RELATIVE RISK SITE EVALUATION

McEntire Joint National Guard Base, South Carolina

Introduction

The Department of Defense (DoD) has identified certain per- and polyfluoroalkyl substances (PFAS) as emerging contaminants of concern which affected installations across the Air Force, which for these fact sheets includes the Air National Guard. These PFAS are perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorobutanesulfonic acid (PFBS), perfluorononanoic acid (PFNA), perfluorohexane sulfonate (PFHxS) are components of Aqueous Film Forming Foam (AFFF) that the Air Force began using in the 1970s as a firefighting agent to extinguish petroleum fires. The U.S. Environmental Protection Agency (EPA) has issued health based site specific Regional Screening Levels (RSLs) for surface soil and groundwater (drinking water)) for PFOS, PFOA, PFBS, PFNA, PFHxS and hexafluoropropylene oxide dimer acid (HFPO-DA, or Gen-X).

Site Inspections (SIs) were initiated to collect soil and groundwater samples and analyze those media for 16 different PFAS at the potential AFFF release areas that were identified in the PA. The intent of the SI is to determine if a release has occurred and determine if there are impacts to soil and/or groundwater. The next step in the process is the Relative Risk Site Evaluation (RRSE). The RRSE is a DoD-wide methodology to evaluate the relative risks posed by PFAS present at an installation in relation to other installations. The RRSE is a tool used to sequence funding for which installations have the highest priority to begin a Remedial Investigation (RI). The DoD premise in installation sequencing is “worst first,” meaning the DoD Component shall address installations that pose a relatively greater potential risk to public safety, human health, or the environment before installations posing a lesser risk.

The results of the McEntire Joint National Guard Base PA and SI can be found at AFCEC Administrative Record (AR): ar.afcec-cloud.af.mil. Scroll to the bottom of the page and click on “Continue to site,” then select the “Air National Guard” radio button, scroll down the Installation List and click on McEntire Air Guard Base, SC, then in the “AR #” field enter either 474919 for the PA or 586433 for the SI, then click “Search” at the bottom of the page.

More information on the Air Force response to PFAS can be found at:
https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/

Acronyms

AR - Administrative Record

AFFF - Aqueous Film Forming Foam

AST - Aboveground Storage Tank

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

CHF - Contaminant Hazard Factor

DoD - Department of Defense

EPA - US Environmental Protection Agency

FTA - Fire Training Area

HA - Health Advisory

HFPO-DA - hexafluoropropylene oxide dimer acid (HFPO-DA, or Gen-X)

MPF - Migration Pathway Factor

PA - Preliminary Assessment

PFAS - Per- and poly-fluoroalkyl substances

PFBS - Perfluorobutane sulfonate

PFHxS - perfluorohexane sulfonate (PFHxS)

PFNA - perfluorononanoic acid (PFNA)

PFOS - Perfluorooctane sulfonate

PFOA - Perfluorooctanoic acid

RCRA - Resource Conservation and Recovery Act

RF - Reception Factor

RI - Remedial Investigation

RRSE - Relative Risk Site Evaluation

RSL - Regional Screening Level

SI - Site Inspection

SWMU - Solid Waste Management Unit

RELATIVE RISK SITE EVALUATION

McEntire Joint National Guard Base, South Carolina

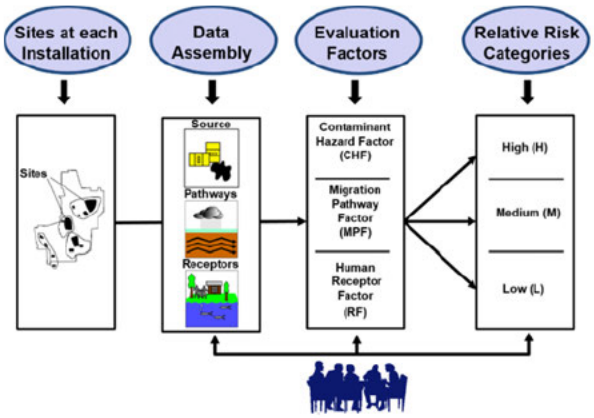
Q. What is the Relative Risk Site Evaluation (RRSE)?

A. RRSE is a methodology used by the Department of Defense (DoD) to sequence environmental restoration work . The DoD fundamental premise is "worst first," meaning the DoD Component shall address installations that pose a relatively greater potential risk to public safety, human health, or the environment before installations posing a lesser potential risk. Relative risk is not the sole factor in determining the sequence of environmental restoration work, but it is an important consideration in the sequencing process. The methodology is described in the DoD, Relative Risk Site Evaluation Primer, Summer 1997 Revised Edition denix.osd.mil/references/dod/policy-guidance/relative-risk-site-evaluation-primer/RRSE_Primer_Summer1997.pdf.

Q. What is the RRSE framework?

A. The RRSE framework provides a DoD-wide approach for evaluating the relative risks to human health and the environment posed by contamination present at component installations. The **Relative Risk Site Evaluation Concept Summary** (shown in the figure) illustrates the selection of sites, evaluation of the site data using three evaluation factors, and placement into high, medium, and low categories. The relative risk site evaluation framework is based on information fundamental to risk assessments: sources, pathways, and receptors, to sequence restoration work. However, the RRSE is not a baseline risk assessment or in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. Regulators and public stakeholders are provided the opportunity to participate in the process in accordance with the DoD Defense Environmental Restoration Program.

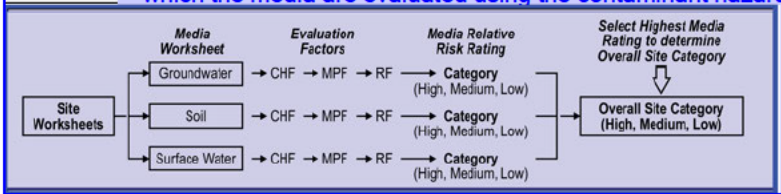
Relative Risk Site Evaluation Concept Summary



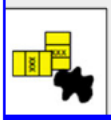
Sites at Each Installation

Q. What restoration sites are required to be evaluated in the RRSE process?

A. Restoration sites in CERCLA phases prior to remedy-in-place are evaluated in the RRSE process. Worksheets are developed for environmental media (such as, groundwater and surface soil) at each site. Environmental media lacking sufficient information to conduct a RRSE are assigned a "Not Evaluated" designation. The figure shows the process for which the media are evaluated using the contaminant hazard factor (CHF), the migration pathway factor (MPF), and the receptor factor (RF). Each media is scored to obtain a relative risk rating of High, Medium, or Low. The highest media-specific relative risk rating determines the Overall Site Category.



Q. How is the Contaminant Hazard Factor (CHF) calculated?



A. The **CHF** is calculated by dividing the maximum concentration of a contaminant by the approved screening value, or comparison value. Contaminant concentration ratios are totaled to arrive at the **CHF.** A CHF of greater than 100 earns a **High** rating. If the CHF is 2 to 100 it earns a **Moderate** rating. A **Minimal** rating is assigned when a CHF is less than **2.**

FOR MORE INFORMATION

Air Force Civil Engineer Center Environmental Restoration Program
www.afcec.af.mil

AFCEC CERCLA Administrative Record (AR)
ar.afcec-cloud.af.mil/

Q. How is the Migration Pathway Factor (MPF) determined?

A. The movement of contamination at a site is evaluated and assigned a **MPF** rating. Ratings for MPFs are designated as: **evident**, **potential**, or **confined** (for **High, Medium, and Low**). **Evident** exposure means the contamination is at a point where exposure to humans or the environment can occur, such as at a drinking water well. **Potential** ratings are given to sites where exposure may happen. A **confined** rating is given to sites where a low possibility for exposure may occur.

POINT OF CONTACT
Jenna Laube
240-612-9874
jenna.laube@us.af.mil

Q. How is the Receptor Factor (RF) determined?

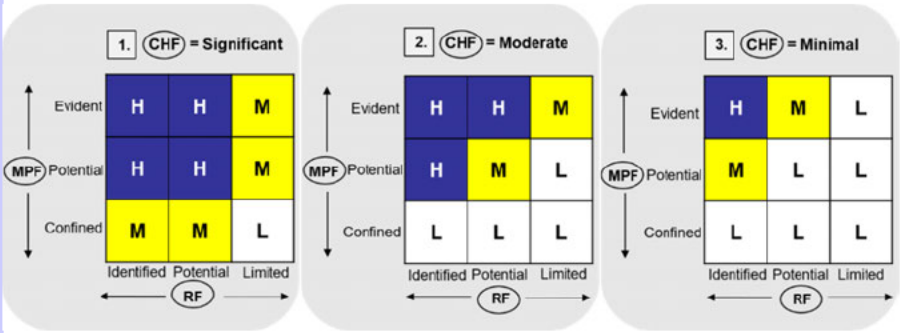
A. The **RF** is determined by a receptor's, such as humans, potential to come into contact with contaminated media. **RFs** are designated as: identified, potential, or limited **(High, Medium, and Low). Identified** rating is given when receptors are in contact or threat of contact with contaminated media. **Potential** is given when receptor may contact contaminated media. **Limited** is given when there is little or no contact with contaminated media.

RELATIVE RISK SITE EVALUATION PROCESS, cont.

Media Relative Risk Rating

Q. How is the media-specific relative risk rating determined?
A. Use the charts on the right to determine the media-specific relative risk rating. Start by choosing the **CHF** result in the evaluation. If the **CHF** is **Significant**, use **box 1.** If the CHF is **Moderate**, use **box 2.** if the CHF is **Minimal**, use **box 3.** Then find the **MPF** and **RF** results and move to the square where the results meet. That square indicates the media-specific relative risk rating. For example, if the **CHF** is **Significant** - go to box 1, if the **MPF** is **Potential,** and the **RF** is **Identified**, then the rating is High (**H**).

Relative Risk Site Evaluation Concept Summary



CHF (Contaminant Hazard Factor) **MPF** (Migration Potential Factor) **RF** (Receptor Factor) **H** (High) **M** (Medium) **L** (Low)

Overall Site Category

Q. How do I determine the Overall Site Category?
A. The highest relative risk media rating becomes the **Overall Site Category** for the site. For example, if a site has a groundwater relative risk rating of **High**, and soil relative risk rating of **Low**, then the Overall Site Category rating for the site is **High**.

Regulatory and Stakeholder Involvement

Q. How do I participate as Stakeholder?

A. To offer opportunities to participate in the RRSE process, the Air Force announces a public comment period in your local newspaper. There is also opportunity to participate during installation Restoration Advisory Boards, where active. Installation Restoration Advisory Board meetings are announced in your local newspaper.

Relative Risk Site Evaluation Summary McEntire Joint National Guard Base

Overall Site Category	Site Name (Sites are shown on the map below and RRSE Worksheets are attached)
HIGH	SS014P, SS015P, SS016P, PRL 12, PRL 13, PRL 14
MEDIUM	PRL 3, PRL 4
LOW	Not Applicable

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 2 - Former FTA 5 (IRP Site 2) - SS014P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 2 encompasses Installation Restoration Program (IRP) Site 2, which is a former Fire Training Area (FTA) 5 used for emergency firefighting exercises from 1970 until 1984. IRP Site 2 is located in the southeast portion of the Base and consists of an oval-shaped pit that is approximately 1 foot (ft). in depth and 60 ft. by 75 ft. in dimension with an area of approximately 4,500 square feet. Between 1970 and 1984 an estimated 63,000 gallons of waste oil, solvent, jet propulsion fuel 4 (JP-4), brake fluid, transmission fluid, paint thinners or strippers, hydraulic fluid, and other combustible water materials were burned at this site for fire training exercises. This site was previously investigated for the chemicals regulated at that time and achieved No Further Action (NFA) status in 2009. This PRL will be investigated as PFAS Site "SS014P".
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions. There are no surface water bodies or outfalls in the vicinity of this PRL.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. This PRL is within a boundary fence which limits access to authorized personnel or escorted visitors. Activities at the Base have been typical of those at most airports and military air bases, including fueling and maintenance operations. These activities are consistent with industrial/commercial receptor scenarios.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 2

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.250	0.6	0.417
PFOA	0.550	0.040	13.8
PFOS	1.10	0.040	27.5
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**41.7**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 2

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000190	0.13	0.00146
PFOS	0.0350	0.13	0.269
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.270**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 3 - Former FTAs 2, 3, and 4 (IRP Site 8)	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: MEDIUM			

Site Summary	
Brief Site Description:	PRL 3 encompasses IRP Site 8, which is comprised of three distinct, non-contiguous former FTAs (2, 3, and 4). Former FTA 2 is located in the north-central portion of the Base and was used from the mid-1950s until 1967. Former FTA 2 consists of an oval-shaped area surrounded by a discontinuous low berm, which is approximately 0.5 to 1 ft. in height. It is approximately 150 ft. by 114 ft. in size and covers an area of approximately 17,000 ft2. Approximately 20 exercises occurred at this site, using a total of 6,000 gal of mixed oils, fuels, and solvents. Former FTA 3 is located in a cleared area between Building 90 and the aircraft wash racks. Former FTA 3 was used from 1967 to 1969. Approximately eight exercises were conducted at this location using about 2,400 gal of fuels and waste oils. Former FTA 3 consists of a circular area approximately 30 ft. to 50 ft. in diameter and has a raised earthen berm. Former FTA 4 is located in a field across Mississippi Road from Building 225. Former FTA 4 was used from 1969 to 1970 for a total of four exercises, using a total of 1,200 gal of waste oil and fuel. Former FTA 4 consists of a circular area approximately 30 ft. to 50 ft. in diameter and has a raised earthen berm. Several investigations have been conducted at IRP Site 8 and these three FTAs, and NFA status was achieved in 2009 for the chemicals regulated at that time.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. This PRL is within a boundary fence which limits access to authorized personnel or escorted visitors. Activities at the Base have been typical of those at most airports and military air bases, including fueling and maintenance operations. These activities are consistent with industrial/commercial receptor scenarios.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 3 **AFFF Release Area #:** PRL 3

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.00100	0.6	0.00167
PFOA		0.040	
PFOS	0.00240	0.040	0.0600
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.0617**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor		
Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**MEDIUM**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 3 **AFFF Release Area #:** PRL 3

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS	0.000190	1.9	0.000100
PFOA	0.000880	0.13	0.00677
PFOS	0.00690	0.13	0.0531
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.0600**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor		
Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor		
Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 4 - Building 62, Current Fire Station	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: MEDIUM			

Site Summary	
Brief Site Description:	PRL 4 is comprised of Building 62, which was built in 1986 and used as the Fire Station on the Base. The Fire Station is located in the northwest portion of the Base along the flight line in Drainage Basin 006. The Fire Station was built with a 300-gal AFFF tank and piping system with overhead fill stations. Base personnel interviewed stated the tank was located on the roof and was difficult to access. According to Base personnel, there have been no known leaks from the AFFF piping system. It was reported that routine nozzle testing was conducted annually outside the Fire Station with water only. The Base Fire Department used AFFF Air Rescue and Fire Fighting (ARFF) vehicles stored inside Building 62. Historically, some of the AFFF in these vehicles was transferred using the Fire Department's transfer pump. According to Base personnel, all ARFF vehicles were known to leak. In addition, personnel recalled possibly spraying foam that had been in the trucks in the field north of the Fire Station. The AFFF tank was removed during a construction project.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions. The area surrounding the Fire Station discharges through a series of catch basins and trench drains and discharges to Outfall 006. Trench drains within the Fire Station are connected to an OWS that is connected to the Base sanitary sewer and discharges to the Base WWTP.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. This PRL is within a boundary fence which limits access to authorized personnel, firefighters, and escorted visitors. Activities at this PRL are consistent with industrial/commercial receptor scenarios. Surface soil receptors would include Base personnel and Fire Department personnel with access to the area.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 4 **AFFF Release Area #:** PRL 4

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.00880	0.6	0.0147
PFOA	0.00490	0.040	0.123
PFOS	0.0450	0.040	1.13
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**1.27**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**MEDIUM**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 4 **AFFF Release Area #:** PRL 4

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS	0.00620	1.9	0.00326
PFOA	0.00590	0.13	0.0454
PFOS	0.220	0.13	1.69
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**1.74**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 5 - Building 253, Main Hangar and Phase Dock - SS014P, SS015P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 5 is comprised of Building 253 and consists of the Main Hangar and the Phase Dock. This building hangar supports the maintenance efforts for F-16 aircraft. Work is primarily performed indoors, although some minor maintenance may take place outdoors on the apron. The Main Hangar was built in 1966, and the Phase Dock was added in 2003. Base drawings of the Main Hangar indicate that the hangar was built with a fire suppression system (FSS) containing AFFF. The original FSS was an overhead system but was modified in the 1990s to an underwing system. The Main Hangar and Phase Dock FSSs held 900 and 200 gal of AFFF, respectively. AFFF was stored in a tank (size unknown) in the AFFF Room (Room 147). The AFFF FSS was retrofitted for use of high expansion foam (HEF) in the spring of 2013. During the HEF retrofit, AFFF was pumped out and sent offsite for reuse by Fire Systems, Inc. There are no records of AFFF testing or releases within Building 253. This PRL will be investigated as PFAS Site "SS014P" for groundwater and "SS015P" for soil.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. This PRL is within a boundary fence which limits access to authorized personnel, firefighters, and escorted visitors. Activities at this PRL are consistent with industrial/commercial receptor scenarios. Surface soil receptors would include Base personnel and Fire Department personnel with access to the area.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P, SS015P **AFFF Release Area #:** PRL 5

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.290	0.6	0.483
PFOA	0.300	0.040	7.50
PFOS	5.40	0.040	135
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**143**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**H**

Migratory Pathway Factor		
Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P, SS015P **AFFF Release Area #:** PRL 5

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.00120	0.13	0.00923
PFOS	0.00990	0.13	0.0762
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.0854**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor		
Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 6 - Building 1046, Fuels Hangar and Corrosion Control - SS014P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 6 is comprised of Fuels Hangar and Corrosion Control Building 1046, which was initially built in 1990 with an underwing AFFF FSS. A wash rack was added to the hangar in 1999. The Fuels Hangar was added in 2004 and was also built with an underwing AFFF FSS. The combined system was equipped with AFFF, which was stored in a 300-gal tank located in a locked room (Room 120) that served both areas of the building. Two smaller, portable AFFF tanks were available in the building. The FSS was retrofitted for the use of HEF in the spring of 2013. There are no records of AFFF testing or releases within Building 1046. This PRL will be investigated as PFAS Site "SS014P".
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. This PRL is within a boundary fence which limits access to authorized personnel or escorted visitors. Surface soil receptors in this area would be consistent with industrial/commercial scenarios, limited to base personnel and authorized workers.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 6

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.0800	0.6	0.133
PFOA	0.130	0.040	3.25
PFOS	0.220	0.040	5.50
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**8.88**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 6

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.00240	0.13	0.0185
PFOS	0.0210	0.13	0.162
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.181**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 9 - Vehicle Maintenance Yard - SS014P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 9 is comprised of the Vehicle Maintenance Yard on the southwest side of Building 210, the Vehicle Maintenance Facility. It is used for the general maintenance of ground vehicles, including ARFF vehicles. The facility and yard are located in Basin 003. According to Base personnel, in 2010 or 2011, an accidental release of AFFF from an ARFF vehicle occurred during maintenance in the Vehicle Maintenance Yard. The AFFF flowed from the yard into Outfall 003. The amount of AFFF released is unknown and was left to dissipate. This PRL will be investigated as PFAS Site "SS014P".
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 9

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.310	0.6	0.517
PFOA	0.390	0.040	9.75
PFOS	9.50	0.040	238
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**248**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**H**

Migratory Pathway Factor		
Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 9

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000300	0.13	0.00231
PFOS	0.000680	0.13	0.00523
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.00754**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 10 - Building 1160 POL - SS014P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 10 is comprised of Building 1160 - Petroleum, Oil, and Lubricants (POL). According to the 2009 Stormwater Pollution Prevention Plan, a FSS located in Building 1160 contained AFFF and was maintained by the FD. This is now known to be incorrect. Base personnel indicated that the POL building did not use or store AFFF. This PRL will be investigated as PFAS Site "SS014P".
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions. Stormwater drainage at this facility from areas outside of those that discharge within the POL building is directed by perimeter drains away from this facility to minimize run-on to the facility. Stormwater drainage at this facility discharges through Outfall 004.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios for surface soil. The PRL is within the base boundary fence so access would be limited.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 10

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.0260	0.6	0.0433
PFOA	0.0160	0.040	0.400
PFOS	0.0850	0.040	2.13
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**2.57**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS014P **AFFF Release Area #:** PRL 10

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000470	0.13	0.00362
PFOS	0.00310	0.13	0.0238
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.0274**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor		
Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 11 - Nozzle Testing Area - SS016P	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 11 is comprised of a nozzle testing area at the end of Runway Road by Former FTA 5 (IRP Site 2). According to Base personnel, nozzle testing was conducted when a new AFFF vehicle was brought on-Base or after a major service. Typically, less than 1 gal of 3% AFFF was released onto the ground and left to dissipate. Nozzle testing was last done in January 2016 for ARFF vehicles Crash 5, 6, and 7. Approximately 1 gal of AFFF was discharged to the ground and left to dissipate. Groundwater data for this PRL utilized data associated with downgradient PRL 2. This PRL will be investigated as PFAS Site "SS016P".
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions. Stormwater drainage at this facility from areas outside of those that discharge within the POL building is directed by perimeter drains away from this facility to minimize run-on to the facility. Stormwater drainage at this facility discharges through Outfall 004.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios for surface soil. The PRL is within the base boundary fence so access would be limited.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS016P **AFFF Release Area #:** PRL 11

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.250	0.6	0.417
PFOA	0.550	0.040	13.8
PFOS	1.10	0.040	27.5
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**41.7**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: SS016P **AFFF Release Area #:** PRL 11

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.00150	0.13	0.0115
PFOS	0.190	0.13	1.46
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**1.47**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 12 - Aircraft Parking Apron	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 12 is comprised of the Aircraft Parking Apron, which is located along the flight line and is used for parking, fueling, and occasional maintenance of the F-16 aircraft. The apron is located within Basins 1 and 10. On March 7, 1982, a C-141 aircraft caught fire and released approximately 9,000 gal of JP-4 onto the aircraft ramp area. According to Base personnel, AFFF was used to extinguish the fire. The exact location of the original spill and the amount of AFFF used is not known, but Base personnel indicated that the burning aircraft was located in front of the Main Hangar. Stormwater runoff from the apron is directed via the slope of the apron surface (sheet flow) generally to the northeast and southwest and enters either a series of catch basins or drains into the adjacent grassy areas that drain to either Outfall 001 or Outfall 010. During the aircraft fire event, fuel and AFFF entered underground storm sewers and flowed into the open drainage ditch (IRP Site 6, PRL 13). Groundwater data for this PRL utilized data associated with downgradient PRLs 5 and 6.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios for surface soil. The PRL is within the base boundary fence so access would be limited.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 12 **AFFF Release Area #:** PRL 12

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.290	0.6	0.483
PFOA	0.300	0.040	7.50
PFOS	5.40	0.040	135
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**143**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**H**

Migratory Pathway Factor		
Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 12 **AFFF Release Area #:** PRL 12

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000360	0.13	0.00277
PFOS	0.0110	0.13	0.0846
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.0874**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor		
Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 13 - C-141 Spill Area (IRP Site 6)	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 13 encompasses IRP Site 6, which is a C-141 spill area in an open drainage ditch that ran parallel to Mississippi Road. In 1982, fuel released from a burning C-141 aircraft entered underground storm sewers and flowed into the open drainage ditch. According to Base personnel, AFFF was used to extinguish the fire and would have flowed with the fuel to the open drainage ditch. The fire was extinguished that evening, and an inspection was performed by an SC DHEC representative. Additional investigations occurred, and NFA status was recommended. SC DHEC concurred in 2005 and in 2007, a No Further Response Action Planned Decision Document was prepared for the site and the chemicals regulated at that time.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios for surface soil. The PRL is within the base boundary fence so access would be limited.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 13 **AFFF Release Area #:** PRL 13

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.0220	0.6	0.0367
PFOA	0.0230	0.040	0.575
PFOS	0.950	0.040	23.7
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**24.3**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor

Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 13 **AFFF Release Area #:** PRL 13

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000330	0.13	0.00254
PFOS	0.0200	0.13	0.154
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.157**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**

Site Background Information			
Installation:	McEntire Joint National Guard Base	**Date:**	11/16/2023
Location:	South Carolina	**Media Evaluated:**	GW, SS
Site Name and ID:	PRL 14 - Waste Water Treatment Plant	**Phase of Execution (e.g., RI, Record of Decision (ROD)):**	N/A
RPM's Name:	Jenna Laube	**Agreement Status (e.g., Federal Facility Agreement date signed):**	N/A
OVERALL SITE CATEGORY: HIGH			

Site Summary	
Brief Site Description:	PRL 14 is comprised of Building 220, the waste water treatment plan (WWTP). Waste water generated by McEntire JNGB is collected in pipelines throughout the Installation and treated at Building 220. The WWTP is rated at 20,000 gal per day and has an average throughput of 15,000 gal per day. The discharge from the WWTP is permitted through a National Pollutant Discharge Elimination System permit. The WWTP receives all of the waste water from the sanitary sewers, including floor drain discharges and waste water from the Fire Station and Fuels Hangar and Corrosion Control.
Brief Description of Pathways:	The Middendorf Aquifer of the Tuscaloosa Formation, which is present at greater than 150 ft below ground surface (bgs), is the primary water-bearing unit in the area. Regional groundwater flow within this aquifer is from west to east and follows the near-horizontal orientation of bedding. Groundwater within this aquifer occurs in confined water table conditions. Wells within the Tuscaloosa Formation have been reported to yield as much as 2,000 gallons (gal) per minute (min) The ground surface in the vicinity of IRP Site 2 is relatively flat with no distinct drainage pathways. Historical reports indicate shallow groundwater is observed at depths between 27 ft. bgs to 47 ft. bgs. The direction of shallow groundwater on the Base is southwest towards Cedar Creek and occurs under unconfined conditions.
Brief Description of Receptors:	The Base is currently supplied by municipal water. The PA Report indicated that no drinking water wells are located at the Base, and no public water system wells exist within a one-mile radius of McEntire JNGB. The PA noted four U.S. Geological Survey wells, one test well, and privately owned water wells within a one-mile radius. During the SI phase, 30 potential drinking water wells were identified within one mile downgradient of the Base. The two municipal water systems in Richland County serve the city of Columbia and the town of Eastover from surface water and groundwater sources. Activities at this PRL are consistent with industrial/commercial receptor scenarios for surface soil. The PRL is within the base boundary fence so access would be limited.

Groundwater Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 14 **AFFF Release Area #:** PRL 14

Contaminant	Maximum Concentration (ug/L)	Comparison Value (ug/L)	Ratios
PFBS	0.0320	0.6	0.0533
PFOA	0.0460	0.040	1.15
PFOS	0.400	0.040	10.0
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**11.2**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**M**

Migratory Pathway Factor		
Evident	Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	
Potential	Contamination in the groundwater has moved beyond the source or insufficient information available to make a determination of Evident or Confined	M
Confined	Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited (possibly due to geological structures or physical controls)	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
Receptor Factor		
Identified	Impacted drinking water well with detected contaminants or existing downgradient water supply well within 4 miles and groundwater is current source of drinking water (EPA Class I or IIA groundwater)	H
Potential	Existing downgradient drinking water well beyond 4 miles with no contaminant detection(s) or no known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water (i.e., EPA Class I or II groundwater) or other beneficial use (e.g., agricultural)	
Limited	No known water supply wells downgradient and groundwater is not considered potential drinking water source and is of limited beneficial use (Class III)	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	H
	Groundwater Category	**HIGH**

Soil Worksheet

Installation: McEntire Joint National Guard Base

Site ID: PRL 14 **AFFF Release Area #:** PRL 14

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
PFBS		1.9	
PFOA	0.000560	0.13	0.00431
PFOS	0.0190	0.13	0.146
CHF Scale	**CHF Value**	**Contamination Hazard Factor (CHF)**	**0.150**
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CHF Value		**CHF VALUE**	**L**

Migratory Pathway Factor

Evident	Analytical data or observable evidence that contamination is present at a point of exposure	
Potential	Contamination has moved beyond the source, could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined	M
Confined	Low possibility for contamination to be present at or migrate to a point of exposure	
Migratory Pathway Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M

Receptor Factor

Identified	Receptors identified that have access to contaminated soil	
Potential	Potential for receptors to have access to contaminated soil	M
Limited	No potential for receptors to have access to contaminated soil	
Receptor Factor	DIRECTIONS: Record the single highest value from above in the box to the right (maximum value = H).	M
	Soil Category	**LOW**