

# **FORT WALKER**

Army Cleanup Program

Installation Action Plan Final

June 2024

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## STATEMENT OF PURPOSE

The Installation Action Plan (IAP) provides evidence that the Army is firmly committed to expeditious identification and cleanup of environmental contamination, and that the installation has a credible, organized program to carry out that commitment. The IAP provides an outline of the total multi-year environmental cleanup program for each site with ongoing or future planned restoration activity and includes the (1) environmental restoration requirements, (2) the rationale for the selected technical approach, and (3) foundation to develop corresponding financial needs for each cleanup site.

## INSTALLATION OVERVIEW

**Installation Name:** FORT WALKER

**Installation City:** BOWLING GREEN

**Installation County:** CAROLINE

**Installation State:** VA

**Regulatory Participation - Federal:** N/A

**Regulatory Participation - State:** Virginia Department of Environmental Quality

## ACRONYMS

Acronym	Definition
1,1-DCA	1,1- Dichloroethane
ACM	Assessment of Corrective Measures
AFFF	Aqueous Film-Forming Foam
AOPI	Area of Potential Interest
CAP	Corrective Action Program
CAMP	Corrective Action Monitoring Plan
CASE	Corrective Action Status Evaluation
CC	Compliance-related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
DES	Design
DHS	US Department of Homeland Security
ENV	Environmental
FS	Feasibility Study
FY	Fiscal Year
FYR	Five-Year Review
GPS	Groundwater Protection Standard
HRS	Hazard Ranking System
IAP	Installation Action Plan
ID	Identification
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MEC	Munitions and Explosives of Concern
MNA	Monitored Natural Attenuation
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
N&ES	Nature and Extent Study
NPL	National Priorities List
PA	Preliminary Assessment

Acronym	Definition
PCRJ	Peumansend Creek Regional Jail
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
RAB	Restoration Advisory Board
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
RRSE	Relative Risk Site Evaluation
RSL	Regional Screening Level
SC	Site Closeout
SI	Site Inspection
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
USAEC	US Army Environmental Command
USEPA	US Environmental Protection Agency
VA	Virginia
VDEQ	Virginia Department of Environmental Quality
WWTP	Wastewater Treatment Plant

## PHASE TRANSLATION TABLE

CERCLA Phase	RCRA Phase	RCRA UST Phase
Preliminary Assessment (PA)	RCRA Facility Assessment (RFA)	Initial Site Characterization (ISC)
Site Inspection (SI)	Confirmation Sampling (CS)	Investigation (INV)
Remedial Investigation/ Feasibility Study (RI/FS)	RCRA Facility Investigation/Corrective Measures Study (RFI/CMS)	Corrective Action Plan (CAP)
Remedial Design (RD)	Design (DES)	Design (DES)
Interim Remedial Action (IRA)	Interim Measure (IM)	Interim Remedial Action (IRA)
Remedial Action (Construction) (RA(C))	Corrective Measures Implementation (Construction) (CMI(C))	Implementation (Construction) (IMP(C))
Remedial Action (Operations) (RA(O))	Corrective Measures Implementation (Operations) (CMI(O))	Implementation (Operations) (IMP(O))
Long-Term Management (LTM)	Long-Term Management (LTM)	Long-Term Management (LTM)

## **PROGRAM SUMMARY**

**Number of Open Sites with Response Complete/Total Open IR Sites: 0/13**

**Number of Open Sites with Response Complete/Total Open MR Sites: 1/1**

**Number of Open Sites with Response Complete/Total Open CC Sites: 0/1**

## SITE-LEVEL INFORMATION

## 51290.1025\_FTAPH-16\_PFAS - Old Headquarters WWTP

**Env Site ID:** FTAPH-16

**Cleanup Site:** PFAS - Old Headquarters WWTP

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** The Old Headquarters Wastewater Treatment Plant (WWTP) was in use from 1979 to 1993. A uniform Army-wide investigation was coordinated by US Army Environmental Command (USAEC) to assess the presence of per- and polyfluoroalkyl substances (PFAS) in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). The 2019 preliminary assessment (PA) viewed historical records of operations, spill, and storage of materials containing PFOS/PFOA and isolated 18 areas of potential interest (AOPI) to further evaluate. The Old Headquarters WWTP was identified as PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to receipt of waste conveyance from Fire Station 8 which were potentially contaminated with aqueous film-forming foam (AFFF). Based on these results, the AOPIs were further investigated as part of a site inspection (SI). During the 2020 SI, two groundwater samples and one surface soil sample were collected at this site. Following the completion of the 2020 SI and screening of the AOPIs against the 2021 regional screening levels (RSL), seven of the 18 AOPIs were determined to require additional investigation and would move forward to the remedial investigation (RI) phase. In May 2022, the screening levels were revised by the US Environmental Protection Agency (USEPA), and the SI results were rescreened against these new screening levels. This resulted in 15 of the 18 AOPIs requiring further evaluation in the RI and moving on to being designated as areas of interest. The PFAS sites were originally consolidated into one work breakdown structure number (51290.1025) until broken into separate sites in December 2022. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1026\_FTAPH-17\_PFAS Fire Station 8

**Env Site ID:** FTAPH-17

**Cleanup Site:** PFAS Fire Station 8

**Alias:** FIRESTAT 8

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Fire Station 8 has been in use since 1966. AFFF has been transferred into fire engines regularly at this facility since 2000. A large AFFF spill occurred on June 12, 2012, due to an AFFF reservoir malfunction on a fire engine. Fire Station 8 was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to an AFFF spill and regular AFFF use that may have resulted in other incidental spills. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Based on these results the AOPIs were further investigated as part of an SI. During the 2020 SI, one groundwater sample and two surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1035\_FTAPH-18\_PFAS New Wilcox WWTP

**Env Site ID:** FTAPH-18

**Cleanup Site:** PFAS New Wilcox WWTP

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** The New Wilcox WWTP has been in operation since 1991. Currently, the WWTP is run by American Water. It was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the drainage of effluent from fire stations to the WWTP. Drains, which are potentially contaminated with AFFF from fire stations, go to this WWTP. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, three groundwater samples and one surface water sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1036\_FTAPH-19\_PFAS Vehicle Maintenance Fac

**Env Site ID:** FTAPH-19

**Cleanup Site:** PFAS Vehicle Maintenance Fac

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** The Vehicle Maintenance Facility has been in operation since in 1972. It was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to potential drainage of AFFF from the June 20, 2012, spill at Fire Station 8. Additionally, the Vehicle Maintenance Facility was included as an AOPI for other historical leaks, spills, or releases to the drain field. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, one groundwater sample was collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1037\_FTAPH-20\_PFAS Range 29 Plywood & Bunker

**Env Site ID:** FTAPH-20

**Cleanup Site:** PFAS Range 29 Plywood & Bunker

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** The Range 29 - Plywood Structure at the Infantry Platoon Battle Course, is a heavily forested area. AFFF was previously used to extinguish a munitions fire at the large plywood building on this range sometime between 2010 and 2019. The Range 29- Bunker at the Infantry Platoon Battle Course is also a heavily forested area. AFFF was used to extinguish a fire at a wooden turret sometime between 2010 and 2019. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Based on these results, the AOPIs were further investigated as part of an SI. The Range 29 – Plywood Structure and Bunker sites were identified as an AOPIs due to the use of AFFF to extinguish a munitions fire. During the 2020 SI, two groundwater samples and two surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1038\_FTAPH-21\_PFAS Taylors Corner Landfill

**Env Site ID:** FTAPH-21

**Cleanup Site:** PFAS Taylors Corner Landfill

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Taylor's Corner Landfill was historically used as a sanitary landfill at Fort Walker and possibly received sludge wastes from the Old Headquarters WWTP. The WWTP received sanitary wastes from the Fire Station 8 bay drains, which contained AFFF. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Taylor's Corner Landfill was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the possible disposal of PFAS-containing materials AFFF. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, two groundwater samples were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1039\_FTAPH-22\_PFAS Fire Station 7

**Env Site ID:** FTAPH-22

**Cleanup Site:** PFAS Fire Station 7

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Fire Station 7 has been in use since 2008. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Fire Station 7 was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the possibility of incidental spills or leaks while transferring AFFF, washing fire engines, or additional regular fire department practices. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, two groundwater samples and one surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1040\_FTAPH-23\_PFAS Fire St 9 & Fire Trng Fac

**Env Site ID:** FTAPH-23

**Cleanup Site:** PFAS Fire St 9 & Fire Trng Fac

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Fire Station 9 has been in use since 2013 and includes a storage warehouse. AFFF was stored in five-gallon buckets in a storage locker at the site. The Fire Training Facility has been in use by the fire department for hazardous material training since the early 2000s. Class A materials, such as wood pallets and bales of straw, are burned in the building and disposed of in a nearby dumpster. A metal aircraft is also on site and used for fire department training. It is reported that no AFFF has been used in this area; only water is used for training. Despite this, there is a high possibility of release of residual AFFF from nozzles during training at this facility because AFFF is frequently used in the same fire engines to extinguish fires at other areas of the installation. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Fire Station 9 and the Fire Training Facility were identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the possibility of incidental spills or leaks while transferring AFFF, washing fire engines, or additional regular fire department practices. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, four groundwater samples and two surface soil sample were collected. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1041\_FTAPH-24\_PFAS Range 24-Mover 2

**Env Site ID:** FTAPH-24

**Cleanup Site:** PFAS Range 24-Mover 2

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** The Range 24- Mover 2 targets (not co-located) consist of an approximately 200-foot long, eight-foot-high concrete wall backed by a soil berm. The walls were previously built from creosote timbers. Around 2005, at least one large fire occurred on the creosote timbers at each mover target. AFFF was used at these mover targets to control a large fire by completely covering the entire wall with AFFF. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. The Range 24 – Mover 2 site was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the AFFF to control a fire. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, two groundwater samples and one surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1042\_FTAPH-25\_PFAS Range 42 Mover Target Area

**Env Site ID:** FTAPH-25

**Cleanup Site:** PFAS Range 42 Mover Target Area

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Range 42, previously operated by an Army training unit, was used for survival, leadership, and medical training. . Prescribed burns have previously occurred at this range adjacent to the back road and mover target. AFFF would have been used at the base of larger trees to prevent the trees from falling and causing damage to expensive targets. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. During the PA reconnaissance, fire department personnel with experience assisting with prescribed burns pointed out several trees as examples of trees that may have been sprayed with AFFF but exact locations of AFFF use are unknown. Range 42 Mover Target Area was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the use of AFFF. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, one groundwater sample was collected at the site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1043\_FTAPH-26\_PFAS Range 43 Plywood Stru Area

**Env Site ID:** FTAPH-26

**Cleanup Site:** PFAS Range 43 Plywood Stru Area

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Range 43 – Plywood Structures Area was also historically operated by an Army training unit and contains many plywood structures (e.g., small houses, turrets). AFFF has been sprayed around the base of some of these structures for protection before training operations. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. The Range 43 Plywood Structures Area was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the preventative use of AFFF. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, three groundwater samples and four surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1044\_FTAPH-27\_PFAS Trng Area 17A Trans Fire

**Env Site ID:** FTAPH-27

**Cleanup Site:** PFAS Trng Area 17A Trans Fire

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Training Area 17A – Transformer Fire site is adjacent to the installation’s northern boundary. On April 14, 2018, a downed power line caused a transformer fire. About five gallons of AFFF were used to spot treat logs over an area measuring about 400 square feet. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC’s efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Training Area 17A – Transformer Fire site was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the use of fire AFFF to extinguish a transformer fire. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, one groundwater sample and one surface soil sample were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army’s database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1045\_FTAPH-28\_PFAS Wilcox Landfill

**Env Site ID:** FTAPH-28

**Cleanup Site:** PFAS Wilcox Landfill

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/2/2029

**RC Date:** 2/2/2029

**RC Reason:** Not assigned

**SC Date:** 2/3/2029

**Program:** ENV Restoration, Army

**Subprogram:** IR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:**

**MRSPP:** N/A

Phase	Start	End
PA:	5/21/2018	9/19/2019
SI:	9/20/2019	6/30/2022
RI/FS:	1/3/2022	2/2/2029
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	--	--

**Site Narrative:** Wilcox Landfill was historically used as a sanitary landfill at Fort Walker and possibly received sludge wastes from the Old Headquarters WWTP. The Old Headquarters WWTP received sanitary wastes from the Fire Station 8 bay drains, where AFFF drained. A uniform Army-wide investigation was coordinated by USAEC to assess the presence of PFAS in drinking water caused by Army operations. PFAS denotes a wide array of chemicals and compounds. The focus of USAEC's efforts is on PFOS and PFOA. The 2019 PA viewed historical records of operations spill and storage of materials containing PFOS/PFOA and isolated 18 AOPIs to further evaluate. Wilcox Landfill was identified as a PFAS AOPI following records review, personnel interviews, and site reconnaissance, due to the possible disposal of PFAS-containing materials. Based on these results, the AOPIs were further investigated as part of an SI. During the 2020 SI, four groundwater samples were collected at this site. The results from this AOPI were evaluated against the RSLs, dated May 2022, and it was determined that an RI would be required. A new site was created in the Army's database of record and approved on December 2022, which separates it from the legacy PFAS site, 51290.1025. Upon completion of the RI, sites that exceed regulatory standards will undergo an analysis of alternative remedies and a remedy selection process.

## 51290.1022\_FTAPH-003-R-01\_TRAINING RANGE AREA 20 AN

**Env Site ID:** FTAPH-003-R-01

**Cleanup Site:** TRAINING RANGE AREA 20 AN

**Alias:** #

**Regulatory Driver:** CERCLA

**RIP Date:** 2/15/2015

**RC Date:** 2/15/2015

**RC Reason:** Study Completed, No Cleanup Required

**SC Date:** 9/30/2054

**Program:** ENV Restoration, Army

**Subprogram:** MR

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:** N/A

**MRSPP:** 10

Phase	Start	End
PA:	2/14/2002	5/1/2003
SI:	5/31/2007	12/31/2008
RI/FS:	5/31/2010	2/15/2015
RD:	--	--
IRA:	--	--
RA(C):	--	--
RA(O):	--	--
LTM:	3/15/2015	9/30/2054

**Site Narrative:** Training range areas 20 and 21 are comprised of approximately 150 acres located in the center of Fort Walker, north of Route 301. This area was used for light ground maneuver training from its acquisition in 1941 until 1996, when it was transferred to Caroline County for the construction of the Peumansend Creek Regional Jail (PCRJ). In 2018, Caroline County entered into an agreement with the US Department of Homeland Security (DHS) for the former PCRJ to house illegal immigrants, which changed the name of the facility to the Caroline Detention Facility (CDF). The CDF now occupies the site and actively uses approximately half of the 150-acre parcel, with the remainder left undisturbed. The SI was completed in December 2008 and recommended the site for further investigation for munitions and explosives of concern (MEC). The SI also recommended no further action for munitions constituents. The RI report was completed in June 2012 and feasibility study (FS) was completed in May 2014. All field data and investigation results show that neither MEC nor unexploded ordinances were found on this site, eliminating the need for future remedial actions. The small amount of munitions debris that was found is consistent with practice rounds/training aids and not with live-fire activities. The decision document was signed in March 2015 and the land use control (LUC) plan was completed in April 2015. Most of the LUCs outlined in the LUC plan are being maintained by the CDF since the property is owned by Caroline County and operated by CDF personnel. Implementation, maintenance, and enforcement of the LUCs is the responsibility of the CDF personnel. The Army has aided CDF in developing dig policies, providing MEC awareness and avoidance informational materials, and in continuing to perform periodic LUC inspections. The Army is responsible for ensuring no trespassing signage outside the site perimeter is maintained and replaced as needed, utilizing installation in-house resources. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for unlimited use/unrestricted exposure, five-year remedy reviews will continue indefinitely.

## 51290.1030\_CC SWMU16\_WILCOX CLOSED LANDFILL

**Env Site ID:** CC SWMU16

**Cleanup Site:** WILCOX CLOSED LANDFILL

**Alias:** #

**Regulatory Driver:** RCRA-D

**RIP Date:** 9/30/2006

**RC Date:** 9/15/2054

**RC Reason:** Not assigned

**SC Date:** 9/16/2054

**Program:** Compliance-related Cleanup

**Subprogram:** CC

**NPL Status:** No

**Hazardous Ranking Score:** 0

**RRSE:** N/A

**MRSPP:**

Phase	Start	End
<b>RFA:</b>	1/31/1999	5/31/1999
<b>CS:</b>	2/28/2002	8/31/2002
<b>RFI/CMS:</b>	2/28/2002	3/31/2005
<b>DES:</b>	1/31/2000	3/31/2006
<b>IRA:</b>	--	--
<b>CMI(C):</b>	5/31/2006	8/31/2006
<b>CMI(O):</b>	9/30/2006	9/15/2054
<b>LTM:</b>	--	--

**Site Narrative:** The site served as Fort Walker's primary sanitary landfill and was utilized for the disposal of solid waste generated on the installation between 1981 and 1992. The landfill was constructed using a trench and fill type design, which involves the placement of waste into elongated trenches. In 1988, use of three of the trenches ceased and the cells were capped with clean native soil. Two of the remaining trenches received waste from 1989 to mid-1992, at which time a synthetic cap was installed over these trenches. The unit was closed under the Virginia Solid Waste Management Regulations as a sanitary landfill in 1992 (Permit No.332). Post closure detection monitoring began in 1995. A statistical assessment of the first two years of detection monitoring data (1995 and 1996) concluded that 1,1-dichloroethane (1,1-DCA) was present above the background prediction limit in groundwater samples collected from detection wells. Consequently, Fort Walker initiated an assessment monitoring program at the site per 9 VAC-20-80-250-D-6. In September 2000, the Virginia Department of Environmental Quality (VDEQ) approved a permit variance for the establishment of groundwater protection standards (GPS). In January 2001, Fort Walker reported a statistically significant exceedance of the GPS for chloroethane in downgradient wells. As a result, the site moved from assessment monitoring into a corrective action program (CAP), as required by 9 VAC-20-81-260. The CAP follows three phases- assessment of corrective measures (ACM), selection of remedy, and implementation of the CAP. As part of the ACM portion of the CAP, Fort Walker conducted a nature and extent study (N&ES) to evaluate the constituent plume. The N&ES was included in the ACM report to the VDEQ in June 2002, which accepted the findings in October 2002. The CAP was submitted to the VDEQ in April 2003. A human health risk assessment intended to support the CAP was performed in August 2003 and updated in 2004. In 2005, a corrective action monitoring plan (CAMP) for the site was submitted to VDEQ. The purpose of the CAMP was to specify sampling and analysis procedures to be followed during the implementation of CAP monitoring. VDEQ approved a major permit amendment to incorporate the CAP and CAMP into Module XIV of the permit on May 3, 2006. As part of the CAP monitoring regime, two sentinel monitoring wells were installed in 2006 and 2008 to ensure that there is no adverse impact to receptors as a result of

chemical constituent plume migration. The selected and approved remedy in the CAP is monitored natural attenuation (MNA) and several groundwater wells have been identified adequate for quarterly MNA monitoring to ensure that the remedy continues to be effective. The second (2012) and third (2015) corrective action status evaluation (CASE) reports for MNA sampling resulted in the same conclusions to continue MNA. The 2018 CASE Report for the period March 2015 to March 2018 identified uncertainties in the performance of the MNA remedy that affects the ability to determine appropriate groundwater protection standards. The uncertainties include accumulation of vinyl chloride in groundwater, expansion of the plume area, and the addition of 1,1-DCA to the contaminants of concern list in 2017. Beginning with the 2018 sampling event, these uncertainties increased the scope of sampling and reporting. The CASE report dated April 13, 2018, indicated that, based on the fiscal year (FY) 2015-FY 2018 CASE period data, the anticipated MNA completion date at that time was 2024; therefore, the next CASE report would be required in 2024. MNA monitoring and CASE reporting will be conducted every three years until MNA requirements are met. Based on the ongoing results of MNA monitoring program, it is not anticipated that the MNA requirements will be met in the near future; therefore, the corrective measures implementation (operations) (CMI(O)) phase end has been adjusted to 30-year rolling remedial action (operations) (RA(O)) phase. When MNA requirements are met based on the CASE evaluation, then monitoring and CASE reporting will cease, pending VDEQ concurrence.

## **SITE SUMMARY**

## SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
51290.1001	FTAPH-1_BLDG 1233 DDT SPILL	11/30/1982
51290.1002	FTAPH-10_SALES CORNER LANDFILL	9/30/1991
51290.1003	FTAPH-100_HEADQUARTERS/ANDERSON STORAGE	8/31/1991
51290.1004	FTAPH-101_UST POL BLDG # 303	4/30/1991
51290.1005	FTAPH-102_CAMP SITE STORAGE TANKS	4/30/1991
51290.1006	FTAPH-11_TAYLORS CORNER LANDFILL #1	9/30/1991
51290.1007	FTAPH-12_PENDER CAMP LANDFILL	3/31/1989
51290.1008	FTAPH-13_DROP ZONE LANDFILL	3/31/1988
51290.1009	FTAPH-14_WILCOX DRIVE LANDFILL	9/30/1991
51290.1010	FTAPH-15_IMPACT AREA AND RANGES	9/30/1990
51290.1011	FTAPH-1A_OLD ENTOMOLOGY BUILDING	10/31/1996
51290.1012	FTAPH-2A_DIRECT SUPPORT MAINTENANCE SHOP	9/30/1993
51290.1013	FTAPH-3A_HEADQUARTERS DDT AREA	9/30/2018
51290.1014	FTAPH-4_HERBICIDE STOR SHED #225 DIOXIN	12/31/1989
51290.1015	FTAPH-4A_DIRTBRIDGE WAREHOUSE	2/28/1985
51290.1016	FTAPH-5_TAYLORS CORNER LANDFILL #2	9/30/1991
51290.1017	FTAPH-6_WOOD SCRAP YARD	9/30/1991
51290.1018	FTAPH-7_AMMUNITION SUPPLY PT. LANDFILL	9/30/1991
51290.1019	FTAPH-8_ACORS LANDFILL	3/31/1988
51290.1020	FTAPH-001-R-01_TRAINING RANGE AREA 10	5/30/2003
51290.1021	FTAPH-002-R-01_TRAINING RANGE AREA 16	5/30/2003
51290.1023	FTAPH-004-R-01_TRAINING RANGE AREA 30	5/30/2003
51290.1024	FTAPH-005-R-01_WILCOX WASTEWATER TREATME	12/31/2008
51290.1027	CC SWMU12_TAYLORS CORNER 1 CLOSED LANDFI	12/31/2010
51290.1028	CC SWMU13_TAYLORS CORNER 2 CLOSED LANDFI	3/31/2008
51290.1029	CC SWMU14_CDD CLOSED LANDFILL	12/31/2010
51290.1031	CC SWMU17_ACORS CLOSED LANDFILL	12/31/2010
51290.1032	CC SWMU22_FIRE TRAINING PIT #2	3/31/2005
51290.1033	CC SWMU20_PENDER CLOSED LANDFILL	12/31/2010
51290.1034	CC 1638_Building 1638 UST leak remediati	12/31/2008

## COMMUNITY INVOLVEMENT

<b>Community Involvement Plan (Date Last Reviewed):</b>	4/15/2011
<b>Technical Review Committee Establishment Date:</b>	N/A
<b>Restoration Advisory Board (RAB) Establishment Date:</b>	N/A
<b>RAB Adjournment Date:</b>	N/A
<b>RAB Adjournment Reason:</b>	N/A
<b>Reasons for Not Establishing RAB:</b>	No sufficient, sustained community interest in a RAB has been expressed by the community
<b>RAB Date of Solicitation from Community:</b>	08/08/2023
<b>RAB Results of Solicitation:</b>	No response from Community from latest RAB Solicitation.
<b>Current Technical Assistance for Public Participation (TAPP):</b>	N/A
<b>TAPP Title:</b>	N/A
<b>Potential TAPP:</b>	N/A
<b>Administrative Record Location:</b>	Fort Walker Environmental Division, 19952 North Range Road, Bowling Green, VA
<b>Information Repository Location:</b>	Caroline County Regional Library, 17202 Richmond Turnpike, Milford, VA 22514

## FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Future	FYR	December 2024	March 2025	TBD	TBD	TBD
Completed	FYR	7/11/2025	7/12/2025	N/A	N/A	The review results indicated the remedy is protective.