative (include time and location):

- 0730 - Leidos Team onsite.
- 0830 - R. Caffey conducts safety meeting @ 0745 and Leidos personnel calibrate equipment. Leidos Team mobilize to LCMW01D and set up sampling equipment.
- 0923 - Leidos Team collect LCMW01D-GW-202509 from 40' bgs @ 0923.
- 0930 - R. Caffey mobilizes to PM-MW02 to begin groundwater sampling.
- 1010 - Leidos Team collect LCMW01S-GW-202509 from 21' bgs @ 1010.
- 1030 - R. Caffey collects PM-MW02-GW-202509 from 20' bgs @ 1030.
- 1115 - Leidos Team collect LCMW02S-GW-202509 from 15' bgs @ 1115.
- 1218 - Leidos Team collect LCMW04S-GW-202509 from 14' bgs @ 1218.
- 1230 - R. Caffey collects PM-MW01-GW-202509 from 28' bgs @ 1230.
- 1250 - Leidos Team unload purge water into drums near FFS 1864.
- 1300 - Leidos Team mobilize to L4MW07B to begin groundwater sampling.
- 1330 - R. Caffey mobilizes to Killpack building to update eCOC and manage sample coolers. Leidos Team begin groundwater sampling procedures @ L4MW07B.

Daily Weather Condition: A.M. 60°F, 1mph N, Cloudy/Rain

P.M. 82°F, 5mph NW, Cloudy/Sunny

Recorded By: [Signature]

(Signature)

QC Checked by: [Signature]

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/05/25

Page 2 of 2

Task Team Members:

See page 1 of 2
EC 9/5

EC 9/5

Narrative (include time and location):

1500 - Leidos Team collects L4MW07B-GW-202509 from 57' bgs @ 1500. Collected FD. R. Coffey collects CBV-FB01 using PFAS-free DI @ 1450.
1540 - Leidos Team collects L4MW07B-GW-202509 EB off of the stainless-steel monsoon pump intake.
1600 - Leidos Team unloads equipment into Killpack building. Offsite.

Daily Weather Condition: A.M. See page 1 of 2

P.M. See page 1 of 2

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/06/25

Page 1 of 2

Task Team Members:

R. Caffey

G. Barnett

C. James

Narrative (include time and location):

0730 - Leidos Team onsite.

0800 - Leidos Team conduct safety meeting and calibrate sampling equipment inside the Kilpack building. Leidos personnel signed-in @ Range HQ.

0830 - Leidos Team mobilized to L4MW05A to begin groundwater sampling.

1000 - Leidos Team collects L4MW05A-GW-202509 from 34' @ 1000.

1030 - Leidos Team mobilizes to L4MW09A to begin groundwater sampling.

1135 - Leidos Team collects L4MW09A-GW-202509 from 40' bgs @ 1135.

1200 - R. Caffey mobilizes to FFS 1864 to begin SW/SD sampling.

1215 - R. Caffey collects CB186408-SW01 from surface water adjacent to buildings near 1864.

1220 - R. Caffey collects CB186408-SD01 from 0-0.5' bgs.

1245 - R. Caffey collects CB186409-SW01. Collected FD.

1250 - R. Caffey collects CB186409-SD01 from 0-0.5' bgs.

1330 - R. Caffey collects CB186410-SW01.

1335 - R. Caffey collects CB186410-SD01 from 0-0.5' bgs. FD.

1415 - R. Caffey collects CB448311-SW01.

1420 - R. Caffey collects CB448311-SD01 from 0-0.5' bgs.

Daily Weather Condition: A.M. 60°F, NW 2mph, Cloudy

P.M. 75°F, N 2mph, Cloudy

Recorded By:

[Signature]
(Signature)

QC Checked by:

[Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/06/23

Page 2 of 2

Task Team Members:

See page 1 of 2
EC 9/6

EC 9/6

Narrative (include time and location):

1445 - R. Caffey collected CBWR1208 - SW101
1450 - R. Caffey collected CBWR1208 - SD01 from 0 - 0.5' bgs
1515 - R. Caffey collected CBWR1209 - SW01
1520 - R. Caffey collected CBWR1209 - SD01 from 0 - 0.5' bgs
1545 - Leidos Team unloads equipment and transfers
samples into coolers at Kilpack building.
1615 - Leidos offsite.

Daily Weather Condition: A.M. See page 1 of 2

P.M. See page 1 of 2

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/18/25

Page 1 of 1

Task Team Members:

R. Caffey
R. Rice (Greida)
M. Cox

D. Hendricks
Gregory: T. Hatch
T. Barn

Narrative (include time and location):

J. Fraga

- 1100 - R. Caffey & R. Rice onsite @ Range HQ to meet w/ Betsy Wing (Clark Co)
- 1130 - R. Caffey and R. Rice mobilize to FFS 1864 to visualize sample locations.
- 1145 - R. Caffey and R. Rice mobilize to FFS 4483 and WR12 to visualize sample locations.
- 1200 - R. Rice onsite. R. Caffey organizes storage room and prepares sample bottle sets.
- 1345 - M. Cox onsite. Leidos Team signs in and mobilizes to each AOPI to observe staked locations.
- 1445 - Gregory personnel and D. Hendricks onsite.
- 1500 - Leidos and Gregory personnel mobilize to FFS 1864 parking lot to stage equipment.
- 1530 - Gregory and Leidos personnel participate in UXO safety meeting w/ Betsy Wing (Clark Co). Gregory personnel sign-in.
- 1600 - Gregory and Leidos personnel begin unloading equipment and supplies. Gregory personnel had source water into totes.
- 1730 - Leidos Team & Gregory offsite.

9/18

Daily Weather Condition:

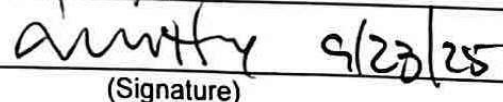
A.M. 58°F, P. Cloudy / Sunny, 1mph SW

P.M. 79°F, Sunny, 7mph NW

Recorded By:


(Signature)

QC Checked by:


(Signature) 9/23/25

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/19/25

Page 1 of 3

Task Team Members:

R. Caffey
R. Rice
M. Cox

D. Hendricks
Gregory Drilling: T. Hatch
T. Barn
J. Fraga

Narrative (include time and location):

- 0700 - Leidos Team onsite @ gate. Signed in @ Range HQ
- 0715 - Gregory Drilling onsite.
- 0730 - R. Caffey conducts safety meeting at FFS 1864 parking lot
- 0800 - Gregory and Leidos Team continue low-impact clearance @ CBU-1864-07. Leidos conducts drill rig inspection.
- 0845 - Gregory and Leidos personnel continue low-impact clearance @ CBU-1864-06. Gregory moves the sonic rig to CBU-1864-07 and begins setting up equipment.
- 0945 - R. Caffey collected CBU²²-186407-SS01 @ 0945 from 0-1' bgs
- 0950 - R. Caffey collected CBU-186407-SB01 from 4-6' bgs @ 0950.
- 0955 - R. Caffey collected CBU-186407-SB02 from 8-10' bgs @ 0955.
- 1000 - Leidos Team and Gregory personnel complete low-impact clearance @ CBU-1864-11 and CBU-1864-05
- 1010 - Gregory continues drilling down to 20' bgs @ CBU-1864-07 to install temp well. Leidos and Gregory personnel complete low-impact clearance @ CBU-1864-04.

0300 - Gregory continues drilling down to 30' bgs @ CBU-1864-07

Daily Weather Condition: A.M. 60°F, Sunny/Clear, 5 mph

P.M. 80's F, Sunny, SW 2 mph

Recorded By:


(Signature)

QC Checked by:


(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/19/25

Page 2 of 3

Task Team Members:

See page 1

QC a/n

QC a/n

Narrative (include time and location):

1030 cont. - Leidos Team & Gregory personnel mobilize to FFS 4483 and Wash Trucks 1 & 2 to continue low-impact clearance.

1100 - Gregory Drilling completed drilling @ CBV-1864-07 and installed temp well down to 30' bgs (10' screen from 20' to 30' bgs).

1130 - Gregory personnel begin adding sand (#2/12) to the temp well screen @ CBV-1864-07. Gregory waits for more well supplies / drums to arrive.

1200 - Gregory personnel arrive onsite to deliver drums / sand / grout / temp well supplies. Leidos Team and Gregory personnel continue low-impact clearance / UXO avoidance at FFS 4483.

1300 - Leidos and Gregory personnel complete temp well installation @ CBV-1864-07.

1330 - Gregory and Leidos personnel begin drilling @ CBV-1864-11 down to 10' bgs for soil only.

1410 - R. Caffey collects CB186411-SS01 from 0-1' bgs @ 1410.

1415 - R. Caffey collects CB186411-SB01 from 4-6' bgs @ 1415.

1420 - R. Caffey collects CB186411-SB02 from 8-10' bgs @ 1420.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By: [Signature]
(Signature)

QC Checked by: [Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 08/19/25

Page 5 of 3

Task Team Members:

See page 1

cc 9/19

cc 9/19

Narrative (include time and location):

1430 - Gregory personnel move sonic rig and equipment to CBV-1864-06.

1450 - Gregory personnel begin drilling @ CBV-1864-06

1500 - R. Caffey collects CB186406-SS01 from 0-1' bgs @ 1500 Collected FD.

1505 - R. Caffey collects CB186406-SB01 from 4-6' bgs @ 1505

1510 - R. Caffey collects CB186406-SB02 from 8-10' bgs @ 1510.

1520 - Gregory drills down to 20' bgs.

1600 - Gregory personnel drill down to 30' bgs.

1620 - Gregory personnel install temporary PVC well @ CBV-1864-06.

1640 - Gregory personnel begin decontaminating drilling rods. Leidos Team completes low-impact clearance @ CBV-1864-04.

1700 - Gregory personnel moves the sonic rig to CBV-1864-04

1730 - Leidos & Gregory offsite.

cc 9/19

Daily Weather Condition: A.M. 55°F, Sunny/Fog. See page 1

P.M. See page 1

Recorded By: (Signature) QC Checked by: (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/20/25

Page 1 of 3

Task Team Members:

R. Caffey
M. Cox
D. Hendricks

B. Bice
Gregory Drilling: T. Hatch
T. Bran
S. Fraga

Narrative (include time and location):

0700 - Leidos Team & Gregory onsite.
0715 - Leidos Team & Gregory sign-in @ Range HQ
0730 - R. Caffey conducts safety meeting at FES 1864 parking lot.
0800 - Leidos Team continues low impact clearance at
CBV-4483-05.
0830 - Gregory personnel begin drilling at CBV-1864-04.
0850 - R. Caffey collects CB186404 SS01 from 0-1' bgs
@ 0850
0855 - R. Caffey collects CB186404-SB01 from 4-6' bgs
@ 0855
0900 - R. Caffey collects CB1864-SB02 from 8-10' bgs
@ 0900
0930 - Gregory personnel begin installing PVC riser & screen
for a temp well @ CBV-1864-04.
1000 - Gregory personnel move drilling equipment and mobilize
drill rig to CBV-1864-05. Gregory personnel decom
equipment.
1030 - Leidos Team and Gregory personnel continue low-impact
clearance @ CBV-WR12-06.
1100 - Gregory begins drilling @ CBV-1864-05 down to 10' bgs
for soil-only boring
1120 - ~~R. Caffey~~ D. Hendricks collects CB186405-SS01 from 0-1' bgs
@ 1120.

Daily Weather Condition: A.M. 55°F Sunny / Fog, SW 2mph

P.M.

Recorded By:


(Signature)

QC Checked by:


(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/26/25

Page 2 of 3

Task Team Members:

See page 1

EC 9/26

EC 9/26

Narrative (include time and location):

1125 - ~~R. Caffey~~ D. Hendricks collects CB186405-SB01 from 4-6' bgs from 1125.

1130 - D. Hendricks collects CB186405-SB02 from 8-10' bgs from 1130.

R. Caffey collects CB186407-GW01 from 2.5' bgs from 1130. Final NTU: 87.1

1200 - Gregory and Leidos Team mobilize to FFS and WR12 to set up drilling equipment and clean pad. R. Caffey mobilizes to CBV-1864-06.

1230 - R. Caffey begins purging groundwater @ CBV-1864-06.

1330 - R. Caffey collects CB186406-GW01 from 2.5' bgs at 1330. Final NTU: 34.9

1345 - R. Caffey mobilizes to CBV-1864-04 and starts purging GW.

D. Hendricks collects ~~CB186406~~^{EC 9/26} CBWR1206-SS01 from 0-1' bgs @ ~~1325~~ 1335

D. Hendricks collects CBWR1206-SB01 from 4-6' bgs @ ~~1325~~ 1340

D. Hendricks collects CBWR1206-SB02 from 8-10' bgs @ ~~1330~~ 1345

1515 - R. Caffey collects CB186404-GW01 from 76' bgs @ 1515. Final NTU: 812

1530 - Gregory Drilling halt drilling activities due to broken belts

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By:  (Signature)

QC Checked by:  (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/20/25

Page 3 of 3

Task Team Members:

See page 1
PC 9/20

PC 9/20

Narrative (include time and location):

1615 - Leidos Team & Gregory offsite. Gregory picking up bolts for sonic head repair.
1630 - Leidos offsite.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

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(Signature)

QC Checked by: [Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/21/25

Page 1 of 2

Task Team Members:

R. Caffey
M. Cox
R. Rice

Gregory Drilling: T. Hatch
T. Bran
J. Fraga

Narrative (include time and location):

- 0800 - Leidas & Gregory onsite & sign-in @ Range HQ
- 0815 - R. Caffey conducts safety tailgate
- 0830 - Gregory personnel begin repairing the sonic drill head
- 0920 - Gregory drilling resumes @ CBV-WR12-06.
- 1000 - Gregory drilling reaches 50' bgs @ CBV-WR12-06
tight/fat clay observed. No water / dry.
- 1045 - Gregory personnel reach 60' bgs. Tight/fat clay. Gray sediment / clay towards 60' bgs.
- 1130 - Gregory personnel reach 70' bgs. Tight clay. Gray clay / sediment. No visible moisture. R. Caffey organizes sample coolers.
- 1245 - Gregory personnel reach 80' bgs. Tight/fat clay w/ no visible moisture. Drilling halted to await further instruction.
- 1315 - Gregory personnel mobilize back to FFS 1864 and begin grouting and abandoning temp well locations: CBV-1864-04, -06, -07.
- 1330 - R. Caffey calls V. Peterson (Leidas PM) and discusses the ongoing issue with tight clay and no water. Decided to abandon well due to lack of water and proximity to Troutdale formation.
- 1500 - Gregory personnel complete grouting and abandonment at Former Fire Station 1864. Gregory personnel mobilize back to CBV-WR12-06 to abandon all 80' bgs.

Daily Weather Condition: A.M. 50's °F, Rain, SW 2mph

P.M. 68°F, Cloudy, S 3mph

Recorded By:  (Signature)

QC Checked by:  (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/21/25

Page 2 of 2

Task Team Members:

See page 1

Narrative (include time and location):

1615 - Gregory personnel mobilize equipment to FFS 4483
1720 and begin decontaminating drill rods/tooling
1520 - Leidos and Gregory off site.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By: [Signature]
(Signature)

QC Checked by: [Signature]
(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/22/25

Page 1 of 4

Task Team Members:

R. Caffey
M. Cox
R. Rice

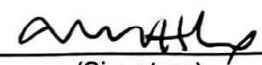
Gregory Drilling: T. Hatch
T. Bran
S. Frager

Narrative (include time and location):

0700 - Leidas & Gregory onsite. Sign in @ Range HQ
0715 - R. Caffey conducts safety meeting @ PFS 4483.
0745 - Gregory personnel begin mobilizing the sonic drill rig and equipment to CBV-4483-10
0800 - Gregory begin drilling @ CBV-4483-10 down to 10' bgs
0815 - R. Caffey collects CB448310-SS01 from 0-1' @ 0815.
0820 - R. Caffey collects CB448310-SB01 from 4-6' @ 0820. Collected FD. Tight/fat clay. No visible moisture.
0825 - R. Caffey collects CB448310-SB02 from 8-10' bgs @ 0825. Tight/fat clay, brown with gray mottling. No visible moisture.
0830 - Tight/fat clay persistent @ ~~CB448310~~ CBV-4483-10 down to 10' bgs. No temp well installed.
0835 - Gregory personnel mobilize sonic rig to CBV-WR12-07.
0850 - Gregory personnel begin drilling @ CBV-WR12-07.
0900 - R. Caffey collects CBWR1207-SS01 from 0-1' @ 0900. Collected FD. ~~Size 9/16~~
0905 - R. Caffey collected CBWR1207-SB01 from 4-6' bgs @ 0905. Tight clay / No moisture.
0910 - R. Caffey collected CBWR1207-SB02 from 8-10' bgs @ 0910. Tight/fat clay / No moisture.

Daily Weather Condition: A.M. 50°F, Sunny/Fog, SW 3mph
P.M. 79°F, Sunny, SW 2mph

Recorded By:  (Signature)

QC Checked by:  (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/22/25

Page 2 of 4

Task Team Members:

See page 1

Narrative (include time and location):

0915 - Gregory personnel begin drilling down to 10' bgs
@ CBV-4483-08.

0930 - R. Caffey collects CB448307-SS01 from 0-1' bgs
@ 0930

0935 - R. Caffey collects CB448307-SB01 from 4-6' bgs
@ 0935. Tight/fat clay

0940 - R. Caffey collects CB448307-SB02 from 8-10' bgs
@ 0940. Tight/fat clay w/ no moisture.

0945 - Gregory begins drilling down to 10' bgs @
CBV-4483-08.

0950 - R. Caffey collects CB448308-SS01 from 0-1' bgs
@ 0950

0955 - R. Caffey collects CB448308-SB01 from 4-6' bgs
@ 0955.

1000 - R. Caffey collects CB448308-SB02 from 8-10' bgs
@ 1000.

1005 - Gregory begins drilling down to 10' bgs @ CBV-4483-09

1010 - R. Caffey collects CB448309-SS01 from 0-1' bgs
@ 1010

1015 - R. Caffey collects CB448309-SB01 from 4-6' bgs
@ 1015. Collected FD

1020 - R. Caffey collects CB448309-SB02 from 8-10' bgs
@ 1020. Tight/fat clay / No moisture.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By:

(Signature)

QC Checked by:

(Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/22/25

Page 3 of 4

Task Team Members:

See page 1

See page 1

Narrative (include time and location):

1025 - Gregory personnel start drilling @ CBV-4483-06 down to 10' bgs.

1030 - R. Caffey collects CB448306-SS01 from 0-1' bgs @ 1030

1035 - R. Caffey collects CB448306-SB01 from 4-6' bgs @ 1035

1040 - R. Caffey collects CB448306-SB02 from 8-10' bgs @ 1040

1050 - Gregory personnel start drilling down to 10' bgs @ CBV-4483-05.

1100 - R. Caffey collects CB448305-SS01 from 0-1' bgs @ 1100.

1105 - R. Caffey collects CB448305-SB01 from 4-6' bgs @ 1105

1110 - R. Caffey collects CB448305-SB02 from 8-10' bgs @ 1110. Tight / fat clay / no moisture.

1115 - Gregory personnel begin preparing grouting equipment and supplies.

1200 - R. Caffey uses Trimble GPS to mark boring locations and SW/SD locations. Gregory grouts and abandons borings at the WR12 and 4483 ADPTs. R. Rice offsite for lunch.

1245 - R. Rice back onsite.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By: [Signature] (Signature)

QC Checked by: [Signature] (Signature)

TASK TEAM ACTIVITY LOG SHEET PROJECT

NAME: BRAC SSI at Camp Bonneville

Date: (mm/dd/yy): 09/22/25

Page 4 of 4

Task Team Members:

See page 1

Narrative (include time and location):

1330 - Gregory personnel begin moving drums to FFS 1864 parking lot and secure IDW storage area.
Leidos personnel collect IDW samples @ FFS 1864 parking lot.

1430 - Gregory offsite until further notice regarding WDOE concurrence.

1445 - Leidos Team offsite. R. Colley ships samples @ 1630.

Daily Weather Condition: A.M. See page 1

P.M. See page 1

Recorded By:

(Signature)

QC Checked by:

(Signature)

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APPENDIX D

BORING LOGS

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HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-04	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 3
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Building 1864			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/20/25 0800 9/20/25 1030			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
0. OVERBURDEN THICKNESS N/A		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
1. DEPTH DRILLED INTO BEDROCK N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-1864-04-SS; 1864-04-SB1; 1864-04-SB2; 1864-04-202508			
2. TOTAL DEPTH OF BOREHOLE 30'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: <u>GROUT</u> BENTONITE <u>TEMPORARY WELL POINT</u> MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million 16' : First Water Encountered : Static Water Level NA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
The sketch shows a grid with a central grey rectangle labeled 'BUILDING 1864'. Below it is a horizontal line labeled 'ROAD'. Five borehole locations are marked with black dots and labeled: CBV-1864-04 (top left), CBV-1864-05 (middle left), CBV-1864-11 (middle right), CBV-1864-06 (bottom left), and CBV-1864-07 (bottom right). A north arrow points upwards in the top right corner.					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-1864-04	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-04	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 3 OF 3	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	22 —	CH	16-30' Fat Clay, 5Y 3/1 black, very stiff, trace very fine sands, wet No Stains; No Odors	20' Run/ 20' Recovered	4.6	
	24 —					
	26 —					
	28 —					
	30 —					
			TOTAL DEPTH 30'			
	32 —					
	34 —					
	36 —					
	38 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-04	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-05	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 2	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2 —	CH	0-2' Fat Clay, 5YR 3/4 dark reddish brown, very stiff, dry No Stains; No Odors	10' Run/ 10' Recovered	0.0	1864-05-SS 0'-1'
	4 —		2-7' Fat Clay, 10YR 5/8 yellowish brown with 10YR 7/1 light gray mottles, very stiff, dry No Stains; No Odors			1864-05-SB1 4'-6'
	6 —		7-8' Fat Clay, 10YR 7/1 light gray with 5YR 3/4 dark reddish brown and 10YR 2/1 black mottles, very stiff, dry No Stains; No Odors			1864-05-SB2 8'-10'
	8 —		8-10' Fat Clay, 10YR 5/8 yellowish brown with 10YR 7/1 light gray mottles, very stiff, dry No Stains; No Odors			
	10 —		TOTAL DEPTH 10'			
	12 —	CL				
	14 —					
	16 —					
	18 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-05	

HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-06	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 3
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Building 1864			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/18/25 1625 9/19/25 1235			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
0. OVERBURDEN THICKNESS N/A		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
1. DEPTH DRILLED INTO BEDROCK N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-1864-06-SS; 1864-06-SB1; 1864-06-SB2; 1864-06-202508			
2. TOTAL DEPTH OF BOREHOLE 30'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: <u>GROUT</u> BENTONITE <u>TEMPORARY WELL POINT</u> MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million 26' : First Water Encountered : Static Water Level NA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
The sketch shows a grid with a central grey rectangle labeled 'BUILDING 1864'. Below it is a horizontal line labeled 'ROAD'. Five borehole locations are marked with black dots and labeled: CBV-1864-04 (top left), CBV-1864-05 (middle left), CBV-1864-11 (middle right), CBV-1864-06 (bottom left), and CBV-1864-07 (bottom right). A north arrow points upwards in the top right corner.					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-1864-06	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 2 OF 3
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-1.5' Lean Clay, 5YR 3/3 dark reddish brown, very stiff, trace basalt gravels to 0.2' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	0.6	1864-06-SS 0'-1'
	4		1.5-8' Lean Clay, 2.5Y 3/3 light yellowish brown with 7.5YR 4/4 brown and 7.5YR 2.5/1 black mottles, stiff, dry No Stains; No Odors			1864-06-SB1 4'-6'
	6					
	8	CH	8-10' Fat Clay, 7.5YR 4/4 brown with 2.5Y 6/3 light yellowish brown mottles, very stiff, dry No Stains; No Odors	20' Run/ 20' Recovered	1.3	1864-06-SB2 8'-10'
	10		10-13' Fat Clay, 2.5Y 3/3 dark olive brown with 7.5YR 5/6 strong brown mottles, very stiff, moist No Stains; No Odors			
	12					
	14		13-16' Fat Clay, 2.5Y 3/2 very dark grayish brown, very stiff, moist No Stains; No Odors			
	16		16-18' Fat Clay, 2.5Y 3/3 dark olive brown with 7.5YR 5/6 strong brown mottles, very stiff, moist No Stains; No Odors			
	18		18-26' Fat Clay, 2.5Y 2.5/1 black, very stiff, moist No Stains; No Odors			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-1864-06

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 3 OF 3	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	22 —	CH	18-26' Fat Clay, 2.5Y 2.5/1 black, very stiff, moist No Stains; No Odors	20' Run/ 20' Recovered	1.3	
	24 —					
	26 —					
	28 —	CL	26-30' Fat Clay Interbedded with Sandy Lean Clay with Gravel (0.3' thick subhorizontal), 2.5Y 2.5/1 black, very stiff, basalt gravels to 0.1' diameter, wet No Stains; No Odors			
	30 —		TOTAL DEPTH 30'			
	32 —					
	34 —					
	36 —					
	38 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-06	

HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-07	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 3
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Building 1864			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/18/25 1625 9/19/25 1235			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
0. OVERBURDEN THICKNESS N/A		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
1. DEPTH DRILLED INTO BEDROCK N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-1864-07-SS; 1864-07-SB1; 1864-07-SB2; 1864-07-202508			
2. TOTAL DEPTH OF BOREHOLE 30'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: <u>GROUT</u> BENTONITE <u>TEMPORARY WELL POINT</u> MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million 18' : First Water Encountered : Static Water Level NA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
The sketch is on a grid background. A large grey rectangle labeled 'BUILDING 1864' is in the center. A horizontal line labeled 'ROAD' is at the bottom. Five borehole locations are marked with black dots and labeled: CBV-1864-04 (top left), CBV-1864-05 (left of building), CBV-1864-06 (bottom left), CBV-1864-07 (bottom right), and CBV-1864-11 (middle right). A north arrow points upwards in the top right corner.					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-1864-07	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-07	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 3	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-3.5' Lean Clay with Gravel, 5YR 3/3 dark reddish brown, very stiff, basalt gravels to 0.2' diameter, dry No Stains; No Odors			1864-07-SS 0'-1'
	4	SW-SM	3.5-5.5' Well Graded Sand with Silt, 2.5Y 4/2 dark grayish brown, medium dense, very fine grained, angular, quartz, feldspars, micas, and FeMg (dark) grains, trace basalt gravels to 0.05' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	21.6	1864-07-SB1 4'-6'
	6					
	8	CH	5.5-9' Fat Clay with Gravel, 5YR 4/3 reddish brown with 7.5YR 5/8 strong brown and 2.5Y 6/4 light yellowish brown mottles, very stiff, basalt gravels to 0.2' diameter, dry No Stains; No Odors			1864-07-SB2 8'-10'
	10		9-10' Fat Clay with Gravel, 10YR 6/4 light yellowish brown with 2.5Y 6/4 light yellowish brown mottles, very stiff, basalt gravels to 0.2' diameter, dry No Stains; No Odors			
	12					
	14		10-15' Gravelly Lean Clay with Sand, 2.5Y 3/2 very dark grayish brown with 10YR 6/8 brownish yellow mottles, stiff, very fine grained, angular, quartz, feldspars, micas, and FeMg (dark) grains, basalt gravels to 0.06' diameter, moist No Stains; No Odors	20' Run/ 20' Recovered	3.5	
	16	CL	15-18' Lean Clay, 2.5Y 2.5/1 black, stiff, with shale fragments, fissile, moist No Stains; No Odors			
	18		18-30' Lean Clay with Sand, 2.5Y 3/2 very dark grayish brown, stiff, fine to coarse grained, angular, quartz, feldspars, micas, and FeMg (dark) grains, trace basalt and chert gravels to 0.02' diameter, wet No Stains; No Odors			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-07	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-07	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 3 OF 3	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	22 —	CL	18-30' Lean Clay with Sand, 2.5Y 3/2 very dark grayish brown, stiff, fine to coarse grained, angular, quartz, feldspars, micas, and FeMg (dark) grains, trace basalt and chert gravels to 0.02' diameter, wet No Stains; No Odors	20' Run/ 20' Recovered	3.5	
	24 —					
	26 —					
	28 —					
	30 —					
	32 —					
	34 —					
	36 —					
	38 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-07	

HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-11	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 2
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Building 1864			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/19/25 1400 9/19/25 1435			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
0. OVERBURDEN THICKNESS N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-1864-11-SS; 1864-11-SB1; 1864-11-SB2			
1. DEPTH DRILLED INTO BEDROCK N/A					
2. TOTAL DEPTH OF BOREHOLE 10'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: <u>GROUT</u> BENTONITE TEMPORARY WELL POINT MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million N/A : First Water Encountered : Static Water Level NA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
The sketch is on a grid background. A large grey rectangle labeled 'BUILDING 1864' is in the center. A horizontal grey line labeled 'ROAD' is at the bottom. Five borehole locations are marked with black dots and labeled: CBV-1864-04 (top left), CBV-1864-05 (left of building), CBV-1864-11 (right of building), CBV-1864-06 (bottom left), and CBV-1864-07 (bottom right). A north arrow points upwards in the top right corner.					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-1864-11	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-1864-11	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 2	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2 —	CL	0-2.5' Lean Clay, 7.5YR 3/4 dark brown, stiff, dry No Stains; No Odors	10' Run/ 10' Recovered	3.1	1864-11-SS 0'-1'
	4 —		2.5-4.2' Lean Clay, 7.5YR 3/4 dark brown with 10YR 6/3 pale brown and 7.5YR 5/6 strong brown mottles, stiff, dry No Stains; No Odors			1864-11-SB1 4'-6'
	6 —		4.2-8.1' Lean Clay, 5YR 5/8 yellowish red with 5YR 7/1 light gray laminations, stiff, dry No Stains; No Odors			1864-11-SB2 8'-10'
	8 —		8.1-10' Lean Clay, 2.5Y 6/3 light yellowish brown with 5YR 5/8 yellowish red mottles, stiff, dry No Stains; No Odors			
	10 —		TOTAL DEPTH 10'			
	12 —	CL				
	14 —					
	16 —					
	18 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-1864-11	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-4483-05	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 2 OF 2
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL	INCLINED DEGREES
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-1.9' Sandy Lean Clay with Gravel, 7.5YR 3/3 dark brown, dense, basalt gravels to 0.2' diameter, dry No Stains; No Odors			4483-05-SS 0'-1'
		OL	1.9-2.6' Organic Soil, 10YR 2/1 black, loose, with bark and roots, dry No Stains; No Odors			
	4	CH	2.6-3.9' Fat Clay, 2.5Y 4/3 olive brown with 10YR 5/8 yellowish brown mottles, very stiff, few basalt gravels to 0.05' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	27.6	4483-05-SB1 4'-6'
	6		3.9-5.7' Fat Clay, Gley 1 4/N dark gray with 7.5YR 5/8 strong brown mottles, hard, dry			
	8		5.7-9' Fat Clay, 7.5YR 4/6 strong brown with 7.5YR 6/1 gray mottles, very stiff, dry			
	10		9-10' Fat Clay, Gley 1 7/10Y light greenish gray with 7.5YR 4/6 strong brown mottles, hard, dry No Stains; No Odors			4483-05-SB2 8'-10'
	10		TOTAL DEPTH 10'			
	12					
	14					
	16					
	18					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-4483-05

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-4483-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 2 OF 2
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	SM	0-2.5' Silty Sand with Gravel, 10YR 3/1 very dark gray, loose, basalt gravels to 0.1' diameter, dry No Stains; No Odors			4483-06-SS 0'-1'
	4	CH	2.5-3.2' Fat Clay with Gravel, 10YR 2/1 black with 10YR 4/6 dark yellowish brown mottles, stiff, basalt gravels to 0.1' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	27.6	4483-06-SB1 4'-6'
	6		3.2-4.5' Fat Clay, 7.5YR 5/4 brown, hard, few basalt gravels to 0.3' diameter, dry No Stains; No Odors			4483-06-SB2 8'-10'
	8		4.5-6.8' Fat Clay, Gley 1 5/10GY greenish gray with 5YR 4/4 reddish brown mottles, hard, dry No Stains; No Odors			
	10		6.8-10' Fat Clay, 7.5YR 4/6 strong brown with Gley 1 6/5GY greenish gray mottles, hard, dry No Stains; No Odors			
	10		TOTAL DEPTH 10'			
	12					
	14					
	16					
	18					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-4483-06

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-4483-07	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 2	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-2.8' Lean Clay with Gravel, 7.5YR 4/4 brown, stiff, basalt gravels to 0.4' diameter, dry No Stains; No Odors			4483-07-SS 0'-1'
	4					
	6	CH	2.8-8.5' Fat Clay, 7.5YR 4/6 strong brown with 7.5YR 2.5/1 black and 10YR 5/6 yellowish brown mottles, hard, few basalt gravels to 0.3' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	3.8	4483-07-SB1 4'-6'
	8					
	10		8-10' Fat Clay, 7.5YR 6/1 gray with 7.5YR 4/6 strong brown mottles, very hard, dry No Stains; No Odors			4483-07-SB2 8'-10'
	12					
	14					
	16					
	18					
			TOTAL DEPTH 10'			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-4483-07	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-4483-08	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 2 OF 2
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL	INCLINED DEGREES
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-2.5' Lean Clay with Gravel, 7.5YR 4/4 brown, stiff, basalt gravels to 0.4' diameter, dry No Stains; No Odors			4483-08-SS 0'-1'
	4					
	6	CH	2.5-9' Fat Clay, 7.5YR 4/6 strong brown with 7.5YR 2.5/1 black and 10YR 5/6 yellowish brown mottles, hard, few basalt gravels to 0.3' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	3.8	4483-08-SB1 4'-6'
	8					
	10		9-10' Fat Clay, 7.5YR 6/1 gray with 7.5YR 4/6 strong brown mottles, very hard, trace basalt gravels to 0.1' diameter, dry No Stains; No Odors			4483-08-SB2 8'-10'
	12					
	14					
	16					
	18					
			TOTAL DEPTH 10'			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-4483-08

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-4483-10	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 2 OF 2
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL	INCLINED DEGREES
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2	CL	0-2' Lean Clay with Gravel, 5YR 3/3 dark reddish brown, stiff, basalt gravels to 0.4' diameter, dry No Stains; No Odors			4483-10-SS 0'-1'
	4		2-4' Fat Clay, 7.5YR 4/6 strong brown with 2.5Y light olive brown mottles, hard, dry No Stains; No Odors			
	6	CH	4-9' Fat Clay, 2.5Y 5/4 light olive brown with 7.5YR 5/6 strong brown mottles, very hard, dry No Stains; No Odors	10' Run/ 10' Recovered	6.2	4483-10-SB1 4'-6'
	8		4-9' Fat Clay, Gley 1 6/N gray with 7.5YR 5/6 strong brown mottles, very hard, dry No Stains; No Odors			4483-10-SB2 8'-10'
	10		TOTAL DEPTH 10'			
	12					
	14					
	16					
	18					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-4483-10

HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-06	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 5
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Wash Rack 12			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/20/25 0800 9/20/25 1030			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
0. OVERBURDEN THICKNESS N/A		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
1. DEPTH DRILLED INTO BEDROCK N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-WR12-06-SS; WR12-06-SB1; WR12-06-SB2			
2. TOTAL DEPTH OF BOREHOLE 80'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million N/A : First Water Encountered : Static Water Level NA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-WR12-06	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 5	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	2 —	CH	0-2' Fat Clay, 7.5YR 4/6 strong brown with 7.5YR 7/1 light gray mottles, very stiff, trace basalt gravels to 0.1' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	3.0	WR12-06-SS 0'-1'
	4 —					
	6 —		2-10' Fat Clay, 7.5YR 4/6 strong brown with 7.5YR 7/1 light gray mottles, very stiff, dry No Stains; No Odors			
	8 —					WR12-06-SB2 8'-10'
	10 —					
	12 —			10-20' Fat Clay, 7.5YR 4/4 brown with 7.5YR 7/1 light gray mottles, very stiff, trace basalt gravel to 0.1' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	1.3
	14 —					
	16 —					
	18 —					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-WR12-06	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 3 OF 5
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X		VERTICAL INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	22 —	CH	20-25' Fat Clay, 7.5YR 4/4 brown with 7.5YR 7/1 light gray mottles, very stiff, dry No Stains; No Odors	10' Run/ 10' Recovered	1.3	
	24 —					
	26 —					
	28 —		25-30' Fat Clay, 7.5YR 4/3 brown with 7.5YR 7/1 light gray mottles, hard, dry No Stains; No Odors			
	30 —					
	32 —		30-36' Fat Clay, 10YR 4/3 brown with 2.5Y 5/1 gray mottles, hard, dry No Stains; No Odors	10' Run/ 10' Recovered	1.2	
	34 —					
	36 —	36-38' Fat Clay, 2.5Y 5/1 gray with 10YR 4/3 brown mottles, hard, dry No Stains; No Odors				
	38 —		38-40' Fat Clay, 7.5YR 4/3 brown with 7.5YR 7/1 light gray mottles, hard, dry No Stains; No Odors			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-WR12-06

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 4 OF 5
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)			Colors from Munsell Soil Color Chart, Rev 2000
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	42	CH	40-45' Fat Clay, 5YR 3/2 dark reddish brown with Gley 1 4/5GY dark greenish gray mottles, hard, dry No Stains; No Odors	10' Run/ 10' Recovered	1.0	
	44		45-46' Fat Clay, 5YR 3/2 dark reddish brown with Gley 1 4/5GY dark greenish gray and 2.5Y 4/4 olive brown mottles, hard, dry No Stains; No Odors			
	46					
	48		46-50' Fat Clay, Gley 2 7/10BG light greenish grey with 2.5Y 5/4 light olive brown and 2.5Y 2.5/1 black mottles, hard, dry No Stains; No Odors			
	50	CL	50-63' Lean Clay, Gley 2 4/10BG dark greenish grey with 2.5Y 5/4 light olive brown and 2.5Y 2.5/1 black mottles, stiff, dry No Stains; No Odors	20' Run/ 20' Recovered	0.4	
	52					
	54					
	56					
	58					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>			BOREHOLE NUMBER CBV-WR12-06

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-06	
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 5 OF 5	
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES	
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000	
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)
	62	CL	50-63' Lean Clay, Gley 2 4/10BG dark greenish grey with 2.5Y 5/4 light olive brown and 2.5Y 2.5/1 black mottles, stiff, dry No Stains; No Odors	20' Run/ 20' Recovered	0.4	
	64		63-66' Lean Clay, Gley 2 4/10BG dark greenish grey with 2.5Y 5/4 light olive brown, 2.5YR 4/4 reddish brown and 2.5Y 2.5/1 black mottles, stiff, dry No Stains; No Odors			
	66		66-67' Lean Clay, Gley 1 4/N dark grey with 2.5Y 3/4 dark olive brown mottles, stiff, dry No Stains; No Odors			
	68		67-69' Lean Clay, Gley 1 4/N dark grey, stiff, dry No Stains; No Odors			
	70		69-70' Lean Clay, Gley 1 4/N dark grey with 10YR 2/1 black and 10R 2.5/1 reddish black subhorizontal laminations, stiff, dry No Stains; No Odors	10' Run/ 10' Recovered	0.4	
	72					
	74		70-80' Lean Clay, Gley 2 3/10BG very dark greenish gray, stiff, dry No Stains; No Odors			
	76					
	78					
			TOTAL DEPTH 80'			
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 8/24/25			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-WR12-06	

HTRW DRILLING LOG		DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-07	
1. COMPANY NAME Leidos		2. DRILLING SUBCONTRACTOR Gregory Drilling			SHEET 1 of 2
3. PROJECT BRAC PFAS PA/SI at Camp Bonneville		4. LOCATION Camp Bonneville, Vancouver, Washington			
5. NAME OF DRILLER Thomas Hatch		6. MAKE/MODEL OF DRILL Terrasonic YB6M68			
7. SIZES AND TYPES OF SAMPLING EQUIPMENT TSI 150 CC Sonic Drill Rig 6" & 7" x 10' Sonic rods and bits		8. BOREHOLE LOCATION Wash Rack 12			
		9. DRILL DATE/TIME STARTED: COMPLETED: 9/22/25 08509/22/25 0900			
		10. DEPTH GROUNDWATER ENCOUNTERED N/A			
0. OVERBURDEN THICKNESS N/A		11. DEPTH TO WATER/ELAPSED TIME AFTER BOREHOLE COMPLETION N/A			
1. DEPTH DRILLED INTO BEDROCK N/A		12. CHEMICAL SAMPLES VIA USEPA METHOD 1633A CBV-WR12-07-SS; WR12-07-SB1; WR12-07-SB2			
2. TOTAL DEPTH OF BOREHOLE 10'					
3. DISPOSITION OF BOREHOLE					
BACKFILL TYPE: GROUT BENTONITE TEMPORARY WELL POINT MONITORING WELL					
4. NOTES BKG: ≤ Background BGS: Below Ground Surface PPM: Parts per Million N/A : First Water Encountered: Static Water LevelNA: Not					
LOCATION SKETCH/COMMENTS					SCALE: None
The sketch shows a site layout on a grid. A horizontal road is at the bottom. Building 4475 is a large rectangle in the lower center. Building 4476 is a smaller rectangle to the right. Building 4483 is a rectangle to the left of Building 4475. Borehole CBV-1864-04 is at the top center. Borehole CBV-1864-11 is to the right of Building 4483. Boreholes CBV-4483-04, 05, 06, 07, 08, 09, and 10 are clustered around Building 4483. Borehole CBV-WR12-06 is to the right of Building 4476. Borehole CBV-WR12-07 is below Building 4475. A north arrow points towards the top right.					
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i> Michael H. Cox 9/24/25		QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i> Timothy T Runkle		BOREHOLE NUMBER CBV-WR12-07	

HTRW DRILLING LOG			DISTRICT USACE- Baltimore		BOREHOLE NUMBER CBV-WR12-07		
1. COMPANY NAME Leidos			2. DRILLING SUBCONTRACTOR Gregory Drilling		SHEET 2 OF 2		
3. PROJECT Camp Bonneville, Vancouver, Washington			4. DIRECTION OF BOREHOLE X VERTICAL		INCLINED DEGREES		
5. NOTES 6" x 7" Sonic to TD			Honeywell Mini-Rae 3000 SN: 592-601797 (health & safety screening only)		Colors from Munsell Soil Color Chart, Rev 2000		
ELEVATION	DEPTH (Feet)	USCS	CLASSIFICATION OF MATERIALS	RECOVERY (ft)	MONITORING (PPM)	REMARKS (Sample IDs/Depths/Etc.)	
	2	CL	0-3.5' Lean Clay with Gravel, 7.5YR 4/4 brown, stiff, basalt gravels to 0.4' diameter, dry No Stains; No Odors			WR12-07-SS 0'-1'	
	4	CH	3.5-8' Fat Clay, 7.5YR 4/6 strong brown with 10YR 2.5/1 black and 10YR 5/6 yellowish brown mottles, very stiff, few basalt gravels to 0.3' diameter, dry No Stains; No Odors	10' Run/ 10' Recovered	6.2	WR12-07-SB1 4'-6'	
	6						
	8		8-10' Fat Clay, 7.5YR 6/1 gray with 7.5YR 4/6 strong brown mottles, very stiff, trace basalt gravels to 0.1' diameter, dry No Stains; No Odors				WR12-07-SB2 8'-10'
	10		TOTAL DEPTH 10'				
	12						
	14						
	16						
	18						
GEOLOGIST SIGNATURE/DATE <i>Michael H. Cox</i>			QA/QC SIGNATURE/DATE <i>Timothy T Runkle</i>		BOREHOLE NUMBER CBV-WR12-07		

APPENDIX E

SAMPLING FORMS AND CALIBRATION LOGS

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CATEGORY 1 M&TE CALIBRATION LOG

IDENTIFIER	ITEM DESCRIPTION	CALIBRATION MEASUREMENT			LOT NUMBER	EXP DATE	NAME	DATE
		PRE	ADJUSTMENT	POST				
U125301X	Horiba U-52	4.15 PH	0.14	4.01	44120256	12/30/26	GB	9/3/25
		3.96 mS/cm	0.53	4.49				
		0.0 NTU	0.0	0.0				
		14.00 DO	0.82	9.18				
U1301440	Horiba U-52	4.01 PH	0.01	4.00	44120256	12/30/26	CT	9/3/25
		4.65 mS/cm	0.17	4.48				
		0.0 NTU	0	0.0				
		7.53 mg/L	1.29	8.82				
U1301440	Horiba U-52	4.04 PH	0.03	4.01	44120256	12/30/26	CT	9/4/25
		4.47 mS/cm	0.02	4.49				
		0.0 NTU	0	0.0				
		8.21 mg/L	0.38	8.59				
U125301X	Horiba U-52	4.02 PH	0.01	4.01				
		4.53 mS/cm	0.03	4.50				
		0.0 NTU	0	0.0				
		9.31 mg/L	0.92	8.39				
U123167X	Geotech	N/A	N/A	0.02	72D	4/26	GB	9/4/25
				20	72D	4/26		
				100	72D	4/26		
				800	72D	4/26		
U123167X	Geotech	N/A	N/A	0.02	72D	4/26	GB	9/5/25
				20				
				100				
				800				
U1301440	Horiba U-52	4.04 PH	0.03	4.01	44120256	12/30/26	CT	9/5/25
		4.43 mS/cm	0.05	4.48				
		0.0 NTU	0	0.0				
		9.15 mg/L	0.13	9.02				
U125301X	Horiba U-52	3.97 PH	0.03	4.00				
		4.75 mS/cm	0.24	4.49				
		0.2 NTU	0.1	0.1				
		7.48 mg/L	0.48	8.96				
U123167X	Geotech	N/A	N/A	0.02 NTU	72D	4/26	GB	9/6/25
				20 NTU				
				100 NTU				
				800 NTU				

CATEGORY 1 M&TE CALIBRATION LOG

CATEGORY 1 M&TE CALIBRATION LOG								
IDENTIFIER	ITEM DESCRIPTION	CALIBRATION MEASUREMENT			LOT NUMBER	EXP DATE	NAME	DATE
		PRE	ADJUSTMENT	POST				
U13168		N/A	N/A					
U107267X	Geotech			0.02 NTU	85D	5/27	GB	9/6/25
				2.0 NTU				
				100 NTU				
				800 NTU				
U130442	Horiba U-52	3.98 pH	0.03	4.01	45040488	5/15/27	CJ	9/6/25
		4.51 mS/cm	0.42	4.49				
		0.1 NTU	0.1	0.0				
		8.82 mg/L	0.12	8.74				
U125301b	Horiba U-52	4.02 pH	0.01	4.01	45040488	5/15/27	CJ	9/6/25
		4.76 mS/cm	0.27	4.49				
		0.0 NTU	0.3	0.3				
		8.25 mg/L	0.08	8.17				
U125301X	Horiba U-52	4.09 pH	0.09	4.00	45040488	5/15/27	EC	9/20/25
		4.54 mS/cm	0.05	4.49				
		0.0 NTU	0.0	0.0				



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: LCMW095Date (mm/dd/yy): 09/04/25

Page 1 of 2

Personnel C. James, G. Barnett, R. CaffeyPurge Start Time: 14:08 End Time: 14:5314:08Water Quality Meter: Horiba U-52Serial #: 1130144Calibrated: 9/1/25Water Level Meter: HeronSerial #: U131537Calibrated: NA

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump☒ Other (specify) peristaltic pumpDepth To Water: 10.00 ft. from measuring pointTotal Depth Of Well: 22.44 ft. from measuring point

Stagnant Water Purge Calculation:

(purged prior to stabilization commencing)

Tubing Volume Factor Calculation

1/4" OD= 9.46 3/8" OD= 21.576

Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = — ^{cc}/_{mL}

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/4/25	14:00	150 ml/min	16.46	5.48	153	6.05	0.101	77.5	1/4 gal	10.86	
9/4/25	14:15		16.15	5.25	149	6.11	0.101	44.9	~1 L	10.95	
9/4/25	14:20		15.47	5.13	162	6.05	0.103	28.2	0.5 gal	11.01	
9/4/25	14:25		15.05	5.11	174	5.92	0.104	25.8	0.75 gal	11.03	
9/4/25	14:30		14.94	5.32	184	5.82	0.105	11.5	1 gal	11.03	
9/4/25	14:35		14.83	5.20	194	5.73	0.105	8.32	1 1/4 gal	11.03	
9/4/25	14:40		14.83	5.20	194	5.73	0.105	7.19	↓	11.03	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic pumpSample ID: peristaltic pump GBSample Date/ Time: 9/4/25 15:00Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: LCMW095-GW-202509Sampling Procedure Followed: ☒ Yes ☐ NoIf no, why was deviation necessary: ec a/c

Recorded By:

[Signature] 9/4/25
(Signature and Date)

QA Checked By:

[Signature] 9/6/25
(Signature and Date)



Page 2 of 2

Recorded By:

QA Checked By:

 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: LCMW01DDate (mm/dd/yy): 09/05/25

Page 1 of 1

Personnel C. James G. BarnettPurge Start Time: 0845 End Time: 0929Water Quality Meter: Horiba U-52Serial #: U130144xCalibrated: 915125

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: HeronSerial #: U131537xCalibrated: N/A☒ Other (specify) peristalticDepth To Water: 7.51 ft. from measuring point

Stagnant Water Purge Calculation:

Tubing Volume Factor CalculationTotal Depth Of Well: 42.42 ft. from measuring point

(purged prior to stabilization commencing)

1/4" OD= 9.46

3/8" OD= 21.576

Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = 2 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	0850	100 mL/min	16.93	6.50	259	5.73	0.180	20.4	1/8 gal	8.75	
9/5/25	0855		15.73	5.23	257	5.84	0.125	15.2	0.5 gal	9.10	
9/5/25	0900		15.42	5.14	259	5.81	0.115	13.6	0.75 gal	9.22	
9/5/25	0905		15.21	5.79	261	5.79	0.111	11.9	1 gal	9.27	
9/5/25	0910		14.95	5.22	261	5.79	0.110	8.24	1 1/4 gal	9.34	
9/5/25	0915		14.84	5.26	263	5.77	0.109	8.84	2 gal	9.32	
9/5/25	0920		14.84	5.75	264	5.75	0.109	8.37	2.5 gal	9.30	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic pumpSample ID: LCMW01D-GW-202509Sample Date/ Time: 9/5/25 0923Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: no afSampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: [Signature](Signature and Date) 9/4/25QA Checked By: [Signature](Signature and Date) 9/6/25

**leidos****BRAC SSI at Camp Bonneville Low Flow GWS Form**Well ID Number: LCMW015Date (mm/dd/yy): 9/5/25

Page 1 of 1

Personnel J. Carter, G. BarnettPurge Start Time: 0940 End Time: 1012Water Quality Meter: Horiba V-52 Serial #: V130144X Calibrated: 9/5/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Acon Serial #: V131537X Calibrated: N/A☐ Other (specify) peristalticDepth To Water: 7.09 ft. from measuring point

Stagnant Water Purge Calculation:

Tubing Volume Factor Calculation

Total Depth Of Well: 22.95 ft. from measuring point

(purged prior to stabilization commencing)

1/4" OD= 9.46 3/8" OD= 21.576

Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = ~ 1/4 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	0945	100 mL/min	14.10	5.18	252	5.96	0.112	9.11	1/4 gal	7.48	
9/5/25	0950		13.18	4.63	237	6.17	0.116	6.14	1 gal	7.52	
9/5/25	0955		13.01	4.55	244	6.03	0.114	4.24	1.5 gal	7.52	
9/5/25	1000		13.02	4.51	249	5.99	0.113	3.18	1.5 gal	7.56	
9/5/25	1005	V	12.99	4.83	263	5.98	0.112	3.54	2 gal	7.52	
						ec 9/6					
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic pumpSample ID: LCMW015 - GW-202509Sample Date/ Time: 9/5/25 1010Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: ec 9/6Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By:

[Signature]

(Signature and Date)

QA Checked By:

[Signature]9/6/25

(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Page 1 of 1

Personnel C. James G. Barnett

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

☒ Other (specify) peristaltic

Stagnant Water Purge Calculation:
(purged prior to stabilization commencing)

Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576

[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = ²/₄ mL

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic

Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24

Field Observations/Site Conditions During Purging: _____ re 9/6

Sampling Procedure Followed: ☒ Yes ☐ No If no, why was deviation necessary:

Eric Deane
(Signature and Date)

 9/6/23
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: LCMW045Date (mm/dd/yy): 9/5/25

Page 1 of 1

Personnel: C. James G. BarnettPurge Start Time: 11:28 End Time: 12:15Water Quality Meter: Horiba U-52Serial #: U130144xCalibrated: 9/5/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: HeronSerial #: U131537xCalibrated: N/A☒ Other (specify) peristalticDepth To Water: 8.03 ft. from measuring point

Stagnant Water Purge Calculation:

(purged prior to stabilization commencing)

Tubing Volume Factor Calculation

1/4" OD= 9.46 3/8" OD= 21.576

Total Depth Of Well: 16.64 ft. from measuring pointWell Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = ~ 1/6 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	1130	~150 mL/min	13.49	11.61	249	5.76	0.112	56.7	1/4 gal	8.28	8.28
9/5/25	1135		13.35	11.05	257	5.57	0.113	17.8	1 gal	8.29	
9/5/25	1140		13.31	10.92	260	5.54	0.113	11.9	1.5 gal	8.29	
9/5/25	1145		13.40	10.57	260	5.58	0.113	6.34	2 gal	8.29	
9/5/25	1150		13.55	10.45	254	5.70	0.113	5.55	2.5 gal	8.29	
9/5/25	1155		13.90	10.27	250	5.80	0.113	4.58	3 gal	8.18	
9/5/25	1200	✓	13.98	10.31	256	5.71	0.114	8.76	3.5 gal	8.18	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

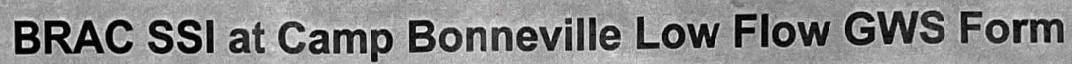
Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristalticSample ID: LCMW045-GW-202509Sample Date/ Time: 9/5/25 12:18Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Light rain ~12:00Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: [Signature]

(Signature and Date)

QA Checked By: [Signature]9/6/25
(Signature and Date)



LCMW04S

Date (mm/dd/yy): 09/05/25

Page 2 of 2Recorded By:

Bin Dura
(Signature and Date)

QA Checked By:

[Handwritten signature]

9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Page 1 of 1

Well ID Number: L4MW07BDate (mm/dd/yy): 9/5/25WA State ID: AAA 130Purge Start Time: 13:15 End Time: 15:05Personnel: C. James, G. BarnettWater Quality Meter: Horiba U-52Serial #: U130144XCalibrated: 9/5/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: HeronSerial #: U131537XCalibrated: N/A☒ Other (specify) monsoon peristalticDepth To Water: 40.78 ft. from measuring point

Stagnant Water Purge Calculation:

Tubing Volume Factor Calculation

Total Depth Of Well: 58.99 ft. from measuring point

(purged prior to stabilization commencing)

1/4" OD= 9.46

3/8" OD= 21.576

Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = 2.0 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	1320	150 mL/min	12.25	11.61	258	5.44	0.050	1090	0.5 gal	41.50	visibly murky/turbid
9/5/25	1325		11.90	10.65	261	4.99	0.043	332	1 gal	41.62	
9/5/25	1330		11.89	10.18	212	4.86	0.042	115	1.5 gal	41.65	
9/5/25	1335		11.91	10.01	201	4.80	0.041	62.8	2 gal	41.66	
9/5/25	1340		11.83	9.86	201	4.76	0.041	48.0	2.5 gal	41.68	
9/5/25	1345		11.83	9.62	203	4.76	0.041	47.6	3.5 gal	41.74	
9/5/25	1350		11.81	9.62	164	4.92	0.040	72.8	5 gal	41.54	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic monsoonSample ID: L4MW07B-GW-202509Sample Date/ Time: 9/5/25 15:00Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: see pgSampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: [Signature]

(Signature and Date)

9/5/25QA Checked By: [Signature]9/6/25

(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number:

L4MW07B

Date (mm/dd/yy):

09/05/25

Page 2 of 2

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
09/5/25	1355	5.2 gal/min	12.87	9.25	178	5.33	0.041	18.3	7 gal	41.25	
9/5/25	1400		12.99	9.15	182	5.23	0.040	26.7	7.5 gal	41.17	
9/5/25	1405		13.06	8.99	164	5.43	0.041	55.6	8 gal	41.13	/
9/5/25	1410		13.19	9.07	167	5.33	0.042	52.1	8.5 gal	41.15	
9/5/25	1415		13.26	9.02	164	5.35	0.041	58.3	9 gal	41.20	
9/5/25	1420		14.04	8.59	164	5.37	0.041	55.2	9.5 gal	41.15	
9/5/25	1425		14.46	8.53	165	5.36	0.042	50.8	9.8 gal	41.02	
9/5/25	1430		14.46	11.01	185	5.02	0.044	87.3	10 gal	41.13	
9/5/25	1435		13.78	11.16	184	5.01	0.042	84.7	10.4 gal	41.13	
9/5/25	1440		13.70	10.59	190	4.84	0.041	35.8	10.5 gal	41.28	
9/5/25	1445		13.66	10.51	200	4.85	0.041	25.5	10.75	41.25	
9/5/25	1450		13.85	10.25	207	4.85	0.042	25.0	11 gal	41.20	
9/5/25	1455	✓	13.67	10.25	209	4.83	0.042	25.4	11.5 gal	41.24	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Recorded By:


(Signature and Date) 9/5/25

QA Checked By:


(Signature and Date) 9/6/25

BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: 24MW05A

Date (mm/dd/yy): 09/06/25

Page 1 of 2

Personnel C. James G. Barnett

Purge Start Time: 0855 End Time: 1002

Water Quality Meter: Horiba U-52

Serial #: U1306144X

Calibrated: 9/6/25

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: Heron

Serial #: V131537X

Calibrated: N/A

☒ Other (specify) peristaltic

Depth To Water: 25.46 ft. from measuring point

Stagnant Water Purge Calculation:

Tubing Volume Factor Calculation

Total Depth Of Well: 36.60 ft. from measuring point

(purged prior to stabilization commencing)

1/4" OD= 9.46 3/8" OD= 21.576

Well Diameter: 2 inches

[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = _____ mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/6/25	0900	100 ml/min	16.87	10.21	328	4.42	0.075	115	18 gal	26.35	
9/6/25	0905	1	15.88	9.81	330	4.43	0.057	76.6	40.5 gal	26.58	
9/6/25	0910		15.61	9.64	328	4.47	0.046	77.1	40.5 gal	26.47	
9/6/25	0915		15.50	9.71	327	4.48	0.043	67.9	40.5 gal	26.31	
9/6/25	0920		15.50	9.69	327	4.48	0.041	58.2	40.5 gal	26.23	
9/6/25	0925		15.49	9.65	327	4.47	0.040	51.7	0.5 gal	26.21	
9/6/25	0930	V	15.50	9.59	328	4.48	0.039	38.7	0.5 gal	26.21	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic

Sample ID: L4MW05A-GW-202509

Sample Date/ Time: 9/6/25 1600

Analyses PFAS by EPA Method 1633 and DoD
QSM, Table B-24

Field Observations/Site Conditions During Purging: _____

Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary:

Recorded By:

[Signature]
(Signature and Date)

QA Checked By:

 9/6/25
(Signature and Date)



Date (mm/dd/yy): 09/06/25

Page 2 of 2

[illegible]


(Signature and Date)

 9/6/25
(Signature and Date)

BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: LYMW09A

Date (mm/dd/yy): 09/06/25

Page 1 of 2

Personnel C. James, R. Caffey, G. Barnett

Purge Start Time: 10:48 End Time: 1138

Water Quality Meter: Horiba U-52 Serial #: U130144x Calibrated: 9/6/25

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: Heron Serial #: U131537x Calibrated: N/A

☒ Other (specify) Monsoon peristaltic GB

Depth To Water: 23.67 ft. from measuring point

Stagnant Water Purge Calculation:
(purged prior to stabilization commencing)

Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576

Total Depth Of Well: 42.60 ft. from measuring point

Well Diameter: 2 inches

[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = _____ mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/6/25	1045	100 ml/min	14.11	6.67	182	5.11	0.029	1060	1.8 gal	34.45	
9/6/25	1050		13.15	6.27	204	4.85	0.028	845	16.5 gal	34.90	
9/6/25	1055		12.92	6.77	227	4.71	0.026	300	20.5 gal	34.60	
9/6/25	1100		12.65	6.76	236	4.64	0.026	127	1 gal	36.33	
9/6/25	1105		12.92	6.69	232	4.68	0.026	127	1.5 gal	36.76	
9/6/25	1110		12.91	6.65	241	4.85	0.025	109	2 gal	36.83	
9/6/25	1115	✓	13.00	6.08	259	4.73	0.026	69.0	2.5 gal	36.69	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) peristaltic pump ^{CB}

Sample ID: LYMW09A-GW-202509

Sample Date/ Time: 9/6/25 11:35

Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24

Field Observations/Site Conditions During Purging: _____ PC a/c

Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary:

Recorded By:

San Rueda 9/6/25
(Signature and Date)

QA Checked By:

 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: L4MWØ9BDate (mm/dd/yy): Ø9/Ø6/25

Page 1 of 2

Personnel C. James, G. BarnettPurge Start Time: 115Ø End Time: 1247Water Quality Meter: Horiha U-52Serial #: Ø13Ø144xCalibrated: 9/6/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: AeronSerial #: Ø131537xCalibrated: N/A☒ Other (specify) MONSOONDepth To Water: 42.94 ft. from measuring point

Stagnant Water Purge Calculation:

Tubing Volume Factor Calculation

Total Depth Of Well: 77.78 ft. from measuring point

(purged prior to stabilization commencing)

1/4" OD= 9.46

3/8" OD= 21.576

Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = Ø.96 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/6/25	1155	100 ml/min	13.32	1.76	18Ø	4.79	Ø.Ø7Ø	232	Ø.5 gal	46.84	
9/6/25	12ØØ		13.59	1.87	15Ø	4.91	Ø.Ø65	2Ø5	~Ø.7 gal	47.4Ø	
9/6/25	12Ø5		13.Ø1	1.97	143	4.84	Ø.Ø63	129	1 gal	49.11	
9/6/25	121Ø		13.ØØ	1.84	167	4.74	Ø.Ø57	65.3	1.5 gal	49.84	
9/6/25	1215		13.33	1.8Ø	176	4.69	Ø.Ø55	45.8	2 gal	5Ø.29	
9/6/25	122Ø		13.35	1.79	178	4.65	Ø.Ø53	32.8	2.5 gal	5Ø.7Ø	
9/6/25	1225	✓	13.39	1.7Ø	191	4.63	Ø.Ø53	19.1	3 gal	51.3Ø	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) MONSOONSample ID: L4MWØ9B-GW-2Ø25Ø9Sample Date/ Time: 9/6/25 1245Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Ø.96Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: B. D. D.9/6/25
(Signature and Date)QA Checked By: [Signature]9/6/25
(Signature and Date)



L4Mwø 9B

Date (mm/dd/yy): 09/06/25

Page 2 of 2Recorded By:

Li Duan 9/6/25
(Signature and Date)

QA Checked By:

 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number:

L4MWØ 4A

Date (mm/dd/yy):

Ø9/Ø6/25Page 1 of 2

Personnel

C. James, G. Barnett

Purge Start Time:

13 Ø5

End Time:

1428

Water Quality Meter:

Horiba U-52

Serial #:

U13Ø144x

Calibrated:

9/6/25

Water Level Meter:

Heron

Serial #:

U131537x

Calibrated:

N/A

Purge Method:

☐ Disposable Bailer☐ Bladder Pump☒ Other (specify)monsoon

Depth To Water:

29.18 ft. from measuring point

Stagnant Water Purge Calculation:

(purged prior to stabilization commencing)

Tubing Volume Factor Calculation

1/4" OD= 9.46

3/8" OD= 21.576

Total Depth Of Well:

46.62 ft. from measuring point

Well Diameter:

2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/6/25	131Ø	1ØØ mL/min	13.22	6.64	19Ø	5.43	Ø.Ø22	>11ØØ	1/4 gal	31.12	
9/6/25	1315		13.ØØ	5.93	232	4.99	Ø.Ø22	>11ØØ	0.5 gal	31.55	
9/6/25	132Ø		12.95	4.92	234	5.Ø8	Ø.Ø22	622	1 gal	31.61	
9/6/25	1325		12.95	4.89	244	5.Ø1	Ø.Ø22	3Ø6	1.5 gal	31.77	
9/6/25	133Ø		12.5Ø	4.71	255	4.72	Ø.Ø21	149	2 gal	33.46	
9/6/25	1335		12.4Ø	4.59	266	4.71	Ø.Ø21	1Ø5	2.5 gal	33.11	
9/6/25	134Ø	✓	12.4Ø	4.52	27Ø	4.69	Ø.Ø21	81.5	3 gal	33.Ø4	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method:

☐ Bladder Pump☐ Disposable Bailer☒ Other (specify)monsoon

Sample ID:

L4MWØ4A-GW-ØØ25Ø9

Sample Date/ Time:

9/6/25 14:25

Analyses

PFAS by EPA Method 1633 and DoD QSM, Table B-24

Field Observations/Site Conditions During Purging:

 ØØ 9/6

Sampling Procedure Followed:

☒ Yes☐ No

If no, why was deviation necessary:

Recorded By:

[Signature]9/6/25
(Signature and Date)

QA Checked By:

[Signature]9/6/25
(Signature and Date)



24MWØ4A

Date (mm/dd/yy): 09/06/25

Page 2 of 2[illegible]

Mr. [Signature] 9/6/25
(Signature and Date)

 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: PM-MW02Date (mm/dd/yy): 09/05/25

Page 1 of 2

Personnel R. CaffeyPurge Start Time: 0950 End Time: 1030Water Quality Meter: Horiba - U-52 Serial #: U103106X Calibrated: 9/5

Purge Method:

☐ Disposable Bailor ☐ Bladder PumpWater Level Meter: Heron Dipper - T Serial #: U130400X Calibrated: NA☒ Other (specify) Peri.Depth To Water: 13.30 ft. from measuring point

Stagnant Water Purge Calculation:

(purged prior to stabilization commencing)

Tubing Volume Factor Calculation

1/4" OD = 9.46 3/8" OD = 21.576

Total Depth Of Well: 22.95 ft. from measuring pointWell Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = 126.76 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	0950	0.5L	12.59	3.26	276	5.48	0.139	10.2	0.5L	14.30	100 mL/min
	0955		12.09	3.93	256	5.64	0.124	71.2	1.0L	15.05	
	1000		12.20	4.81	251	5.71	0.114	98.6	1.5L	16.10	
	1005		12.49	4.28	254	5.66	0.113	102	2.0L	16.80	
	1010		12.52	3.98	259	5.61	0.111	104	2.5L	17.92	
	1015		12.47	4.06	258	5.60	0.109	96.3	3.0L	18.10	
✓	1020	✓	12.51	3.94	256	5.63	0.108	89.3	3.5L	18.21	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailor ☒ Other (specify) Peristaltic PumpSample ID: PM-MW02-GW-202509Sample Date/ Time: 9/5/25 1030Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Final NTU: 93.4, Semi-clear, no odorSampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: [Signature]9/5/25
(Signature and Date)QA Checked By: [Signature]9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: PM-MW02-GW-202509 Date (mm/dd/yy): 09/05/25

Page 2 of 2

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std. Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	1026	0.5	12.59	3.85	254	5.63	0.107	93.4	4.0L	18.30	
	1030	—	Sampled		PM - MW02 - 2025	09					
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Recorded By:

 9/5/25
(Signature and Date)

QA Checked By:

S-D 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Page 1 of 1

Well ID Number: PM-MW01 Date (mm/dd/yy): 09/05/25Purge Start Time: 1155 End Time: 1230Personnel: R. Caffey

Purge Method:

Water Quality Meter: Hanba U-52 Serial #: U103106X Calibrated: 9/5☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Huron Dipper-T Serial #: U130400X Calibrated: NA☒ Other (specify) BoDepth To Water: 21.15 ft. from measuring pointStagnant Water Purge Calculation:
(purged prior to stabilization commencing)Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576Total Depth Of Well: 30.30 ft. from measuring pointWell Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = 9.46 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/5/25	1200	0.5L	14.55	2.34	61	6.22	0.219	25.7	1.0L	21.52	100 ml/min
	1205		13.56	1.78	52	6.22	0.220	21.2	1.5L	21.80	
	1210		12.68	1.47	44	6.15	0.219	20.3	2.0L	22.30	
	1215		12.71	1.80	55	6.07	0.211	28.3	2.5L	22.60	
	1220		12.86	1.93	60	6.09	0.209	29.8	3.0L	22.71	
✓	1225	✓	12.92	2.01	63	6.10	0.209	26.3	3.5	22.82	
	1230	—	Sampled PM-MW01 - GW-202509								
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) Peristaltic PumpSample ID: PM-MW01 - GW-202509Sample Date/ Time: 9/5/25 1230Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Final NTU: 26.3, Clear, no odorSampling Procedure Followed: ☒ Yes ☐ No If no, why was deviation necessary: _____

Recorded By:

9/5/25
(Signature and Date)

QA Checked By:

9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: CBV-1864-07Date (mm/dd/yy): 09/20/25

Page 1 of 1

Personnel R. CaffeyPurge Start Time: 1025 End Time: 1130Water Quality Meter: Horiba U-52 Serial #: U125301X Calibrated: 9/20Water Level Meter: Heron Dipper-T Serial #: U131537X Calibrated: NA

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump☒ Other (specify) Peri. PumpDepth To Water: 10.82 ft. from measuring pointTotal Depth Of Well: 30 ft. from measuring pointStagnant Water Purge Calculation:
(purged prior to stabilization commencing)Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576Well Diameter: 2" inches(Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)) x Tubing Factor x 2 = 9.46 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/20/25	1030	0.5L	14.70	1.77	-151	6.63	0.293	32.1	0.75L	11.49	100 mL/min
	1035		14.14	0.36	-237	6.79	0.273	25.9	1.25L	12.30	
	1040		14.11	0.19	-303	6.84	0.272	46.1	1.75L	12.65	
	1045		14.23	0.21	-315	6.87	0.273	50.2	2.25L	12.67	
	1050		14.39	0.17	-322	6.90	0.274	80.1	2.75L	12.68	
	1055		14.10	0.02	-356	6.93	0.267	88.6	3.25	12.81	
	1100		14.56	0.24	-301	6.92	0.273	93.2	3.75	13.02	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

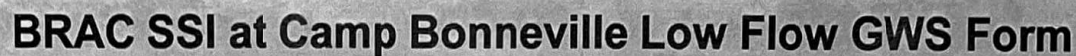
Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) Peri. PumpSample ID: CB186404-GW01 Sample Date/ Time: 9/20/25 1130Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Moderate NTU, No odorSampling Procedure Followed: ☒ Yes ☐ No If no, why was deviation necessary: _____

Recorded By:

[Signature] 9/20/25
(Signature and Date)

QA Checked By:

[Signature] 9/23/25
(Signature and Date)



Page 2 of 2

Recorded By:

9/20/25
(Signature and Date)

QA Checked By:

auth

9/23/25
(Signature and Date)

BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: CBV-1864-06

Date (mm/dd/yy): 09/20/25

Page 1 of 1

Personnel R. Caffey

Purge Start Time: 1225 End Time: 1330

Water Quality Meter: Horiba U-52 Serial #: U125301X Calibrated: 9/20

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: Heron Dipper -T Serial #: U131537X Calibrated: N/A

☒ Other (specify) Peri Pump.

Depth To Water: 13.50 ft. from measuring point

Total Depth Of Well: 30 ft. from measuring point

Stagnant Water Purge Calculation:
(purged prior to stabilization commencing)

Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576

Well Diameter: 2 inches

[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/20/15	1230	0.5L	14.93	6.08	36	7.20	0.255	20.9	1.0L	14.92	100 mL/min
	1235		14.36	5.15	38	7.11	0.256	23.0	1.5L	15.23	
	1240		14.56	4.78	38	7.18	0.258	28.3	2.0L	15.25	
	1245		14.77	4.61	45	7.07	0.258	64.2	2.5L	15.23	
	1250		14.60	4.60	43	7.06	0.260	110	3.0L	15.30	
	1255		14.61	4.53	44	7.02	0.259	125	3.5L	15.31	
	1300		14.33	4.35	37	7.08	0.259	109	4.0L	15.33	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☐ Disposable Bailer ☒ Other (specify) Peri. Pump

Sample ID: CB186406 - GW01

Sample Date/ Time: 9/20/25 1330

Analyses PFAS by EPA Method 1633 and DoD QSM. Table B-24

Field Observations/Site Conditions During Purging: Low NTU, No odor

Sampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary:

Recorded By:

 9/20/25
(Signature and Date)

QA Checked By:

Antty 9/23/28
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number:

CBV-1864-06

Date (mm/dd/yy):

09/20/25Page 2 of 2

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/20/25	1305	0.5	14.44	3.93	32	7.04	0.261	45.9	4.5L	15.40	
	1310		14.45	3.96	29	6.96	0.253	35.3	5.0L	15.61	
	1315		14.64	3.31	22	6.93	0.249	35.4	5.5L	15.77	
	1320		14.67	3.25	21	6.91	0.249	35.3	6.0L	15.80	
	1325	✓	14.59	3.19	19	6.90	0.248	34.9	6.5L	15.82	
	1330	—	Sampled CB186406-GW01								
at 9/20											
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Recorded By:

9/20/25

(Signature and Date)

QA Checked By:

9/23/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: CBV-1864-04Date (mm/dd/yy): 09/20/25

Page 1 of 1

Personnel: R. CaffeyPurge Start Time: 1345 End Time: 1515Water Quality Meter: Horiba U-52Serial #: U125301X Calibrated: 9/20

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Heron Dipper-TSerial #: U131537X Calibrated: NA☒ Other (specify) Peri Pump.Depth To Water: 16.79 ft. from measuring pointTotal Depth Of Well: 30 ft. from measuring pointStagnant Water Purge Calculation:
(purged prior to stabilization commencing)Tubing Volume Factor Calculation
1/4" OD= 9.46 3/8" OD= 21.576Well Diameter: 2 inches[Tubing Intake Depth (ft btoc) - Depth to Water (ft btoc)] x Tubing Factor x 2 = 72 mL

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/20/25	1350	1.55	16.28	3.76	59	6.92	0.176	>1000	3.0L	17.38	300 mL/min
	1355		16.30	4.88	53	7.07	0.171	>1000	4.5L	18.02	
	1400		16.40	5.67	50	7.12	0.169	>1000	6.0L	18.40	
	1405		16.36	6.48	44	7.26	0.168	71000	7.5L	18.56	
	1410		16.96	6.40	45	7.45	0.162	873	9.0L	20.63	
	1415		16.82	6.57	45	7.38	0.164	774	10.5L	20.92	
V	1420	V	16.55	6.62	46	7.37	0.165	851	12.0L	21.09	
			±3%	±10% or < 0.5 mg/L	±10 mV	±0.1 SU	3%	10% or < 5			

Sample Method: ☐ Bladder Pump ☒ Disposable Bailer ☐ Other (specify) _____Sample ID: CB186404-GW01Sample Date/ Time: 9/20/25 9/21/25 0930Analyses PFAS by EPA Method 1633 and DoD QSM, Table B-24Field Observations/Site Conditions During Purging: Moderate/High NTU, No odorSampling Procedure Followed: ☒ Yes ☐ No

If no, why was deviation necessary: _____

Recorded By: _____

9/20/25
(Signature and Date)

QA Checked By: _____

Amette 9/20/25
(Signature and Date)



BRAC SSI at Camp Bonneville Low Flow GWS Form

Well ID Number: CBV-1864-04Date (mm/dd/yy): 09/20/25Page 2 of 2

Date	Time	Volume Removed	Temp (°C)	Dissolved Oxygen (mg/L)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Water Level (ft btoc)	Comments
9/20/25	1425	1.5L	16.16	4.69	10	7.01	0.170	71000	13.5L	21.38	
	1430		15.80	4.41	-1	6.97	0.172	824	15.0L	21.73	
	1435		15.62	3.36	-15	6.99	0.175	852	16.5L	22.52	
	1440		15.53	2.47	-21	6.99	0.180	861	18.0L	23.10	
	1445		15.40	1.78	-28	7.00	0.181	865	19.5L	23.82	100 mL/min Adjust
	1450		15.98	1.52	-30	7.03	0.180	856	20.0L	24.06	
	1455		16.21	0.98	-31	6.99	0.180	842	20.5L	24.26	
	1500		15.96	1.36	-32	7.00	0.181	820	21.0L	24.40	
	1505		15.90	1.40	-33	7.00	0.180	815	21.5L	24.48	
	1510		15.86	1.47	-34	7.02	0.181	812	22.0L	24.50	
	1515	—	Sampled CB186404 - GW01								
9/21/25	0930	—	Sampled CB186404 - GW01 via HDPE boiler from 24' bgs.								
			Final NTU: 341								
			EC 9/20								



Sediment / Surface Water Sampling Form

SHEET 1 OF 1

BRAC SSI at Camp Bonneville

1. Sample Team: R. Calky

AOP: 1864

2. Location ID:

CBV-1864-08

Northing:

NA

Easting:

NA

3. Sample ID:

CB186408-SW01/SD01

4. Date and Time:

9/6/25

1215

5. Dupe ID (if needed):

N/A

6. Equipment Riset ID (if needed)

NA

7. Sediment Sample Equipment Used:

HDPE Trowel

8. MGMSD: NA

9. Weather Conditions:

Cloudy / P. Sunny

10. Activities in the Area:

NE P185 Rd / FFS 1864

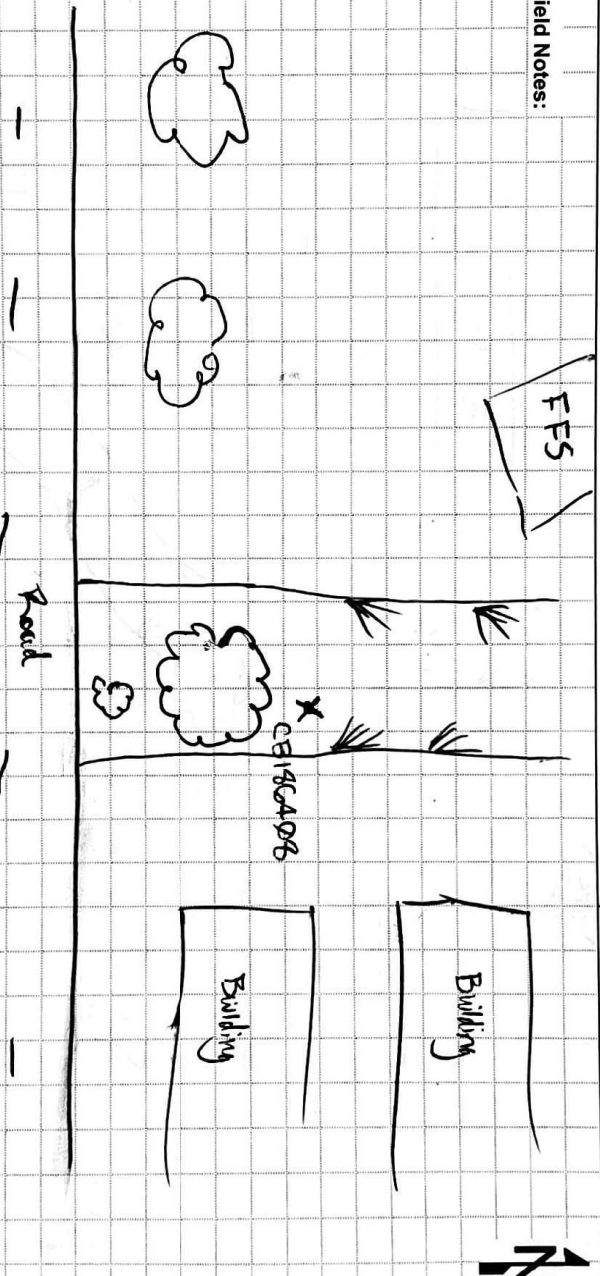
Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

Slow moving water, shallow

LOCATION SKETCH/COMMENTS

SCALE: Not to scale

Field Notes:



Surface Water Quality Parameters:

Temp (C): 18.64

DO(mg/L): 6.11

Eh (mV):

237

pH (SU):

6.48

spc (ms/cm):

0.108 NTU: 1.5

Sediment Description:

Soft silty layer on top of small gravel w/ silty sands
Dark brown, no odor

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed:

☒ Yes☐ No

If no, why was deviation necessary?

COC NO: CBV-0062

Laboratory:

Merit

Recorded By:

9/6/25

(Signature and Date)

QC Checked By:

9/6/25

(Signature and Date)



Sediment / Surface Water Sampling Form

SHEET 1 OF 1

BRAC SSI at Camp Bonneville

1. Sample Team: P. Caffrey

AOP#: 18CA

2. Location ID:

CBV - 18CA - 09

North:

NA

East:

NA

3. Sample ID:

CB18CA09 - SW01 / SSD01

4. Date and Time:

9/6/25

1245

5. Dupe ID (if needed):

CB18CA09 - SW01FD

6. Equipment Risate ID (if needed)

NA

7. Sediment Sample Equipment Used:

HDPE Trowel

10. Activities in the Area:

NE plus 28. / 18CA

8. MS/MSD: N/A

9. Weather Conditions:

Cloudy / P. Sunny

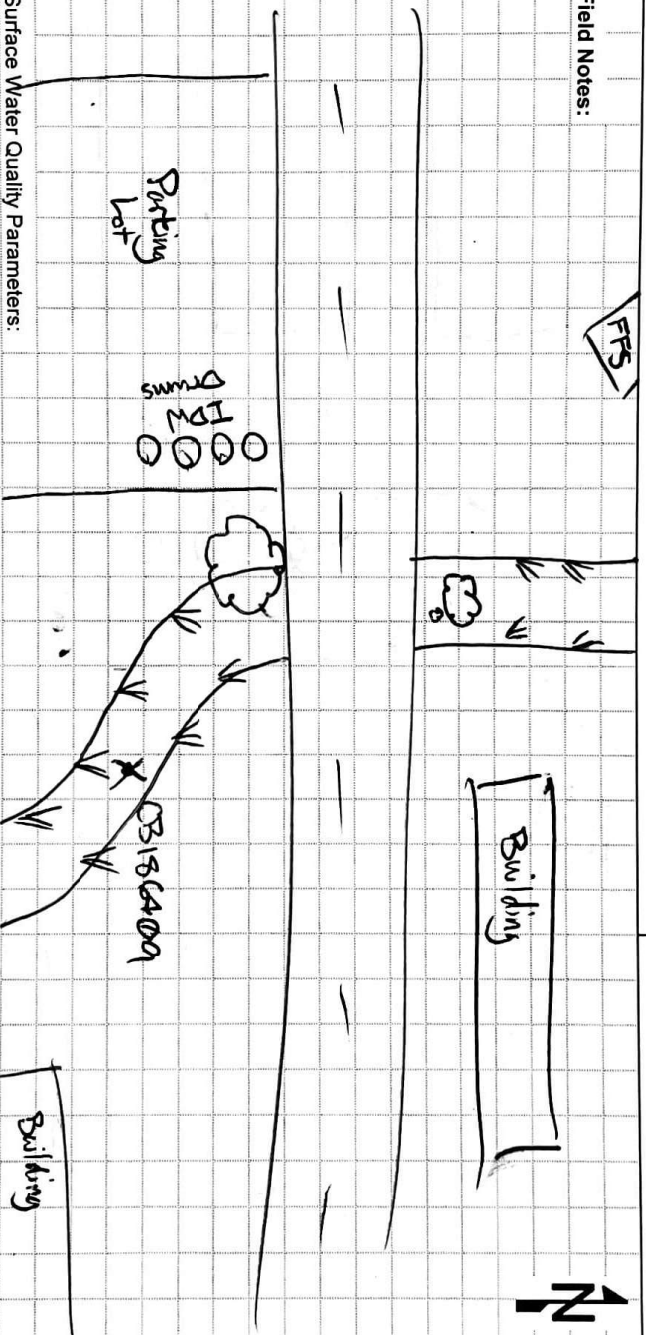
Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

See moving water, shallow < 1', clear water

LOCATION SKETCH/COMMENTS

SCALE: Not to scale

Field Notes:



Surface Water Quality Parameters:

Temp (°C): 19.49

DO(mg/L): 5.56

Eh (mV): 229

pH (SU): 6.78

spc (ms/cm): 0.075 NTU: 280

Sediment Description:

Wet, dark brown, soft silt layer on top of small gravel w/ silty sand.

ca. 2/6

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed:

☒ Yes

☐ No

If no, why was deviation necessary?

COC NO:

CBV-002

Laboratory:

Met

Recorded By:

[Signature] 9/6/25

QC Checked By:

[Signature] 9/16/25



Sediment / Surface Water Sampling Form

SHEET

1

OF

1

BRAC SSI at Camp Bonneville

1. Sample Team: R. Caffrey

2. Location ID:

CBV-1864-10AOPI: 1864

Northing:

NA

Easting:

NA

3. Sample ID:

CB186410-SWD1 / SWD1

4. Date and Time:

9/6/251330

5. Dupe ID (if needed):

CB186410-SWD1FD

6. Equipment Risate ID (if needed)

NA7. Sediment Sample Equipment Used: HDPE trowel8. MS/MSD: NA

9. Weather Conditions:

Cloudy / P. Sunny

10. Activities in the Area:

NE Plus Rd. / FFS 1864

Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

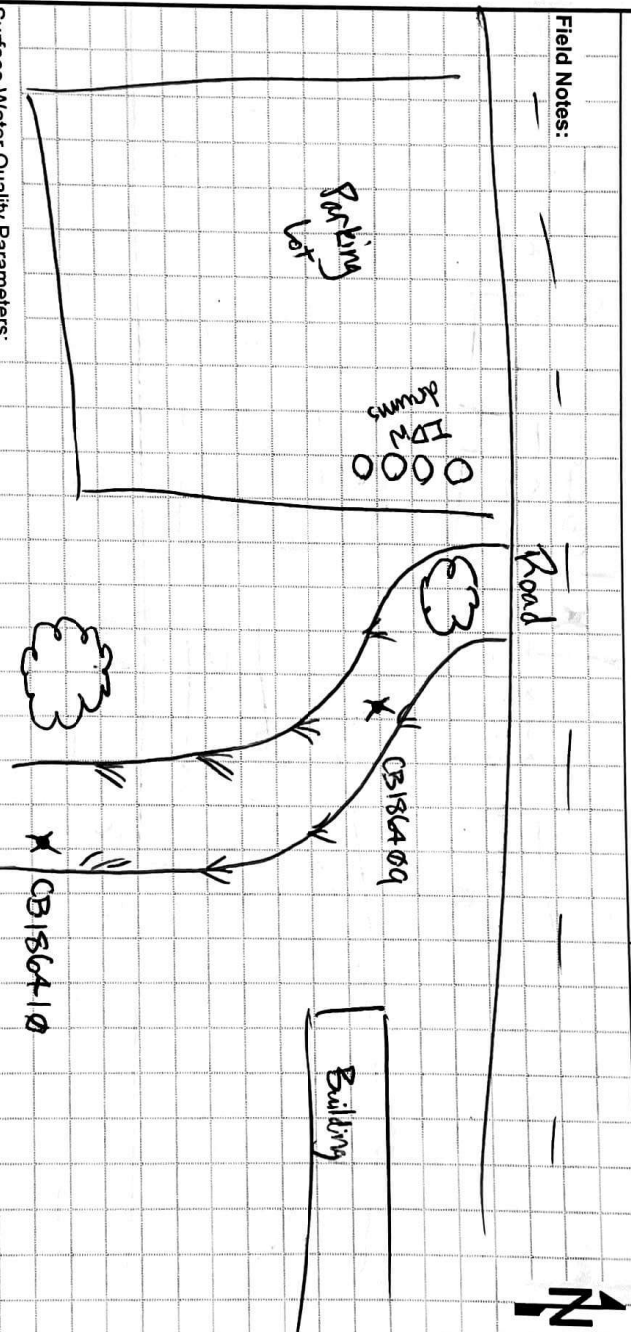
Shallow, slow-moving water, clear, no odor

LOCATION SKETCH/COMMENTS

SCALE:

Not to scale

Field Notes:



Surface Water Quality Parameters:

Temp (°C): 19.08 DO(mg/L): 4.92 Eh (mV): 215 pH (SU): 7.06 spc (ms/cm): 0.071 NTU: 7.3

Sediment Description:

Dark brown, wet, no odor

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed:

☒ Yes ☐ No

If no, why was deviation necessary?

COC NO: CBV-002Laboratory: MercitRecorded By: [Signature]9/6/25
(Signature and Date)QC Checked By: [Signature]9/11/25
(Signature and Date)



Sediment / Surface Water Sampling Form

SHEET 1 OF 1

BRAC SSI at Camp Bonneville

1. Sample Team: R. Caffy

AOP: 4483

2. Location ID:

CBV-4483-11

Northing:

NA

Easting:

NA

3. Sample ID:

CB448311-SWD1/SD01

4. Date and Time:

9/6/25

M15

5. Dupe ID (if needed):

NA

6. Equipment Ristate ID (if needed)

7. Sediment Sample Equipment Used:

HDPE Trowel

8. MS/MSD:

9. Weather Conditions:

Cloudy / P. Sunny

10. Activities in the Area:

NE PWS Rd. / 4483 / WK 182

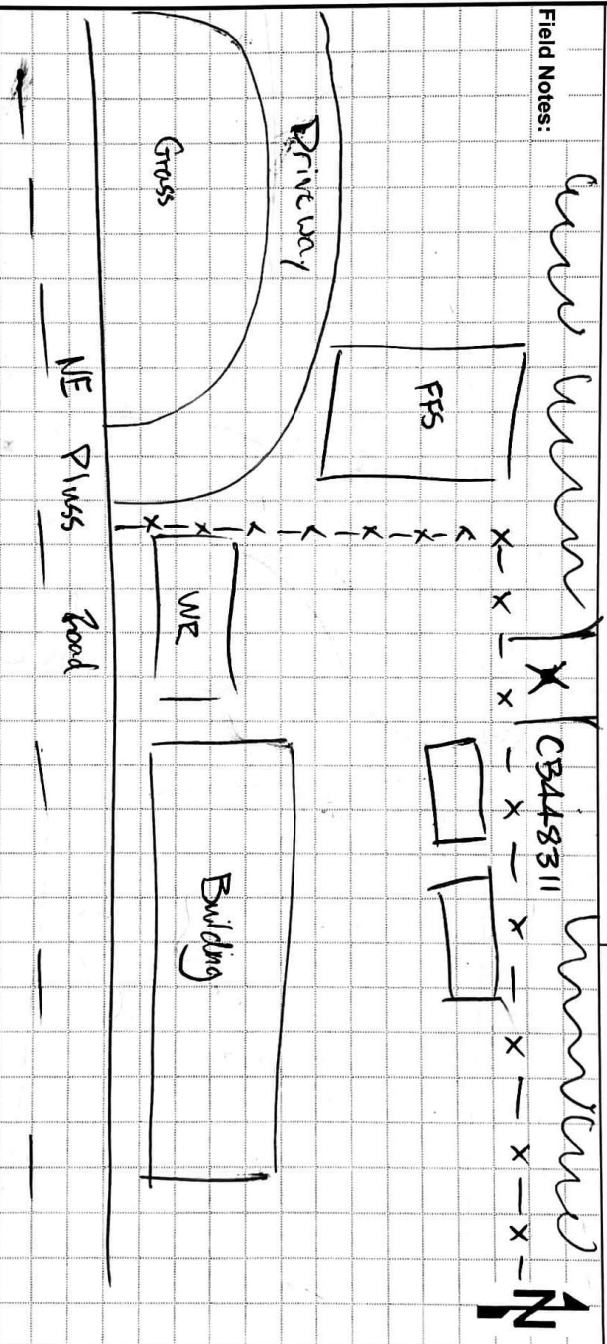
Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

Shallow, start making water, clear

LOCATION SKETCH/COMMENTS

SCALE: Not to scale

Field Notes:



Surface Water Quality Parameters:

Temp (°C): 19.12 DO (mg/L): 5.73 Eh (mV): 202 pH (SU): 7.67 spc (ms/cm): 0.145 NTU: 14.4

Sediment Description:

Dark/mud. brown, organic material, converging streams.

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed: ☒ Yes ☐ No If no, why was deviation necessary?

COC NO: CBV-002

Laboratory: Morit

Recorded By:

(Signature and Date)

QC Checked By:

(Signature and Date)



Sediment / Surface Water Sampling Form

SHEET 1 OF 1

BRAC SSI at Camp Bonneville

1. Sample Team: R. Caflitz

AOP: WR12

2. Location ID: CBV-WR12-08

Northing:

Easting:

3. Sample ID: CBWR1208-SW01/SD01

4. Date and Time:

9/6/25

5. Dupe ID (if needed): NA

6. Equipment Risalet ID (if needed): NA

7. Sediment Sample Equipment Used: HDPE Trawl

8. MSMSD: NA

9. Weather Conditions:

Cloudy / P. Cloudy

10. Activities in the Area:

4463/WR12 / NE Pluss Rd.

Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

Shallow water, clear, no odor

cc up

LOCATION SKETCH/COMMENTS SCALE: Not to scale

Field Notes: Drive Way

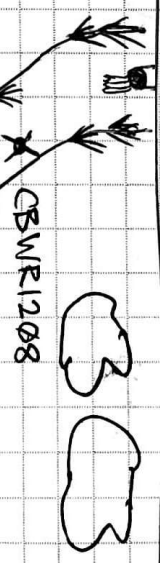
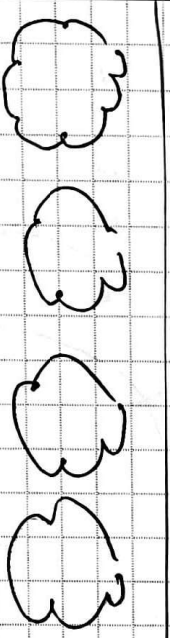
grass

WR

Building



NE Pluss Road



Surface Water Quality Parameters: Temp (°C): 18.52 DO(mg/L): 5.11 Eh (mV): 165 pH (SU): 7.81 spc (ms/cm): 0.151 NTU: 4.4

Sediment Description: Dark brown, wet, soft silt on top of small gravel.

cc up

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed: ☒ Yes ☐ No If no, why was deviation necessary?

COC NO: CBV-002 Laboratory: Merit

Recorded By: [Signature] 9/6/25 QC Checked By: [Signature] 9/6/25
(Signature and Date) (Signature and Date)



Sediment / Surface Water Sampling Form

SHEET 1 OF 1

BRAC SSI at Camp Bonneville

1. Sample Team: Z. Cally

2. Location ID:

CBV-WR12-09

AOP1: WR12

North:

NA

East:

NA

3. Sample ID:

CBWR1209-SW01/SD01

4. Date and Time:

9/6/25

5. Dupe ID (if needed):

NA

6. Equipment Risate ID (if needed)

NA

7. Sediment Sample Equipment Used:

HDPE Trawl

8. MSMSD: NA

9. Weather Conditions:

Cloudy / P. Sunny

10. Activities in the Area:

NE Pluss Rd. / 4453 / WR12

Field Observations (wet/dry sediment, depth of water, field conditions, water description, etc.)

Shallow, clear, no odor

LOCATION SKETCH/COMMENTS

SCALE: Not to scale

Field Notes:

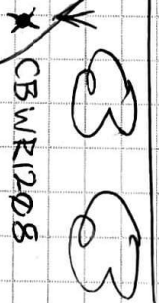
grass

Driveway

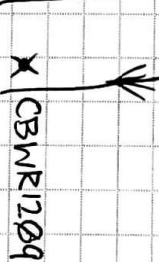
WR

Building

NE Pluss Rd.



CBWR1208



CBWR1209

Surface Water Quality Parameters:

Temp (°C): 18.98

DO(mg/L): 4.69

Eh (mV): 186

pH (SU): 7.79

spc (ms/cm): 0.150 NTU: 9.6

Sediment Description:

light, dark brown/tan, silty

cc q/c

Analyses: PFAS by EPA Method 1633 and DoD QSM, Table B-24

Sampling Procedure Followed:

☒ Yes ☐ No If no, why was deviation necessary?

COC NO: CBV-001

Laboratory: Merit

Recorded By:

9/6/25

QC Checked By:

9/16/25

(Signature and Date)

(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: LCMW09SDate (mm/dd/yy): 09/02/2025

Page 1 of 1

WA State ID: (BJH 382)Purge Start Time: 14:20 End Time: 14:53Personnel C. James, B. Caffey, G. BarnettWater Quality Meter: Horiba U-52Serial #: U130144XCalibrated: 9/2/25 GP @ Umatilla

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Mega Monsoon ProSerial #: 24915Calibrated: N/A @ Umatilla☒ Other (specify) MonsoonPump: HeronSerial #: U131537XCalibrated: N/ADepth To Water: 10.01 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 22.44 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 3.6 gallonsWell Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/2/25	1425	1.5L	8.41	12.99	140	7.49	0.102	33.3	2 gal	3.6 gal	~300 ml/min
9/2/25	1430	1.0L	7.47	12.85	146	6.81	0.100	6.5	2.5 gal		Slowed Flow Rate ~100 ml/min
9/2/25	1435		7.20	12.61	148	6.49	0.099	7.20	4 gal		
9/2/25	1440		7.24	12.29	147	6.47	0.099	2.5	5.5 gal		
9/2/25	1445		7.22	12.37	160	6.27	0.099	2.4	~6.5 gal		
9/2/25	1450	V	7.30	12.34	164	6.26	0.098	3.6	8.5 gal		
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dedicated tubing in well removed prior to development; tubing placed 1ft off bottom

Recorded By:

[Signature] 9/2/25
(Signature and Date)

QA Checked By:

[Signature] 9/6/25
(Signature and Date)



Page 1 of 1

Purge Start Time: 09:08 End Time: 09:38

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

☒ Other (specify) Monsoon

17. 10/10/2017 10/10/2017

Well Volume Calculation

0.16 * h = gallons (1 well volume for 2" well) One Well Volume: 3.7 gallons

0.04 * h = gallons (1 well volume for 1" well) h = height of water column in feet

Field Observations/Site Conditions During Purging: Dedicated tubing in well removed prior to purge

QA Checked By: [Signature] 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: LCMW010Date (mm/dd/yy): 09/03/25

Page 1 of 1

WA State ID: AHA358Purge Start Time: 18:20 End Time: 11:02Personnel C. James, G. BarnettWater Quality Meter: Horiba U-52 Serial #: U130144X Calibrated: 9/3/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Heron Serial #: U131537X Calibrated: N/A☒ Other (specify) MonsoonPump: Mega Monsoon Pro Serial #: 24915 Calibrated: N/AInitial Depth To Water: 9.03 ft. from measuring point

Well Volume Calculation

Initial Total Depth Of Well: 42.42 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 6.8 gallonsWell Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/3/25	1025	~1.5gal	8.94	12.88	193	6.67	0.113	3.90	0.5 gal	6.8	
9/3/25	1030		6.95	12.05	229	6.11	0.112	18.5	3.5 gal		
9/3/25	1035		6.86	12.05	237	5.99	0.112	5.5	4.9 gal		
9/3/25	1040		7.03	12.12	228	6.14	0.112	4.7	5.3 gal		
9/3/25	1045		6.66	12.03	236	6.04	0.111	3.9	7.5 gal		
9/3/25	1050		6.01	11.99	238	6.00	0.111	2.9	9.5 gal		
9/3/25	1055		6.57	12.02	235	6.08	0.111	2.5	~9 gal		
9/3/25	1100	✓	6.64	12.07	234	6.29	0.111	1.8	10 gal	✓	
ce 9%											
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge.

Recorded By:

[Signature]
(Signature and Date)

QA Checked By:

[Signature] 9/6/25
(Signature and Date)



Date (mm/dd/yy): 09/03/25

WA State ID: AHA 364

Purge Start Time: 1203 End Time: 1236

Personnel C. James, G. Barnett

Water Quality Meter: Horiba U-52

Serial #: U130144X

Calibrated: 9/3/25

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: *Heron*

Serial #: U131537X

Calibrated: *NA*

☒ Other (specify) Monsoon

Pump: Mega Monsoon Pro Serial #: 24915

Calibrated: N/A

Initial Depth To Water: 8.43 ft. from measuring point

Well Volume Calculation

Initial Total Depth Of Well: 17.63 ft. from measuring point

$$0.16 * h = \text{gallons (1 well volume for 2" well)}$$

One Well Volume: 2.8 gallons

Well Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge

Recorded By:

En Pro

(Signature and Date)

QA Checked By:

Handwritten signature

9/6/25

(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: LCMW45Date (mm/dd/yy): 09/03/25

Page 1 of 1

WA State ID: AHA 375Purge Start Time: 13:23 End Time: 1407Personnel C. James, G. BarnettWater Quality Meter: Horiba U-52Serial #: U130144xCalibrated: 9/3/25

Purge Method:

Water Level Meter: HeronSerial #: U131537xCalibrated: NA☐ Disposable Bailor ☐ Bladder PumpPump: Mega Monsoon Pro Serial #: 24915Calibrated: NA☒ Other (specify) MonsoonInitial Depth To Water: 8.22 ft. from measuring point

Well Volume Calculation

Initial Total Depth Of Well: 16.64 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 2.7 gallonsWell Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/3/25	1325	~20 gal	13.00	13.43	219	5.97	0.107	1000	0.5 gal	2.7 gal	
9/3/25	1330		10.05	13.05	219	5.95	0.109	98.9	3 gal		
9/3/25	1335		12.93	12.93	214	5.80	0.109	13.3	5.5 gal		
9/3/25	1340		12.87	12.87	229	5.46	0.112	8.56	6.5 gal		
9/3/25	1345		12.82	12.82	204	5.77	0.111	4.6	7.5 gal		
9/3/25	1350		12.88	7.63	204	5.72	0.111	3.6	10 gal		
9/3/25	1355		7.30	12.80	195	5.92	0.111	2.5	12 gal		
9/3/25	1400		7.17	12.84	193	5.88	0.111	2.4	15 gal		
9/3/25	1405	V	7.07	12.80	183	5.86	0.113	2.0	15 gal	V	
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge

Recorded By:

(Signature and Date)

QA Checked By:

9/6/25

(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: L4MW05ADate (mm/dd/yy): 09/04/25Page 1 of 2WA State ID: AGL 467Purge Start Time: 0844 End Time: 0938Personnel C. James, G. Barnett, B. Caffery

Purge Method:

Water Quality Meter: Horiba U-52 Serial #: U130144X Calibrated: 9/4/25☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Heron Serial #: U131537X Calibrated: NA☒ Other (specify) MonsoonPump: Mega Monsoon Serial #: 24915 Calibrated: NADepth To Water: 26.40 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 36.60 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 5.9 gallonsWell Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/4/25	0850	~1.5gal	7.69	11.87	217	5.40	0.041	36.2	2gal	5.9gal	Purge rate increased to discharge sed. build up
9/4/25	0855		6.84	11.92	208	5.11	0.037	65.8	3.5gal		Purge rate decreased
9/4/25	0900		6.03	11.70	212	5.03	0.035	24.0	4gal		
9/4/25	0905		6.13	11.35	185	4.81	0.035	33.6	5gal		
9/4/25	0910		6.45	11.14	194	4.76	0.033	33.7	7gal		
9/4/25	0915		7.13	11.12	181	5.13	0.032	31.7	10gal		
9/4/25	0920		7.74	11.07	212	4.93	0.033	45.3	14gal		
9/4/25	0925		7.59	11.08	193	5.15	0.034	47.1	~12gal		
9/4/25	0930	V	7.56	11.08	192	5.16	0.033	52.8	17gal		
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge; rust on dedicated pump due to metal tool left in well that is rusting; water initially has visual rust/orange/brown color

Recorded By:

[Signature] 9/4/25
(Signature and Date)

QA Checked By:

[Signature] 9/6/25
(Signature and Date)



Date (mm/dd/yy): _____

See page 1 Page 1 of 1

Personnel

Purge Start Time: ~~End Time:~~

Water Quality Meter: _____ Serial #: _____ Calibrated: _____

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: _____ Serial #: _____ Calibrated: _____

☐ Other (specify) _____

Pump: _____ Serial #: _____ Calibrated: _____

Depth To Water: ~~ft. from measuring point~~

Well Volume Calculation

Total Depth Of Well: _____ ft. from measuring point

$$0.16 * h = \text{gallons (1 well volume for 2" well)}$$

One Well Volume: _____ gallons

Well Diameter: _____ inches

$0.04 * h = \text{gallons (1 well volume for 1" well)}$

h = height of water column in feet

[illegible]

Field Observations/Site Conditions During Purging:

Recorded By:


(Signature and Date)

QA Checked By:

 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: L4MW09A Date (mm/dd/yy): 09/04/25
WA State ID: BJH 377 Purge Start Time: 10:09 End Time: 12:06
Personnel: C. James, G. Barnett, B. Coffey

Page 1 of 1

Water Quality Meter:	Horiba U-52	Serial #: U130144X	Calibrated: 9/4/25
Water Level Meter:	Heron	Serial #: U131537X	Calibrated: NA
Pump:	Mega Monsoon	Serial #: 24915	Calibrated: NA

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

☒ Other (specify) Monsoon

Depth To Water: 33.98 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 42.60 ft. from measuring point

$$0.16 * h = \text{gallons (1 well volume for 2" well)}$$

One Well Volume: 6.8 gallons

Well Diameter: 2 inches

$0.04 * h = \text{gallons (1 well volume for 1" well)}$

h = height of water column in feet

[illegible]

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge

Recorded By: Gri Duro
(Signature and Date)

QA Checked By: [Signature] 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: L4MWØ 9BDate (mm/dd/yy): 09/14/25

Page 1 of 2

Personnel: C. James, G. Barnett, R. CaffreyPurge Start Time: 11:10 End Time: 1205Water Quality Meter: Horiba U-52 Serial #: U13Ø144x Calibrated: 9/14/25Water Level Meter: Heron Serial #: U131537x Calibrated: NAPump: Mega Monsoon Serial #: 24915 Calibrated: NA

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump☒ Other (specify) MonsoonDepth To Water: 45.55 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 77.78 ft. from measuring point $0.16 * h =$ gallons (1 well volume for 2" well)One Well Volume: 12.4 gallonsWell Diameter: 2 inches $0.04 * h =$ gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/14/25	1115	~1.5 gal	Ø.53	12.ØØ	79	5.64	Ø.Ø68	1ØØØ	1.5 gal	12.4 gal	
9/14/25	112Ø		Ø.38	12.53	1Ø8	5.54	Ø.Ø58	19Ø	3 gal		
9/14/25	1125		Ø.66	13.49	116	5.57	Ø.Ø56	74.5	5 gal		
9/14/25	113Ø		Ø.97	13.95	123	5.56	Ø.Ø61	45.9	5.5 gal		
9/14/25	1135		1.46	12.81	141	5.39	Ø.Ø50	33.6	6.5 gal		
9/14/25	114Ø		2.Ø9	12.88	145	5.48	Ø.Ø49	42.5	7 gal		
9/14/25	1145		2.26	13.30	147	5.46	Ø.Ø5Ø	37.Ø	9.5 gal		
9/14/25	115Ø		2.Ø9	13.72	153	5.38	Ø.Ø5Ø	29.7	10 gal		
9/14/25	1155		2.Ø9	14.Ø2	159	5.31	Ø.Ø5Ø	25.5	12 gal		
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dedicated tubing removed prior to purge

Recorded By:

[Signature]
(Signature and Date)

QA Checked By:

[Signature] 9/6/25
(Signature and Date)



Page 1 of 1

See page 106

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

☐ Other (specify) _____

h = height of water column in feet

Field Observations/Site Conditions During Purging:

QA Checked By: [Signature] 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: L4MW04ADate (mm/dd/yy): 09/04/25

Page 1 of 1

Personnel: C. James, G. Barnett, R. CaffeyPurge Start Time: 12:38 End Time: 1330Water Quality Meter: Horiba U-52Serial #: U130144xCalibrated: 9/4/25

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: HeronSerial #: U131537xCalibrated: NA☒ Other (specify) MonsoonPump: Mega MonsoonSerial #: 24915Calibrated: NADepth To Water: 30.63 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 46.62 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 7.5 gallonsWell Diameter: 2 inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/4/25	1240	~1.5gal	5.52	13.10	174	5.39	0.022	1000	0.5gal	7.5gal	
9/4/25	1245		4.82	12.91	200	5.30	0.022	826	2gal		
9/4/25	1250		6.05	12.70	211	5.33	0.022	524	4gal		
9/4/25	1255		5.97	13.34	217	5.34	0.022	373	5.5gal		
9/4/25	1300		5.59	13.69	222	5.31	0.021	492	6gal		
9/4/25	1305		4.93	13.07	233	5.24	0.020	808	7.5gal		
9/4/25	1310		5.13	13.29	233	5.28	0.020	706	8.5gal		
9/4/25	1315		6.11	13.67	236	5.27	0.020	410	10gal		
9/4/25	1320		6.83	14.01	235	5.32	0.020	105	11gal		
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging:

Dedicated tubing removed prior to purge

Recorded By:

[Signature]

(Signature and Date)

QA Checked By:

[Signature]

9/6/25

(Signature and Date)



Page 2 of 2

Purge Start Time: End Time:

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

☐ Other (specify) _____

Pump: _____ Serial #: _____ Calibrated: _____

Well Volume Calculation

$0.16 * h = \text{gallons (1 well volume for 2" well)}$

One Well Volume: _____ gallons

$0.04 * h = \text{gallons (1 well volume for 1" well)}$

h = height of water column in feet

✓6

Field Observations/Site Conditions During Purging: well recharges quickly


(Signature and Date)

[Signature]

9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: PM - MW02

Date (mm/dd/yy): 09/03/25

Page 1 of 1

Personnel: B. Caffey

Purge Start Time: 1000 End Time: 1030

Water Quality Meter: Hanna U-52

Serial #: U125301X Calibrated: 9/3

Purge Method:

☐ Disposable Bailer ☐ Bladder Pump

Water Level Meter: Heron Diver - T

Serial #: U130400X Calibrated: NA

☒ Other (specify) Monsoon

Pump: Monsoon

Serial #: 24915 Calibrated: NA

Depth To Water: 11.85 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 22.95 ft. from measuring point

$0.16 * h = \text{gallons}$ (1 well volume for 2" well)

One Well Volume: 1.76 gallons

Well Diameter: 2 inches

$0.04 * h = \text{gallons}$ (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/3/25	1005	1.5L	10.65	15.24	266	5.44	0.152	249	3.0L	6.6L	
	1010		4.93	16.39	183	5.74	0.142	92.6	4.5L		
	1015		4.54	16.25	116	5.86	0.144	27.3	6.0L		
	1020		4.32	16.19	112	5.90	0.145	18.4	7.5L		
✓	1025	✓	4.46	16.14	109	5.91	0.146	7.1	9.0L	✓	
	1030	—	5 ^{cc} / ₉ Completed well development @ PM - MW02								
9/3											
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: Dark brown sediment @ start of purging. NTU dropped below 10.
No odor/color

Recorded By:

9/3/2025
(Signature and Date)

QA Checked By:

9/6/25
(Signature and Date)



Page 1 of 1

h = height of water column in feet

Field Observations/Site Conditions During Purging: Final NTU: 26.7 . Clear, No odor

Eric Brown 9/6/25
(Signature and Date)



BRAC SSI at Camp Bonneville Well Development Form

Well ID Number: L4MW07BDate (mm/dd/yy): 09/03/25

Page 1 of 1

Personnel: B. CaffeyPurge Start Time: 1440 End Time: 1520Water Quality Meter: Horiba U-52 Serial #: U 125301X Calibrated: 9/3

Purge Method:

☐ Disposable Bailer ☐ Bladder PumpWater Level Meter: Heron Dipper - T Serial #: U 130400X Calibrated: NA☒ Other (specify) MonsoonPump: Monsoon Serial #: 24915 Calibrated: NADepth To Water: 40.82 ft. from measuring point

Well Volume Calculation

Total Depth Of Well: 58.99 ft. from measuring point

0.16 * h = gallons (1 well volume for 2" well)

One Well Volume: 2.88 gallonsWell Diameter: 2" inches

0.04 * h = gallons (1 well volume for 1" well)

h = height of water column in feet

Date	Time	Volume Removed	Dissolved Oxygen (mg/L)	Temp (°C)	Eh (mV)	pH (Std.Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Total Volume Removed	Well Volume	Comments
9/3/25	1445	1.5L	4.67	19.10	126	5.98	0.065	240	3.0L	10.9L	300 mL/min
	1450		4.38	17.40	190	5.15	0.054	46.7	4.5L		
	1455		4.20	16.42	209	4.90	0.040	10.8	6.0L		
	1500		4.17	15.50	231	4.53	0.038	2.87	7.5L		
	1505		4.28	15.25	235	4.49	0.038	0.02	9.0L		
	1510		4.22	15.19	236	4.47	0.038	0.02	10.5L		
✓	1515	✓	4.35	15.16	236	4.47	0.037	0.02	12.0L	✓	
	1520	-	Completed well development @ L4MW07B								
						20 9/6					
			±10% or < 0.5 mg/L	±3%	±10 mV	±0.1 SU	3%	10% or < 5			

Field Observations/Site Conditions During Purging: No odor, clear, Final NTU: 0.02

Recorded By:

9/3/25
(Signature and Date)

QA Checked By:

9/6/25
(Signature and Date)

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APPENDIX F

INVESTIGATION-DERIVED WASTE DOCUMENTS

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GENERATOR	NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WAN 001 002 030	2. Page 1 of 1	3. Emergency Response Phone (800) 839-3975	4. Waste Tracking Number 11032025CMPBONN
	5. Generator's Name and Mailing Address 600 ARMY PENTAGON ATTN: ERIN MAUER WASHINGTON, DC 20310 Generator's Phone: (703) 545-2504		Generator's Site Address (if different than mailing address) 23201 NE PLUSS ROAD VANCOUVER, WA 98682		
	6. Transporter 1 Company Name NRC ENVIRONMENTAL SERVICES INC				U.S. EPA ID Number CAR 000 030 114
	7. Transporter 2 Company Name US Ecology Transportation Solutions, Inc				U.S. EPA ID Number MIK 593 743 838
	8. Designated Facility Name and Site Address 20400 LEMLEY ROAD GRAND VIEW, ID 83624 Facility's Phone: (800) 274-1516				U.S. EPA ID Number IDD 073 114 654
TRANSPORTER	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity
			No.	Type	
	1. Material Not Regulated By D.O.T.		004	DM	01800
	2.				
	3.				
DESIGNATED FACILITY	4.				
	13. Special Handling Instructions and Additional Information 001. 1209460 Water				
	14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.				
	Generator's/Offor's Printed/Typed Name LTC Steve Gallo		Signature <i>Steve Gallo</i>		Month Day Year 11 07 25
	15. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: Date leaving U.S.:		
DESIGNATED FACILITY	16. Transporter Acknowledgment of Receipt of Materials				
	Transporter 1 Printed/Typed Name <i>H. Campbell</i>		Signature <i>[Signature]</i>		Month Day Year 12 02 25
	Transporter 2 Printed/Typed Name		Signature		Month Day Year
	17. Discrepancy				
	17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection				
Manifest Reference Number:					
17b. Alternate Facility (or Generator)					
U.S. EPA ID Number					
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)					
Month Day Year					
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name		Signature		Month Day Year	



NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number WAN001002030		b. Manifest Document Number BONNEVILLE112025		c. Page 1 of 1	
d. Generator's Name and Location: Camp Bonneville 23201 NE Pluss Road Vancouver, WA.98682 f. Phone:703-545-2504			e. Generator's Mailing Address: Cody Coombs- ZACConstruction Dept of the Army 110 Army Pentagon Washington, DC. 20310 g. Phone:703-545-2504		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No. Type		n. Total Quantity
4125 25 16720 (ACCT: 333795)	10/21/2026	Soil & Contact Waste	18	DM	9,000
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
LTC Steve Gallo		<i>Steve Gallo</i>		07NOV25	
p. Generator Authorized Agent Name (Print)		q. Signature		r. Date	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:		
b. Phone:		
<i>John N. N. N.</i>	<i>[Signature]</i>	<i>12-02-25</i>
c. Driver Name (Print)	d. Signature	e. Date

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: Coffin Butte Landfill, Inc (Company 4125) 28972 Coffin Butte Rd Corvallis, OR, 97339 b. Phone: 541.745.2018		c. US EPA Number ORD990751950	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print)		f. Signature	g. Date

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	
		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

APPENDIX G

DATA USABILITY ASSESSMENT

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Final
Data Usability Assessment
for the
Per- and Polyfluoroalkyl Substances
Supplemental Site Inspection at
Camp Bonneville
Vancouver, Washington

Contract No. W912DR-18-D-0003
Delivery Order Number W912DR21F0140

Prepared for:



U.S. ARMY

**Office of the Deputy Assistant Secretary of the Army for Environment,
Safety and Occupational Health (ODASA [ESOH]),
Base Realignment and Closure (BRAC)**

**110 Army Pentagon
Washington, DC 20310**

Prepared by:



Leidos
1750 Presidents Street
Reston, Virginia 20190

June 2026

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Final

**Data Usability Assessment
for the
Per- and Polyfluoroalkyl Substances
Supplemental Site Inspection at
Camp Bonneville
Vancouver, Washington**

**Contract No. W912DR-18-D-0003
Delivery Order Number W912DR21F0140**

Prepared for:
ODCS, G-9, ESOH-BRAC
600 Army Pentagon
Washington, DC 20310

Prepared by:
Leidos
1750 Presidents Street
Reston, Virginia 20190

June 2026

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LIST OF ACRONYMS AND ABBREVIATIONS

BRAC	Base Realignment and Closure
CCV	Continuing Calibration Verification
DI	Deionized
DoD	U.S. Department of Defense
DQO	Data Quality Objective
EIS	Extracted Internal Standard
ICV	Initial Calibration Verification
ISC	Instrument Sensitivity Check
LCL	Lower Control Limit
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LLCS	Low-Level Laboratory Control Sample
LOD	Limit of Detection
LOQ	Limit of Quantitation
Merit	Merit Laboratories, Inc.
NIS	Non-extracted Internal Standard
ODASA (ESOH)	Office of the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health
PFAS	Per- and Polyfluoroalkyl Substances
QA	Quality Assurance
QC	Quality Control
QSM	Quality Systems Manual
RPD	Relative Percent Difference
SSI	Supplemental Site Inspection
UCL	Upper Control Limit
UFP-QAPP	Uniform Federal Policy-Quality Assurance Project Plan
USEPA	U.S. Environmental Protection Agency

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1.0 INTRODUCTION

A comprehensive quality assurance/quality control (QA/QC) program was implemented during the Supplemental Site Inspection (SSI) activities at the former Camp Bonneville in Vancouver, Washington. Groundwater, surface water, soil, and sediment samples and associated QC samples (e.g., field duplicates, equipment rinsate blanks, source water samples) were collected and analyzed for per- and polyfluoroalkyl substances (PFAS) using methods specified in the *Uniform Federal Policy-Quality Assurance Project Plan Per- and Polyfluoroalkyl Substances Supplemental Site Inspection at Camp Bonneville Vancouver, Washington* (Leidos 2025), herein referred to as the Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP).

Soil samples included 39 primary samples, 4 soil field duplicates, 6 sediment primary samples, and 1 sediment field duplicate. Aqueous samples included 15 primary groundwater samples, 2 groundwater field duplicates, 6 surface water primary samples, 1 surface water field duplicate, 4 equipment rinsate blanks, and 2 field blanks (1 onsite source water used for initial decontamination and 1 laboratory-provided PFAS-free deionized [DI] water). Samples were submitted to Merit Laboratories, Inc. (Merit), in East Lansing, Michigan, for analysis of PFAS by liquid chromatography with tandem mass spectrometry compliant with U.S. Environmental Protection Agency (USEPA) Method 1633A (USEPA 2024) and Table B-24 of the U.S. Department of Defense's (DoD's) Quality Systems Manual (QSM) Version 6.0 (DoD 2023b). The laboratory-provided PFAS-free DI water was used during equipment decontamination as a final rinse and to collect the equipment rinsate blanks. All field samples were collected in laboratory-supplied high-density polyethylene bottles in September 2025 and shipped to Merit.

The data evaluation process subjected 100 percent of the sample data to a systematic and rigorous technical review by examining all analytical QC results as documented by the laboratory, following appropriate guidelines for Stage 2B data verification/validation; 10 percent of the data were subjected to Stage 4 validation. Data validation was performed in accordance with the DoD Data Validation Guidelines Module 6 (DoD 2022) and the Revised Table for Sample Qualification in the Presence of Blank Contamination (DoD 2023a). Data evaluation compared the contents of the data packages and QC results to requirements contained in the requested analytical method and against precision and accuracy limits established in USEPA Method 1633A (USEPA 2024) and QSM Version 6.0, Table B-24 (DoD 2023b), as well as other QC criteria presented in the UFP-QAPP (Leidos 2025).

The systematic review of the sample data set for compliance with the established QC criteria was based on the following categories:

- Laboratory case narrative
- Sample condition upon receipt
- Holding times
- Blanks (field, method, and instrument)
- Laboratory control samples (LCSs)
- Extracted internal standard (EIS) and non-extracted internal standard (NIS) recoveries
- Transition ion ratios
- Standard analyses (mass tuning, initial and continuing calibrations, bile salts, instrument sensitivity checks [ISCs])
- Sample reanalysis and dilutions.

Consistent with the data quality requirements established in the UFP-QAPP (Leidos 2025) and the data quality objectives (DQOs), all sample data and associated QC data were evaluated during the review and validation process. The following samples were collected during the SSI sampling event in September 2025:

- Thirty-nine soil samples
- Four soil field duplicates
- Six sediment samples
- One sediment field duplicate
- Four equipment rinsate blanks (three associated with soil and one associated with groundwater)
- Fifteen groundwater samples
- Two groundwater field duplicates
- Six surface water samples
- One surface water field duplicate
- Two field blanks
- Two investigation-derived waste samples (not validated).

Individual sample results were qualified, as necessary, to designate usability of the data toward meeting project objectives. Data qualifiers were applied based on deviations from the measurement performance criteria identified on UFP-QAPP Worksheet #12 and requirements specified on Worksheets #15, #19/30, #24, and #28 (Leidos 2025). The final data qualifiers are defined as follows:

- U: The analyte was analyzed for, but was not detected above the associated concentration value, which is the limit of detection (LOD), as reported on the laboratory report, or a value revised during validation.
- J: The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. These results are considered usable but estimated values.
- J+: The analyte was positively identified; the result is an estimated concentration and may be biased high.
- J-: The analyte was positively identified; the result is an estimated concentration and may be biased low.
- UJ: The analyte was not detected above the associated concentration value, which is the LOD, as reported on the laboratory report, or a value revised during validation. However, the concentration value is approximate and may or may not represent the actual limit of quantitation (LOQ) necessary to accurately and precisely measure the analyte in the sample. These results are considered usable but estimated values.
- R: The analyte result was rejected due to serious deficiencies in the ability to analyze the sample and/or meet QC criteria. The presence or absence of the analyte cannot be verified.

The following sections summarize the results of the QA program and QC samples analyzed during the SSI at Camp Bonneville. Data qualified during the data validation process are presented in Table G-1.

1.1 PRECISION

Precision was evaluated by the analysis of field duplicate samples and the relative percent difference (RPD) between the duplicate spike results. Eight field duplicates were collected from various locations. Results for the sample duplicates met the criteria specified in UFP-QAPP (Leidos 2025).

1.2 ACCURACY/BIAS CONTAMINATION

Bias introduced from blank contamination (in method, instrument, or field blanks) and any impact on accuracy were evaluated during validation. Method and instrument blanks were analyzed with each batch of 20 or fewer samples in accordance with UFP-QAPP requirements and met criteria (all target analytes were non-detect). Field QC included four equipment rinsate blanks and two field blanks collected to gauge the impacts from field activities. All analytes were reported as non-detect in the equipment rinsate blanks. All analytes were reported as non-detect in the onsite source water, which deemed the source usable for the investigation for initial decontamination. All analytes were reported as non-detect in the laboratory-provided PFAS-free DI water. No qualification was necessary.

1.3 OVERALL ACCURACY/BIAS

Analytical accuracy was measured through the use of LCSs, EISs, NISs, initial and continuing calibration, and target compound quantitation requirements.

Low-level laboratory control sample (LLCS)/LCS/laboratory control sample duplicate (LCSD) recoveries were compared to DoD QSM control limits during validation. Detected analytes in associated samples were qualified as estimated (J+) if LLLCS/LCS/LCSD recoveries were greater than the applicable recovery QC limit (non-detected analytes would not be qualified). Non-detected sample results were qualified as rejected (R) and detected analytes were qualified estimated (J-) if the associated LLLCS/LCS/LCSD recoveries were less than the LLLCS/LCS/LCSD recovery control limit. LLLCS/LCS/LCSD recoveries met criteria.

EIS and NIS recoveries provide another measure of accuracy for PFAS. Sample results were qualified as estimated (J+/UJ) if the associated EIS recoveries were less than the lower control limit (LCL) but greater than 10 percent. Detected compounds were qualified as estimated (J) if the EIS recoveries were greater than the upper control limit (UCL) but less than or equal to 200 percent. Detected compounds were qualified as estimated (J-) if the EIS recoveries were greater than 200 percent. Detected and non-detected results were qualified as rejected (R) if the EIS recoveries were less than 10 percent. All NIS and EIS recoveries were within control limits.

Initial calibration of each instrument was completed in accordance with USEPA Method 1633A (USEPA 2024) and DoD QSM Version 6.0, Table B-24 requirements (DoD 2023b). Instrument calibration was evaluated by the analysis of an ISC standard and bile salt standard. Initial calibrations were further evaluated by the analysis of an initial calibration verification (ICV) standard and subsequent continuing calibration verification (CCV) standards. Sample results were qualified as estimated (J-/UJ) if the associated ICV/CCV/ISC is less than the LCL but greater than or equal to 50 percent recovery. Sample results were qualified as estimated (J+/UJ) if the associated ICV/CCV/ISC was greater than the UCL but less than or equal to 150 percent recovery. All ICV and CCV recoveries were within control limits with the following exceptions. Twenty data points were qualified estimated (UJ) due to CCV recoveries greater than the UCL but less than or equal to 150 percent and are summarized in Table G-1 with reason code C05. Sixteen data points were qualified estimated (UJ) due to CCV recoveries less than the LCL but greater than or equal to 50 percent recovery and are summarized in Table G-1 with reason code C04.

The target compounds that were reported as detections satisfied all qualitative and quantitative identification.

As noted above, 10 percent of the sample data were subjected to Stage 4 validation and results verified by recalculations from the raw data; no transcription or calculation errors were identified. Overall, data met stated objectives for analytical accuracy.

1.4 SENSITIVITY

Sensitivity requirements were provided as minimum required LOQs and LODs in the UFP-QAPP (Leidos 2025); these criteria were met.

1.5 REPRESENTATIVENESS

Representativeness was satisfied by ensuring that the UFP-QAPP protocols were followed, appropriate sampling techniques were used, and established analytical procedures were implemented. Sample results were qualified as estimated (J/UJ) if holding times were exceeded; samples analyzed after more than two times the method required holding time were rejected (R) for non-detected analytes and estimated (J) for detected analytes. USEPA Method 1633A for the analysis of PFAS identifies shortened sample holding times for four PFAS compounds in aqueous samples and one PFAS compound in soil or sediment. It is understood that laboratories are unlikely to extract/analyze samples before these shortened holding times are exceeded. Samples met holding time criteria with the following exceptions. Fifty data points for nonafluoro-3,6-dioxahexanoic acid were qualified estimated (UJ) and are listed in Table G-1 with reason code A01. One hundred twenty data points for N-ethyl perfluorooctanesulfonamidoacetic acid, N-ethyl perfluorooctanesulfonamidoethanol, N-methyl perfluorooctanesulfonamidoacetic acid, and N-methyl perfluorooctanesulfonamidoethanol were qualified estimated (UJ) and are listed in Table G-1 with reason code A01. Based on an evaluation of sample collection and receipt, holding times, and precision and accuracy, the samples collected during the SSI are considered to be representative of the environmental conditions.

1.6 COMPARABILITY

Comparability is achieved by using consistent, documented, and UFP-QAPP-approved methods and meeting project accuracy and precision objectives. Based on the precision and accuracy assessment presented above and the use of established method criteria (i.e., USEPA Method 1633A [USEPA 2024] and DoD QSM Version 6.0, Table B-24 [DoD 2023b]), the data collected during the SSI are considered to meet project objectives for comparability.

1.7 COMPLETENESS

Completeness measures the amount of valid data obtained from the sampling and analysis effort. For analytical data to be usable, each data point must be validated and meet criteria without significant non-conformance. The DQOs for the sampling conducted at the former Camp Bonneville were set at 90 percent for field sampling and laboratory completeness. All proposed samples were collected except for three groundwaters. The associated wells were not installed due to tight clay. Based on the evaluation of the field and laboratory QC results, usable data resulted in 100 percent completeness.

1.8 DATA RECONCILIATION AND USABILITY

Data that have been qualified as estimated (UJ) during validation indicate accuracy, precision, or sensitivity QC measurements were exceeded, but the analytical results are considered valid and usable for the evaluation of project objectives.

Table G-1. Qualified Camp Bonneville Data, September 2025

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
	CBV-FB-01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.63	U	ng/L	UJ	A01
	CBV-FB-01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
	CBV-FB-01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.63	U	ng/L	UJ	A01
	CBV-FB-01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
L4MW04A	L4MW04A-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
L4MW04A	L4MW04A-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
L4MW04A	L4MW04A-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01
L4MW04A	L4MW04A-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
L4MW05A	L4MW05A-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.67	U	ng/L	UJ	A01
L4MW05A	L4MW05A-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
L4MW05A	L4MW05A-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.67	U	ng/L	UJ	A01
L4MW05A	L4MW05A-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.59	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.59	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
	L4MW07B-GW-202509EB	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
	L4MW07B-GW-202509EB	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
	L4MW07B-GW-202509EB	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
	L4MW07B-GW-202509EB	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509FD	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509FD	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509FD	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01
L4MW07B	L4MW07B-GW-202509FD	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
L4MW09A	L4MW09A-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
L4MW09A	L4MW09A-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
L4MW09A	L4MW09A-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01
L4MW09A	L4MW09A-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
L4MW09B	L4MW09B-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.59	U	ng/L	UJ	A01
L4MW09B	L4MW09B-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
L4MW09B	L4MW09B-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.59	U	ng/L	UJ	A01
L4MW09B	L4MW09B-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW01D	LCMW01D-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
LCMW01D	LCMW01D-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW01D	LCMW01D-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01
LCMW01D	LCMW01D-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW01S	LCMW01S-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
LCMW01S	LCMW01S-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW01S	LCMW01S-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
LCMW01S	LCMW01S-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW02S	LCMW02S-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.63	U	ng/L	UJ	A01
LCMW02S	LCMW02S-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW02S	LCMW02S-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.63	U	ng/L	UJ	A01
LCMW02S	LCMW02S-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW04S	LCMW04S-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.63	U	ng/L	UJ	A01
LCMW04S	LCMW04S-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW04S	LCMW04S-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.63	U	ng/L	UJ	A01
LCMW04S	LCMW04S-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509FD	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509FD	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509FD	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01
LCMW09S	LCMW09S-GW-202509FD	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
PM-MW01	PM-MW01-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.66	U	ng/L	UJ	A01
PM-MW01	PM-MW01-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
PM-MW01	PM-MW01-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.66	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
PM-MW01	PM-MW01-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
PM-MW02	PM-MW02-GW-202509	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.63	U	ng/L	UJ	A01
PM-MW02	PM-MW02-GW-202509	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
PM-MW02	PM-MW02-GW-202509	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.63	U	ng/L	UJ	A01
PM-MW02	PM-MW02-GW-202509	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-01	CBV-SRC-01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
CBV-1864-01	CBV-SRC-01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-01	CBV-SRC-01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01
CBV-1864-01	CBV-SRC-01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-08	CB186408-SD01	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.1	U	µg/kg	UJ	A01
CBV-1864-08	CB186408-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
CBV-1864-08	CB186408-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-08	CB186408-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01
CBV-1864-08	CB186408-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-08	CB186408-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.4	U	ng/L	UJ	C05
CBV-1864-09	CB186409-SD01	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.13	U	µg/kg	UJ	A01
CBV-1864-09	CB186409-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.65	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.65	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
CBV-1864-09	CB186409-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.5	U	ng/L	UJ	C05
CBV-1864-09	CB186409-SW01FD	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.78	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01FD	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.8	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01FD	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.78	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01FD	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	U	ng/L	UJ	A01
CBV-1864-09	CB186409-SW01FD	Perfluoroheptanesulfonic acid (PFHpS)	1.8	U	ng/L	UJ	C05
CBV-1864-10	CB186410-SD01	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.14	U	µg/kg	UJ	A01
CBV-1864-10	CB186410-SD01FD	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01
CBV-1864-10	CB186410-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.72	U	ng/L	UJ	A01
CBV-1864-10	CB186410-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.6	U	ng/L	UJ	A01
CBV-1864-10	CB186410-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.72	U	ng/L	UJ	A01
CBV-1864-10	CB186410-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.6	U	ng/L	UJ	A01
CBV-1864-10	CB186410-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.6	U	ng/L	UJ	C05
CBV-4483-11	CB448311-SD01	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.15	U	µg/kg	UJ	A01
CBV-4483-11	CB448311-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.6	U	ng/L	UJ	A01
CBV-4483-11	CB448311-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
CBV-4483-11	CB448311-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.6	U	ng/L	UJ	A01
CBV-4483-11	CB448311-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-4483-11	CB448311-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.4	U	ng/L	UJ	C05
CBV-WR12-08	CBWR1208-SD01	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.14	U	µg/kg	UJ	A01
CBV-WR12-08	CBWR1208-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.65	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
CBV-WR12-08	CBWR1208-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
CBV-WR12-08	CBWR1208-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.65	U	ng/L	UJ	A01
CBV-WR12-08	CBWR1208-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
CBV-WR12-08	CBWR1208-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.5	U	ng/L	UJ	C05
CBV-WR12-09	CBWR1209-SD01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.25	U	µg/kg	UJ	A01
CBV-WR12-09	CBWR1209-SW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.63	U	ng/L	UJ	A01
CBV-WR12-09	CBWR1209-SW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
CBV-WR12-09	CBWR1209-SW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.63	U	ng/L	UJ	A01
CBV-WR12-09	CBWR1209-SW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-WR12-09	CBWR1209-SW01	Perfluoroheptanesulfonic acid (PFHpS)	1.4	U	ng/L	UJ	C05
CBV-1864-04	CB186404-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.093	U	µg/kg	UJ	A01, C04
CBV-1864-04	CB186404-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.098	U	µg/kg	UJ	A01, C04
CBV-1864-04	CB186404-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.095	U	µg/kg	UJ	A01, C04
CBV-1864-05	CB186405-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01, C04
CBV-1864-05	CB186405-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.098	U	µg/kg	UJ	A01, C04
CBV-1864-05	CB186405-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.085	U	µg/kg	UJ	A01, C04
CBV-1864-06	CB186406-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.098	U	µg/kg	UJ	A01, C04
CBV-1864-06	CB186406-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01, C04
CBV-1864-06	CB186406-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.094	U	µg/kg	UJ	A01, C04
CBV-1864-06	CB186406-SS01FD	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.1	U	µg/kg	UJ	A01, C04
CBV-1864-07	CB186407-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.074	U	µg/kg	UJ	A01, C04
CBV-1864-07	CB186407-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.095	U	µg/kg	UJ	A01, C04
CBV-1864-07	CB186407-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.081	U	µg/kg	UJ	A01, C04
CBV-1864-11	CB186411-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01, C04
CBV-1864-11	CB186411-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01, C04
CBV-1864-11	CB186411-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.087	U	µg/kg	UJ	A01, C04
CBV-4483-05	CB448305-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.098	U	µg/kg	UJ	A01
CBV-4483-05	CB448305-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.12	U	µg/kg	UJ	A01
	CB448305-SB02EB	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.67	U	ng/L	UJ	A01

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
	CB448305-SB02EB	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
	CB448305-SB02EB	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.67	U	ng/L	UJ	A01
	CB448305-SB02EB	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
	CB448305-SB02EB	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.5	U	ng/L	UJ	C05
CBV-4483-05	CB448305-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.083	U	μg/kg	UJ	A01
CBV-4483-06	CB448306-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-06	CB448306-SB02	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
	CB448306-SB02EB	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.69	U	ng/L	UJ	A01
	CB448306-SB02EB	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.6	U	ng/L	UJ	A01
	CB448306-SB02EB	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.69	U	ng/L	UJ	A01
	CB448306-SB02EB	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.6	U	ng/L	UJ	A01
	CB448306-SB02EB	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.6	U	ng/L	UJ	C05
CBV-4483-06	CB448306-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.082	U	μg/kg	UJ	A01
CBV-4483-07	CB448307-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.096	U	μg/kg	UJ	A01
CBV-4483-07	CB448307-SB02	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-07	CB448307-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.092	U	μg/kg	UJ	A01
CBV-4483-08	CB448308-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.094	U	μg/kg	UJ	A01
CBV-4483-08	CB448308-SB02	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-08	CB448308-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.092	U	μg/kg	UJ	A01
CBV-4483-09	CB448309-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.1	U	μg/kg	UJ	A01
CBV-4483-09	CB448309-SB01FD	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.098	U	μg/kg	UJ	A01
CBV-4483-09	CB448309-SB02	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-09	CB448309-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.082	U	μg/kg	UJ	A01
CBV-4483-10	CB448310-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-10	CB448310-SB01FD	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-10	CB448310-SB02	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.11	U	μg/kg	UJ	A01
CBV-4483-10	CB448310-SS01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.086	U	μg/kg	UJ	A01
CBV-WR12-06	CBWR1206-SB01	Nonafluoro-3,6-dioxahепtanoic acid (NFDHA)	0.1	U	μg/kg	UJ	A01
CBV-WR12-06	CBWR1206-SB01	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.1	U	μg/kg	UJ	C05

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
CBV-WR12-06	CBWR1206-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01
CBV-WR12-06	CBWR1206-SB02	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.11	U	µg/kg	UJ	C05
	CBWR1206-SB02EB	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.64	U	ng/L	UJ	A01
	CBWR1206-SB02EB	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
	CBWR1206-SB02EB	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.64	U	ng/L	UJ	A01
	CBWR1206-SB02EB	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
	CBWR1206-SB02EB	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.5	U	ng/L	UJ	C05
CBV-WR12-06	CBWR1206-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01
CBV-WR12-06	CBWR1206-SS01	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.11	U	µg/kg	UJ	C05
CBV-WR12-07	CBWR1207-SB01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01
CBV-WR12-07	CBWR1207-SB01	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.11	U	µg/kg	UJ	C05
CBV-WR12-07	CBWR1207-SB02	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.11	U	µg/kg	UJ	A01
CBV-WR12-07	CBWR1207-SB02	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.11	U	µg/kg	UJ	C05
CBV-WR12-07	CBWR1207-SS01	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.086	U	µg/kg	UJ	A01
CBV-WR12-07	CBWR1207-SS01	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	0.086	U	µg/kg	UJ	C05
CBV-WR12-07	CBWR1207-SS01FD	Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	0.084	U	µg/kg	UJ	A01
CBV-WR12-07	CBWR1207-SS01FD	3-Perfluoropropyl propanoic acid (3:3FTCA)	0.084	U	µg/kg	UJ	C05
CBV-1864-04	CB186404-GW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.61	U	ng/L	UJ	A01
CBV-1864-04	CB186404-GW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-04	CB186404-GW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.61	U	ng/L	UJ	A01
CBV-1864-04	CB186404-GW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.4	U	ng/L	UJ	A01
CBV-1864-04	CB186404-GW01	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.4	U	ng/L	UJ	C05
CBV-1864-04	CB186406-GW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.68	U	ng/L	UJ	A01
CBV-1864-04	CB186406-GW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
CBV-1864-04	CB186406-GW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.68	U	ng/L	UJ	A01
CBV-1864-04	CB186406-GW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
CBV-1864-04	CB186406-GW01	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.5	U	ng/L	UJ	C05

Table G-1. Qualified Camp Bonneville Data, September 2025 (Continued)

Location	Sample ID	Chemical	Laboratory Result	Laboratory Qualifier	Unit	Final Qualifier	Validation Code
CBV-1864-04	CB186407-GW01	N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	0.64	U	ng/L	UJ	A01
CBV-1864-04	CB186407-GW01	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.5	U	ng/L	UJ	A01
CBV-1864-04	CB186407-GW01	N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	0.64	U	ng/L	UJ	A01
CBV-1864-04	CB186407-GW01	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.5	U	ng/L	UJ	A01
CBV-1864-04	CB186407-GW01	3-Perfluoropropyl propanoic acid (3:3FTCA)	1.5	U	ng/L	UJ	C05

A01 = Extraction holding times were exceeded.

C04 = ICV/CCV/ISC percent recovery was < LCL but ≥ 50 percent.

C05 = ICV/CCV/ISC percent recovery was > UCL but ≤ 150 percent.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the associated concentration value, which is the LOD, as reported on the laboratory report, or a value revised during validation. However, the concentration value is approximate and may or may not represent the actual LOQ necessary to accurately and precisely measure the analyte in the sample. These results are considered usable but estimated values.

$\mu\text{g/kg}$ = Micrograms per Kilogram

ID = Identifier

ng/L = Nanograms per Liter

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2.0 REFERENCES

- DoD (U.S. Department of Defense). 2022. Data Validation Guidelines Module 6: *Data Validation Procedures for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-24*. Environmental Data Quality Workgroup. October.
- DoD. 2023a. *Data Validation Guidelines Modules 1, 2, 3, 4, and 6 Revised Table for Sample Qualification in the Presence of Blank Contamination*. October.
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- Leidos. 2025. *Per- and Polyfluoroalkyl Substances Supplemental Site Inspection Uniform Federal Policy-Quality Assurance Project Plan Addendum at Camp Bonneville Vancouver, Washington*. June.
- USEPA (U.S. Environmental Protection Agency). 2024. *Method 1633, Revision A, Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS*. December.

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APPENDIX H

DATA PRESENTATION TABLES

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Table H-1. Groundwater Data Presentation: Building 1864 Fire Station AOPI

Location ID Sample ID Sample Date Screen Depth (feet bgs)				CBV-1864-04 CB186404-GW01 9/21/2025 24	CBV-1864-06 CB186406-GW01 9/20/2025 25	CBV-1864-07 CB186407-GW01 9/20/2025 25	PM-MW01 PM-MW01-GW-202509 9/5/2025 28	PM-MW02 PM-MW02-GW-202509 9/5/2025 20
Chemical Name	CASRN	Unit	Screening Level					
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS	1.4 UJ	1.5 UJ	1.5 UJ	1.5 U	1.4 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ng/L	NS	1.4 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.4 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	ng/L	NS	0.61 UJ	0.68 UJ	0.64 UJ	0.66 UJ	0.63 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS	1.4 UJ	1.5 UJ	1.5 UJ	1.5 UJ	1.4 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS	0.61 UJ	0.68 UJ	0.64 UJ	0.66 UJ	0.63 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluorododecanoic acid (PFDoA)	307-55-1	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0	0.61 U	0.69 J	0.64 U	0.66 U	0.63 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ng/L	NS	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS	0.61 U	0.68 U	0.64 U	0.66 U	0.63 U

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rs1.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Table H-1. Groundwater Data Presentation: Building 1864 Fire Station AOPI

Bolded values denote detected concentrations.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

ASD = Assistant Secretary of Defense

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

ID = Identifier

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-2. Groundwater Data Presentation: Southwest Boundary Assessment

Location ID Sample ID Sample Date Screen Depth (feet bgs)				LCMW01D LCMW01D-GW-202509 9/5/2025 40	LCMW01S LCMW01S-GW-202509 9/5/2025 21	LCMW02S LCMW02S-GW-202509 9/5/2025 15	LCMW04S LCMW04S-GW-202509 9/5/2025 14	LCMW09S LCMW09S-GW-202509 9/4/2025 21	LCMW09S LCMW09S-GW-202509FD 9/4/2025 21
Chemical Name	CASRN	Unit	Screening Level						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ng/L	NS	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	ng/L	NS	0.60 UJ	0.60 UJ	0.63 UJ	0.63 UJ	0.61 UJ	0.60 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS	0.60 UJ	0.60 UJ	0.63 UJ	0.63 UJ	0.61 UJ	0.60 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorododecanoic acid (PFDoS)	307-55-1	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	ng/L	NS	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS	0.60 U	0.60 U	0.63 U	0.63 U	0.61 U	0.60 U

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Table H-2. Groundwater Data Presentation: Southwest Boundary Assessment

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
 UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.
 ASD = Assistant Secretary of Defense
 bgs = Below Ground Surface
 CASRN = Chemical Abstracts System Registry Number
 DoD = U.S. Department of Defense
 FD = Field Duplicate
 ID = Identifier
 MDL = Method Detection Limit
 NS = No screening level available for that analyte
 ng/L = Nanograms per Liter
 PFAS = Per- and Polyfluoroalkyl Substances
 RSL = Regional Screening Level
 SL = Screening Level
 USEPA = U.S. Environmental Protection Agency

Table H-3. Groundwater Data Presentation: Landfill 4/Demolition Area 1 AOPI

Location ID Sample ID Sample Date Screen Depth (feet bgs)				L4MW04A L4MW04A-GW-202509 9/6/2025 44	L4MW05A L4MW05A-GW-202509 9/6/2025 34	L4MW07B L4MW07B-GW-202509 9/5/2025 57	L4MW07B L4MW07B-GW-202509FD 9/5/2025 57	L4MW09A L4MW09A-GW-202509 9/6/2025 40	L4MW09B L4MW09B-GW-202509 9/6/2025 75
Chemical Name	CASRN	Unit	Screening Level						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ng/L	NS	1.4 UJ	1.5 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	ng/L	NS	0.61 UJ	0.67 UJ	0.59 UJ	0.61 UJ	0.60 UJ	0.59 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS	1.4 UJ	1.5 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS	0.61 UJ	0.67 UJ	0.59 UJ	0.61 UJ	0.60 UJ	0.59 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorododecanoic acid (PFDoA)	307-55-1	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ng/L	NS	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS	0.61 U	0.67 U	0.59 U	0.61 U	0.60 U	0.59 U

Notes:
PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eic/eer/ecc/pfas/pfas101/rsl.html> (DoD 2025b).
DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Table H-3. Groundwater Data Presentation: Landfill 4/Demolition Area 1 AOPI

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

FD = Field Duplicate

HQ = Hazard Quotient

ID = Identifier

LOD = Limit of Detection

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

SL = Screening Level

Table H-4. Sediment Data Presentation: Building 1864 Fire Station AOPI

				Location ID Sample ID Sample Date Sample Depth (feet bgs)	CBV-1864-08 CB186408-SD01 9/6/2025 0-0.5	CBV-1864-09 CB186409-SD01 9/6/2025 0-0.5	CBV-1864-10 CB186410-SD01 9/6/2025 0-0.5	CBV-1864-10 CB186410-SD01FD 9/6/2025 0-0.5
Chemical Name	CASRN	Unit	Screening Level					
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS		0.1 UJ	0.13 UJ	0.14 UJ	0.11 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS		0.02 U	0.024 U	0.026 U	0.02 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS		0.02 U	0.024 U	0.026 U	0.02 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19		0.1 U	0.13 U	0.14 U	0.11 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63		0.1 U	0.13 U	0.14 U	0.11 U
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070		0.1 U	0.13 U	0.14 U	0.11 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	µg/kg	NS		0.046 U	0.057 U	0.06 U	0.047 U

Table H-4. Sediment Data Presentation: Building 1864 Fire Station AOPI

				Location ID Sample ID Sample Date Sample Depth (feet bgs)	CBV-1864-08 CB186408-SD01 9/6/2025 0-0.5	CBV-1864-09 CB186409-SD01 9/6/2025 0-0.5	CBV-1864-10 CB186410-SD01 9/6/2025 0-0.5	CBV-1864-10 CB186410-SD01FD 9/6/2025 0-0.5
Chemical Name	CASRN	Unit	Screening Level					
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS		0.02 U	0.024 U	0.026 U	0.02 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS		0.1 U	0.13 U	0.14 U	0.11 U
Solids, Total	TOT_SOLIDS	µg/kg	NS		65	52	52	64

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b). DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Bolded values denote detected concentrations.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

µg/kg = Micrograms per Kilograms

ASD = Assistant Secretary of Defense

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

FD = Field Duplicate

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-5. Sediment Data Presentation: Building 4483 Fire Station AOP1

				Location ID	CBV-4483-11
				Sample ID	CB448311-SD01
				Sample Date	9/6/2025
				Sample Depth (feet bgs)	0-0.5
Chemical Name	CASRN	Unit	Screening Level		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS	0.15 U	
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS	0.15 U	
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS	0.15 U	
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS	0.064 U	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS	0.15 U	
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS	0.15 U	
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS	0.15 U	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS	0.15 U	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS	0.15 U	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS	0.15 U	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS	0.15 U	
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS	0.15 U	
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS	0.064 U	
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS	0.15 U	
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS	0.15 U	
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS	0.15 U	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS	0.15 UJ	
Perfluoro(2-ethoxyethane) sulfonic acid (PFEEESA)	113507-82-7	µg/kg	NS	0.064 U	
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS	0.064 U	
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS	0.027 U	
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900	0.064 U	
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800	0.064 U	
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS	0.064 U	
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06	0.064 U	
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS	0.15 U	
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS	0.027 U	
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS	0.15 U	
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS	0.064 U	
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130	0.064 U	
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200	0.064 U	
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS	0.15 U	
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19	0.15 U	
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS	0.064 U	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63	0.15 U	
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070	0.15 U	

Table H-5. Sediment Data Presentation: Building 4483 Fire Station AOPI

				Location ID Sample ID Sample Date Sample Depth (feet bgs)	CBV-4483-11 CB448311-SD01 9/6/2025 0-0.5
Chemical Name	CASRN	Unit	Screening Level		
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS	0.064 U	
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS	0.064 U	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS	0.027 U	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS	0.15 U	
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS	0.15 U	
Solids, Total	TOT SOLIDS	µg/kg	NS	51	

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/eeer/ecc/pfas/pfas101/rsl.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Bolded values denote detected concentrations.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

µg/kg = Micrograms per Kilograms

ASD = Assistant Secretary of Defense

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-6. Sediment Data Presentation: Wash Racks 1 and 2 AOPI

				Location ID Sample ID Sample Date Sample Depth (feet bgs)	CBV-WR12-08 CBWR1208-SD01 9/6/2025 0-0.5	CBV-WR12-09 CBWR1209-SD01 9/6/2025 0-0.5
Chemical Name	CASRN	Unit	Screening Level			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS		0.14 U	0.25 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS		0.14 U	0.25 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS		0.14 U	0.25 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS		0.06 U	0.11 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS		0.14 U	0.25 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS		0.14 U	0.25 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS		0.14 U	0.25 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS		0.14 U	0.25 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS		0.14 U	0.25 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS		0.14 U	0.25 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS		0.14 U	0.25 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS		0.14 U	0.25 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS		0.06 U	0.11 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS		0.14 U	0.25 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS		0.14 U	0.25 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS		0.14 U	0.25 U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS		0.14 UJ	0.25 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS		0.06 U	0.11 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS		0.06 U	0.11 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS		0.026 U	0.047 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900		0.06 U	0.11 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800		0.06 U	0.11 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS		0.06 U	0.11 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06		0.06 U	0.11 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS		0.14 U	0.25 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS		0.026 U	0.047 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS		0.14 U	0.25 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS		0.06 U	0.11 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130		0.06 U	0.11 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200		0.06 U	0.11 U
Perfluoronanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS		0.14 U	0.25 U
Perfluoronanoic acid (PFNA)	375-95-1	µg/kg	19		0.14 U	0.25 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS		0.06 U	0.11 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63		0.14 U	0.25 U
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070		0.14 U	0.25 U

Table H-6. Sediment Data Presentation: Wash Racks 1 and 2 AOPI

				Location ID Sample ID Sample Date Sample Depth (feet bgs)	CBV-WR12-08 CBWR1208-SD01 9/6/2025 0-0.5	CBV-WR12-09 CBWR1209-SD01 9/6/2025 0-0.5
Chemical Name	CASRN	Unit	Screening Level			
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS		0.06 U	0.11 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS		0.06 U	0.11 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS		0.026 U	0.047 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS		0.14 U	0.25 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS		0.14 U	0.25 U
Solids, Total	TOT_SOLIDS	µg/kg	NS		57	31

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Bolded values denote detected concentrations.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

µg/kg = Micrograms per Kilograms

ASD = Assistant Secretary of Defense

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-7. Soil Data Presentation: Building 1864 Fire Station AOP1

Location ID				CBV-1864-04 CB186404- SS01	CBV-1864-04 CB186404- SB01	CBV-1864-04 CB186404- SB02	CBV-1864-05 CB186405- SS01	CBV-1864-05 CB186405- SB01	CBV-1864-05 CB186405- SB02	CBV-1864-06 CB186406- SS01	CBV-1864-06 CB186406- SS01FD	CBV-1864-06 CB186406- SB01	CBV-1864-06 CB186406- SB02	CBV-1864-07 CB186407- SS01	CBV-1864-07 CB186407- SB01	CBV-1864-07 CB186407- SB02
Sample Date				9/20/2025	9/20/2025	9/20/2025	9/20/2025	9/20/2025	9/20/2025	9/19/2025	9/19/2025	9/19/2025	9/19/2025	9/19/2025	9/19/2025	9/19/2025
Sample Depth (feet bgs)				0–1	4–6	8–10	0–1	4–6	8–10	0–1	0–1	4–6	8–10	0–1	4–6	8–10
Chemical Name	CASRN	Unit	Screening Level													
11-Chloroeicosafiuoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS	0.095 UJ	0.093 UJ	0.098 UJ	0.085 UJ	0.11 UJ	0.098 UJ	0.094 UJ	0.1 UJ	0.098 UJ	0.11 UJ	0.081 UJ	0.074 UJ	0.095 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS	0.018 U	0.017 U	0.018 U	0.016 U	0.02 U	0.018 U	0.018 U	0.019 U	0.018 U	0.021 U	0.015 U	0.014 U	0.018 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800	0.042 U	0.041 U	0.043 U	0.1 J	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.057 J	0.032 U	0.042 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS	0.018 U	0.017 U	0.018 U	0.016 U	0.02 U	0.018 U	0.018 U	0.019 U	0.018 U	0.021 U	0.015 U	0.014 U	0.018 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63	0.095 U	0.093 U	0.098 U	0.22	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.16	0.074 U	0.095 U
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS	0.042 U	0.041 U	0.043 U	0.037 U	0.046 U	0.043 U	0.041 U	0.044 U	0.043 U	0.048 U	0.035 U	0.032 U	0.042 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS	0.018 U	0.017 U	0.018 U	0.016 U	0.02 U	0.018 U	0.018 U	0.019 U	0.018 U	0.021 U	0.015 U	0.014 U	0.018 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS	0.095 U	0.093 U	0.098 U	0.085 U	0.11 U	0.098 U	0.094 U	0.1 U	0.098 U	0.11 U	0.081 U	0.074 U	0.095 U
Solids, Total	TOT SOLIDS	µg/kg	NS	84	73	74	84	74	70	77	77	76	71	87	92	74

Notes:
PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b).
DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.
Bolded values denote detected concentrations.

Table H-7. Soil Data Presentation: Building 1864 Fire Station AOP1

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (+/- indicates biased high or low).
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit
µg/kg = Micrograms per Kilogram
bgs = Below Ground Surface
CASRN = Chemical Abstracts System Registry Number
FD = Field Duplicate
ID = Identifier
NS = No screening level available for that analyte
ng/L = Nanograms per Liter

Table H-8. Soil Data Presentation: Building 4483 Fire Station AOP1

				Location ID	CBV-4483-05	CBV-4483-05	CBV-4483-05	CBV-4483-06	CBV-4483-06	CBV-4483-06	CBV-4483-07	CBV-4483-07	CBV-4483-07	CBV-4483-08
				Sample ID	CB448305-SS01	CB448305-SB01	CB448305-SB02	CB448306-SS01	CB448306-SB01	CB448306-SB02	CB448307-SS01	CB448307-SB01	CB448307-SB02	CB448308-SS01
				Sample Date	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025	9/22/2025
				Sample Depth (feet bgs)	0-1	4-6	8-10	0-1	4-6	8-10	0-1	4-6	8-10	0-1
Chemical Name	CASRN	Unit	Screening Level											
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS		0.083 UJ	0.098 UJ	0.12 UJ	0.082 UJ	0.11 UJ	0.11 UJ	0.092 UJ	0.096 UJ	0.11 UJ	0.092 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS		0.016 U	0.018 U	0.022 U	0.015 U	0.02 U	0.021 U	0.017 U	0.018 U	0.021 U	0.017 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.083 J	0.042 U	0.049 U	0.04 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS		0.016 U	0.018 U	0.022 U	0.015 U	0.02 U	0.021 U	0.017 U	0.018 U	0.021 U	0.017 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.05 J	0.042 U	0.049 U	0.04 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.063 J	0.042 U	0.049 U	0.04 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.61	0.096 U	0.11 U	0.1 J
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.12	0.096 U	0.11 U	0.092 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS		0.036 U	0.043 U	0.05 U	0.036 U	0.046 U	0.048 U	0.04 U	0.042 U	0.049 U	0.04 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS		0.016 U	0.018 U	0.022 U	0.015 U	0.02 U	0.021 U	0.017 U	0.018 U	0.021 U	0.017 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS		0.083 U	0.098 U	0.12 U	0.082 U	0.11 U	0.11 U	0.092 U	0.096 U	0.11 U	0.092 U
Solids, Total	TOT SOLIDS	µg/kg	NS		93	74	69	92	72	69	85	78	68	86

Table H-8. Soil Data Presentation: Building 4483 Fire Station AOPI

Location ID				CBV-4483-08 CB448308- SB01 9/22/2025 4–6	CBV-4483-08 CB448308- SB02 9/22/2025 8–10	CBV-4483-09 CB448309- SS01 9/22/2025 0–1	CBV-4483-09 CB448309- SB01 9/22/2025 4–6	CBV-4483-09 CB448309- SB01FD 9/22/2025 4–6	CBV-4483-09 CB448309- SB02 9/22/2025 8–10	CBV-4483-10 CB448310- SS01 9/22/2025 0–1	CBV-4483-10 CB448310- SB01 9/22/2025 4–6	CBV-4483-10 CB448310- SB01FD 9/22/2025 4–6	CBV-4483-10 CB448310- SB02 9/22/2025 8–10
Chemical Name	CASRN	Unit	Screening Level										
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS	0.094 UJ	0.11 UJ	0.082 UJ	0.1 UJ	0.098 UJ	0.11 UJ	0.086 UJ	0.11 UJ	0.11 UJ	0.11 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS	0.018 U	0.02 U	0.015 U	0.02 U	0.018 U	0.021 U	0.016 U	0.021 U	0.021 U	0.02 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800	0.041 U	0.047 U	0.051 J	0.046 U	0.043 U	0.049 U	0.081 J	0.05 U	0.048 U	0.046 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS	0.018 U	0.02 U	0.015 U	0.02 U	0.018 U	0.021 U	0.016 U	0.021 U	0.021 U	0.02 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.11	0.11 U	0.11 U	0.11 U
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS	0.041 U	0.047 U	0.036 U	0.046 U	0.043 U	0.049 U	0.038 U	0.05 U	0.048 U	0.046 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS	0.018 U	0.02 U	0.015 U	0.02 U	0.018 U	0.021 U	0.016 U	0.021 U	0.021 U	0.02 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS	0.094 U	0.11 U	0.082 U	0.1 U	0.098 U	0.11 U	0.086 U	0.11 U	0.11 U	0.11 U
Solids, Total	TOT SOLIDS	µg/kg	NS	79	76	93	77	78	71	86	68	68	71

Notes:
PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eic/eer/ecc/pfas/pfas101/rsl.html> (DoD 2025b).
DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Bolded values denote detected concentrations.
Highlighted values indicate a value equal to or exceeding the screening level.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (+/- indicates biased high or low).
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

Table H-8. Soil Data Presentation: Building 4483 Fire Station AOP1

µg/kg = Micrograms per Kilogram
ASD = Assistant Secretary of Defense
bgs = Below Ground Surface
CASRN = Chemical Abstracts System Registry
Number DoD = U.S. Department of Defense
HQ = Hazard Quotient
ID = Identifier
LOD = Limit of Detection
MDL = Method Detection Limit
NS = No screening level available for that analyte
ng/L = Nanograms per Liter
PFAS = Per- and Polyfluoroalkyl Substances
QC = Quality Control
RSL = Regional Screening Level
SL = Screening Level
USEPA = U.S. Environmental Protection Agency

Table H-9. Soil Data Presentation: Wash Racks 1 and 2 AOPI

Location ID Sample ID Sample Date Sample Depth (feet bgs)				CBV-WR12-06 CBWR1206-SS01 9/20/2025 0–1	CBV-WR12-06 CBWR1206-SB01 9/20/2025 4–6	CBV-WR12-06 CBWR1206-SB02 9/20/2025 8–10	CBV-WR12-07 CBWR1207-SS01 9/21/2025 0–1	CBV-WR12-07 CBWR1207-SS01FD 9/21/2025 0–1	CBV-WR12-07 CBWR1207-SB01 9/21/2025 4–6	CBV-WR12-07 CBWR1207-SB02 9/21/2025 8–10
Chemical Name	CASRN	Unit	Screening Level							
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 UJ	0.084 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	µg/kg	NS	0.11 UJ	0.1 UJ	0.11 UJ	0.086 U	0.084 UJ	0.11 UJ	0.11 UJ
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	µg/kg	NS	0.11 UJ	0.1 UJ	0.11 UJ	0.086 UJ	0.084 UJ	0.11 UJ	0.11 UJ
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	µg/kg	NS	0.02 U	0.019 U	0.02 U	0.016 U	0.016 U	0.02 U	0.02 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	µg/kg	1900	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorobutanoic acid (PFBA)	375-22-4	µg/kg	7800	0.047 U	0.045 U	0.047 U	0.084 J	0.062 J	0.047 U	0.048 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorodecanoic acid (PFDA)	335-76-2	µg/kg	0.06	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Perfluorododecanoic acid (PFDoA)	307-55-1	µg/kg	NS	0.02 U	0.019 U	0.02 U	0.016 U	0.016 U	0.02 U	0.02 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Perfluoroheptanoic acid (PFHpA)	375-85-9	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	µg/kg	130	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.14	0.048 U
Perfluorohexanoic acid (PFHxA)	307-24-4	µg/kg	3200	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Perfluorononanoic acid (PFNA)	375-95-1	µg/kg	19	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/kg	0.63	0.11 U	0.1 U	0.11 U	0.96	0.87	0.25	0.11 U
Perfluorooctanoic acid (PFOA)	335-67-1	µg/kg	0.070	0.11 U	0.1 U	0.11 U	0.086 U	0.095 J	0.11 U	0.11 U
Perfluoropentanoic acid (PFPeA)	2706-90-3	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	µg/kg	NS	0.047 U	0.045 U	0.047 U	0.038 U	0.037 U	0.047 U	0.048 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	µg/kg	NS	0.02 U	0.019 U	0.02 U	0.016 U	0.016 U	0.02 U	0.02 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	µg/kg	NS	0.11 U	0.1 U	0.11 U	0.086 U	0.084 U	0.11 U	0.11 U
Solids, Total	TOT SOLIDS	µg/kg	NS	72	71	72	87	88	74	72

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a).

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DoD PFAS SLs are based on USEPA’s RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

Bolded values denote detected concentrations.

Highlighted values indicate a value equal to or exceeding the screening level.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample (+/- indicates biased high or low).

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

µg/kg = Micrograms per Kilogram

ASD = Assistant Secretary of Defense

bgs = Below Ground Surface

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

HQ = Hazard Quotient

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

QC = Quality Control

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-10. Surface Water Data Presentation: Building 1864 Fire Station AOP1

				Location ID	CBV-1864-08	CBV-1864-09	CBV-1864-09	CBV-1864-10
				Sample ID	CB186408-SW01	CB186409-SW01	CB186409-SW01FD	CB186410-SW01
				Sample Date	9/6/2025	9/6/2025	9/6/2025	9/6/2025
Chemical Name	CASRN	Unit	Screening Level					
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ng/L	NS		1.4 UJ	1.5 UJ	1.8 UJ	1.6 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	ng/L	NS		0.60 UJ	0.65 UJ	0.78 UJ	0.72 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS		1.4 UJ	1.5 UJ	1.8 UJ	1.6 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS		0.60 UJ	0.65 UJ	0.78 UJ	0.72 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600		1.4 U	1.5 U	1.8 U	1.6 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52		1.4 U	1.5 U	1.8 U	1.6 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
Perfluorododecanoic acid (PFDoA)	307-55-1	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS		1.4 UJ	1.5 UJ	1.8 UJ	1.6 UJ
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9		1.4 U	1.5 U	1.8 U	1.6 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0		1.4 U	1.5 U	1.8 U	1.6 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0		0.60 U	0.65 U	0.78 U	0.72 U

Table H-10. Surface Water Data Presentation: Building 1864 Fire Station AOP1

				Location ID Sample ID Sample Date	CBV-1864-08 CB186408-SW01 9/6/2025	CBV-1864-09 CB186409-SW01 9/6/2025	CBV-1864-09 CB186409-SW01FD 9/6/2025	CBV-1864-10 CB186410-SW01 9/6/2025
Chemical Name	CASRN	Unit	Screening Level					
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U
Perfluorotridecanoic acid (PFTeDA)	72629-94-8	ng/L	NS		1.4 U	1.5 U	1.8 U	1.6 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS		0.60 U	0.65 U	0.78 U	0.72 U

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/eer/ecc/pfas/pfas101/rsl.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

ASD = Assistant Secretary of Defense

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

FD = Field Duplicate

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-11. Surface Water Data Presentation: Building 4483 Fire Station AOPI

				Location ID Sample ID Sample Date	CBV-4483-11 CB448311-SW01 9/6/2025
Chemical Name	CASRN	Unit	Screening Level		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS		0.60 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS		1.4 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS		1.4 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS		1.4 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS		1.4 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS		1.4 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS		1.4 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS		0.60 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS		1.4 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS		0.60 U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	ng/L	NS		1.4 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	ng/L	NS		1.4 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	ng/L	NS		0.60 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS		0.60 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS		1.4 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS		0.60 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS		1.4 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS		0.60 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS		0.60 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS		0.60 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600		1.4 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800		0.60 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS		0.60 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52		1.4 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS		1.4 U
Perfluorododecanoic acid (PFDoA)	307-55-1	ng/L	NS		0.60 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS		1.4 UJ
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS		0.60 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10		0.60 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990		0.60 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS		0.60 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9		1.4 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS		0.60 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0		1.4 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0		0.60 U

Table H-11. Surface Water Data Presentation: Building 4483 Fire Station AOPI

				Location ID Sample ID Sample Date	CBV-4483-11 CB448311-SW01 9/6/2025
Chemical Name	CASRN	Unit	Screening Level		
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS		1.4 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS		0.60 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS		0.60 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ng/L	NS		1.4 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS		0.60 U

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b).

DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

ASD = Assistant Secretary of Defense

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

USEPA = U.S. Environmental Protection Agency

Table H-12. Surface Water Data Presentation: Wash Racks 1 and 2 AOPI

			Location ID Sample ID Sample Date	CBV-WR12-08 CBWR1208-SW01 9/6/2025	CBV-WR12-09 CBWR1209-SW01 9/6/2025
Chemical Name	CASRN		Screening Level		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-Pf3OUdS)	763051-92-9	ng/L	NS	0.65 U	0.63 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	ng/L	NS	1.5 U	1.4 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	ng/L	NS	1.5 U	1.4 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	ng/L	NS	1.5 U	1.4 U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	914637-49-3	ng/L	NS	1.5 U	1.4 U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	812-70-4	ng/L	NS	1.5 U	1.4 U
3-Perfluoropropyl propanoic acid (3:3FTCA)	356-02-5	ng/L	NS	1.5 U	1.4 U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	ng/L	NS	0.65 U	0.63 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	ng/L	NS	1.5 U	1.4 U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	ng/L	NS	0.65 U	0.63 U
N-ethyl perfluorooctanesulfonamide (NetFOSA)	4151-50-2	ng/L	NS	1.5 U	1.4 U
N-ethyl perfluorooctanesulfonamidoacetic acid (NetFOSAA)	2991-50-6	ng/L	NS	1.5 UJ	1.4 UJ
N-ethyl perfluorooctanesulfonamidoethanol (NetFOSE)	1691-99-2	ng/L	NS	0.65 UJ	0.63 UJ
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	ng/L	NS	0.65 U	0.63 U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	ng/L	NS	1.5 UJ	1.4 UJ
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	ng/L	NS	0.65 UJ	0.63 UJ
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	ng/L	NS	1.5 U	1.4 U
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	ng/L	NS	0.65 U	0.63 U
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	ng/L	NS	0.65 U	0.63 U
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	ng/L	NS	0.65 U	0.63 U
Perfluorobutanesulfonic acid (PFBS)	375-73-5	ng/L	600	1.5 U	1.4 U
Perfluorobutanoic acid (PFBA)	375-22-4	ng/L	1800	0.65 U	0.63 U
Perfluorodecanesulfonic acid (PFDS)	335-77-3	ng/L	NS	0.65 U	0.63 U
Perfluorodecanoic acid (PFDA)	335-76-2	ng/L	0.52	1.5 U	1.4 U
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	ng/L	NS	1.5 U	1.4 U
Perfluorododecanoic acid (PFDoA)	307-55-1	ng/L	NS	0.65 U	0.63 U
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	ng/L	NS	1.5 UJ	1.4 UJ
Perfluoroheptanoic acid (PFHpA)	375-85-9	ng/L	NS	0.65 U	0.63 U
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	ng/L	10	0.65 U	0.63 U
Perfluorohexanoic acid (PFHxA)	307-24-4	ng/L	990	0.65 U	0.63 U
Perfluorononanesulfonic acid (PFNS)	68259-12-1	ng/L	NS	0.65 U	0.63 U
Perfluorononanoic acid (PFNA)	375-95-1	ng/L	5.9	1.5 U	1.4 U
Perfluorooctanesulfonamide (PFOSA)	754-91-6	ng/L	NS	0.65 U	0.63 U
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	ng/L	4.0	1.5 U	1.4 U
Perfluorooctanoic acid (PFOA)	335-67-1	ng/L	4.0	0.65 U	0.63 U

Table H-12. Surface Water Data Presentation: Wash Racks 1 and 2 AOPI

				Location ID Sample ID Sample Date	CBV-WR12-08 CBWR1208-SW01 9/6/2025	CBV-WR12-09 CBWR1209-SW01 9/6/2025
Chemical Name	CASRN	Unit	Screening Level			
Perfluoropentanoic acid (PFPeA)	2706-90-3	ng/L	NS		1.5 U	1.4 U
Perfluoropentansulfonic acid (PFPeS)	2706-91-4	ng/L	NS		0.65 U	0.63 U
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	ng/L	NS		0.65 U	0.63 U
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	ng/L	NS		1.5 U	1.4 U
Perfluoroundecanoic acid (PFUnA)	2058-94-8	ng/L	NS		0.65 U	0.63 U

Notes:

PFAS SLs used in DoD investigations are listed in the 2025 ASD memorandum titled Investigating Per- and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program (DoD 2025a). These and subsequent SL updates for DoD investigations of PFAS are documented on the PFAS Task Force website, <https://www.acq.osd.mil/eie/ee/ecc/pfas/pfas101/rsl.html> (DoD 2025b). DoD PFAS SLs are based on USEPA's RSL tables dated November 2024 except where the USEPA RSLs were below the MDLs of USEPA-approved analytical methods.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

ASD = Assistant Secretary of Defense

CASRN = Chemical Abstracts System Registry Number

DoD = U.S. Department of Defense

ID = Identifier

LOD = Limit of Detection

MDL = Method Detection Limit

NS = No screening level available for that analyte

ng/L = Nanograms per Liter

PFAS = Per- and Polyfluoroalkyl Substances

RSL = Regional Screening Level

SL = Screening Level

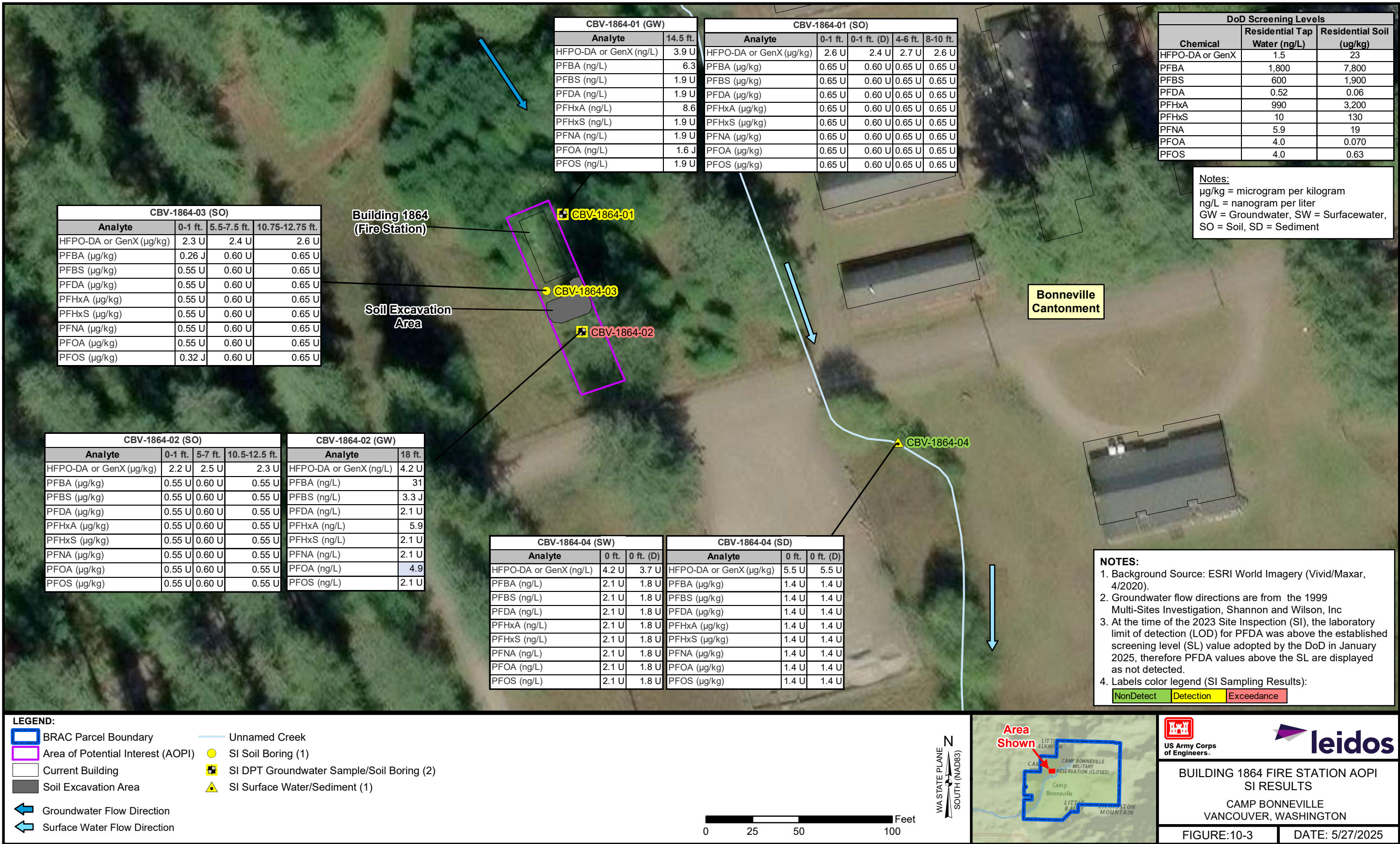
USEPA = U.S. Environmental Protection Agency

APPENDIX I

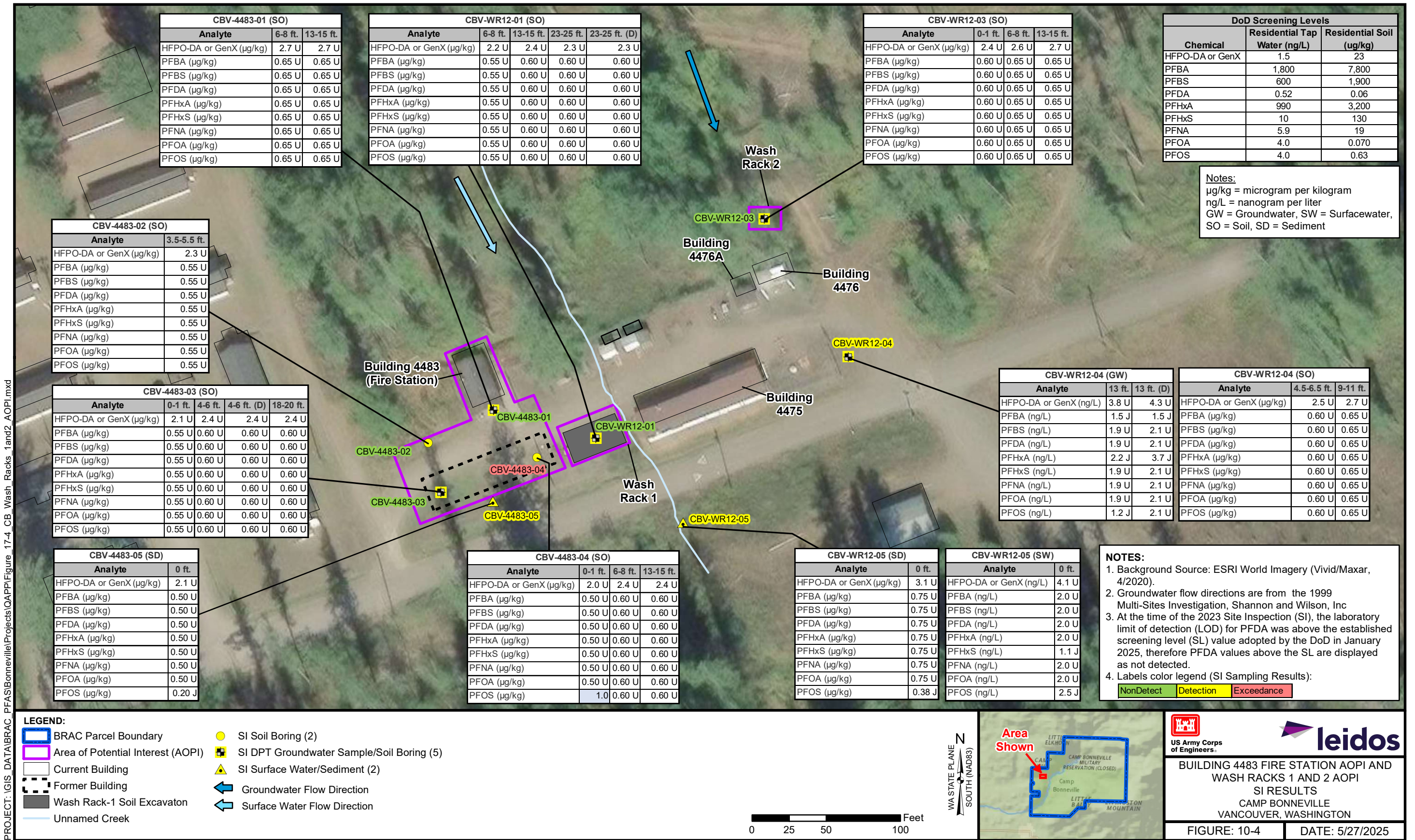
SI RESULTS FIGURES

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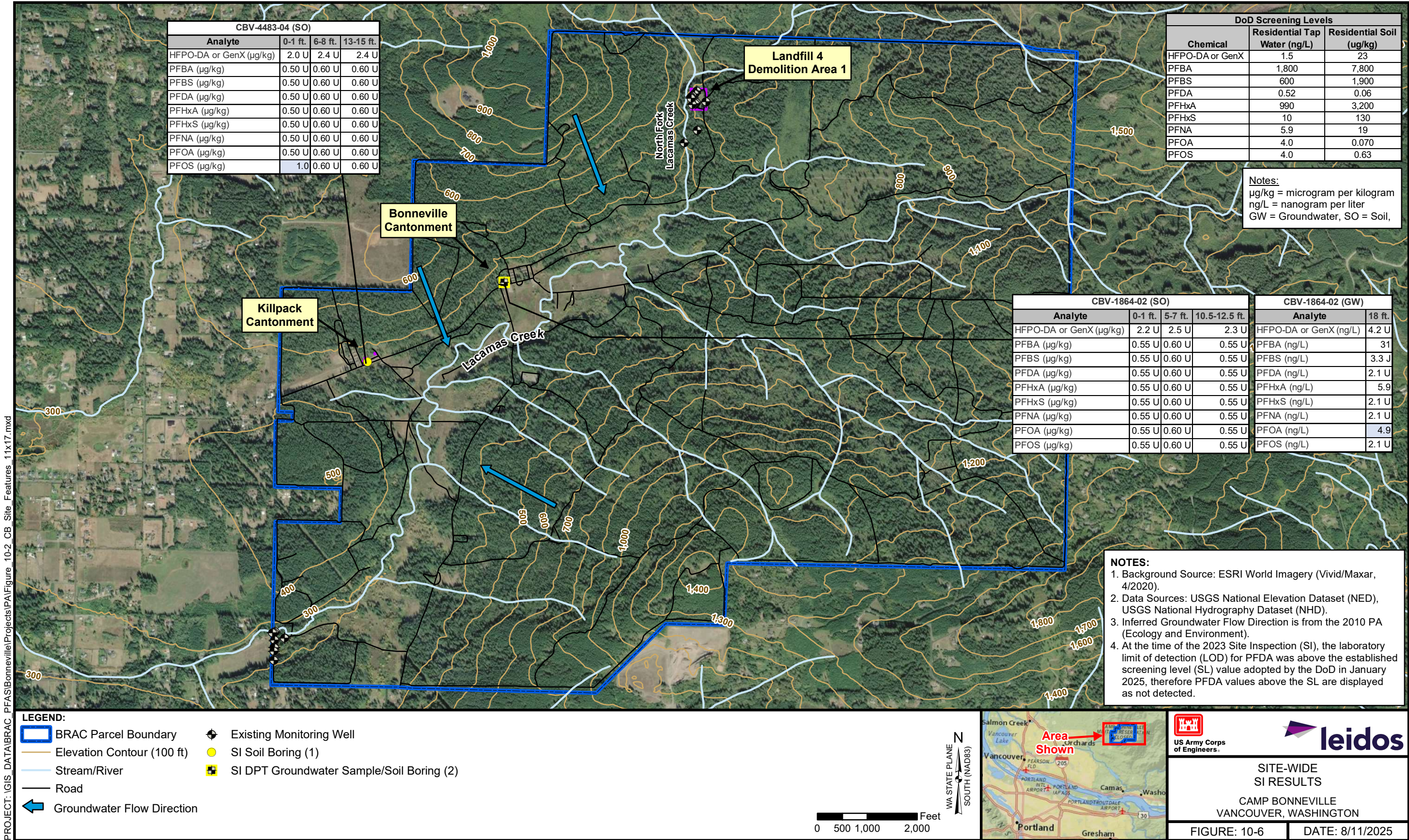
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