FORT BELVOIR

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 BELVOIR

Installation City: Fort Belvoir

Installation County: FAIRFAX

Installation State: VA

Regulatory Participation - Federal: US Environmental Protection Agency (USEPA), Region 3

Regulatory Participation - State: Virginia Department of Environmental Quality (VADEQ)

ACRONYMS

Acronym	Definition
ACL	Alternate Concentration Limits
AEDB-CC	Army Environmental Database – Compliance-related Cleanup
AOPC	Area of Potential Concern
AST	Aboveground Storage Tank
BGS	Below Ground Surface
BRAC	Base Realignment and Closure
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CDC	Child Development Center
C/D/D	Construction/Demolition/Debris
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI	Corrective Measures Implementation
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
CMO	Corrective Measures Objectives
CMS	Corrective Measures Study
COC	Containments of Concern
CRC	Combat Range Complex
CRC-W	Combat Range Complex-Water
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
DA-01	Demolition Area – 01
DAAF	Davison Army Airfield
DCE	Dichloroethylene
DD	Decision Document
DES	Design
DNT	Dinitrotoluene
DOD	Department of Defense
DPDO	Defense Property Disposal Office
DPE	Dual Phase Extraction
DPW-ED	Department of Public Works – Environment Division
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organics
EBS	Environmental Baseline Survey
ENV	Environmental
EOD	Explosive Ordnance Disposal
EPG	Engineer Proving Ground
ESD	Explanation of Significant Difference
EVO	Emulsified Vegetable Oil

Acronym	Definition
FATTS	Former Aboveground Test Tank Site
FBNA	Fort Belvoir North Area
FCP	Fairfax County Parkway
FETA	Fire Equipment Testing Area
FFS	Focused Feasibility Study
FS	Feasibility Study
ft	feet
FTA	Fire Training Area
FTBL	Fort Belvoir
FY	Fiscal Year
FYR	Five-Year Review
GIS	Geographic Information System
GPS	Groundwater Protection Standard
GRO	Gasoline Range Organics
HEC	Humphrey Engineer Center
HI	Hazard Index
HRS	Hazard Ranking System
IAP	Installation Action Plan
IC	Institutional Control
ICM	Interim Corrective Measures
ICMR	Interim Corrective Measures Report
ID	Identification
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISCO	In Situ Chemical Oxidation
ISEB	In Situ enhanced Bioremediation
JP	Jet Propellant
LFG	Landfill Gas
LTM	Long-Term Management
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
MBTA	Mines and Booby Trap
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
mg/kg	milligram per kilogram
MILCON	Military Construction
MPPEH	Material Potentially Presenting an Explosive Hazard
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation

Acronym	Definition
MRA	Munitions Response Area
MR	Munitions Response
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
NEPA	National Environmental Policy Act
NFA	No Further Action
NGA	National Geospatial Agency
NPL	National Priorities List
NTCRA	Non-Time Critical Removal Action
OB	Open Burning
OD	Open Detonation
ORO	Oil Range Organics
OSD	Office of the Secretary of Defense
OWS	Oil Water Separator
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PAL	Preliminary Action Level
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene
PFAS	Per- and Polyfluoroalkyl Substances
PFBS	Perfluorobutanesulfonic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
PID	Photoionization Detector
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
ppm	parts per million
PR	Periodic Review
PRG	Preliminary Remediation Goal
PSA	Petroleum Storage Area
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RBC	Risk-Based Concentrations
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation

Acronym	Definition
RIP	Remedy-in-Place
ROD	Record of Decision
ROW	Right of Way
RRSE	Relative Risk Site Evaluation
RSL	Regional Screening Level
RV	Recreational Vehicle
SC	Site Closeout
SCR	Site Characterization Report
SDZ	Surface Danger Zone
SI	Site Inspection
SVE	Soil Vapor Extraction
SWMU	Solid Waste Management Unit
SVOC	Semi-volatile Organic Compound
TAPP	Technical Assistance for Public Participation
TBD	To be Determined
TCE	Trichloroethylene
TD	Transferred
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
UAO	Unilateral Administrative Order
ug/L	micrograms per liter
USACE	US Army Corps of Engineers
USAG-FB	US Army Garrison – Fort Belvoir
USATHAMA	US Army Toxic and Hazardous Materials Agency
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UU/UE	Unlimited Use / Unrestricted Exposure
UXO	Unexploded Ordnance
VA	Virginia
VADEQ	Commonwealth of Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VSI	Visual Site Inspection
VOC	Volatile Organic Compound

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: 25/39

Number of Open Sites with Response Complete/Total Open MR Sites: 9/18

Number of Open Sites with Response Complete/Total Open CC Sites: 0/2

SITE-LEVEL INFORMATION

51105.1023_FTBL-24_SEWAGE TREATMENT PLANT 2

Env Site ID: FTBL-24

Cleanup Site: SEWAGE TREATMENT PLANT 2

Alias: SWMU L-11

Regulatory Driver: RCRA-C

RIP Date: 12/2/2019

RC Date: 12/2/2019

RC Reason: All Required Cleanup(s) Completed

SC Date: 2/24/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	9/15/2011	4/15/2014
RFI/CMS:	2/15/2014	2/17/2019
DES:	12/3/2015	5/1/2019
IRA:	- -	- -
CMI(C):	12/3/2015	12/2/2019
CMI(O):	- -	- -
LTM:	2/24/2020	2/24/2054

Site Narrative: Fort Belvoir (FTBL)-24 is solid waste management unit (SWMU) L-11 in the Fort Belvoir Resource Conservation and Recovery Act (RCRA) Part B permit. The site is a former wastewater treatment plant on the western shore of Dogue Creek at the termination of Jadwin Road. The former wastewater treatment plant operated from the mid-1940s through 1981 and is currently inactive. The affected area for the former treatment plant expanded from approximately 1.4 acres in 1953 to 6.2 acres in 1972. Records indicate that the unit accepted hazardous constituents throughout its history, although the nature of those constituents is undocumented. The site was identified as a SWMU in a 1988 Phase II RCRA Facility Assessment (RFA). A 2014 Phase I RCRA Facility Investigation (RFI) recommended no further investigation of subsurface soil and groundwater. However, residual sludge sediment on the site was found to be contaminated with the pesticide dieldrin with detected concentrations at or above the industrial risk screening level. An RFI Addendum/Site Specific Risk Assessment recommending a CMS for the site was finalized in December 2017 and approved by the Virginia Department of Environmental Quality (VADEQ) in January 2018. No unacceptable risk to human receptors was identified from the risk assessment for concentrations of metals and pesticides in the sludge sediment. Contaminants of concern (COC) at the site consist of metals and pesticides above ecological screening criteria in the surface soil. A CMS completed in May 2018 recommended soil capping, groundwater monitoring, and land use controls (LUC) in the form of annual inspections to address soil and groundwater at the site. VADEQ approved the CMS report recommendation in May 2018. An internal decision document (DD) identifying the selected remedy was finalized in February 2019. A LUC implementation plan (LUCIP) and a remedial action (RA) work plan were completed under the remedial design (RD) phase and were approved by VADEQ in May 2019. An interim corrective measures report (ICMR) completed in September 2019 was approved by VADEQ in December 2019 and documented the placement of soil cover in the sediment basins at the site. Corrective measures objectives (CMO) for the site are to mitigate risk from COCs in soil by preventing ecological receptor exposure; monitoring groundwater to verify that COCs are not migrating off-site; and LUCs to maintain soil cover integrity and prevent use of

site groundwater. Future land use is identified as industrial in the garrison's master plan. Long-term groundwater monitoring; annual LUC inspections with reporting; and periodic reviews are conducted under the long-term management (LTM) phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for unlimited use/unrestricted exposure (UU/UE), LTM will continue indefinitely.

51105.1029_FTBL-38_DRMO STUMP DUMP

Env Site ID: FTBL-38

Cleanup Site: DRMO STUMP DUMP

Alias: CC-A03

Regulatory Driver: RCRA-D

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	6/15/1988	9/15/1988
CS:	12/15/1993	2/15/1996
RFI/CMS:	8/17/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	9/30/2054

Site Narrative: SWMU CC-A03 (51105.1029) in Headquarters Army Environmental System was identified in a 1988 Phase II RFA report as a suspected landfill. The fenced 16.5-acre site is located east of Beulah Street, and south of Telegraph Road and is accessible only from the secure Aerospace Data Facility-East site. Historical documentation indicates that the site was used as a borrow pit and later as a landfill. The site was covered with dredge material from an off-site US Army Corps of Engineers (USACE) project in the 1980s. Prior to construction of Beulah Street in 1997, a portion of the landfill was excavated and taken off-site for disposal; however, a significant amount of the landfill remains on site. A Phase I RFI conducted at SWMU A-03 in September 2008 included landfill delineation by test pit excavation, soil borings, groundwater monitoring well installations, surface water and sediment sampling, and landfill gas (LFG) probe installation and monitoring. This effort identified non-native soils as a landfill cap as well as waste consisting of fill material, wood, and concrete debris as well as household waste (i.e., glass, metal, plastics, paper). Based on ecological and risk screening of sample results from the Phase I investigation, the USEPA Region III concurred with the recommendation for no further action (NFA) on July 30, 2010. VADEQ required NFA with LUCs in the statement of basis for SWMU A-03, dated Oct. 20, 2014. Land use is monitored to address the waste associated with the former landfill. LUCs consist of annual inspections with reporting under the LTM Phase. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews will continue under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LTM will continue indefinitely.

51105.1038_FTBL-51_TANK FARM - BLDG 324, 325

Env Site ID: FTBL-51

Cleanup Site: TANK FARM - BLDG 324, 325

Alias: FTBL-51

Regulatory Driver: RCRA-I

RIP Date: 2/15/2008

RC Date: 2/14/2054

RC Reason: Not assigned

SC Date: 2/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
ISC:	5/15/1996	6/15/1996
INV:	4/15/1997	6/15/1998
CAP:	10/15/1998	5/26/1999
DES:	6/15/1999	5/15/2000
IRA:	- -	- -
CMI**(C):**	6/15/1999	2/15/2008
CMI**(O):**	2/15/2008	2/14/2054
LTM:	- -	- -

Site Narrative: Building 324 (SWMU FTBL-51) is a military generator testing and research building on the southern Main Post south of Beach Road in the secure 300-area of FTBL. Six underground storage tanks (UST) ranging in size from 3,000 gallons to 12,000 gallons were identified south of Building 324 in 1988. A waste oil UST and an oil water separator were removed from an area southeast of Building 324 between former buildings 328 and 356 in January-February 1995. Ten USTs including the original six, ranging from 1,000 gallons to 12,000 gallons were removed from the site between 1996 and 1997. The tanks contained gasoline, diesel fuel, oil, and jet propellant (JP) fuels (JP5, JP6, JP7, and JP8). Five of the USTs were found to be leaking. Approximately 2,200 cubic yards of petroleum-contaminated soil and 27,060 gallons of residual product in the tanks were recovered during the removals. The site was reported to the VADEQ, and Pollution Complaint No. 1998-3593 was assigned in 1998. A site characterization report (SCR) completed in April 1998 delineated a petroleum hydrocarbon groundwater plume that reached surface water drainage south of the site. VADEQ-mandated Corrective Action Plan (CAP) No. 148 was approved in May 1999. A three-zone soil vapor extraction (SVE) system and air sparging points were installed in accordance with the CAP to address the source area and the surface water discharge area. The system was installed in November 1999 with start-up initiated in December 1999. An SCR addendum in June 2001 investigated potential additional source areas and further delineated groundwater contamination on the northern and southern areas of the site. A dual phase extraction (DPE) system was constructed and started in April 2002 in accordance with an approved CAP addendum. The DPE system recovered 1,644 gallons of free-product from April 2002 through March 2008, when VADEQ approved the system shut-down. The SVE system recovered approximately 10.77 tons of cumulative hydrocarbon mass between December 1999 and September 2012. The DPE system removed approximately 18.04 tons of vapor phase, cumulative mass of total petroleum hydrocarbons (TPH) between April 2002 and September 2012. The SVE system was shut down in September 2012. No free-product has been gauged in any of the site wells since October 2006. Post-operational monitoring was conducted from late 2012 until late 2014. A closure report for FTBL-51 submitted to VADEQ in August 2014 was denied due to

continued downgradient groundwater seepage to surface drainage. Supplemental sampling data indicated surface water and groundwater concentrations remain above regulatory standards, therefore VADEQ issued a directive to Fort Belvoir requesting restart of the DPE system to continue groundwater remediation at FTBL-51. A CAP addendum to restart the DPE system was approved by VADEQ in July 2017. COCs include volatile organic compounds (VOC) in groundwater such as benzene, toluene, ethyl-benzene xylene, and naphthalene. There is concern for off-site migration via seepage of contaminated groundwater into a roadside drainage ditch, however, perennial surface water downgradient from the site has not been impacted by site discharge. The original DPE system was re-initiated in spring 2019 with long-term groundwater monitoring to include monitoring of COC concentrations for downgradient migration until remedial action objectives have been achieved. The refurbished DPE system operated until September 2022 when system component failures required the system to be shut down. Consultation with VADEQ determined that a CAP addendum will focus on additional source area delineation south of Building 352 and treatment of seep discharge at Totten Road ditch. Long-term groundwater monitoring and periodic reviews continue under the corrective measures implementation (operation) (CMI(O)) phase. Future land use for FTBL-51 is identified as industrial in the garrison's master plan. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, CMI(O) will continue indefinitely.

51105.1070_FTBL-66_SITES M-07, M-18, APOC04, AOPC20

Env Site ID: FTBL-66

Cleanup Site: SITES M-07, M-18, APOC04, AOPC20

Alias: FTA

Regulatory Driver: CERCLA

RIP Date: 10/16/2026

RC Date: 10/15/2055

RC Reason: Not assigned

SC Date: 10/15/2055

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Medium

MRSPP: N/A

Phase	Start	End
PA:	6/15/1988	9/15/1988
SI:	10/15/2006	3/15/2007
RI/FS:	6/15/2007	10/15/2023
RD:	11/1/2023	9/30/2024
IRA:	6/15/1995	10/15/2007
RA(C):	10/1/2024	9/30/2026
RA(O):	10/16/2026	10/15/2055
LTM:	- -	- -

Site Narrative: FTBL-66 (former Fire Equipment Testing Area [FETA]) is an approximately 13-acre area on the Fort Belvoir North Area that is bounded the north by the developed National Geospatial Agency (NGA) to the east by a perennial stream and Resource Protection Area. The FETA consists of proximal sites M-07 (Inactive Fire Equipment Test Area); M-18 (Abandoned Underground petroleum oil, and lubricants (POL) Tanks); and areas of potential concern (AOPC)-04 and AOPC-20 BNA found during ongoing investigations and construction. Site M-07 was used as a fire equipment test area, where fuel was pumped into a large shallow tank partially filled with water and ignited. Site M-18 was the fuel storage area for the M-07 testing facility. AOPC-04 was associated with a former burning slab on the FETA and consisted of concrete and steel retaining walls, a cistern and sump, associated piping, and a fuel loading area. AOPC-20 BNA was located southeast of SWMU M-18 and east of AOPC-04 on the bank of an unnamed creek. The site was identified in December 2008 during site preparation for the installation of underground service lines. A construction contractor reported odors, high photoionization detector (PID) readings, and soil staining in a test pit at approximately 6 feet below ground surface (bgs).

Phased environmental investigations were conducted at SWMUs M-07, M-18, AOPC-04, and AOPC-20 during the winter of 2006-2007 and in 2009. Environmental activity associated with SWMUs M-07/M-18 consisted of UST removal actions, soil excavation and disposal, infrastructure removal, three phases of environmental investigation, and several 2007 abatement measures consisting of characterization and disposal of soil piles, piping removal, and site restoration. Phase I environmental investigations at M-07/M-18 detected residual petroleum concentrations and chlorinated solvents including vinyl chloride and cis-1,2-dichloroethylene (DCE) in the site soil. Benzene and naphthalene concentrations in groundwater at M-07/M-18 exceeded regulatory criteria with vinyl chloride and cis-1,2-DCE concentrations detected in groundwater near the maximum contaminant levels (MCL). During the Phase II investigation, five additional groundwater monitoring wells were installed north of the SWMU M-07/M-18 excavation. Trichloroethylene (TCE) was detected slightly above the MCL in groundwater near

the northwest corner of former Building 2037. A Phase III Investigation to further delineate the extent of TCE at Building 2037 did not detect concentrations greater than regulatory limits.

Three phases of environmental investigation were conducted at AOPC-04 between 2007 and 2008. Chemicals detected in soil samples at AOPC-04 did not exceed risk-based concentrations (RBC) Carbon tetrachloride (170 microgram per liter (ug/L)) and chloroform (200 ug/L) detected in groundwater samples collected at AOPC-04 exceeded the corresponding MCLs. To further delineate VOCs in groundwater at AOPC-04, seven additional groundwater monitoring wells were installed during the Phase II investigation in 2007. Carbon tetrachloride was detected at concentrations above the MCL in groundwater samples collected from four of the seven wells with the maximum concentration detected at 720 ug/L. Carbon tetrachloride was delineated in groundwater toward the southern and eastern boundaries of AOPC-04. Chloroform was detected in the groundwater from Phase III monitoring wells. Chloroform is a known breakdown product of carbon tetrachloride, so the collocation of chloroform with carbon tetrachloride suggests carbon tetrachloride at AOPC-04 is naturally degrading. The infrastructure at AOPC-04, including the concrete structure, was demolished, and removed in 2007. After three rounds of investigation and removals at AOPC-04, soil contamination was not detected, and the carbon tetrachloride and chloroform groundwater plumes were delineated.

During a February 2009 investigation at AOPC-20, soil sample analysis did not identify chemicals of potential concern above the October 2007 USEPA Region III residential risk criteria. An isolated benzene concentration was detected in groundwater above the MCL. Elevated PID readings (17.9 to 4,600 parts per million (ppm)) and a strong odor were encountered in the vicinity of AOPC-20 during construction of a utility service line in June 2009. The contaminated construction area was over-excavated to the north and to the south of the concrete utility service lines until PID measurements were below 100 ppm. Approximately 500 cubic yards of contaminated soil and 20,000 gallons of contaminated groundwater from the excavation pits were removed for disposal. Benzene and naphthalene groundwater plumes at M-07/M-18 detected in 2007 were reduced to an isolated benzene concentration (5.8 ug/L) detected during a 2018 data gap investigation. Carbon tetrachloride and chloroform groundwater plumes identified in 2007 were not detected at AOPC-04 in the 2018 investigation. Benzene concentrations in groundwater at AOPC-20 BNA were below the MCL in 2018. Based on the results of previous investigations and remediation efforts, human health and ecological risk assessments, and the results of the 2018 supplemental investigation, it was concluded that the source(s) of contamination at the FETA have been addressed through soil and infrastructure removal actions and natural attenuation in the environment.

Future land use for FTBL-66 is identified as industrial in the garrison's master plan. There is no concern for potential off-site contaminant migration from this site and there is no use of groundwater as a potable water source. A February 2019 Data Gap Investigation report concluded that the concentrations of chemicals of concern in the groundwater at FTBL-66 had significantly decreased since a previous sampling event in 2007.

Quarterly groundwater monitoring events were completed at FTBL-66 in August 2021, November 2021, February 2022, and April 2022. A streamlined risk assessment using the quarterly results estimated the cumulative cancer risk at 8E-04, and the non-cancer hazard index (HI) across all target organs at 12 exceeding the USEPA target range of 1E-06 to 1E-04 and the HI target value of 1. Current groundwater conditions pose an unacceptable risk to human health if the groundwater presented a complete exposure pathway. Upon completion of a feasibility study (FS), a proposed plan (PP), and record of decision (ROD) will be prepared to close out the remedial investigation (RI)/FS phase. Fort Belvoir anticipates the final remedy to address groundwater contamination at FTBL-66 will include LUCs, long-term monitoring of groundwater, and five-year reviews. Because the future land use will remain

industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and inspections will continue indefinitely.

51105.1072_FTBL-68_SWMU M-26 HYDROCARBON SPILL AREA

Env Site ID: FTBL-68

Cleanup Site: SWMU M-26 HYDROCARBON SPILL AREA

Alias: M-26, FATTS

Regulatory Driver: CERCLA

RIP Date: 6/15/2017

RC Date: 6/14/2054

RC Reason: Not assigned

SC Date: 6/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	9/15/1988	9/15/1989
SI:	1/15/1990	9/15/1990
RI/FS:	11/15/2001	2/15/2008
RD:	12/15/2005	2/15/2008
IRA:	4/15/2006	7/15/2006
RA(C):	10/15/2006	3/15/2008
RA(O):	6/15/2017	6/14/2054
LTM:	- -	- -

Site Narrative: FTBL-68 is a former Fire Training Area (FTA) on the Fort Belvoir North Area that consists of SWMU M-26 the location of a 1968 petroleum release, and the Former Aboveground Test Tank Site (FATTS). The sites are located east of Accotink Creek and southeast of Site FTBL-66. M-26 was the location of aboveground storage tanks (AST) 05000A, 05000B, 05000C, and 05000D on approximately 8.4 acres, that were used to support engineer and firefighting training. In August 1968, approximately 30,000 to 100,000 gallons of gasoline were released from Tank 05000D. The fuel flowed into an unnamed, intermittent tributary that drained into Accotink Creek (MACTEC, 2005). The gasoline ignited, subsequently burning, and destroying nearby buildings and a bridge over I-95 approximately two miles downstream. All four ASTs were removed by 1980. The FATTS was the former location of five, bermed above ground storage tanks that were used for fire training activity approximately 1,200 feet southwest of M-26. The approximately 5-acre site is currently located almost entirely within the Fairfax County Parkway (FCP) right of way (ROW) and a Virginia Department of Transportation easement. The historical ASTs consisted of open-top vessels into which fuel was poured, ignited, and subsequently extinguished as part of fire training exercises. The tanks were removed prior to 1994. An Environmental Baseline Survey (EBS) (US Army Toxic and Hazardous Materials Agency (USATHAMA) 1990) report recommended sampling to delineate residual soil contamination associated with the M-26 release. A closure plan was implemented in 1995, when TPH concentrations in soil above VADEQ action levels were reported. Additional investigations were conducted in 2002 and 2005 and a remediation plan for FTBL-68 was developed in 2005. The implemented remedy for FTBL-68 consisted of source removal by soil excavation and monitored natural attenuation (MNA) to address residual contamination in groundwater. Approximately 13,000 tons of soil were removed from the FTBL-68 site area in 2007. LUCs are in place to address potential exposure to groundwater contamination. The DD for FTBL-68 was signed in October 2007. While performing the soil remediation associated with SWMU M-26, additional underground piping and petroleum contamination were encountered south of M-26 at FATTS. Additional soil excavation was completed at the FATTS in 2007 and the site was combined with Site M-26 under FTBL-

68. A long-term groundwater monitoring plan was approved in 2007 specifying two years of quarterly groundwater MNA sampling. Quarterly sampling at FATTS was completed in December 2008 and groundwater wells were abandoned to facilitate Base Realignment and Closure (BRAC) and highway construction.

Sample results from the last two quarters of MNA sampling at M-26 indicated that the remedial goals had been met; however, USEPA Region III requested additional sampling to capture potential seasonal fluctuation. BRAC and FCP construction were completed in March 2011 and groundwater monitoring wells were reinstalled at FTBL-68 in Fall 2011. Fort Belvoir submitted a revised groundwater MNA plan to the USEPA for review, in June 2012. Additional monitoring results were installed in 2012 and 2014. Groundwater concentrations at the FATTS had not met the remedial goals upon completion of the additional sampling. A five-year review for FTBL-68 completed in 2012 found that the remedies are functioning as intended and that immediate threats have been addressed and the remedy is protective in the short term because of LUCs for the site that prohibit groundwater usage.

Annual groundwater monitoring was conducted between 2018 and 2022 to characterize groundwater conditions and further evaluate the effectiveness of the LTM remedy at FTBL-68. The highest March 2022 COC concentrations were detected in samples collected from monitoring well FATTS-LTM-MW09, which was installed at the location of the largest of the former five aboveground test tanks. Concentrations of COCs, including 1,2-DCA, benzene, and ethylene are the lowest since May 2018. Concentrations of 2-methylnaphthalene remain below the RG, and naphthalene concentrations have decreased from 103 ug/L (October 2019) to 26.7 ug/L (March 2022) in monitoring well FATTS-LTM-MW09. Continued annual LTM and MNA is warranted to document declining trends of COCs and geochemical conditions until the achievement of RGs.

Current land use places FTBL-68 within a current cloverleaf for the FCP limiting exposure to either soil or groundwater. Future land use for FTBL-68 is identified as industrial in the garrison's master plan. The 2022 five-year review found that the remedy at FTBL-68 remains protective of human health and the environment because groundwater use land use and restrictions are in place to prohibit extraction of groundwater; excavation in the FCP interchange requires Virginia Department of Transportation (VDOT) and Fort Belvoir dig permits; and LUCs prevent human exposure to groundwater within the boundaries of the site. However, for the remedy to be protective in the long-term, the LTM network should be evaluated to monitor conditions downgradient of M26-LTM-01, FATTS-LTM-MW03, and FATTS-LTM-MW09. Additional measures were undertaken to assess groundwater flow directions and to sample downgradient surface water during groundwater sampling events. The RA(O) phase includes requirements for annual groundwater monitoring with reporting and five-year reviews. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and inspections will continue indefinitely.

51105.1073_FTBL-69_M-27 Ordnance Pits at Range 1

Env Site ID: FTBL-69

Cleanup Site: M-27 Ordnance Pits at Range 1

Alias: SWMU M-27

Regulatory Driver: CERCLA

RIP Date: 8/15/2020

RC Date: 8/14/2054

RC Reason: Not assigned

SC Date: 8/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
PA:	9/15/1988	9/15/1989
SI:	6/15/2003	11/15/2003
RI/FS:	12/15/2003	5/2/2006
RD:	10/15/2006	8/15/2009
IRA:	7/15/2004	11/15/2005
RA(C):	10/15/2006	8/15/2020
RA(O):	8/15/2009	8/14/2054
LTM:	- -	- -

Site Narrative: SWMU M-27 (FTBL-69) was identified in the 1990 Fort Belvoir EBS as a 20-foot diameter, 6-foot-deep disposal pit on Range 1 on the FBNA. The pit was used during the 1950s and 1960s to demilitarize ordnance and explosives. A closure plan for Range 1 was submitted to the USEPA Region III in June 2002. Historical aerial photographs indicate the site area was approximately 13.6 acres including the former open burning (OB)/open detonation (OD) activity, maneuver areas for military tanks and equipment, and a concrete test igloo constructed in 1980. A munitions and explosives of concern (MEC) interim removal action (IRA) was completed at Range 1 between 2004 and 2005. Investigations of the soil and groundwater under the 2005 USEPA RCRA Unilateral Administrative Order (UAO) found no contaminants in soil above industrial screening levels; however, explosives compounds were detected in groundwater above USEPA drinking water RBC. The site boundary was expanded to encompass the area of delineated groundwater contamination. A DD for FTBL-69 signed in May 2006 identified the preferred remedy to address affected groundwater as MNA with LUCs. Fort Belvoir submitted a long-term groundwater monitoring plan recommending two years of monitoring and an evaluation of the effectiveness of the remedy. After two years of groundwater monitoring, several wells were abandoned to facilitate FCP-related construction on the western site boundary. A groundwater evaluation in November 2009 indicated the MNA remedy was not fully effective. Low level cyclotrimethylenetrinitramine (RDX) concentrations were detected in groundwater migrating toward a perennial drainage north of Barta Road. A 2011 human health risk assessment indicated no risk to a hypothetical resident, however, risk to future potential receptors were identified. USEPA Region III approved the risk assessment in August 2012.

The 2017 Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) five-year review concluded that the remedy was functioning as intended by the DD. There were no changes in the physical conditions at the site since the 2012 five-year review that would affect the short-term protectiveness of the remedy. Perimeter monitoring wells were reinstalled along the FCP and north of Barta Road in 2019 as part of a data gap investigation to expand the existing groundwater monitoring

network. Groundwater samples collected from the site wells during the data gap investigation indicated that low level RDX is present in the groundwater. A final data gap investigation report was submitted to VADEQ and was approved in August 2020. A concise FS statement was completed to summarize the information required to support an NFA remedy for site FTBL-69. Detected explosives compounds in the groundwater did not exceed human health criteria at a 1E-04 and HQ=1 risk levels. Analytical results for the groundwater, surface water, and seep samples collected during the data gap investigation indicated that sample concentrations were not detected or were below the revised preliminary action levels (PAL)/preliminary remediation goals (PRG) protective of human health. An explanation of significant difference (ESD) document was completed in June 2021 to update the existing PP and ROD. The significant difference was a change in regulatory limits. VADEQ has indicated that further long-term monitoring will be required to ensure that groundwater concentrations remain below the revised PALs/PRGs.

The RA(O) phase includes requirements for preparation of a LUCIP, long-term groundwater monitoring, and annual reporting. Since there is no defined duration for completion of the groundwater monitoring specified in the 2006 DD, an indefinite 30-years of RA(O) is assumed or until the cleanup goals as stated in the ESD are attained. COCs in groundwater include RDX and 2,4/6-dinitrotoluene (DNT) above USEPA Region III drinking water RBCs. March 2022 groundwater monitoring detected isolated concentrations of 2,4,6-TNT, the breakdown product 4-amino 2,6-DNT, and an isolated perchlorate concentration (14 ug/L) above the remedial goals or screening levels.

A 2022 five-year review found that the remedy for FTBL-69 is protective of human health and the environment and that LUCs are in place to restrict residential land use and groundwater use at the site. Monitoring of groundwater is being conducted in accordance with the 2021 LTM plan and the Fort Belvoir dig permit process is established to prevent unauthorized ground disturbance or land use activity. Institutional controls (IC) focus on restricting use of groundwater, MEC requirements, and restriction on unmitigated development. MEC will be addressed under a DD for Engineer Proving Ground (EPG) Munitions Response Area (MRA) FTBL-005-R01. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and five-year reviews will continue indefinitely.

51105.1093_CC-A29_MASON PIT DEBRIS FILL

Env Site ID: CC-A29

Cleanup Site: MASON PIT DEBRIS FILL

Alias: A29

Regulatory Driver: RCRA-C

RIP Date: 12/1/2015

RC Date: 12/1/2015

RC Reason: Study Completed, No Cleanup Required

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	3/15/2010
RFI/CMS:	3/15/2010	8/6/2015
DES:	8/7/2015	12/1/2015
IRA:	- -	- -
CMI(C):	8/7/2015	12/1/2015
CMI(O):	- -	- -
LTM:	12/2/2015	9/30/2054

Site Narrative: SWMU A-29 is an inactive landfill located on Fort Belvoir North Post south of Telegraph Road and west of Woodlawn Road. The site was identified as a SWMU in a 1988 Phase II RFA and was part of a broad area of sand and gravel pits operated during the 1950s, that were later filled and re-purposed as a storage yard (SWMU A-14) for salvage material by the Defense Reutilization and Marketing Office (DRMO). Historical information indicates that the sand quarries were filled with construction debris in the 1960s that originated from World War II-era building barracks, administration buildings, and associated infrastructure. SWMU-A14 is a 10-acre fenced site that incorporates the former quarry pits at the north (SWMU A-29) and south and is used for materials storage, maintenance, and parking for recreational vehicles (RV). Building 2990 (formerly 2517) has been located on the southern part of the SWMU A-29 site boundary since the early 1950s. During a 2008 Phase I RFI, methane gas was detected at Building 2990 near the landfill. Five LFG probes were installed and sampled around the perimeter of Building 2990 in June 2014. Conditions at Building 2990 did not indicate the presence of LFG inside the building. NFA determination was contingent on completion of methane monitoring at gas probes and inside of Building 2990 over a 12-month period. Fort Belvoir recommended NFA with LUCs for SWMU A-29 and USEPA Region III concurred with the recommendation in November 2015. A DD for SWMU A-29 was approved by USEPA Region III in January 2016 and a LUCIP was finalized in December 2015. Additional methane monitoring and sampling completed in May 2017 and January 2018 supported the conclusion for NFA. Land use is monitored annually and through the dig permitting process to address the waste associated with the former landfill areas. Annual LUC inspections with reporting and periodic reviews were initiated in 2015 and continue under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LTM will continue indefinitely.

51105.1094_CC-A04A23_FRMR COAL STORAGE & PCB SPILL

Env Site ID: CC-A04A23

Cleanup Site: FRMR COAL STORAGE & PCB SPILL

Alias: A04, A23

Regulatory Driver: RCRA-C

RIP Date: 8/5/2016

RC Date: 8/5/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 8/6/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/30/1988	9/30/1989
CS:	3/15/2008	3/15/2009
RFI/CMS:	1/15/2009	12/7/2012
DES:	12/7/2012	12/7/2012
IRA:	- -	- -
CMI(C):	7/5/2014	8/5/2016
CMI(O):	- -	- -
LTM:	8/7/2016	8/6/2054

Site Narrative: SWMUs A-04 (Former Coal Storage Yard) and A-23 (Transformer Coolant Release) were combined in the Army database as CC-A04A23 (51105.1094) because of co-location on Fort Belvoir. The area encompassing SWMU A04A23 was recently used by Fort Belvoir as a materials recycling management center where large items were accumulated, sorted, and re-distributed for recycling. Recycling activity was stopped in April 2020. SWMU A-04 was identified in the 1988 Phase II RFA as a former coal storage area approximately 225 feet by 125 feet in size located 200 feet south of 21st Street. A Phase I RFI completed at SWMU A-04 in January 2009 indicated that the site soil was impacted by polycyclic aromatic hydrocarbon (PAH) compounds at concentrations above residential standards. Based on the RFI and because of the industrial site use, Fort Belvoir recommended NFA for SWMU A-04 and USEPA Region III concurred with the recommendation in December 2012. The VADEQ required NFA with LUCs for industrial land use at SWMU A-04 in the October 2014 statement of basis. A-23 was identified in the 1988 Phase II RFA as the location of a dielectric coolant release from two vandalized transformers stored on a concrete pad. Approximately 197 liters (52 gallons) of coolant containing polychlorinated biphenyl (PCB) flowed off the pad and affected 2,700 square feet of concrete surface and 120 linear feet of a drainage channel adjacent to the western side of the concrete slab. Aroclor 1260 concentrations ranged up to 12,698 milligrams per kilogram (mg/kg) exceeded the 1980 USEPA action level of 50 mg/kg for PCBs. A removal action completed in October 1982 included the removal of affected concrete and soil near the slab and approximately 120 linear feet of sediment from an adjacent drainage ditch. The entire site was filled with two feet of clean soil and was covered with concrete. A site summary report for SWMU A-23 was submitted to USEPA in 2013 with a recommendation for NFA. USEPA Region III concurred with the NFA recommendation with LUCs for industrial land use in March 2014. Annual LUC inspections with reporting and periodic reviews were initiated in 2016 and continue under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LTM will continue indefinitely.

51105.1095_CC-E06_BUILDING T-1423 WASTE POL STORAGE

Env Site ID: CC-E06

Cleanup Site: BUILDING T-1423 WASTE POL STORAGE

Alias: E-06

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	3/15/2009
RFI/CMS:	8/15/2009	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	4/15/2016	4/15/2016
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU E-06 was identified in a 1988 Phase II RFA located inside a fenced contractor vehicle parking lot on Jackson Loop Road on the Fort Belvoir South Post. The SWMU was a storage area for five 55-gallon drums of waste generated from training activities at Building 1423. Three drums contained POL products, one drum held solvents, and the other drum held antifreeze. The drums were stored on a concrete pad measuring approximately 10 by 20 feet with no secondary containment. During a 2005 visual site inspection (VSI), the components (drums) of the waste POL storage area were observed to have been removed. The site had an active rusting waste oil AST. The site was bordered to the west with fencing, to the east by a concrete parking lot near Building 1423, a metal open-ended shed, and a truck trailer. A 2009 Phase I RFI for Building T-1423 Waste POL Storage Area reported semi-volatile organic compounds (SVOC), benzo(a)pyrene and dibenzo (a, h) anthracene at levels exceeding industrial screening criteria. A Phase II RFI was completed in December 2010 to further evaluate the nature and extent of SVOCs in subsurface soil at SWMU E-06. Analytical results from the Phase I and Phase II RFIs were evaluated for potential risk to human health receptors. A total of four PAH compounds were detected above their USEPA Region III residential regional screening level (RSL) values, however, risk results were within the USEPA acceptable risk range for human health for current and planned future site use. Based on the risk screening of sample results from the Phase II investigation, Fort Belvoir recommended NFA with LUCs for current industrial land use. USEPA Region III concurred with the recommendation in a letter dated December 11, 2013. The VADEQ provided a statement of basis on October 20, 2014. The LUCIP was finalized in December 2015 and was approved by USEPA on April 4, 2016. Annual LUC inspections with reporting and periodic reviews were initiated in 2016 under the LTM phase. Current and future land use remains industrial and hazardous substances, pollutants, or contaminants unrelated to the original site condition may remain at the site at concentrations exceeding levels that allow for UU/UE. However, revision of the SWMU status is warranted as the original site area consisting of POL drum storage has been removed, POL storage discontinued, and the area has expanded to consist of a motor pool, snow equipment storage, and industrial materials storage. FTBL recommends

that the original RCRA SWMU E-06 receive site closeout with discontinuation of LUC inspections and land use revised to active industrial. Future land use will be monitored through the Fort Belvoir dig permit process and National Environmental Policy Act (NEPA) requirements.

51105.1096_CC-MPS2009_PSAs 2009, 2033, and 2034

Env Site ID: CC-MPS2009

Cleanup Site: PSAs 2009, 2033, and 2034

Alias: MPS-2009

Regulatory Driver: RCRA-I

RIP Date: 10/16/2025

RC Date: 10/15/2054

RC Reason: Not assigned

SC Date: 10/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
ISC:	9/15/1989	9/15/1990
INV:	1/15/1996	5/15/1997
CAP:	9/15/2006	10/15/2024
DES:	10/15/2024	10/15/2025
IRA:	1/31/1996	5/31/1997
RA**(C)**	10/15/2024	10/15/2025
RA**(O)**	10/16/2025	10/15/2054
LTM:	- -	- -

Site Narrative: SWMU CC-MPS2009 is located on the FBNA (formerly EPG) and consists of three legacy petroleum UST storage site areas (Petroleum Storage Areas 2009, 2033, and 2034). The original USTs were investigated, removed, and closed under the VADEQ Petroleum program in 1996 and 1997. The USEPA Region III issued a RCRA 3013 UAO in 2005 for the FBNA requiring the Army to investigate potential releases of hazardous substances on the FBNA. Fort Belvoir began additional investigations at CC-MPS2009 in 2006 under the RCRA UAO. However, as a result of BRAC construction, MPS-2009 was covered with gravel and used for parking lots. New sewer and water lines were run through the site to support the temporary administrative space used during construction. Between 2006 and 2008, Fort Belvoir completed several phases of investigation to determine the nature and extent of contamination associated with CC-MPS2009 including the installation of groundwater monitoring wells. The results of the investigations showed little or no residual soil contamination; however, several overlapping groundwater plumes were delineated with constituents of concern in groundwater consisting of mainly petroleum and related halogenated compounds. A risk assessment for the site was submitted to USEPA in November 2011 but was not finalized. Reconnaissance for munitions clearance was conducted over the area of MPS-2009 in 2009 using broadly spaced transects as part of the overall clearance conducted for the former EPG training ranges.

The site was transferred by VADEQ to the CERCLA program in 2017, however, the site area is currently under the RFI/CMS phase in the Army project database. A supplemental RI report was approved by VADEQ on in February 2019 and a focused feasibility study (FFS) was approved by VADEQ in March 2021. Following completion of the RI/FFS, the area of MPS-2009 was identified for a military construction (MILCON) project. Quarterly groundwater monitoring was initiated in March 2022 at MPS-2009 to characterize current groundwater conditions and re-evaluate risk before selecting a remedy. Sampling events were conducted in March 2022, June 2022, October 2022, and January 2023. The quarterly sampling results indicated that a reduced area of groundwater contamination remained south of former Building 2073 and immediately north of the proposed MILCON construction footprint in the vicinity of a

former petroleum tank associated with former Building 2009. A comprehensive military munitions clearance action was initiated by the MILCON proponent in October 2022. Future environmental actions at MPS-2009 are dependent on the MILCON construction outcome. The need and scope for a long-term groundwater remedy will be reassessed as construction progresses to be compatible with the MILCON operations until CERCLA remedial objectives for MPS-2009 are achieved. Ongoing land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1099_CC-A28_NON-AUTHORIZED DEBRIS LANDFILL

Env Site ID: CC-A28

Cleanup Site: NON-AUTHORIZED DEBRIS LANDFILL

Alias: A-28

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	3/15/2009
RFI/CMS:	8/15/2009	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	4/15/2016	4/15/2016
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU A-28 was identified through historical documentation in the 1988 Draft Phase II RFA as an unauthorized debris landfill that was used between 1978 and 1980. The unit is located east of the former 600-area magazine along the top of a steep sided ravine. Debris consisting of broken concrete and asphalt, was observed during a 2005 VSI scattered around the upper slope and grass area of an adjacent ravine. Vegetation appeared to be healthy with no visible signs of distress. A pipe extended from underground running west-east and ended at the edge of the hillside. A Phase I RFI for soil and groundwater was completed at SWMU A-28 in December 2008. VOC and pesticide compounds were detected at concentrations below the corresponding residential/industrial RBC values. Detected concentrations of VOCs or SVOCs in groundwater at SWMU A-28 did not exceed the USEPA Region III September 2008 RBC or MCL values. Based on the conclusions of the investigation, Fort Belvoir recommended NFA at SWMU A-28. USEPA Region III concurred with the recommendation in July 2010. VADEQ required NFA with LUCs for industrial land use in the statement of basis from October 2014. LUCs consist of annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews continue under the LTM phase. Because the future land use will remain industrial and non-native materials remain at the site, periodic reviews will continue indefinitely.

51105.1103_CC-A025_SANITARY/DEBRIS LANDFILL

Env Site ID: CC-A025

Cleanup Site: SANITARY/DEBRIS LANDFILL

Alias: A25

Regulatory Driver: RCRA-C

RIP Date: 7/15/2013

RC Date: 7/15/2013

RC Reason: Study Completed, No Cleanup Required

SC Date: 7/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	10/15/2006	2/15/2008
RFI/CMS:	7/15/2008	12/15/2012
DES:	1/23/2013	2/15/2013
IRA:	- -	- -
CMI(C):	2/15/2013	7/15/2013
CMI(O):	- -	- -
LTM:	7/16/2013	7/15/2054

Site Narrative: SWMU A-25 was identified in a 1988 RFA as an area north of Meeres Road and west of Mulligan Road that was used as a dump site prior to the 1940s. Field observers have noted disposal of concrete curb/gutter and sidewalks from a 1979-1980 USACE project on the site with more than two feet of soil cover placed in the mid-1980s. The location was revised in a 1998 SWMU study to south of Kingman Road approximately 1200 feet southwest of the intersection between Kingman and Mulligan Roads (Jeff Todd Way). Surface dumping was observed consisting of concrete chunks, tires, glass, metal debris. During a 2005 VSI, multiple dump trucks were present at site A-25 depositing fill soil from ongoing construction projects. Two broad, forested stream valleys containing intermittent tributaries to Dogue Creek trend southward to the east and west of the A-25 clearing. Groundwater wells A25-MW08 to A25-MW12 and 11 gas probe (GP-28 to GP-38) wells were installed at SWMU A-25 during the Phase I RFI in 2008. Detected constituents in soil samples from the site were below the October 2007 residential RBCs. Organic and inorganic constituents detected in groundwater were below MCLs. Detectable methane concentrations (3.3 to 25.3%) were reported withing the landfill area but were not detected on the landfill perimeter. Supplemental groundwater monitoring including wells A25-MW16 and A25-MW17 during a Phase II RFI at the site in 2010 did not detect groundwater constituents above the MCLs. Risk evaluation did not identify concerns for human health associated with SWMU A-25. Based on the results of the RFIs, Fort Belvoir recommended NFA with LUCs for the site. USEPA Region III approved the recommendation for NFA with LUCs for industrial land use in December 2012. VADEQ issued the statement of basis for the site in October 2014. Annual LUC inspections with reporting and maintenance of signs were initiated in 2013 and periodic reviews will continue under the LTM phase. Future land use will remain industrial and hazardous substances, pollutants, or contaminants may remain at the site at concentrations exceeding levels that allow for UU/UE, reviews will continue indefinitely.

51105.1104_CC-A05_ROAD AND GRNDS/LAND MGMT STORAGE

Env Site ID: CC-A05

Cleanup Site: ROAD AND GRNDS/LAND MGMT STORAGE

Alias: A-05

Regulatory Driver: RCRA-C

RIP Date: 6/30/2015

RC Date: 9/15/2030

RC Reason: Not assigned

SC Date: 10/14/2059

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	1/15/2009	6/15/2014
DES:	6/15/2014	1/15/2015
IRA:	- -	- -
CMI(C):	2/15/2013	6/15/2015
CMI(O):	6/30/2015	9/15/2030
LTM:	10/15/2030	10/14/2059

Site Narrative: SWMU A-05 was identified in a 1988 RFA as a suspected unlined landfill which was in use prior to 1968. Historical aerial photography indicates an approximately 7-acre area of potential trench landfilling in a 1953 photo with subsequent photography showing substantial land disturbance, stockpiled materials, and considerable industrial activity. A 1992 SWMU study estimated the landfill to be 400 feet by 600 feet and located in the northwest quarter of the site. Site inspections mentioned the presence of surface debris which included abandoned 55-gallon drums, paint cans, tires, and construction debris. A September 2005 VSI indicated the area was part of the roads and grounds/land management yard. Most of the yard, including the site, is currently used for equipment storage and materials staging and is surfaced with concrete aprons, asphalt, loose gravel, and bare soil with sparse vegetation. The site area has expanded to include approximately 2,800 feet of stream channel north of the yard area which has been impacted by chlorinated solvents. Phase I and Phase II RFIs were completed for A-05 between April 2009 and August 2012. Tetrachloroethylene (PCE), methylene chloride, carbon disulfide, and pesticides were detected in groundwater; PCE was detected in subsurface soil; pesticides were detected in surface soil; pesticides and PCE were detected in sediment; and carbon disulfide, barium, manganese, and PCE were found in surface water. Human health risk and ecological screening found concerns for human exposure to surface water at SWMU A-05.

The final CMS for A-05 was completed in September 2013. An internal DD identifying the selected remedy for groundwater contamination at A-05 as in situ enhanced bioremediation, bioaugmentation, long-term monitoring of groundwater, surface water and sediment, LUCs and MNA was finalized in June 2014. VADEQ provided a statement of basis for this site on Oct. 31, 2014. The corrective measures implementation (CMI) work plan and LUCIP were completed in January 2015. The CMI plan was modified by five addenda prepared between March 2015 and September 2017. An initial emulsified vegetable oil (EVO) injection was completed in November 2017. An additional in situ enhanced bioremediation (ISEB) (EVO) injection was completed in fiscal year (FY)21 to address an influx of PCE from potential upgradient sources. A 2021 data gap investigation identified chlorinated VOCs, predominately PCE, in the

groundwater at an upgradient source (SWMU MP-2) at concentrations above the PALs/MCLs. PCE contamination has impacted the deeper aquifer to the Mount Vernon Clay stratum. An updated CSM indicated a direct contaminant migration pathway from SWMU MP-2 to the area of SWMU A-05. November 2022 investigations of upgradient SWMU MP-2 have verified the migration pathway to downgradient groundwater/surface water contamination by chlorinated solvents in the wells and surface water at SWMU A-05. This data will be used to refine proposed remedial actions for SWMUs A05 and MP-2. A fourth A05 ISEB injection event is currently projected to take place concurrently with the proposed initial MP-2 injection event. A corrective measure implementation plan for SWMU MP-2 was completed in November 2023 to treat groundwater flowing towards A-05. Corrective measures for these sites will be coordinated to ensure a comprehensive treatment outcome. Additional monitoring of groundwater, surface water, and sediment, periodic reviews, and LUCs will be conducted under the CMI(O) phase until remedial goals have been achieved and will be incorporated into the CMI plan.

51105.1110_CC-E14_BLDG 1939 WASTE POL STORAGE AREA

Env Site ID: CC-E14

Cleanup Site: BLDG 1939 WASTE POL STORAGE AREA

Alias: E-14

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	10/15/2008	6/20/2014
DES:	6/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	6/20/2014	4/15/2016
CMI(O):	4/15/2016	4/15/2016
LTM:	4/16/2016	4/15/2054

Site Narrative: Site CC-E14 (51105.1110) includes RCRA Part B permit, SWMUs E-14 and SWMU F-06 located within the yard area for Building 1906. SWMU E-14 was identified in the 1988 Draft Phase II RFA. The site was described as an area with three abandoned 55-gallon drums containing waste POL. The drums were observed to be approximately 15 feet from bare ground on an asphalt pad, located next to Building 1939 in the yard area. SWMU F-06 was a 250-gallon waste oil AST identified in the 1988 Draft Phase II RFA. According to the 1992 SWMU study, the original tank rested on bare soil with no containment and exhibited noticeable soil staining. During a 2005 VSI, it was noted that the stain was still present; however, it had decreased in size to 10 feet by 6 feet. The AST at SWMU F-06 was active in 1985 and removed in 1994. A Phase I RFI was initiated at E-14 and F-06 in October 2008. SVOCs were detected at concentrations that exceeded residential RBC soil values to include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo (a, h)anthracene, indenol(12,3-c,d)pyrene and naphthalene. All SVOCs, except for benzo(k)fluoranthene, reported concentrations that exceeded industrial RBC soil values. SWMUs E-14 and F-06 were combined during the Phase II RFI due to proximity. The Phase II RFI, completed in July 2013reported PAH concentrations exceeding the residential RSL for benzo(a)pyrene near the former 250-gallon AST. Based on the Phase II RFI results, Fort Belvoir recommended NFA with LUCs for the site. The USEPA Region III concurred with the recommendation in December 2013. The VADEQ concurred with NFA with LUCs in the statement of basis dated October 2014. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews will continue under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs will continue indefinitely.

51105.1111_CC-A06_Kingman Road Landfill

Env Site ID: CC-A06

Cleanup Site: Kingman Road Landfill

Alias: A-06

Regulatory Driver: RCRA-C

RIP Date: 7/15/2013

RC Date: 7/15/2013

RC Reason: Study Completed, No Cleanup Required

SC Date: 7/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	6/30/2008	12/15/2012
DES:	1/23/2013	2/15/2013
IRA:	- -	- -
CMI(C):	2/15/2013	7/15/2013
CMI(O):	- -	- -
LTM:	7/16/2013	7/15/2054

Site Narrative: SWMU A-06 is an inactive seven-acre landfill located south of Kingman Road and approximately 800 feet east of Woodlawn Road on an active military site at Building 2310. Historical reports indicate that the area was operated as a sanitary landfill from the 1940s until the 1950s. A 1953 aerial photograph documents the extent of the landfill disturbance. Geotechnical borings from October-November 1983, indicated buried debris north of Building 2310. Additional encounters with fill material in the area included waste debris such as wood, glass, fabric, metal, cinders, paper, and rubber. A portion of the landfill surface is currently occupied by a fenced compound with surface structures.

A Phase I RFI completed in September 2009 detected trace VOCs, SVOCs, and pesticides below the RBCs. Groundwater analyses from monitoring wells A06-MW01 to A060-MW02 installed at the site reported SVOCs and metals at concentrations below the RBCs and MCLs. Surface water/sediment metals detections were below the human health and ecological regulatory criteria. Measurable methane concentrations (0.1 to 47.3 %) were detected in interior landfill gas probes at the site. A Phase II RFI completed in May 2011 detected metals constituents in subsurface soil, surface water, and groundwater below regulatory and health criteria. Measurable methane concentrations (5.3 to 17.3 %) were detected in interior (GP-02 and GP-03) landfill gas probes at the site. Based on the results of the Phase I and Phase II RFIs Fort Belvoir recommended NFA with administrative LUCs to ensure safety for personnel that access the site. However, because of previously detected LFG (methane) and surface debris found at the site the USEPA, approved NFA with LUCs for current industrial land use at SWMU A-06 in a letter dated Dec. 7, 2012. USEPA also recommended periodic landfill cap inspections to ensure that surface water runoff does not contribute to erosion of the landfill cap. VADEQ issued the statement of basis for this site on Oct.20, 2014. Annual LUC inspections reporting, and maintenance of signs were initiated in 2013 and periodic reviews will continue under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, reviews will continue indefinitely.

51105.1112_CC-A07_Mulligan Road Landfill

Env Site ID: CC-A07

Cleanup Site: Mulligan Road Landfill

Alias: A-07

Regulatory Driver: RCRA-C

RIP Date: 7/15/2013

RC Date: 7/15/2013

RC Reason: Study Completed, No Cleanup Required

SC Date: 7/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	2/15/1988	2/15/1988
CS:	2/15/1988	2/15/1988
RFI/CMS:	6/15/2010	12/15/2012
DES:	1/23/2013	2/15/2013
IRA:	- -	- -
CMI(C):	2/15/2013	7/15/2013
CMI(O):	- -	- -
LTM:	7/16/2013	7/15/2054

Site Narrative: SWMU A-07 was identified in a 1988 Draft Phase II RFA as an inactive debris landfill located on North Post approximately 1,000 feet southwest of the intersection of Kingman Road and Mulligan Road (now Jeff Todd Way). The approximately 4-acre area operated as a soil borrow pit from the late 1950s until 1978. The area was filled with debris from World War II-era wood buildings between 1978 and 1986. The deepest area along the western side of the site is approximately 20-feet deep. Along the ridge line on the eastern side of the site, there was no excavation. Historical documentation indicated asbestos-covered piping, dried lead paint, and numerous No. 2 heating oil tanks (250-gallon) were disposed at this site. The entire area is covered with two feet of clean fill. During the 1988 Phase II RFA, partially buried construction debris was observed particularly along the edges of the landfill. Several rusted metal storage tanks and large pieces of concrete were reported in a swale that drains land to the northeast. Soil fill material from an ongoing housing project was placed on top of the landfill as a cap in September 2005 and was stabilized with a native grass seed mix. Phase I and Phase II RFIs completed in July 2012 reported organic compounds and metals were sporadically detected above screening levels in groundwater. Based on the results of the RFIs and subsequent risk evaluation, Fort Belvoir recommended NFA for SWMU A-07. USEPA Region III approved NFA with LUCs for current industrial land use at SWMU A-07 in December 2012. VADEQ issued the statement of basis for the site in October 2014. Annual LUC inspections and reporting, and maintenance of signs were initiated in 2013 under the LTM phase. Periodic reviews will continue under the LTM phase. While future land use remains industrial and hazardous substances, pollutants, or contaminants remain at the site exceeding criteria for UU/UE, LUCs will continue indefinitely.

51105.1113_CC-A08A16_GW Village Landfill/Gas Trench

Env Site ID: CC-A08A16

Cleanup Site: GW Village Landfill/Gas Trench

Alias: A-08, A-16

Regulatory Driver: RCRA-C

RIP Date: 9/15/2016

RC Date: 8/14/2054

RC Reason: Not assigned

SC Date: 8/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	9/15/1989	9/15/1989
RFI/CMS:	6/15/2008	6/15/2013
DES:	8/15/2013	5/15/2014
IRA:	- -	- -
CMI(C):	1/15/2014	9/15/2016
CMI(O):	9/15/2016	8/14/2054
LTM:	- -	- -

Site Narrative: SWMU A-08 and Site A-16 are co-located on South Post near Dogue Creek and are combined as CC-A08A16 (51105.1113). SWMU A-08 is a closed landfill that operated from the post 1930s to the early 1960s. SWMU A-16 is a two-foot wide, 400-foot-long limestone-filled trench installed in 1982 as an LFG mitigation measure on the western edge of the landfill. Since A-16 is an active unit and does not meet the definition of a SWMU, USEPA Region III granted NFA to the interceptor trench in a letter dated Jan. 12, 2011.

Phase I and Phase II RFIs were completed for the landfill site between August 2009 and April 2013 and reported chlorinated solvents (principally PCE) and SVOCs in groundwater and VOCs in adjacent surface water at Site A-08. A CMS completed in August 2013, documented the preferred corrective measure for addressing landfill waste as engineered vegetative cover enhancement, long-term monitoring, and LUCs; no corrective measure was selected to address groundwater in the CMS report. Fort Belvoir conducted two years of MNA sampling prior to selecting a corrective measure for groundwater. USEPA Region III approved the CMS report recommendation in a letter dated May 19, 2014. An internal DD identifying the selected remedy for addressing the landfill waste was finalized in June 2014. VADEQ provided a statement of basis for this site on Oct. 31, 2014. A LUCIP was finalized in January 2015. An internal DD addendum was finalized in January 2016 selecting MNA, LTM, and LUCs as the final remedy to address groundwater contamination at Site A-08. USEPA Region III approved the 2016 Internal DD Addendum recommendation on Jan. 5, 2016. Enhancements to the landfill cover to address subsidence of the landfill waste were completed in late 2016 as part of the CMI. Long-term groundwater monitoring was initiated in 2016. In a letter dated Dec. 18, 2020, VADEQ concurred with discontinuation of LFG monitoring at Site A08 based on the lack of detectable methane. Long-term monitoring of the groundwater, annual inspections of the landfill cover, and periodic reviews will continue under the CMI(O) phase until remedial goals have been achieved. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and reviews will continue indefinitely.

51105.1114_CC-A09_MARKHAM SCHOOL LANDFILL/TRENCH

Env Site ID: CC-A09

Cleanup Site: MARKHAM SCHOOL LANDFILL/TRENCH

Alias: A-09, A-17

Regulatory Driver: RCRA-C

RIP Date: 9/15/2016

RC Date: 9/15/2054

RC Reason: Not assigned

SC Date: 9/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	6/15/2008	5/15/2014
DES:	6/15/2014	6/15/2016
IRA:	- -	- -
CMI(C):	1/15/2014	9/15/2016
CMI(O):	9/15/2016	9/15/2054
LTM:	- -	- -

Site Narrative: SWMU A-09 and Site A-17 are co-located on South Post near Dogue Creek and are combined as SWMU CC-A09A17 (51105.1114). SWMU A-09 (Markham School Landfill) is an approximately 17 acre closed trench and fill landfill that operated between the late 1930s and 1956. Site A-17 is 1.5 feet wide by 270 ft long, gravel-filled trench installed as a methane mitigation measure to vent LFG generated from SWMU A-09. The trench was installed in 1981 on the southern edge of the landfill east of the Markham School building and remains in place. Since A-17 is an active unit and does not meet the definition of a SWMU, the USEPA Region III granted NFA for the interceptor trench (A-17) in a letter dated Jan. 12, 2011.

Because of the location of Markham School on the southwestern corner of the landfill, a methane monitoring system was installed around and inside the school in 1980 and a foundation air flushing (blower unit) and vent system was installed in 1982. The blower unit was shut-off and electrical components were discovered to have been removed during a building renovation in approximately 2012. Necessary repairs to bring the unit back into operation were completed in September 2020.

Phase I and Phase II RFIs were completed for the site between August 2009 and June 2013. Landfill A-09 is monitored by groundwater wells A09-MW01 to A09-MW13 and landfill gas wells A09-GP01 to GP09. Groundwater underlying the site is impacted by declining chlorinated solvent compound concentrations consisting predominantly of PCE and breakdown products TCE, 1,2-DCE, and vinyl chloride. Chlorinated solvents have also impacted an unnamed surface water drainage to Dogue Creek and surface water locations adjacent to Dogue Creek.

A CMS completed in August 2013 documented the preferred corrective measure at CC-A09 as an engineered vegetative cover enhancement, long-term monitoring, and LUCs. A corrective measure was not selected to address groundwater in the CMS Report. Fort Belvoir conducted two years of MNA sampling prior to selecting a corrective measure for groundwater. USEPA Region III approved the CMS report recommendation in a letter dated May 19, 2014. An internal DD identifying the selected remedy

for addressing the landfill waste was finalized in June 2014. VADEQ provided a statement of basis for this site on Oct. 31, 2014. A LUCIP was finalized in January 2015. An internal DD addendum was finalized in January 2016 selecting MNA, LTM, and LUCs as the final remedy to address groundwater contamination at Site A-09. USEPA Region III approved the 2016 internal DD addendum recommendation in an E-mail dated Jan. 5, 2016. Enhancements to the landfill cover to address the landfill subsidence were completed in late 2016 as part of the CMI. Long-term groundwater monitoring was initiated in 2016 and will continue under the CMI(O) Phase until remedial goals have been achieved. Concentrations of chlorinated solvents continue to exceed the remedial goals in surface water and groundwater at A-09 based on sampling in 2022.

Long-term quarterly LFG monitoring of nine probes near the Markham School, as well as operation and maintenance of the methane detection/alarm system at the school, was initiated in December 2013 and will continue to ensure the protection of human health at the facility. Additionally, operation and maintenance of the blower unit was re-initiated in 2020. Annual LUC inspections/reporting and long-term monitoring of the groundwater, landfill cover, and LFG will continue under the CMI(O) phase until remedial goals have been achieved. Because hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, periodic reviews will continue indefinitely.

51105.1115_CC-A11_POE ROAD LANDFILL

Env Site ID: CC-A11

Cleanup Site: POE ROAD LANDFILL

Alias: A-11

Regulatory Driver: RCRA-C

RIP Date: 9/15/2016

RC Date: 8/14/2054

RC Reason: Not assigned

SC Date: 8/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1988
CS:	2/15/2008	2/15/2008
RFI/CMS:	6/15/2008	8/15/2013
DES:	6/15/2014	1/15/2015
IRA:	- -	- -
CMI(C):	2/15/2014	9/15/2016
CMI(O):	3/15/2015	8/14/2054
LTM:	- -	- -

Site Narrative: SWMU A-11, Poe Road Landfill, was identified in a 1988 Phase II RFA as an approximately 20-acre, unlined landfill that received municipal waste and construction debris from the installation between 1967 and 1977before closing in 1978. The site was operated on a former military operational training range on the FTBL Southwest Training Area. Prior to its use as a landfill, the area was used as a small arms firing range during World War II. A ridgeline along the western portion of the site was used as a backstop, while the firing points were on the eastern side along Poe Road. Phase I and Phase II RFIs were completed for the site between August 2009 and June 2013. VOCs and metals were detected in groundwater and surface water. A CMS approved by USEPA Region III in August 2013 documented the preferred corrective measures for the landfill waste and groundwater at A-11. The preferred measures consisted of engineered vegetative cover enhancement, long term monitoring, LUCs, and MNA. An internal DD was finalized in June 2014. VADEQ provided a statement of basis for this site on Oct. 31, 2014. A LUCIP was finalized in January 2015. Enhancements to the landfill cover to address the landfill waste were completed in 2016 as part of the CMI. Long-term monitoring of the groundwater, landfill cover, and LFG was initiated in 2015 with annual and periodic reviews continuing under the CMI(O) phase until remedial goals have been achieved. 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 UU/UE, monitoring and reviews will continue indefinitely.

Methane is reported in A11 LFG probes A11-GP02 through A11GP04 and A11-GP06 through A11-GP08 in October 2021 and March 2022 at concentrations ranging from 1.0 percent to 69.7 percent by volume. The highest methane concentration in October 2021 (69.7 percent by volume) was measured in LFG probe A11-GP03. Chlorinated solvent concentrations in groundwater have completely degraded (PCE) or exhibit order of magnitude decreasing trends (TCE, DCE, vinyl chloride) in the A11 monitoring wells.

51105.1116_CC-A12_ACCOTINK LANDFILL

Env Site ID: CC-A12

Cleanup Site: ACCOTINK LANDFILL

Alias: A-12

Regulatory Driver: RCRA-C

RIP Date: 9/15/2016

RC Date: 3/14/2054

RC Reason: Not assigned

SC Date: 3/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	3/15/2009
RFI/CMS:	9/15/2009	2/15/2014
DES:	1/15/2013	8/15/2014
IRA:	- -	- -
CMI(C):	2/15/2014	9/15/2016
CMI(O):	3/15/2015	3/14/2054
LTM:	- -	- -

Site Narrative: SWMU A-12, Accotink Landfill, was identified in a 1988 Phase II RFA as an inactive landfill located on the southwest training area operational range on Fort Belvoir. Historical records indicate that the landfill accepted construction and municipal waste between 1956 and 1973. Aerial photographs from 1953 show four large petroleum tanks (SWMU MP1 [51105.1124]) with berms along Poe Road on either side of the landfill entrance. There is presently no visual evidence of the storage tanks. The center of the landfill including portions of Accotink Bay, and the adjacent wetlands were filled with debris until ordered to stop by Congress in 1973. Currently, the landfill is covered with a layer of soil and supports old field vegetation and planted stands of loblolly pine and black locust. The landfill is within the Accotink Bay Wildlife Refuge and is traversed by unimproved hiking trails.

Phase I and Phase II RFIs were completed for the site between October 2009 and December 2012 and reported VOCs and metals in groundwater and surface water at the site. A CMS report was approved by the USEPA Region III in August 2013 to document the preferred corrective measure for landfill waste and groundwater at A-12. The preferred measures consisted of engineered vegetative cover enhancement, long term monitoring, LUCs, and MNA. An internal DD was finalized in June 2014. VADEQ provided a statement of basis for the site on Oct. 31, 2014. A LUCIP was finalized in January 2015. Enhancements to the landfill cover to address the landfill waste were completed in late 2016 as part of the CMI. Long-term monitoring of the groundwater and LFG were initiated in 2015 and periodic reviews will continue under the CMI(O) phase until remedial goals have been achieved. 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 UU/UE, reviews will continue indefinitely.

Methane was detected (1.0 percent by volume to 68.9 percent by volume) in LFG probes (A12-GP03, A12-GP04, and A12-GP08) during monitoring at A12 in October 2021 and March 2022. Concentration trends in groundwater verify that the MNA remedy is effectively degrading chemicals of interest to concentrations below MCLs. Concentrations of PCE and TCE are below the MCLs at SWMU A12.

51105.1117_CC-A14_DRMO SALVAGE STORAGE AREA

Env Site ID: CC-A14

Cleanup Site: DRMO SALVAGE STORAGE AREA

Alias: A-14

Regulatory Driver: RCRA-C

RIP Date: 12/1/2015

RC Date: 12/1/2015

RC Reason: Study Completed, No Cleanup Required

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	6/15/1996	7/15/1996
RFI/CMS:	3/15/2008	8/6/2015
DES:	8/7/2015	12/1/2015
IRA:	- -	- -
CMI(C):	8/7/2015	12/1/2015
CMI(O):	12/1/2015	12/1/2015
LTM:	12/1/2015	9/30/2054

Site Narrative: The DRMO Salvage Yard (SWMU A-14) as an outdoor unit Identified in a 1988 RFA, that was used for the collection and storage of salvageable materials generated on site. The unit consists of a 10-acre fenced enclosure that includes several smaller SWMUs (A-29, L1, H1, N1, L35, N16) on the northernmost Main Post. Material previously stored on the surface at this site included vehicles, vehicle parts, batteries, scrap machinery, scrap metal, scrap cable and wire, equipment, appliances, furniture, and tires. The unit measuring approximately 500 ft by 300 ft is partially paved and partially located on bare soil within a fenced enclosure. A leaking transformer was reported on the site from a 1987 inspection.

SWMU A-14 surrounds a complex of light industrial buildings, designated Buildings 2990, 2991, and 2993 on the FTBL North Post. Installation records indicate that stains from spillage and/or leakage from items stored on the ground have been noted in the area. The RFA document also noted batteries stored on bare ground; however, the stains and batteries were not observed when the site was visually inspected in 1992. Stained soil was observed by field personnel after a pile of scrap cable stored in the northwest corner of the DRMO area was removed. An isolated lead concentration (2,300 mg/kg) exceeding criteria was reported in the soil. Currently, the fenced area is used as the North Post Golf Course maintenance facility. Several dozen RVs are parked in rows on the bare ground at SWMU A-29. No visual evidence of releases from the RVs was observed and no storage of batteries or other hazardous materials described in earlier reports was observed at the time of RFI phase I investigation.

Though combined with A-29, A-14 has been recommended for NFA as no significant contamination associated with the non-landfill portion was detected. Methane was detected above the lower explosive limit during the investigation of A-29 though detections are thought to be the result of landfill activities and not activities associated with SWMU A-14. Furthermore, given the age of the landfill and the distance to the occupied building, FTBL concluded that monitoring of the existing LFG probes would be sufficient to protect human health and the environment. Based on the information presented in the RFI, Fort Belvoir recommended NFA at SWMU A-14. USEPA Region III concurred with the recommendation in

a letter dated Aug. 6, 2015. Current land use at SWMU A-14 is classified as Community which encourages mixed development as religious, family support, personnel services, professional services, medical community, housing, commercial, and recreational facilities. Fort Belvoir recommended NFA with LUCs for SWMU A-29 and the USEPA Region III concurred with the recommendation on Nov. 23, 2015. The remedy for LUCs and the LUCIP was finalized in December 2015. The DD for SWMU A-29 was approved by USEPA Region III on Jan. 8, 2016. A statement of basis is pending from VADEQ. Fort Belvoir will implement LUCs at Site A-14 in accordance with the approved LUCIP for A-29, where LUCs will include performance of annual inspections/ reporting and periodic reviews under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE reviews, will continue indefinitely.

51105.1118_CC-A26_SANITARY LANDFILL

Env Site ID: CC-A26

Cleanup Site: SANITARY LANDFILL

Alias: A-26

Regulatory Driver: RCRA-C

RIP Date: 7/15/2013

RC Date: 7/15/2013

RC Reason: Study Completed, No Cleanup Required

SC Date: 7/15/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	10/15/2006	12/15/2008
RFI/CMS:	7/15/2008	1/23/2013
DES:	1/23/2013	2/15/2013
IRA:	- -	- -
CMI(C):	2/15/2013	7/15/2013
CMI(O):	- -	- -
LTM:	7/16/2013	7/15/2054

Site Narrative: SWMU A-26 was identified in the 1988 Phase II RFA as an approximately 5-acre site located along Pohick Road immediately south of the Tulley Access Control Point. The site is in an area of former military development in the late 1930s and in proximity to the former Pig Farm Range. A 1960 aerial photograph documents an approximately 8-acre disturbed area that extended east and west of Pohick Road. A 1953 aerial photograph shows mounded and bermed materials with building construction on the site adjacent to the Pig Farm Range. A SWMU study reported that USACE soil borings and wells in the area in the early 1980s did not encounter evidence of waste burial. Re-vegetation of the site was initiated in 1972 and the site area has been heavily vegetated to the present. During both the 1988 RFA and a 2005 VSI, evidence of surface dumping was found along the edges of the unit. Surface debris such as five-gallon containers, pipes, hoses, 55-gallon drums, and concrete potentially associated with troop training, bivouac, or surface dumping that was covered with soil.

Groundwater analyses for Phase I RFI wells A26-MW01 to A26-MW05 reported metals concentrations and the pesticide heptachlor epoxide exceeding the MCLs in 2008. The Phase II RFI included additional wells A26-MW06 and MW07. Arsenic, iron, and manganese concentrations exceeded RBCs in the Phase II groundwater sampling. Elevated lead (1,860 mg/kg) was detected in a sediment sample near the site. Methane was detected in one of five gas probes (GP-01 to GP-05) ranging from 0.2 to 12.5% in 2008 but was not detected during the Phase II RFI in 2012.

Phase I and Phase II RFIs completed between July 2008 and August 2012 supported a determination of NFA for SWMU A-26. The USEPA Region III approved NFA with LUCs for current industrial land use at SWMU A-26 in a letter dated Jan. 23, 2013. The USEPA letter stipulated that additional landfill cap maintenance and possible improvements would be required as deemed necessary. Approximately 25 cubic yards of surface debris was removed from the site area by Fort Belvoir in November 2013. VADEQ issued a statement of basis for the site on Oct. 20, 2014. LUCs include performance of annual inspections and reporting, and maintenance of signs under the LTM phase Annual LUC inspections and reporting and maintenance of signs were initiated in 2013. Because the future land use will remain industrial and

hazardous substances, potentially, remain at the site at concentrations exceeding levels that allow for UU/UE, annual inspections and periodic reviews will continue under the LTM phase.

51105.1119_CC-L45_SEWAGE TREATMENT PLANT #1

Env Site ID: CC-L45

Cleanup Site: SEWAGE TREATMENT PLANT #1

Alias: L-45

Regulatory Driver: RCRA-C

RIP Date: 12/2/2019

RC Date: 12/2/2019

RC Reason: All Required Cleanup(s) Completed

SC Date: 2/24/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	3/15/2009
RFI/CMS:	3/31/2008	2/17/2019
DES:	12/3/2015	5/1/2019
IRA:	- -	- -
CMI(C):	12/3/2015	12/2/2019
CMI(O):	- -	- -
LTM:	2/24/2020	2/24/2054

Site Narrative: SWMU CC-L45 is a 1.7-acre site located within a fenced area east of Morrow Road and approximately 150 feet north of Gunston Cove. The unit is largely an inactive wastewater treatment plant except Building 687 which is currently used as a lift station by American Water. The wastewater treatment plant was active from 1919 through 1981 and underwent various upgrades and expansions during that time. Records indicate that the unit accepted hazardous constituents during its operational history. Results of a Phase I RFI completed in 2009 indicated that VOCs did not exceed RBC or MCL values in soil, groundwater, or sediment samples. Bis (2 ethylhexyl) phthalate was detected above the residential RBC and MCL values in the groundwater. Arsenic and lead exceeded the RBC screening levels in sediment samples. Pesticide exceeded RBCs in soil and sediment; and MCLs in groundwater. A Phase II RFI completed in 2014 reported detections of dieldrin above residential and industrial screening values in subsurface soil. Pesticides dieldrin and heptachlor epoxide were detected above the RSL and MCL values in groundwater. COCs at the site consist of SVOCs, metals, and pesticides above respective ecological screening criteria. A May 2018 CMS recommended soil capping, groundwater monitoring, and LUCs in the form of annual inspections to address soil and groundwater contamination at the site. VADEQ approved the CMS report recommendation on May 25, 2018. An internal DD identifying the selected remedy to address soil and groundwater was finalized in February 2019. An interim corrective measure (ICM) work plan and LUCIP were approved by VADEQ on May 1, 2019. An ICMR was completed in September 2019 documenting the placement of soil cover in the sediment basins at the site. VADEQ approved the ICMR in a letter dated Dec. 2, 2019. CMOs were to mitigate risks from COCs in soil by preventing ecological receptor exposure, monitoring groundwater to verify that COCs are not migrating off-site, and LUCs to maintain soil cover integrity and prevent use of site groundwater. The statement of basis for CC-L45 is pending permit modification. Future land use is identified as industrial in the garrison master plan. The CMI(C) phase which included requirements for LUC implementation and soil capping was completed on Dec. 2, 2019. The LUCIP and remedial action work plan were completed under the DES phase. Future requirements for long-term groundwater monitoring, annual LUC inspections with

reporting, and periodic reviews are conducted under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and periodic reviews will continue indefinitely.

51105.1120_CC-N23_POST DUMP

Env Site ID: CC-N23

Cleanup Site: POST DUMP

Alias: N-23

Regulatory Driver: RCRA-C

RIP Date: 7/15/2013

RC Date: 7/15/2013

RC Reason: Study Completed, No Cleanup Required

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1988
CS:	2/15/2008	2/15/2008
RFI/CMS:	10/15/2008	1/23/2013
DES:	1/23/2013	2/15/2013
IRA:	- -	- -
CMI(C):	2/15/2013	7/15/2013
CMI(O):	- -	- -
LTM:	7/16/2013	9/30/2054

Site Narrative: SWMU N-23 is an approximately 3-acre area located on South Post, north of the former Recycling Center (Building 1089). The area has an extensive history of usage for industrial storage, materials stockpiling, and possible materials burial dating from 1943 to 2021. The Recycling Center at Building 1089 and a yard waste composting area northwest of the building and overlying the landfill are currently inactive. The site area has undergone multiple episodes of stockpiling and re-grading. A 1960 aerial photograph shows bulk containers adjacent to a soil berm although it is unclear if the containers were actually landfilled on site. No information is known about the design, construction, or operation of the landfill or the waste materials. Debris including drums and steel trusses were observed scattered across the site. Phase I and Phase II RFIs were completed between October 2008 and January 2013. The Phase II RFI, Human Health Risk Assessment, and Ecological Risk Assessment report concluded that the investigation results supported a determination of NFA. USEPA Region III approved NFA with LUCs for current industrial land use at SWMU N-23 in a letter dated Jan. 23, 2013. VADEQ issued the statement of basis for CC-N23 on Oct. 20, 2014. LUCs include performance of annual inspections with reporting and maintenance of signs under the LTM phase. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and periodic reviews will continue indefinitely.

51105.1128_CC-AOPC-20 BNA_CONTAMINATED SOIL AND GW

Env Site ID: CC-AOPC-20 BNA

Cleanup Site: CONTAMINATED SOIL AND GW

Alias: AOPC-20

Regulatory Driver: CERCLA

RIP Date: 10/16/2026

RC Date: 10/15/2055

RC Reason: Not assigned

SC Date: 10/15/2055

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
PA:	11/15/2008	12/15/2008
SI:	1/15/2009	3/15/2009
RI/FS:	10/15/2010	10/15/2023
RD:	11/1/2023	9/30/2024
IRA:	6/15/2009	10/15/2012
RA(C):	10/1/2024	9/30/2026
RA(O):	10/16/2026	10/15/2055
LTM:	- -	- -

Site Narrative: Site AOPC-20 was identified on the FBNA during BRAC-related utility construction when workers encountered heavily stained soil and petroleum odors while excavating pits for directional boring of utility conduits. A thin layer of burned material was found in the soil column. Soil samples exhibited low level TPH, and dioxins. Most of the soil was excavated and removed as part of the construction project. Soils above soil screening levels for groundwater protection standards are present and are isolated; however, due to installation of critical infrastructure, the remaining contaminated soils were left in place. Site AOPC-20 is being investigated as part of FTBL-66 (former Fire Training Area) because of the proximity of the site areas. Three groundwater wells were installed and sampled near the excavation area in 2008. Benzene (5.2 ug/L) was detected in one well. Additional RFI work at the site was completed in July 2017. A February 2019 data gap investigation report concluded that the concentrations of chemicals of concern in the groundwater at FTBL-66 (including AOPC-20) had significantly decreased since 2007-2008. VADEQ approved the 2019 investigation report in a letter dated April 25, 2019, and recommended the Army evaluate remedial alternatives for the site.

Quarterly groundwater monitoring events were conducted in August 2021, November 2021, February 2022, and April 2022 in accordance with the Uniform Federal Policy – Quality Assurance Project Plan Groundwater Monitoring For FTBL-66 (Fire Training Area) North Area. A streamlined risk assessment using the quarterly groundwater results estimated non-cancer hazard quotients and cancer risks based on the maximum detections across the four sampling events. The cumulative cancer risk was estimated to be 8E-04, and the non-cancer hazard index across all target organs was estimated at 12. The cancer human health risk for groundwater is greater than the USEPA target risk values. Current groundwater conditions pose an unacceptable risk to human health if the groundwater were used as a potable water supply.

Future land use for FTBL-66 is identified as Industrial in the garrison master plan. There is no concern for potential off-site contaminant migration to this site and groundwater use is prohibited installation wide. The RI/FS phase will be completed following preparation of FS, PP and DD documentation. Fort Belvoir

anticipates the final remedy to address groundwater contamination at FTBL-66 will include LUCs, long-term monitoring of groundwater, and five-year reviews. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and reviews will continue indefinitely.

51105.1134_CC-MP2_B1152 PCE RELEASE SITE

Env Site ID: CC-MP2

Cleanup Site: B1152 PCE RELEASE SITE

Alias: MP-2

Regulatory Driver: RCRA-C

RIP Date: 11/15/2024

RC Date: 9/30/2054

RC Reason: Not assigned

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	6/15/2010	8/15/2010
CS:	8/15/2010	8/15/2010
RFI/CMS:	2/15/2013	7/31/2024
DES:	9/15/2018	10/16/2024
IRA:	- -	- -
CMI(C):	10/15/2020	11/15/2024
CMI(O):	11/15/2024	9/30/2054
LTM:	- -	- -

Site Narrative: SWMU CC-MP2 is a broad area of chlorinated solvent-contaminated groundwater underlying the industrial/commercial area of the FTBL South Post west of Gunston Road. PCE was initially detected in groundwater along Theote Road in the vicinity of Building 1124 in the 1960s. Phase I and Phase II RFIs completed for downgradient SWMU A-05 between April 2009 and August 2012 reported PCE in groundwater and surface water discharging to an adjacent ravine potentially associated with MP-2 plume migration. A 2017 RFI identified an extensive chlorinated solvent plume area associated with a potential source at former Building T1152 (former dry cleaner).

The 2017 RFI delineated the nature and extent of PCE concentrations exceeding the USEPA Region 3 RSLs and USEPA MCLs. Unacceptable risk to human health was identified for groundwater and indoor air (Building 1150) predominantly due to concentrations of PCE and its degradation products. The RFI was approved by VADEQ on July 6, 2017.

The information obtained from a data gap investigation report for MP-2 completed in June 2021 was used to update the site conceptual site model and develop a CMS. The CMS recommended in situ enhanced bioremediation and MNA for implementation at SWMU MP-2. The data gap report and CMS received VADEQ concurrence. An internal decision document was finalized in July 2021 with VADEQ concurrence. A LUCIP was completed for the site in August 2021 with VADEQ concurrence to formalize protective measures that restrict groundwater usage, identify changes in land-use or building occupancy within the areas overlying the MP-2 contaminant plume, and to require a dig permit for all subsurface activity.

SWMUs A-02 and A-05 (51105.1104) downgradient of the MP-2 plume area represent discharge pathways for MP-2 contaminants. The CMS recommended additional site investigations under the CMI(C) prior to the design of the recommended alternative. The design of the recommended alternative will include the implementation of the LUCs, groundwater monitoring program, and the design of the ISEB remediation. Information from the additional site investigations and the latest data from the SWMU

A-05 CMS for SWMU MP-2 remediation will be used to support the design. The design will be provided as part of the corrective measures implementation plan. Subsequent investigations have suggested that the MP-2 contaminant plume may not extend to SWMU A-02 and that an alternative source may be present for this area. VADEQ has recommended that additional resolution may be needed for A-02. Groundwater remediation, monitoring, annual LUC inspections, and reporting will be performed under the CMI(O) phase until remedial objectives have been achieved. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and periodic reviews will continue indefinitely.

51105.1138_CC-A24_FRMR DPDO STORAGE AREA/PCB SPILL

Env Site ID: CC-A24

Cleanup Site: FRMR DPDO STORAGE AREA/PCB SPILL

Alias: A-24

Regulatory Driver: RCRA-C

RIP Date: 8/5/2016

RC Date: 8/4/2054

RC Reason: Not assigned

SC Date: 8/4/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
RFA:	4/15/1980	8/15/1981
CS:	3/15/2008	3/15/2009
RFI/CMS:	9/15/2011	7/5/2014
DES:	7/5/2014	7/5/2014
IRA:	2/15/2014	8/5/2016
CMI(C):	2/15/2014	8/5/2016
CMI(O):	8/5/2016	8/4/2054
LTM:	- -	- -

Site Narrative: SWMU A-24 was the location of a 1979 release of dielectric transformer coolant from improperly stored transformers in a former Defense Property Disposal Office (DPDO) storage yard. The yard area was previously developed with buildings in the late 1930s and was used as a construction/ contractor yard until the early 1980s. Approximately 163 liters (43 gallons) of coolant containing PCBs was released into the surrounding soil from two transformers on the site affecting 1,600 square feet of soil area. A series of excavations and confirmation sampling events were completed at SWMU A-24 in 1983 until confirmation samples indicated that PCB concentrations were below the prevailing 50 mg/kg action level. The current fenced area is approximately 4.5 acres.

Fort Belvoir conducted a fate and transport evaluation in March 2014 for residual concentrations of Aroclor 1260 and submitted a site summary report recommending NFA with LUCs for SWMU A-24. The USEPA Region III approved NFA with LUCs at site A-24 in a letter dated March 17, 2014. USEPA specified that the required LUCs must include repair of the existing fence gate and signage; assessment and repair of the existing soil cap; evaluation of adjacent drainage features that may have been impacted by PCBs attributed to A-24 cap erosion. Fort Belvoir submitted a site summary report addendum for site A-24 to USEPA Region III in February 2016. USEPA Region III approved the site summary report addendum in February 2016 with the understanding that the drainage ditch downgradient of SWMU A-24 will be investigated in a future action by Fort Belvoir.

PCBs found in the drainage ditch soil exceeded USEPA's RSL for industrial use and ecologic screening for Aroclor 1260. Additional sampling of the drainage ditch downgradient of site A-24 was conducted in 2018 in accordance with the USEPA Region III conditions for approval of the site summary report addendum. Documentation of the sampling investigation was included in a supplemental RFI report, which included an ecological risk assessment. The supplemental RFI report for the drainage ditch was approved by VADEQ in a letter dated June 11, 2020. Approval of the supplemental RFI report for the drainage ditch specified hot spot removal to address an area of identified unacceptable risk to ecological receptors from substrate transport. CMS sampling for PBC was conducted at SWMU A-24 on Dec. 1,

2022, to obtain data to further delineate the horizontal and vertical extent of PCB contamination in the A-24 drainage channel. Aroclor1260 concentrations in the soil/sediment ranged from 0.092 to 65 mg/kg with an average concentration of 6.83 mg/kg. Based on the sampling results, the regulatory lead for the site was conveyed by VADEQ to USEPA- Toxic Substances Control Act (TSCA) in September 2023. Additional characterization of the adjacent stream channel for PCBs will be completed to determine the area requiring remediation under the TSCA guidance.

LUCs at A-24 will continue to address the 2014 USEPA closure requirements and restrict development at the site under the CMI(O) phase. LUCs include completion of annual inspections with reporting. Because hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and periodic reviews will continue indefinitely. The status for the adjacent stream will be determined following the TSCA investigation.

51105.1145_CC-A15_FRMR OB/OD RANGE

Env Site ID: CC-A15

Cleanup Site: FRMR OB/OD RANGE

Alias: A-15

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	9/15/1989	4/15/1999
RFI/CMS:	6/15/1998	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	4/15/1999	9/15/2003
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU A-15 (former OB)/OD) was identified in 1988 as an area formerly used for detonating waste explosives and munitions. The SWMU was located on operational Range T6-A, in the southwest training area on Fort Belvoir. Ground disturbance in the area as indicated from historical aerial photography occurred between approximately 1960 to the mid-1980s when the area was used for maneuvers and possible for detonations prior to development of the bermed site in the late 1980s to early 1990. The detonation area in 1990 consisted of a grassed field approximately 300 feet wide (east to west) and 367 feet long (north to south) bounded on the east, south and west sides by an earthen berm approximately 20 feet high. At the northeastern corner of the area was a 22-foot wide, approximately two-foot-deep detonation pit surrounded by a 1.5-foot-high berm. OB/OD operations were closed in the late 1990s and approximately 84 tons of soil was excavated from the detonation pit area in April 1999. The excavated area measured approximately 20 feet by 20 feet by five feet deep (from top of berm). The excavated soil was sampled, classified, and disposed of in accordance with federal, state, and local regulations. Analytical results from the site and detonation pit sampling indicated that concentrations of target analytes exceeded residential risk standards in the excavated pit and the site but were within industrial/commercial risk standards. Based on the sample results, it was concluded that the site should be closed to industrial/ commercial standards.

The OB/OD Unit closure satisfied the performance standard of 9 VAC 20-60-800, and the requirements of the approved closure plan. Fort Belvoir recommended NFA for SWMU A-15 and closure to industrial/commercial use was approved by VADEQ in a letter dated Sept. 25, 2003, VADEQ requested that Fort Belvoir ensure that the use of the site complies with the null condition of the approved closure. Fort Belvoir recommended NFA with LUCs at SWMU A-15 because of the notice of use limitations. USEPA Region III concurred with the recommendation in a letter dated March 17, 2014. VADEQ required NFA with LUCs in the statement of basis dated Oct. 20, 2014. A LUCIP was developed to manage residual PAHs and metals and to ensure compliance with VADEQ closure requirements. The property was redeveloped for national defense use between 2003 and the present. LUCs include performance of

annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016, Because future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and periodic reviews are required indefinitely. However, because the original OB/OD site area has been remediated and is re-purposed for national security use, FTBL recommends response complete (RC) and site closeout for SWMU A-15. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1146_CC-E09_NORTH GOLF COURSE WASTE POL STRGE

Env Site ID: CC-E09

Cleanup Site: NORTH GOLF COURSE WASTE POL STRGE

Alias: E-09

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Not assigned

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	1/15/2013	11/15/2013
RFI/CMS:	11/15/2012	6/20/2014
DES:	6/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	6/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU E-09 was identified in the 1988 Draft Phase II RFA as an area used to store waste oil generated at the oil change station. The area formerly consisted of a 1-acre area with four buildings and a water tower. The water tower was removed sometime between 1997 and 2002 and the buildings were removed between 2013 and 2015. The waste unit was located under the former water tower near the oil change station in the Golf Course area west of Building 2907 and is no longer present on site. SWMU E-09 is presently located down a paved service road, approximately 25 feet northwest of two former golf course maintenance buildings, Building 2903 and 2907. Waste oil was stored in 55-gallon drums on bare ground at this location before being periodically removed and picked up by the facility.

I RFI in January 2013 detected VOC concentrations below the residential or industrial RSL levels. An isolated concentration of n-nitrosodimethylamine exceeded the residential RSL value but was below the corresponding industrial RSL value. Based on the Phase I investigation sample results, Fort Belvoir recommended no further action for the site. The USEPA Region III concurred with the recommendation in a letter dated Dec. 17, 2013. The VADEQ issued a statement of basis on Oct. 20, 2014, that required LUCs to maintain industrial land use. LUCs will include performance of annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews continue under the LTM phase. However, recent site inspections have indicated that the area is currently used to stockpile golf course debris (trees, stumps) and materials (sand). Because the original site area has been repurposed for minor storage and stockpiling and all building structures and infrastructure have been removed, FTBL recommends RC and site closeout for SWMU E-09 with relocation of stored materials by the Base Support Operations Transportation Division contractor or golf course personnel. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1157_CC-N03F09_BLDG 773/788 ABANDONED STORAGE

Env Site ID: CC-N03F09

Cleanup Site: BLDG 773/788 ABANDONED STORAGE

Alias: N03, F09

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1988
CS:	2/15/2008	2/15/2008
RFI/CMS:	11/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU N-03 (Building 788 Abandoned Tank Storage) was identified in a 1992 SWMU study on the land area adjacent to the confluence of Accotink Bay and Gunston Cove. The site supported 10 abandoned ASTs from 200 to 10,000 gallons located on bare ground with several stained spots beneath the tanks. The SWMU action plan reported N-03 to be located inside the fenced storage yard of former Building 788. A site visit in 2008 indicated that Building 788 had been demolished and that no signs of the former ASTs were observed.

SWMU F-09 (Building 773 Aboveground Waste POL Tank) was identified in a 1988 Draft Phase II RFA as a 2,000-gallon metal AST in use since 1983 northwest of Building 773. The tank was located on bare ground and a brown stain was noted running downgradient from the front of the tank with heavily stained soil observed around the tank area. The 1992 SWMU study identified the unit as handling waste oil from Building 768 and not Building 773. A sludge sample from the bottom of the tank contained toluene, 2-methylphenol, 4-methylphenol, xylenes, and naphthalene. Because of proximity, SWMUs N-03 and F-09 were combined into a single unit CC-N03F09 (51105.1157). Field activities conducted in January 2009 detected benzo(a)pyrene above the corresponding residential (15 ug/kg) soil RBC value. but below the industrial (210 ug/kg) RBC value. Based on the soil sample results, Fort Belvoir recommended NFA for CC-N03F09. The USEPA concurred with the recommendation in a letter dated June 7, 2012. The VADEQ issued a statement of basis on Oct. 20, 2014, for NFA with LUCs based on benzo(a)pyrene detected above the residential RSLs. LUCs consist of annual inspections with reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016.Future land use will remain industrial/recreational with hazardous constituents remaining at the site at concentrations exceeding levels that do not allow for UU/UE, but not impeding recreational use. FTBL recommends discontinuation of annual inspections because the buildings and tank structures have been removed and the area is currently used for recreational surface use, FTBL recommends SWMU CC-N03F09 for RC and site closeout. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1160_CC-N05_BLDG 328A OIL/WATER SEPARATOR

Env Site ID: CC-N05

Cleanup Site: BLDG 328A OIL/WATER SEPARATOR

Alias: N-05

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1988
CS:	2/15/2008	2/15/2008
RFI/CMS:	9/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU N-05 was identified in a 1992 SWMU study as an oil water separator (OWS) unit adjacent to Building 328A. The concrete unit treated water from a wash rack that became operational in 1982. The water from the wash rack flowed through a collection trench that emptied into the unit and drained into the storm water lines. According to a December 1993 SWMU Action Plan, SWMU N-05 was deactivated by 1993 and was removed by 1997. The unit consisted of two concrete chambers- a large settling chamber and a smaller chamber with several baffles. The unit used an alkaline soap and steam cleaning system. During the 2005 VSI, it was reported that the separator had been removed to construct Building 328 and its associated parking lot. A Phase I RFI was completed at SWMU N-05 in September 2008. Iron thallium vanadium, and arsenic exceeded the USEPA Region III RBC standards for residential soil. The iron, vanadium, and thallium concentrations are below the industrial RBC values. Based on the Phase I RFI sample results Fort Belvoir recommended NFA for the site. The USEPA concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ issued a statement of basis on Oct. 20, 2014, for NFA with LUCs for industrial land use for iron, thallium, vanadium, and arsenic. Future land use will remain industrial with hazardous substances pollutants or contaminants remaining at the site at concentrations exceeding levels that allow for UU/UE. Because the OWS has been removed and a new building is constructed on the site, FTBL recommends this site for RC and site closeout.

51105.1169_CC-N20_BLD 1330 WASTE POL STORAGE

Env Site ID: CC-N20

Cleanup Site: BLD 1330 WASTE POL STORAGE

Alias: N-20

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1988
CS:	2/15/2008	2/15/2008
RFI/CMS:	7/15/2012	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU N-20 was identified during a 1992 SWMU study. The site was an outdoor storage area for waste POL and JP-4 fuel from Building 3140 (formerly Building 1330) on the Davison Army Airfield (DAAF) constructed in early 1990. Drums are located in a containment area consisting of a 12-foot by four-foot area of sand contained by railroad ties. The containment area was on an asphalt portion of the parking lot. The 2005 VSI report described a secure secondary containment unit with 55-gallon drums. A January 2013 Phase I RFI reported isolated benzo(a)pyrene and n-nitrosodimethylamine concentrations exceeded the residential RSL values. The compound n-nitrosodimethylamine also exceeded the industrial RSL value. Based on the Phase I RFI results, Fort Belvoir recommended NFA for the site. The USEPA Region III concurred with the recommendation in a letter dated Dec. 17, 2013. The VADEQ issued a statement of basis for NFA with LUCs on Oct. 20, 2014, due to exceedances for benzo(a)pyrene and n-nitrosodimethylamine above residential RSL and exceedance of n-nitrosodimethylamine above industrial RSL values. LUCs include performance of annual inspections and reporting under the LTM phase. Because the site area has been remediated and drums are now stored within secure secondary containment lockers, Fort Belvoir recommends site closeout for SWMU E-09. The site area will be transferred to the Industrial Stormwater program for proponent quarterly self-inspection and annual inspection by Industrial Stormwater staff. Future land use will remain industrial and hazardous substances will remain at the site.

51105.1170_CC-A13_DRMO SPOIL FILL

Env Site ID: CC-A13

Cleanup Site: DRMO SPOIL FILL

Alias: A-13

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	6/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU A-13 was identified in the 1988 Draft Phase II RFA as a landfill. The site is located west of Beulah Street and east of the fenced DRMO (SWMU A14/A29) area. The site was identified as a former gravel quarry that was backfilled with dredged material, as part of a local USACE dredging project. A 2008 Phase I RFI at SWMU A-13 identified non-native soils as a landfill cap with waste consisting of fill material, wood, and concrete debris to include miscellaneous waste (i.e., glass, metal, rubber, cans, and bottle). Analytical results from test pit soil sampling detected arsenic, iron, lead, benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene above the Residential USEPA Region III RBC but below the RBC industrial criteria. Arsenic concentrations were within the range of Fort Belvoir background levels. Chemical constituent concentrations detected in groundwater at the site were below MCLs or RBC tap water screening criteria. Surface water samples detected aluminum, iron, and manganese above national recommended water quality criteria maximum concentration (acute) and criterion continuous concentration (chronic) levels and/or human health standards. Ecological screening of sediment samples indicated none of the detected concentrations exceeded the National Oceanic and Atmospheric Administration effect range-medium or effect range-low sediment quality guidelines. Based on an LFG investigation and monitoring events significant levels of methane are not present at SWMU A-13; therefore, the potential for off-site migration of LFG is low. Based on the Phase I RFI results, Fort Belvoir recommended NFA at SWMU A-13. The USEPA Region III concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ required NFA with LUCs in the statement of basis dated Oct. 20, 2014. LUCs include performance of annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016 and will continue under the LTM phase. 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 UU/UE, periodic reviews will continue indefinitely.

51105.1186_CC-C11D11_BLDG 715 WASHRACK & OIL/WATER

Env Site ID: CC-C11D11

Cleanup Site: BLDG 715 WASHRACK & OIL/WATER

Alias: C-11, D-11

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	2/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SiteCC-C11D11 (51105.1186) was previously located on the southern Main Post in a fenced enclosure located south of Building 714. The site included sites C-11 (wash rack), and D-11(oil/water separator). C-11 was identified in the 1988 Draft Phase II RFA as a concrete pad and drain wash rack located adjacent to Building 715. The pad was used to wash lawn mowers and was observed to be cracked at the time of the RFA. Wash water collected by the drain reportedly discharged to the storm sewer system. C-11 was reported to have been active prior to 1968 until sometime between 1988 and 1990. Site D-11 was identified in the 1988 Draft Phase II RFA as an oil/water separator associated with wash rack C-11. The oil/water separator reportedly discharged to nearby surface water without a National Pollution Discharge Elimination System permit. A 1992 SWMU study concluded that the C-11/D-11 areas were not SWMUs because waste was not managed or treated at the sites. Building 715 was demolished sometime between 1991 and 1997 and the area was converted to a paved parking lot.

The site areas were not physically observed during a 2005 VSI, and the previous locations were estimated from temporary structures on the site. The VSI identified military vehicle and equipment storage area east of the site and a large concrete pad for open storage with a pit southwest of the site. A Phase I RFI was completed at SWMU C-11 concurrently with SWMU D-11 in January 2009. Based on the Phase I RFI results, the Army recommended NFA for this site. The USEPA Region III concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ required NFA with LUCs in the statement of basis dated Oct. 20, 2014. LUCs include performance of annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews will continue under the LTM phase. Because Building 715, the former wash rack pad, and the OWS have been removed and the area repurposed for parking and open storage, the Army recommends the former C-11/D-11 site areas for RC and site closeout with discontinuation of LUCs. The future land use will remain active industrial.

51105.1187_CC-C08D10_B2585 INACTIVE WASHRACK/GRIT

Env Site ID: CC-C08D10

Cleanup Site: B2585 INACTIVE WASHRACK/GRIT

Alias: C-08, D-10

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	10/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: Site CC-C08D10 (51105.1187) includes the RCRA Part B permit sites, SWMU C-08 and SWMU D-10. Both SWMUs are located within Humphrey Engineer Center (HEC), southwest of Building 2585 in the corner of the adjacent parking lot. The HEC was transferred to the USACE in 1980. SWMU C-08 was identified in the 1988 Draft Phase II RFA as a 225 square feet concrete pad wash rack equipped with a dike system on the two sides that bordered bare ground. The wash rack had a drain located in the center of the pad that was connected to a grit chamber (SWMU D-10) through underground pipes. The main purpose of the sump/grit chamber was to separate solids from wastewater that drained off the wash rack before the water entered the post's sanitary system. According to the 1992 SWMU study, the site was active from 1975 to 1987. The 1999 Fort Belvoir action plan stated that on 26 Jan. 26, 1998, the wash rack unit and grit chamber were removed. A composite sample was collected from each of the SWMU sites immediately after they were removed and before they were backfilled with soil. Toluene and barium were detected below USEPA Risk Based Criteria soil levels for residential areas and the TPH-diesel range organics (DRO) concentration was also below the VADEQ action level for petroleum in the soil. During the 2005 VSI, no significant staining, odors, or stressed vegetation was observed at the SWMU C-08/D-10 site. A Phase I RFI was completed at SWMU C-08/D-10 in October 2008.

Based on the Phase I RFI results, Fort Belvoir recommended NFA for this site. USEPA Region III concurred with the recommendation for NFA in a letter dated Dec. 7, 2012. VADEQ required NFA with LUCs in the statement of basis dated Oct. 20, 2014, however, because the infrastructure has been removed with no residual constituents exceeding residential criteria, Fort Belvoir recommends that LUCs be removed from the site and the Humphreys Engineer Center Support Activity monitor future land use through their dig permit process. Annual LUC inspections and reporting initiated in 2016 and periodic reviews will be discontinued. because the wash rack and grit chamber were removed in 1998 and the area has been re-purposed for RV storage on USACE property FTBL recommends RC and site closeout for CC08/D10.

51105.1189_CC-A27_SUSPECTED SANITARY LANDFILL

Env Site ID: CC-A27

Cleanup Site: SUSPECTED SANITARY LANDFILL

Alias: A-27

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	10/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU A-27 was identified in the 1988 Draft Phase II RFA as an inactive site formerly used for disposal of facility waste. The site is located south of Wills Road and north of the former coal storage facility on the North Post. A VSI in 2005 including a review of historical aerial photography indicated an area of denuded terrain with unimproved roads between an unnamed stream located north of a contractor materials lot and Wills Road. The terrain showed no evidence of surface landfilling or trench and fill landfill activity. The area was observed to be deforested in 1953 and 1960 photos and appears to have been re-vegetated in 1972 and 1976 photos with full forest development by 1990.

A Phase I RFI was completed at SWMU A-27 in October 2008. Based on the Phase I RFI results, Fort Belvoir recommended NFA at SWMU A-27. The USEPA Region III concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ required NFA with LUCs in the statement of basis dated Oct. 20,2014. Land use is currently monitored to address potential solid waste associated with former landfill activity. LUCs include performance of annual inspections and reporting under the LTM phase. Annual LUC inspections and reporting were initiated in 2016 and periodic reviews continue under the LTM phase. Based on the lack of observable landfill activity at this site on historical aerial photography, lack of observed landfill artifacts during the 2005 visual inspection and 2023 periodic review, and the lack of detectable constituents of concern in the site media above reported background levels, FTBL recommends that LUCs for this site be discontinued and recommends RC and site closeout in concurrence with USEPA NFA. Future land use will be monitored through the FTBL dig permit process and NEPA requirements.

51105.1190_CC-I02_B317 FRMR ACID NEUTRALIZATION PIT

Env Site ID: CC-I02

Cleanup Site: B317 FRMR ACID NEUTRALIZATION PIT

Alias: #

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: Not assigned

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	2/15/2008	2/15/2008
RFI/CMS:	9/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU I-02 was identified in the 1988 Draft Phase II RFA as an active acid neutralization pit located on the western side of Building 317. The site was described as a unit that managed acid from sinks in the laboratory and was a five-foot-by-five-foot concrete box containing limestone. It also stated that wastewater from the hydrogen fluoride scrubber system (SWMU L-06) drained into the pit before being discharged into the sewer system. The RFA stated that the unit became operational in 1978. Neutralized acid wastes were reported to have been discharged into the sanitary system. According to the 1992 SWMU study, the site became inactive in 1990. During a 2005 VSI, and during subsequent annual inspections and periodic reviews there were no visible remnants of the original site. Visible evidence of stained soil, stressed vegetation, unusual odors, or other indicators of contamination have not been observed at the site or reported by building occupants. A Phase I RFI was conducted in the industrial area at SWMU I-02 in September 2008. A benzo(a)pyrene concentration of 85.5 mg/kg exceeded the corresponding residential soil RBC of 22 mg/kg in the soil sample I02-SB01. The detection of benzo(a)pyrene was significantly below the industrial RBC of 320 mg/kg. Based on the Phase I RFI results, the Army recommended NFA for the site. The USEPA Region III concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ required NFA with LUCs for industrial land use in the statement of basis dated Oct. 20, 2014. The site is now covered by a parking lot and landscaping. Annual LUC inspections and reporting were initiated in 2016 and have continued under the LTM phase. Because the future land use will remain industrial and reported environmental constituents are consistent with the industrial land use and the pit is reported to have been removed prior to building renovations in 2019, FTBL recommends site closeout for CC-I02 and discontinuation of LUCs consistent with the USEPA NFA for the site. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1191_CC-L33_B326 OIL SPILL DITCH

Env Site ID: CC-L33

Cleanup Site: B326 OIL SPILL DITCH

Alias: L-33

Regulatory Driver: RCRA-C

RIP Date: 4/15/2016

RC Date: 4/15/2016

RC Reason: Study Completed, No Cleanup Required

SC Date: 4/14/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE:

MRSPP: N/A

Phase	Start	End
RFA:	9/15/1988	9/15/1989
CS:	3/15/2008	1/15/2012
RFI/CMS:	9/15/2008	10/20/2014
DES:	10/20/2014	4/15/2016
IRA:	- -	- -
CMI(C):	10/20/2014	4/15/2016
CMI(O):	- -	- -
LTM:	4/15/2016	4/14/2054

Site Narrative: SWMU L-33 was identified in the 1988 Draft Phase II RFA as a release in March 1986, when a ruptured oil line released approximately 600 gallons of turbine lubricating oil into a drainage ditch. SWMU L-33 is located on the eastern side of Building 326, inside a small maintenance yard. Kingman Road runs along to the west of SWMU L-33 and the building's parking lot is directly south of the site. The exact location of the spill was undetermined. During the 2005 VSI, drums, drum hoods, and generators were observed inside the fence of the maintenance yard. There were no signs of a release. A Phase I RFI conducted at SWMU L-33 in September 2008 detected vanadium in soil at 82.5 mg/kg slightly exceeded the corresponding residential RBC of 78 mg/kg. The vanadium exceedance is significantly below the industrial RBC of 1,000 mg/kg. Based on the Phase I RFI results, Fort Belvoir recommended NFA for the site. The USEPA Region III concurred with the recommendation in a letter dated Jan. 9, 2012. The VADEQ issued a statement of basis on Oct. 20, 2014, for NFA with LUCs due to exceedance of residential RSL values. Annual LUC inspections and reporting were initiated in 2016 and are conducted under the LTM phase. Because the future land use will remain industrial and reported environmental constituents are consistent with the industrial land use, the Army recommends RC, and site closeout for CC-L33 and discontinuation of LUCs consistent with the USEPA NFA for the site. Recent site improvements included excavation in the former drainage to facilitate building upgrades. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1207_FTBL-70_PFAS

Env Site ID: FTBL-70

Cleanup Site: PFAS

Alias:

Regulatory Driver: CERCLA

RIP Date: 2/2/2029

RC Date: 2/2/2029

RC Reason: Not assigned

SC Date: 2/2/2029

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	10/15/2022
RI/FS:	1/3/2022	2/2/2029
RD:	- -	- -
IRA:	- -	- -
RA(C):	- -	- -
RA(O):	- -	- -
LTM:	- -	- -

Site Narrative: In accordance with Department of Defense (DOD) Sept. 5, 2018, memorandum entitled Army guidance for addressing releases of per- and polyfluoroalkyl, Fort Belvoir has begun conducting historical records reviews to identify locations on the installation with a potential release of per- and polyfluoroalkyl substances (PFAS) with a focus on perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). Site FTBL-70, PFAS was created to investigate locations on the Installation with the greatest likelihood of potential releases of PFAS (e.g., fire training areas aqueous film-forming foams storage locations aircraft crash site fuel farms etc.). A preliminary assessment (PA) including document searches, site visits and/or interviews etc. was initiated in June 2019. Based on the findings of the PA 17 areas of potential interest were identified to be carried forward into the site investigation. Although PFOS and PFOA and perfluorobutanesulfonic acid (PFBS) are the three main compounds of interest within the PFAS group of compounds 18 PFAS chemicals were evaluated as part of the SI process. A final SI to determine the presence and/or absence of PFOS, PFOA, and PFBS and the nature of other PFAS was completed in October 2022. The FTBL PA identified 17 AOPIs for investigation during the SI phase. SI sampling results from the 17 AOPIs were compared to risk-based screening levels calculated by the Office of the Secretary of Defense (OSD) for PFOS, PFOA, and PFBS. PFOS, PFOA, and/or PFBS were detected in soil and/or groundwater at or downgradient of all 17 AOPIs; 12 of the 17 AOPIs had PFOS, PFOA, and/or PFBS present at concentrations greater than the risk-based screening levels. Based on the PA/SI results, the majority of OSD risk screening level exceedances at FTBL were attributed to historical and present AFFF releases and usage, fire station management and firefighter training activity, fire truck maintenance activities, and fire responses. A CERCLA RI for 16 sites on the main post and FBNA was initiated by USACE in 2023.

51105.1049_FTBL-003-R-01_COMBAT RANGE COMPLEX-L

Env Site ID: FTBL-003-R-01

Cleanup Site: COMBAT RANGE COMPLEX-L

Alias: CRC-L

Regulatory Driver: CERCLA

RIP Date: 12/18/2017

RC Date: 12/18/2017

RC Reason: All Required Cleanup(s) Completed

SC Date: 2/28/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/9/2001	5/1/2003
SI:	9/15/2006	7/15/2008
RI/FS:	7/31/2009	10/31/2017
RD:	11/15/2016	10/31/2017
IRA:	10/31/2017	11/19/2017
RA(C):	10/17/2017	12/18/2017
RA(O):	- -	- -
LTM:	3/1/2018	2/28/2054

Site Narrative: The Combat Range Complex (CRC) Munitions Response Site (MRS) is located on the southwest training area on FTBL, adjacent to Accotink Bay and Pohick Bay. The land portion of three former down range training areas (Bayliss Combat Range, Lorton Assault Course, and Lorton Combat Range) identified in historical documentation were combined to form this MRS. A 2008 SI recommended FTBL-003-R-01 for RI for MEC and munitions constituents (MC). The RI for FTBL-003-R-01 completed in December 2012, identified two MEC items in one of the 25 sample grids during the field effort. The downrange area was determined to have been marginally impacted based on the quantity of munitions debris (MD) observed. Adjacent to the MEC grid, field crews encountered an area that was impacted by small arms lead. Historical aerial photography indicates that the range fan from the Tracy Road Range (FTBL-014-R-01) overlapped a portion of the CRC site. The distribution and concentration of lead contamination in soil support the conclusion that small arms range fire from the Tracy Road Range impacted in the CRC. There was additional evidence at the site of a recovery and smelting operation for lead. A FS was finalized in November 2016 and the PP finalized in March 2017 was approved by the VADEQ in April 2017. The DD for soil removal, off-site disposal, and LUCs was signed on Oct. 31, 2017. Lead-contaminated soil removal was completed in December 2017 and a remedial action completion report and LUCIP were finalized in February 2018 initiating 30 years of LTM consisting of sign maintenance, land use inspections, and five-year reviews. Because the future land use will remain industrial, the site is on a former operational training range, and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, five-year reviews will continue indefinitely. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1050_FTBL-004-R-01_COMBAT RANGE COMPLEX-W

Env Site ID: FTBL-004-R-01

Cleanup Site: COMBAT RANGE COMPLEX-W

Alias: CRC-W

Regulatory Driver: CERCLA

RIP Date: 6/15/2025

RC Date: 6/15/2025

RC Reason: Not assigned

SC Date: 12/15/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 5

Phase	Start	End
PA:	10/9/2001	5/1/2003
SI:	4/30/2005	1/31/2008
RI/FS:	10/15/2016	10/15/2023
RD:	9/15/2024	6/15/2025
IRA:	- -	- -
RA(C):	10/15/2024	6/15/2025
RA(O):	- -	- -
LTM:	12/15/2025	12/15/2054

Site Narrative: The Combat Range Complex-Water ((CRC-W) formerly CRC-TD) consists of water areas within Accotink Bay that are overlapped by historical range safety fans associated with Bayliss Combat Range, Lorton Assault Course, Lorton Combat Range on the west side of Accotink Bay and the Tracy Road Range fan on the east side of Accotink Bay. The overlapping range safety fan areas on the western side of Accotink Bay are identified in historical documentation as the CRC. Previous investigation has not been conducted within the CRC-W, however, because of proximity to the CRC-land and Tracy Road Range a performance-based acquisition contract was awarded to investigate the CRC-W water MRS for MC in Accotink Bay. An RI for land portion of the CRC (FTBL-003-R-01) was completed in December 2012. The draft final RI/FFS report for the CRC-W was completed in January 2021. The nature and extent of MC detected in environmental media (i.e., sediment, surface water, and pore water) do not pose unacceptable risk to human or ecological receptors. Exceedances of refined environmental screening values and limited bioavailability based on simultaneously extracted metals/acid-volatile sulfide sample results indicate that the potential for ecological risks from exposure to copper and lead detected in sediment within the Tracy Road Range impact fan are negligible, and no further evaluation is warranted. MD or MEC material potentially presenting an explosive hazard (MPPEH), was not encountered during the analog munitions avoidance geophysical surveys. The MEC risk assessment determined site conditions to be appropriate for current and future anticipated land uses. Completion of a CERCLA-required PP/DD will be needed to close out the RI/FS phase is currently contracted. The area of the CRC-W is completely contained within Accotink Bay, is owned by the Army from the high-water line landward. No MD was encountered during the RI/FFS. Fort Belvoir anticipates that the final remedy for FTBL-004-R-01 will consist of annual inspections, signage posted along the US Army Garrison- Fort Belvoir (USAG-FB) shoreline, and public awareness campaign LUCs with Natural Resources Branch stewardship for the water areas. Because MC associated with small arms ammunition remain in the MRS, five-year reviews will be needed to document land use changes and reported incidents. Because the future land use will

remain recreational and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, signage, annual inspections, and five-year reviews will continue indefinitely.

51105.1051_FTBL-005-R-01_FB NORTH AREA (EPG)

Env Site ID: FTBL-005-R-01

Cleanup Site: FB NORTH AREA (EPG)

Alias: FBNA, EPG

Regulatory Driver: CERCLA

RIP Date: 1/31/2025

RC Date: 1/31/2025

RC Reason: Not assigned

SC Date: 10/29/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 3

Phase	Start	End
PA:	9/15/1990	6/15/2002
SI:	6/15/2002	6/15/2003
RI/FS:	8/15/2003	7/31/2024
RD:	7/31/2024	1/31/2025
IRA:	10/15/2006	10/15/2019
RA(C):	7/31/2024	1/31/2025
RA(O):	- -	- -
LTM:	1/31/2025	10/29/2054

Site Narrative: The FBNA MRA is a USAG-FB parcel that is located approximately 1.25 miles northwest of the USAG-FB Main Post northern boundary. The total area for the FBNA is recorded in Army real estate records at 804.07 acres (USACE 2020). Available land area is reduced to 656.59 acres following a US Army grant (Department of the Army 2013) for a perpetual road easement of 147.48 acres to the Commonwealth of Virginia for construction of a segment of the FCP. Current MILCON activity on the FBNA will further reduce the available property inventory by approximately 170 acres. The FBNA (formerly EPG), was historically used for military research and development, and consists of MRSs, petroleum storage and release areas, former military training areas and ranges, research and development facilities, buildings, bunkers for ammunition storage, and abandoned storage structures. Because of the variably documented use of munitions and explosives over many areas on the FBNA, the entirety of the property is an MRA. The types of testing and training that occurred at FBNA included but were not limited to landmine detection and neutralization, fuel handling, fire suppression, anti-intrusion systems, and heavy equipment testing and training.

Nine ranges and one airstrip were used for training or testing during the active period for the EPG in addition to activity in non-range areas. MD and other related materials were routinely buried on the range areas. Forty-four sites were identified on the EPG during the EBS in 1990. Eight of the sites were munitions-related training or storage sites. Based on the EBS initial munitions removal actions were completed on 10 former military training areas on the EPG in May 1992. Additional removal operations were conducted in 2001 on six ranges (Ranges 1, 2, 3, 4, and 5C) within the proposed FCP ROW. Approximately concurrent with BRAC activity in 2005, USEPA issued a UAO in September 2005 mandating that the EBS environmental sites and identified range areas on the EPG be investigated for environmental hazards. Between 2006 and 2009 additional MEC removal actions were conducted over the remainder of the ranges and received no further action concurrence from USEPA. Encountered disposal pits were investigated and excavated for munitions, MC, and chemical releases. The individual

site areas or MRSs have database identification numbers and costs that are captured under the respective MRSs. The USEPA UAO was rescinded in July 2017.

A Draft Military Munitions Response Program (MMRP) FFS for the EPG MRA was submitted to USEPA and VADEQ for review in April 2013. The FS evaluated no action and LUCs as possible remedies. The preferred remedy was LUCs; however, VADEQ requested additional surveys over land tracts on the periphery of the former range areas that were not previously surveyed for munitions. This action was to support the Army's selection of LUCs as the final remedy. In order to address immediate threats to human health, interim LUCs were developed as a non-time critical action in accordance with the CERCLA, until a final remedy was selected. An action memorandum for interim LUCs document was finalized in 2014. The cleanup/exit strategy for the EPG consisted of LUCs under LTM. An installation-wide LUCIP was finalized in August 2016 that included interim LUCs at FTBL-005-R-01.

A supplemental RI/FS was submitted to VADEQ in March 2018 that included MEC clearance of an additional five acres not previously investigated and a revised FFS component. A supplemental final RI/FS was completed in January 2021 with VADEQ concurrence in February 2021. Ongoing leased MILCON development east and west of Accotink Creek will remove approximately 170 acres from the FBNA inventory.

LUCs at FTBL-005-R-01 are to consist of installation mandated best management practices for MILCON munitions clearance, annual land use inspections and reporting, and five-year reviews in addition to installation mandated dig permit requirements. MEC will be addressed under a PP and DD for EPG munitions response (MR) area FTBL-005-R-01 and will include a MEC remedy for MR sites FTBL-005-R-01 (51105.1051). FTBL anticipates the final remedy for FTBL-005-R-01 to be LUCs with associated annual inspections, MEC requirements for all new MILCON, groundwater restrictions, dig permit requirements, and five-year reviews. The interim August 2016 LUCIP for the EPG is currently being updated by USAG-FB to identify all former site areas on the FBNA and will comprise the basis for LUCs and long-term management of the EPG.

51105.1053_FTBL-007-R-01_GRENADE COURT

Env Site ID: FTBL-007-R-01

Cleanup Site: GRENADE COURT

Alias: #

Regulatory Driver: CERCLA

RIP Date: 2/28/2018

RC Date: 2/28/2018

RC Reason: Study Completed, No Cleanup Required

SC Date: 2/28/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/9/2001	5/1/2003
SI:	4/30/2005	7/31/2008
RI/FS:	7/31/2009	2/14/2018
RD:	11/15/2017	2/28/2018
IRA:	11/4/2011	2/28/2018
RA(C):	11/15/2017	2/28/2018
RA(O):	- -	- -
LTM:	3/1/2018	2/28/2054

Site Narrative: The 7.5-acre former Grenade Court MRS is located within the former Southwest Training Area west of Pohick Road on Poe Road. The site is divided lengthwise by Poe Road with a surface danger zone (SDZ) that extends over a 100-acre area. A closed landfill (CC-A12) and a closed former AST site (CC-MP1) are adjacent to the former Grenade Court. Accotink Creek bounds the site area to the north and east and may be a limiting aspect for munitions training. Historical reports indicate MRS construction began in March 1941 and the MRS appears to have been operational until 1949 when the AST farm (MP-1) was built. The tank farm was dismantled and removed by 1960. The area of the Grenade court and tank farm was re-graded and began re-vegetation in the early 1970s. Poe Road is a paved road that passes over the former Grenade Court with the remainder of the area including the SDZ remaining unoccupied and heavily wooded. Recreational trails are located to the south of the site. Potential munitions use on the site consisted of live and practice hand grenades. Sandbag emplacements built on the north end of the range appear to have been designed for live ordnance usage. The 2008 SI recommended a RI focused on MC metals. The RI was completed in December 2012.

Four initial geophysical survey grids (G01 through G04) within the Grenade Court encountered metallic debris but did not encounter high explosive grenades or grenade fragments. A series of practice landmines were unexpectedly found in grid G04. Four adjacent grids were added (G05 through G08) to delineate the extent of the mines. Additional practice mines were found in the added grids. An isolated practice grenade was also found in the very southern portion of grid G05. The mines post-date the Grenade Court, as some of the mine types were not developed or used until the 1960s. Transects T01, T04, T05, T06, and T07 were investigated for subsurface metallic items. No MEC was found, and the only MD recovered from the Grenade Court was found within the grids. A total of 40 MD items were found during the subsurface investigation including anti-personnel mines, anti-tank mines, and one hand grenade. An EE/CA was completed for the site in May 2013 and an action memorandum for interim LUCs was completed in October 2013.A draft final FS was approved by VADEQ on Nov. 17, 2015, recommending LUCs as the final remedy for the site and the final FS was completed in January 2016.

LUCs were selected in the PP (September 2016) as the preferred alternative to address potential MEC at the Grenade Court since there are no known areas of elevated MEC/MD density. The DD was approved by VADEQ on Nov. 14, 2017, and was signed in February 2018 concurrent with the LUCIP. The LUCs imposed at the Grenade Court restrict land use in the area unless appropriate actions are taken to ensure the future use is compatible with the potential hazard from MEC that may remain at the site. Land use is restricted to non-residential uses. LUCs consist of dig permitting requirements with MEC recognition and safety awareness provisions, annual inspections, and reporting under the LTM phase. Five-year reviews are required to assess the LUC performance and protectiveness. Because the future land use will remain industrial in a former operational training range and hazardous constituents remain at the site at concentrations exceeding levels that allow for UU/UE, annual inspections and five-year reviews will continue indefinitely.

51105.1060_FTBL-014-R-01_TRACY ROAD RANGE

Env Site ID: FTBL-014-R-01

Cleanup Site: TRACY ROAD RANGE

Alias: #

Regulatory Driver: CERCLA

RIP Date: 3/28/2017

RC Date: 3/28/2017

RC Reason: All Required Cleanup(s) Completed

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:	10/9/2001	5/1/2003
SI:	4/30/2005	7/31/2008
RI/FS:	7/31/2009	2/2/2017
RD:	2/2/2017	3/28/2017
IRA:	11/4/2011	3/28/2017
RA(C):	2/2/2017	3/28/2017
RA(O):	- -	- -
LTM:	10/16/2017	9/30/2054

Site Narrative: Tracy Road Range was a small arms range constructed in 1941 with training occurring during the 1940s and 1950s. Two firing lines extended westward toward Accotink Bay at 200 and 300 yards, and a third was planned at 500 yards but was not constructed. During training exercises targets were positioned above two berms that were spaced approximately 120 feet apart. The western berm was approximately 60 feet long and the eastern berm was approximately 650 feet long. A bunker located behind the smaller western berm was used for target and supply storage. Soldiers typically fired at the targets held above the berms; however, trajectories impacted the berms themselves as well as areas beyond the berms. There is evidence of bullet impacts on the CRC (FTBL-003-R-01) across Accotink Bay.

A 2008 SI report identified a small number of .30 caliber bullets in the eastern berm; therefore, the site was recommended for an RI with an emphasis on MC, specifically metals associated with small arms. FTBL used the area between the Tracy Road Range berms for soil borrow in the 1970s before converting that portion of the range to a debris landfill (SWMU A-02). The landfill was closed and entered into post closure care in 1993 under Virginia's Solid Waste Regulations. The landfill was identified in FTBL's RCRA Part B Hazardous Waste Storage Permit as SWMU A-02, Sites L-39 and L-40. In 2012 FTBL received USEPA concurrence that sites L-39 and L-40 (berms) should not be considered SWMUs because they are related to small arms activities to be managed under the MMRP program. The eastern portion of the Tracy Road Range where the former firing points were located has been developed into administrative office space. In 2009 prior to construction of the administrative space, FTBL collected soil samples and analyzed for lead to determine if small arms training activities impacted the site. Sample results did not exhibit levels above Virginia's action level for lead. A CERCLA RI/FS was completed for the Tracy Road Range site in January 2013. Soil samples were collected from both berms and field-analyzed using X-ray fluorescence. Laboratory verification sampling indicated soil contamination above USEPA action levels for lead in the berms. Additionally elevated levels of antimony, copper, and zinc were identified above screening levels. Antimony and lead were retained as contaminants of potential concern. The RI concluded that no unacceptable risks were present at the site based on the exposure setting. The site

area is restricted from future residential development because the landfill remains in place and the site is categorized as industrial in the master plan. The FS evaluated no action, LUCs, and soil removal as potential remediation strategies. A PP was completed in January 2015 and approved by VADEQ in June 2015. The preferred remedy, Alternative 2 (LUCs in the form of ICs) was selected, and the DD was finalized in November 2016 with VADEQ concurrence in December 2016. The DD was signed in January 2017. LUCs include zoning restrictions (150-foot buffer) documented in FTBL's Geographic Information System to prevent future residential use, annual inspections, fencing, and enforcement of the FTBL dig permit process. The final LUCIP was submitted in November 2016 with VADEQ concurrence in March 2017. Annual LUC inspections continue under the LTM phase. Five-year reviews are required to assess the LUC performance and protectiveness. At the request of VADEQ, the initial five-year review was completed by the USACE in December 2017 with final documentation provided in December 2019. Because the future land use will remain industrial and hazardous constituents remain at the site at concentrations exceeding levels that allow for UU/UE, annual inspections and five-year reviews will continue indefinitely.

51105.1066_FTBL-025-R-01_DEMOLITION AREA - USACE

Env Site ID: FTBL-025-R-01

Cleanup Site: DEMOLITION AREA - USACE

Alias: DA-USACE

Regulatory Driver: CERCLA

RIP Date: 10/16/2019

RC Date: 10/16/2019

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:	10/15/2001	5/15/2003
SI:	4/15/2005	1/15/2008
RI/FS:	7/15/2009	10/15/2019
RD:	7/24/2013	10/15/2019
IRA:	8/7/2007	6/15/2014
RA(C):	7/24/2013	10/16/2019
RA(O):	- -	- -
LTM:	10/16/2019	9/30/2054

Site Narrative: Demolition Area–USACE is a 489-acre MRS that was formerly located on the northeastern corner of Fort Belvoir and was transferred to the USACE in 1980. Portions of the MRS are currently occupied by the USACE – HEC, and the remainder of the MRS is undeveloped. The Demolition Area is separated into two MRSs (51105.1090 and 51105.1066) based on property management (Garrison/USACE). Historical (1944) documents indicate that the MRS was used primarily to train engineering soldiers in the use of demolition materials and to practice demolition techniques. Demolition took place either on the surface, within steel pits, or below ground. Materials that may have been used included explosives shape charges cratering charges and fuzes. Other items that may have been used within the MRS included blasting caps dynamite and flare signal rockets. Based on installation maps the MRS was operated between 1940 and approximately 1951. In 2008 the site name for this MRS changed from Demolition Area-Transferred (TD) to Demolition Area - USACE as sites that are under Army or DOD control are not transferred property. A 2008 SI report recommended a RI for Demolition Area-USACE and the RI was completed in December 2012. Soil analyses did not detect MC above RBCs. Interim LUCs were established as a non-time critical removal action (NTCRA) under CERCLA until a final remedy was selected. Interim LUCs were finalized in June 2014. The FS was approved by VADEQ on Nov. 17, 2015, and recommended LUCs as the final remedy. The DD for the Demolition Area-USACE was signed by the USAG-FB GC on July 11, 2020, approved by VADEQ on July 15, 2020, and concurred by USACE (HEC) on July 16, 2020. The final DD identifies Alternative 2 - LUCs as the final remedy for this site. A LUCIP was finalized in July 2020 and obtained VADEQ concurrence on Aug. 19, 2020, and USACE concurrence on Sept. 18, 2020. Responsibility for implementation of the LUCIP is with the USACE. Five-year reviews will continue to be conducted by Fort Belvoir. Because the future land use will remain industrial and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, annual inspections by USACE will continue with five-year reviews by FTBL to continue indefinitely.

51105.1067_FTBL-027-R-01_Training Area T-16

Env Site ID: FTBL-027-R-01

Cleanup Site: Training Area T-16

Alias: T-16

Regulatory Driver: CERCLA

RIP Date: 2/28/2018

RC Date: 2/28/2018

RC Reason: Study Completed, No Cleanup Required

SC Date: 2/28/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/15/2001	5/15/2003
SI:	4/15/2005	1/15/2008
RI/FS:	7/15/2009	2/14/2018
RD:	11/15/2017	2/28/2018
IRA:	11/4/2011	2/27/2018
RA(C):	11/15/2017	2/28/2018
RA(O):	- -	- -
LTM:	3/1/2018	2/28/2054

Site Narrative: Range T-16 is a 232-acre site on the Main Post of Fort Belvoir immediately east of the T-15 training area and south of the Demolition Area -USACE MRS. The historical use of the site is unconfirmed but based on a review of archival maps the area appears to have been used for various combat and field training exercises between 1926 and 1987. Three uncontrolled dump sites were identified in this area. The site is bisected by Jeff Todd Way and is currently undeveloped with the exception of a communications facility (B2310) on the eastern side. The western side is anticipated to be converted to a wetland refuge. A 2008 SI reported numerous depressions that appeared to be fighting positions and weapons emplacements. A RI initiated in July 2010 and was concluded in 2011. MEC were not identified in the site area and regulators concurred that no MC sampling was needed. Interim LUCs were established in June 2014 as a NTCRA under the CERCLA until the final remedy was selected. The FS approved by the VADEQ on Nov. 17, 2015, recommended LUCs as the final remedy. The DD was approved by VADEQ via email received on Nov. 14, 2017. The final DD identifying LUCs as the final remedy for the site was completed on Feb. 14, 2018. A LUCIP was finalized in February 2018. LUCs include annual inspections and reporting under the LTM phase. Five-year reviews will continue. Because the future land use will remain industrial and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, inspections and reviews will continue indefinitely.

51105.1076_FTBL-005-R-04_Munitions Pit-R1A (AOPC16)

Env Site ID: FTBL-005-R-04

Cleanup Site: Munitions Pit-R1A (AOPC16)

Alias: AOPC-16

Regulatory Driver: CERCLA

RIP Date: 1/31/2025

RC Date: 1/31/2025

RC Reason: Not assigned

SC Date: 10/29/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 9

Phase	Start	End
RFA:	9/15/1990	6/15/2002
CS:	6/15/2002	6/15/2003
RFI/CMS:	8/15/2003	7/31/2024
DES:	7/31/2024	1/31/2025
IRA:	10/15/2006	10/15/2019
RA**(C):**	7/31/2024	1/31/2025
RA**(O):**	- -	- -
LTM:	1/31/2025	10/29/2054

Site Narrative: AOPC-16 encompasses a burial pit with dimensions 77 feet long by 35 feet wide by 30 feet deep located in the northwest corner of Range 1A on the FBNA MRA. The site is located approximately 200 feet west of SWMU M-30 and approximately 400 feet northwest of SWMU M-28. AOPC-16 was discovered during unexploded ordnance (UXO) clearance activities at Range 1A in 2007. The former munitions burial pit was excavated to remove 13,576 MEC items, seven canisters of white powder that exhibited characteristics of a strong base and 5,999 chemical horns containing sulfuric acid. Oil and punctured 30-gallon containers were encountered in the pit. The soils excavated from the pit were stockpiled on site and covered with plastic sheeting. The first investigation phase between November 2008 and February 2009 evaluated soil samples obtained from the pit excavation and the spoil piles. February 2009 groundwater data indicated the presence of naphthalene, PCE, and explosives contaminants in the groundwater.

The former pit was identified as the source of explosives and PCE groundwater contamination at the site in June 2009. The soil at AOPC-16 does not pose a threat to human health via the direct contact pathway. A quantitative human health risk assessment was completed to evaluate the groundwater data. The risk calculations based on future hypothetical resident using the groundwater as a potable water source indicated that there was no actionable risk associated with groundwater contamination at Site AOPC-16. A final PP was completed for AOPC-16 in May 2014. Based on environmental investigations at the site the Army recommended NFA as the preferred alternative. Under the NFA alternative no RA would be performed, and no additional ICs would be implemented. The USEPA and VADEQ have concurred with the NFA alternative for soil and groundwater. A final DD for the site recommending NFA was completed in February 2015.

Because the site area has been remediated and re-developed beneath the remote inspection facility access road FTBL recommends the site area for RC and site closeout. Because the future land use will remain industrial, groundwater risks are acceptable, and the site has achieved final MEC clearance during the removal action and MILCON to construct the Remote Inspection Facility, site conditions will

allow for UU/UE with no requirement for inspections or five-year reviews. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1077_FTBL-005-R-05_INERT MINE TEST AREA-M33

Env Site ID: FTBL-005-R-05

Cleanup Site: INERT MINE TEST AREA-M33

Alias: M-33

Regulatory Driver: CERCLA

RIP Date: 8/30/2021

RC Date: 8/30/2054

RC Reason: Not assigned

SC Date: 8/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 3

Phase	Start	End
PA:	5/15/2002	5/15/2002
SI:	10/15/2005	10/15/2005
RI/FS:	12/15/2006	10/30/2018
RD:	3/15/2013	12/16/2019
IRA:	11/21/2006	1/15/2008
RA(C):	11/15/2013	8/30/2021
RA(O):	8/30/2021	8/30/2054
LTM:	- -	- -

Site Narrative: SWMU M-33, Inert Mine Testing Area at Range 5A, was a 10-acre open field located approximately 200 feet east of Building 5091 (formerly B2091) on the western FBNA (formerly EPG). Site M-32 (FTBL-005-R-08, 51105.1080) is located adjacent to the southwest boundary of M-33 and was administratively transferred to M-33 because of the proximity of the two sites and the similarity of compounds detected in groundwater. References to M-33 implicitly include groundwater for the M-32 site. The M-33 site was used as a training area for inert mine detection and the detonation of up to 22-pound explosive charges in detonation pits until the late-1960s to early-1970s. MEC removal actions were completed from several burial pits on the range area between 1989 and 1993. According to a 2003 Explosive Safety Submission, six M20 mines were removed from Range 5A during a 1992 removal action. Based on the historical use of M-33 as a test range, buried MEC have been identified as the most likely source of the groundwater contamination.

USEPA issued a RCRA Section 3013 UAO for EPG in 2005, requiring the Army to investigate potential environmental releases of hazardous substances. In 2006/2007 several grids in the middle of former Range 5A were cleared of MEC. A 2007 Phase I Environmental Investigation Summary report identified nitrobenzene in soils, and RDX and 2,4/6- DNT in groundwater above USEPA screening levels at M-33. In January 2008 the USACE re-swept former Range 5A and the surrounding area to identify any remaining grids that required MEC clearance. All grids identified by USACE were cleared of MEC in fall 2008. The clearance activity did not identify additional burial pits. Phase II UAO environmental investigations were conducted in August 2008, February/March 2009, May 2009, and June 2010. The Phase II Investigations further delineated RDX and 2,4/6-DNT concentrations in groundwater. A final FFS for M-33 was completed in September 2013 and a PP was completed in October 2014. The preferred remedy identified in the PP for FTBL-005-R-05 Alternative 2 originally called for MNA; however, after the source removal there was insufficient COC mass remaining in groundwater for anything more than monitoring. Groundwater sampling was conducted in June and October 2014 to assess the effectiveness of MNA in the area. A DD for MC in groundwater on the site was signed in October 2018. The 2018 DD report

recommended semiannual sampling for the first two years, followed by annual sampling for years three to eight, and biennial sampling for the remaining period of the RA(O) phase. Existing wells were upgraded in 2021 to protect the wellheads. The LTM plan and LUCIP for the site were completed in March 2020.

MILCON activity at SWMUs M-32/M-33 in 2021 required acceleration of groundwater monitoring to accommodate a rigorous construction schedule. The initial LTM semiannual groundwater sampling events were completed at M-32 and M-33 in March and November 2021. Concentrations of the 2,4-DNT/2,6-DNT mixture exceeded the RG (5.3 ug/L) in monitoring well M32-MW03 (8.2 to 9.13 ug/L) adjacent to the B5091 bunker. Detections were below the RG in samples collected from the other M-32 and M-33 monitoring wells in March and November 2021. The 2,4-/2,6-DNT mixture was not detected in wells M33-MW01, M33-MW03, and M33-MW09, located upgradient, within, and downgradient of the M-33 ordnance removal boundary area. RDX detections above the RG were observed in an isolated monitoring well M33-MW12 (73 to 78.5 ug/L) within the M-33 ordnance removal area boundary. RDX detections were below the RG in samples from the remaining M-32 and M-33 monitoring wells in 2021. RDX was not detected at M33-MW03 and M33-MW09, located upgradient and downgradient of the M-33 ordnance removal area boundary.

Semiannual monitoring was conducted at SWMUs M-32/M-33 in May 2022, July 2022, March 2023, and April 2023. Isolated concentrations of 2,4-DNT (9.9 ug/L) and RDX (49.4 ug/L) exceeded the remedial goals in groundwater in April 2023. Following completion of the semiannual monitoring, groundwater wells at the site were abandoned to accommodate the MILCON construction. Concurrent with the well removals, the site areas were subjected to an additional munitions clearance over 65 acres of property that included proximal SWMUs M-32, M-33, M-34, M-35, and AOPC-21. Following the munitions clearance, structures on the property were removed and extensive cut and fill land modification was completed over the entire site area with UXO construction support.

MEC has been addressed at the M-32/M-33 with a site-specific munitions clearance ahead of the MILCON construction. Future administrative requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain industrial, groundwater risks are acceptable, and the site has achieved final MEC clearance during the MILCON, site conditions will allow for UU/UE with no requirement for inspections or five-year reviews. The area of SWMUs M-32/M-33 will be incorporated into a 150-acre MILCON. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1078_FTBL-005-R-06_Ordnance Pit-Range 5 (M34)

Env Site ID: FTBL-005-R-06

Cleanup Site: Ordnance Pit-Range 5 (M34)

Alias: M-34

Regulatory Driver: CERCLA

RIP Date: 1/31/2025

RC Date: 1/31/2025

RC Reason: Not assigned

SC Date: 10/29/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 9

Phase	Start	End
RFA:	9/15/1990	6/15/2002
CS:	6/15/2002	6/15/2003
RFI/CMS:	8/15/2003	7/31/2024
DES:	7/31/2024	1/31/2025
IRA:	10/15/2006	10/15/2019
RA**(C):**	7/31/2024	1/31/2025
RA**(O):**	- -	- -
LTM:	1/31/2025	10/29/2054

Site Narrative: SWMU M-34 is located near the northwestern boundary of the FBNA MRA. The site area was identified in 1990 in a Phase I/II EBS. SWMU M-34 is an area of four former waste ordnance pits located in an open field at Range 5. The Phase I/II EBS reported that waste ordnance, cut-up weapons, bottles of chemicals, and barbed wire were buried in this area. The waste pits were about 30 feet deep, and the buried material was no closer than 15 feet to the surface of the ground. Approximately 200 cubic yards of soil mixed with various items of inert debris (including barbed wire, razor wire, and rusted metal) and a number of inert land mines were removed from seven discrete disposal pits. Soil samples were collected from the bottom of each pit, and explosives residues were detected in the samples. All pits were backfilled with clean soil.

Environmental investigations determined that the former activities at SWMU M-34 have not adversely impacted the subsurface soil and that detected analytes in groundwater samples collected from monitoring wells at SWMU M-34 did not exceed corresponding MCL or RBC values. MEC clearance and removal activities at Range 5 were completed in Fall 2008/Winter 2009 with the exception of a burial pit discovered at grids 2U-24 and 2U-25, located along the eastern boundary of SWMU M-34. Based on these findings, the Army recommended that SWMU M-34 exclude grids 2U-24 and 2U-25 and be closed with NFA. The USEPA concurred with the NFA recommendation in September 2009. Grids 2U-24 and 2U-25 were transferred for investigation as site AOPC-21. A final PP was prepared in May 2014 recommending NFA for M-34. Under the NFA alternative, no RA would be performed, and no additional ICs would be implemented. The USEPA and VADEQ have concurred with the NFA alternative for soil and groundwater. A final DD for the site M-34 was signed in February 2015. The site area remains wooded and undeveloped and will be incorporated into a 150-acre MILCON project.

Semiannual groundwater monitoring was conducted at adjacent downgradient site AOPC21 in May 2021, November 2021, May 2022, and October 2023. Detected concentrations of explosives compounds and chlorinated solvent were below the remedial goals for groundwater with estimated human health risk within the USEPA risk range. Following completion of the semiannual monitoring, groundwater wells

at site M-34 were abandoned to accommodate the MILCON construction. Concurrent with the well removals, the site areas were subjected to an additional munitions clearance over 65 acres of property that included proximal SWMUs M-32, M-33, M-34, M-35, and AOPC-21. Following the munitions clearance, structures on the property were removed and extensive cut and fill land modification was completed over the entire site area with UXO construction support. MEC has been addressed at M-34 with a site-specific munitions clearance ahead of the MILCON construction and groundwater monitoring data. Future requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain industrial, groundwater risks are acceptable, and the site achieved final MEC clearance during the MILCON, site conditions will allow for UU/UE with no requirement for inspections or five-year reviews. The area of SWMU M-34 will be incorporated into a 150-acre MILCON in 2023.

51105.1079_FTBL-005-R-07_Training Area-R5B (M35)

Env Site ID: FTBL-005-R-07

Cleanup Site: Training Area-R5B (M35)

Alias: M-35

Regulatory Driver: CERCLA

RIP Date: 1/31/2025

RC Date: 1/31/2025

RC Reason: Not assigned

SC Date: 10/29/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 9

Phase	Start	End
RFA:	9/15/1990	6/15/2002
CS:	6/15/2002	6/15/2003
RFI/CMS:	8/15/2003	7/31/2024
DES:	7/31/2024	1/31/2025
IRA:	10/15/2006	10/15/2019
RA**(C):**	7/31/2024	1/31/2025
RA**(O):**	- -	- -
LTM:	1/31/2025	10/29/2054

Site Narrative: SWMU M-35 (FTBL-005-R-07) was identified in the 1990 USATHAMA Phase I/II EBS as a 40-acre troop training area located within Range 5B in the northwest quadrant of the FBNA MRA. The site is reported to have been used until the early 1950s. Live ammunition was not fired at the site and no solid or hazardous wastes were stored, used, or disposed of on the site. There are no known structures associated with SWMU M-35. Troop training reportedly occurred in underground tunnels at Range 5B, however, no tunnels have ever been discovered. The site is in proximity (northwest) to B5091 (M-32) which represents the only known above-ground tunnel structure in the area. Range 5B was reported to have been cleared and graded between 1950 and 1954, however, large pits and disturbed ground are visible on aerial photography from 1953 to 1972 indicating that the site was still in use and may have been routinely regraded for training purposes. A building structure was on the site until sometime between 1990 and 1997. A 1990 UXO survey at Range 5B recovered 30 inert fuzes from the ground surface and identified the possible location of a buried landmine. In response to a UAO issued by the USEPA in September 2005, and in preparation for EPG BRAC construction, a site investigation was conducted at M-35. A 2007 MEC clearance in Range 5B recovered 6 fuzes, one M1 land mine, and one M12 land mine. A 2008 USACE transect survey in Range 5B did not identify burial pits. Subsequently, twelve MEC items consisting of ten fuzes, a mine igniter, a fuzed, M6A1 2.36-inch-high explosive anti-tank rocket with a spent motor, and an M12 mine were recovered from the ground surface at Range 5B in 2008. No MEC disposal pits were encountered during this survey.

Based on the range history, geophysical surveys, and MEC clearance results, analysis concluded that unfired MEC items distributed at the ground surface were unlikely to have released contaminants that would pose a threat to groundwater at the site. Range clearance activities did not identify pits or MEC in this area and the site was recommended for NFA in October 2009. A proposed plan was completed in May 2014 and a decision document for NFA was completed in February 2015. USEPA and VADEQ concurred with the NFA recommendation for soil and groundwater in January 2017 and UAO closure was achieved in July 2017. A portion of SWMU M-35 was assessed for MEC in 2018 as part of the additional

munitions investigations on the FBNA MRA. The site area will be incorporated into a 150-acre MILCON re-development project.

The site area at M-35 was subjected to an additional munitions clearance over 65 acres of property that included proximal SWMUs M-32, M-33, M-34, and AOPC-21. Following the munitions clearance, extensive cut and fill land modification was completed over the entire site area with UXO construction support. MEC has been addressed at the M-35 with a site-specific munitions clearance ahead of the MILCON construction. Future requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain industrial, the site has achieved final MEC clearance during the MILCON, site conditions will allow for UU/UE with no requirement for inspections or five-year reviews. The area of SWMU M-35 will be incorporated into a 150-acre MILCON in 2023.

51105.1080_FTBL-005-R-08_Range 5 (Building 5091)

Env Site ID: FTBL-005-R-08

Cleanup Site: Range 5 (Building 5091)

Alias: M-32

Regulatory Driver: CERCLA

RIP Date: 8/30/2021

RC Date: 8/30/2054

RC Reason: Not assigned

SC Date: 8/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 9

Phase	Start	End
RFA:	3/31/1995	3/31/1995
CS:	5/15/1996	5/15/1996
RFI/CMS:	12/15/2008	2/15/2009
DES:	- -	- -
IRA:	6/15/1995	5/15/1996
RA**(C):**	11/15/2013	8/30/2021
RA**(O):**	8/30/2021	8/30/2054
LTM:	- -	- -

Site Narrative: FTBL-005-R-08 (SWMU M-32) at Building 5091 (formerly B2091) is located on the western portion of FBNA MRA adjacent to Range 5A. Building 5091 is a bunker/tunnel that was used for bullet firing and explosives training involving steel cutting and firing bullets into a sand pile. A 1990 Phase I/II EBS identified SWMU M-32 as having the potential for metals and explosives contamination in soil and surface soil. The analytical results from samples collected from the bunker interior and earthen cover indicated that the soil inside the bunker contained lead and RDX at concentrations above action levels and background levels. Eighteen (18) tons of lead/RDX contaminated soil was excavated from within the bunker in 1996. The removal action was documented in a 2002 closure report that recommended NFA for the site.

An investigation summary report for the site was completed in May 2009. Investigation data indicated no site-related residual contamination in the SWMU M-32 soil. Groundwater data indicated the presence of RDX and 2,4-DNT contamination at concentrations greater than the USEPA RSLs. SWMU M-32 is hydraulically upgradient of SWMU M-33, where explosives contamination in groundwater had been found previously. Because of the proximity of the site areas, it was recommended that SWMU M-32 groundwater be addressed administratively as part of SWMU M-33.

A NFA PP for Site M-32 soil was approved by USEPA on Sept. 14, 2009. Under the NFA alternative no RA would be performed, and no additional ICs would be implemented at the site for soil. Consideration for groundwater at M-32 was administratively transferred to adjacent site M-33. A final DD was prepared for SWMU M-32 in February 2015. Phase II UAO environmental investigations were conducted in August 2008, February/March 2009, May 2009, and June 2010. The Phase II Investigations further delineated RDX and 2,4/6-DNT concentrations in groundwater at M-32/M-33. A final FFS was completed in September 2013 and a PP was completed in October 2014. The preferred remedy identified in the PP for FTBL-005-R-05 Alternative 2 originally called for MNA; however, after the source removal there was insufficient COC mass remaining in groundwater for anything more than monitoring. A DD for MC in groundwater on the site was signed in October 2018. The 2018 DD report recommended semiannual

sampling for the first two years, followed by annual sampling for years three to eight, and biennial sampling for the remaining period of the RA(O) phase. Existing wells were upgraded in 2021 to protect the wellheads. The LTM plan and LUCIP for the site were completed in March 2020.

The proposed MILCON activity at SWMUs M-32/M-33 in 2021 required acceleration of groundwater monitoring to accommodate a rigorous construction schedule. The initial LTM semiannual groundwater sampling events were completed at M-32 and M-33 in March and November 2021. Concentrations of the 2,4-DNT/2,6-DNT mixture exceeded the RG (5.3 ug/L) in monitoring well M32-MW03 (8.2 to 9.13 ug/L) adjacent to the B5091 bunker. Detections were below the RG in samples collected from the other M-32 and M-33 monitoring wells in March and November 2021. The 2,4-/2,6-DNT mixture was not detected in wells M33-MW01, M33-MW03, and M33-MW09, located upgradient, within, and downgradient of the M-33 ordnance removal boundary area. RDX detections above the RG were observed in an isolated monitoring well M33-MW12 (73 to 78.5 ug/L) within the M-33 ordnance removal area boundary. RDX detections were below the RG in samples from the remaining M-32 and M-33 monitoring wells in 2021. RDX was not detected at M33-MW03 and M33-MW09, located upgradient and downgradient of the M-33 ordnance removal area boundary.

Following the completion of semiannual monitoring at SWMUs M-32/M-33 in May 2022, July 2022, March 2023, and April 2023. Isolated concentrations of 2,4-DNT (9.9 ug/L) and RDX (49.4 ug/L) exceeded the remedial goals in groundwater. Groundwater wells at the site were abandoned in 2023 to accommodate the MILCON construction. Concurrent with the well removals, the site areas were subjected to an additional munitions clearance over 65 acres of property that included proximal SWMUs M-33, M-34, M-35, and AOPC-21. Following the munitions clearance, structures on the property were removed and extensive cut and fill land modification was completed over the entire site area with UXO construction support. B5091 bunker/tunnel at M-32 was removed in 2023 as part of a MILCON project.

MEC has been addressed at the M-32/M-33 with a site-specific munitions clearance ahead of the MILCON construction. Future administrative requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain industrial, groundwater risks are acceptable, and the site has achieved final MEC clearance during the MILCON, site conditions will allow for UU/UE with no requirement for inspections or five-year reviews. The area of SWMUs M-32/M-33 will be incorporated into a 150-acre MILCON. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1081_FTBL-024-R-01_BOOBY TRAP SITE

Env Site ID: FTBL-024-R-01

Cleanup Site: BOOBY TRAP SITE

Alias: #

Regulatory Driver: CERCLA

RIP Date: 2/28/2018

RC Date: 2/28/2018

RC Reason: Study Completed, No Cleanup Required

SC Date: 2/28/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/15/2001	5/15/2003
SI:	9/15/2006	7/15/2008
RI/FS:	11/15/2009	2/14/2018
RD:	11/15/2017	2/28/2018
IRA:	6/15/2008	2/28/2018
RA(C):	11/15/2017	2/28/2018
RA(O):	- -	- -
LTM:	3/1/2018	2/28/2054

Site Narrative: The Booby Trap Site MRS is located on the southeastern Fort Belvoir Main Post adjacent to Gunston Cove. The site was initially identified from a 1983 memorandum as a 1-acre site within operational training area T-1A. The MRS was identified on several installation training area maps dating from 1987 and 1989. The installation maps indicated the MRS was approximately four acres but provided no additional information regarding training activities. The MRS may have been associated with the engineering school and is presently undeveloped and wooded. An RV travel camp and cabin area was constructed southeast of the training parcel. Fort Belvoir installed fencing in 2008 to impede access as an interim measure until a RI could be completed. During the fence installation, construction workers identified several emplaced training landmines along an access road, outside the MRS. A removal action was completed between November to December 2009 over 36 acres to recover residual training munitions from the site to a depth of two feet. A total of 3 small disposal pits and 954 munitions-related items were recovered from the site. The RA encompassed 36 acres consisting of the Booby Trap Site MRS (4 acres), adjacent Booby Trap Fence Extension (9 acres), and RV travel camp (23 acres). The added area beyond the 4-acre Booby Trap Site was included because practice mines were discovered outside the original 4-acre MRS boundary. A RI with human health and ecological risk assessments was conducted between 2010 and 2012. Metals concentrations exceeding the screening criteria in shallow soils did not indicate human health risk in excess of USEPA criteria. Interim LUCs were established under CERCLA in June 2014 as a NTCRA until a final remedy was selected. The FS approved by the VADEQ on Nov. 17, 2015, recommended LUCs as the final remedy. The DD was approved by VADEQ in November 2017. The DD identifying LUCs as the final remedy for this site was finalized on Feb. 14, 2018. A LUCIP was finalized in February 2018.include provision for MEC recognition and safety training associated with dig permit requirements and annual inspections and reporting under the LTM phase. Because a removal action has been completed at the site, the site area is fenced, and environmental risk is not evident in the collected soil samples, FTBL recommends that because the future land use will remain industrial and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and

five-year reviews will continue indefinitely. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1082_FTBL-026-R-01_MINES AND BOOBY TRAP AREA

Env Site ID: FTBL-026-R-01

Cleanup Site: MINES AND BOOBY TRAP AREA

Alias: MBTA

Regulatory Driver: CERCLA

RIP Date: 9/15/2021

RC Date: 9/15/2021

RC Reason: All Required Cleanup(s) Completed

SC Date: 10/15/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 11

Phase	Start	End
PA:	10/15/2001	5/15/2003
SI:	4/15/2005	1/15/2008
RI/FS:	10/15/2011	10/31/2019
RD:	9/15/2020	3/15/2021
IRA:	11/4/2011	10/15/2017
RA(C):	9/8/2020	9/15/2021
RA(O):	9/8/2020	9/15/2021
LTM:	9/1/2023	10/15/2054

Site Narrative: The Mines and Booby Trap (MBTA) MRS consists of approximately 110 acres located northeast of the Davison Army Airfield complex on FTBL. According to 1943 historical documents, training activities that occurred at the site included the placement and removal of booby trap devices training land mines, and detonating devices. The MRS was operational between 1943 and 1947. The site is partially developed with the Mosby Army Reserve Center, the Fort Belvoir Skills Training Center, and the Farrar Gate ACP. The MBTA is located within FTBL's protected wildlife corridor.

A 2008 SI recommended NFA for the MRS because no evidence of MEC or MC (metals or explosives) was found. However, a hunter reported a possible munition at the MBTA in November 2010. Explosives ordnance disposal (EOD) determined it to be an unarmed anti-tank landmine training device. USACE completed 19.3 miles of meandering transect surveys and 5.9 miles of transects within the MRS boundary. The majority of USACE transects were southeast of the MBTA and along Accotink Creek. USACE located and recovered 11 training landmines, some of which were outside of the MRS boundary.

A RI/FS was conducted for the MBTA between July 2013 and October 2017. MEC was not found at the MRS during the RI, however, a total of 111 additional MD items including inert training mines with inert fuzing, rifle grenades, fuzes, and practice grenades were found. The majority of MD items found were within the Mine Training Area boundaries identified from a 1944 historic aerial photograph, however, 16 of 111 MD items were found outside of the footprint of the historical mine training area boundaries. The southeast corner of the site was not surveyed during the RI investigation because of the imminent construction of the Fort Belvoir Skills Training Facility. USACE completed a UXO clearance of this area during early construction at the site and removed an additional 66 MD items consisting of inert training landmines. To address the immediate threat to human health at this site until a final remedy can be selected, interim LUCs were developed in 2010 as a NTCRA in accordance with CERCLA. The action memorandum implementing the LUCs was signed in July 2014. A DD for the site was signed on Oct. 31, 2019, specifying Focused MEC removal and LUCs as the final remedy for the MBTA. A systematic MEC investigation and removal at the MBTA based on the locations of former training areas as identified from

historical aerial photography and the locations where practice munitions were previously identified and removed was conducted between Sept. 8, 2020, and Nov. 2, 2020. Encountered munition debris, training and bivouac materials including tent screws, a dog tag machine, and corroded munitions parts were removed from the project site. MEC was not encountered during the RA, however, three burial pits were delineated on the site. A final removal action completion report was completed in with VADEQ concurrence in November 2021. LUCs include notations in FTBL master planning maps and geographic information system (GIS), dig permit requirements with site-specific UXO clearance and MILCON construction support, munitions awareness materials for hunters, public, and facility staff education, warning signs, and long-term monitoring (inspections). The selected remedy is protective of human health and the environment and meets RA(O) by preventing human exposure to military munitions found on the surface and subsurface. The LUCs were initiated under the RA(C) phase in FY19 with annual inspections and maintenance to be completed under the LTM phase. The current and anticipated future land use for this site is Airfield, or industrial development, based on the installation's 2015 real property master plan. Because the future land use will remain industrial and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, LUCs and five-year reviews will continue indefinitely. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1089_FTBL-001-R-02_INFILTRATION COURSE

Env Site ID: FTBL-001-R-02

Cleanup Site: INFILTRATION COURSE

Alias: #

Regulatory Driver: CERCLA

RIP Date: 8/30/2021

RC Date: 8/30/2021

RC Reason: All Required Cleanup(s) Completed

SC Date: 8/30/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/15/2001	5/15/2003
SI:	4/15/2005	1/15/2008
RI/FS:	7/15/2009	9/15/2020
RD:	9/15/2020	1/7/2021
IRA:	10/15/2013	8/15/2018
RA(C):	1/7/2021	8/30/2021
RA(O):	- -	- -
LTM:	8/30/2021	8/30/2054

Site Narrative: The Infiltration Course MRS, is an approximately 2-acre site formerly part of the Small Arms Range Complex MRS, that was separated into the Small Arms Range Complex MRS and the Infiltration Course MRS as a result of observations made during the SI. The Infiltration Course MRS is located immediately north of Tully Gate on the Main Post. The Tully Gate area is also the former location of the Pig Farm Range. The Infiltration Course range first appears on installation maps in 1943, and a memo from the same year states that three machine guns mounted on tripods and explosives were available for use at the site. A 1944 memorandum shows three machine gun emplacements along a trench behind a control/observation tower. Firing occurred from the enemy (infiltrator) trench downrange toward the starting trench. Barbed wire was stretched along the course in two locations. According to the 1944 memorandum diagram, circles on the schematic were pits where explosives were set with charges not to exceed one-half pound. The Infiltration Course appears on multiple installation maps between 1943 and 1956. The site is clearly delineated on a 1953 aerial photograph which also appears to show cratering or foxhole excavations. The site is degraded on a 1960 aerial and is revegetated by 1972. The area is currently wooded and undeveloped except for foot trails and bridges for recreational hiking.

A visual survey during the SI discovered remains of a possible machine gun emplacement and two small mounds in the suspected firing area of the Infiltration Course. Due to an elevated concentration of lead detected in an SI soil sample and the historic use of explosives at the site, the SI recommended a RI/FS for the MRS focused on MC (metals and explosives). An underground stormwater detention system was installed beneath the northern Tulley Gate parking area in 2011 that discharges to the drainage flowing through the former Infiltration Course site. The completed RI/FS for the site was approved by VADEQ in December 2012 and finalized in January 2013. The RI identified lead and copper in soil above USEPA action levels, however, a human health risk assessment indicated acceptable human health risk for the site. Surface water samples indicated that Virginia water quality standards were exceeded for lead and copper. An October 2013 action memorandum identified interim LUCs as the appropriate alternative for

a NTCRA at the site. The site was incorporated into the overall USAG-FB LUCIP in August 2016. An addendum to the 2013 FS was completed in January 2019 and concluded that a targeted soil removal for lead and stream stabilization was warranted for the MRS. The FFS was completed in January 2019 with VADEQ concurrence in February 2019. The final PP was submitted in September 2019 with VADEQ concurrence in October 2019. The final DD was submitted in September 2020 with VADEQ concurrence.

A final remediation completion report was approved in August 2021 with VADEQ concurrence. A final LUCIP was completed in August 2021 with VADEQ concurrence in September 2021. Post-remediation remedy for FTBL-001-R-02 consists of dig permit requirements, signage and inspections and associated five-year reviews. Because the future land use will remain industrial/recreational and hazardous constituents may remain at the site at concentrations exceeding levels that allow for UU/UE, five-year reviews will continue indefinitely.

51105.1090_FTBL-018-R-01_DEMOLITION AREA - 01

Env Site ID: FTBL-018-R-01

Cleanup Site: DEMOLITION AREA - 01

Alias: DA-01

Regulatory Driver: CERCLA

RIP Date: 2/28/2018

RC Date: 2/28/2018

RC Reason: All Required Cleanup(s) Completed

SC Date: 2/28/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 10

Phase	Start	End
PA:	10/15/2001	5/15/2003
SI:	4/15/2005	7/15/2008
RI/FS:	7/15/2009	2/14/2018
RD:	11/15/2017	2/28/2018
IRA:	3/15/2011	2/28/2018
RA(C):	11/15/2017	2/28/2018
RA(O):	- -	- -
LTM:	3/1/2018	2/28/2054

Site Narrative: Demolition Area – 01 (DA-01) MRS (FTBL-018-R-01) occupies approximately 312 acres on the northeastern portion of FTBL Main Post. DA-01 was initially part of a larger training area that included Demolition Area – USACE TD that occupied 489 acres. The Demolition Area-USACE TD was transferred to the USACE in 1980 for use as the HEC. The DA-01 MRS was identified on a 1940 archival map displaying tactical training areas and was used between 1940 and 1951. Aerial photographic analysis completed in August 2007 documented FTBL activities from 1943 to 1980 and identified multiple ground scars, craters, and pits, a land mine training area, and a demolition training area on a 1944 aerial photograph. The Demolition Area MRSs were used to train Army engineers in the use of demolition materials and to practice demolition techniques (i.e., bridge demolition). Demolition activities may have occurred on the surface, within steel pits, or below ground. Demolition materials used included bulk explosives, shape charges, cratering charges, time fuses, blasting caps, dynamite, and flare signal rockets.

The DA-01 MRS currently consists of residential and administrative buildings, improved roads, and the Jackson Miles Abbott Wetland Refuge, which is open to the public for nature walking and wildlife observation. The undeveloped areas around the perimeter of the site are wetlands and wildlife protection areas. Woodlawn Village was constructed in the central portion of the MRS in the 1980s. A fence separating the housing area from the surrounding natural areas is maintained by Fort Belvoir, but the MRS is accessible to the public. A 2008 SI identified one MEC item (smoke grenade) and several possible blast holes. MC concentrations in soil samples did not exceed the range of FTBL background levels. A RI was completed in December 2012. Several areas of emplaced training/practice land mines were characterized during the RI field effort. The RI included surface reconnaissance over the entirety of the MRS to locate former range features and surface MEC/MPPEH, Subsurface anomaly investigation was conducted to assess the presence and nature of metallic items, with soil sampling at locations where MC releases may have occurred. Although the developed housing area was not specifically investigated

during the RI, the historical training activities that occurred in the developed area were similar to the rest of the MRS.

Three areas of former land mine training identified in the aerial photography were confirmed during the RI to contain practice mines with three surface and 60 subsurface MD items encountered on the site. The MD included inert training mines expended illumination and smoke signaling devices. Although numerous munitions related items were found in the area, none of the recovered landmines contained explosives and no MEC was found in these areas. An interim MEC removal action was completed over 45.3 acres on DA-01 between May and October 2016. The areas represented specific locations where clusters of practice training landmines were found and delineated during the RI. Removal actions were not conducted in the remaining portions of DA – 01 because no similar clusters were identified. The completion report was approved by the VADEQ on March 8, 2017. The final DD and LUCIP for DA-01 were completed in February 2018 with VADEQ concurrence in March 2018. LUCs include dig permitting requirements with MEC recognition and safety training annual inspections and reporting under the LTM phase.

Future land use includes the residential Woodlawn development, a baseball complex, nature areas, and undeveloped commercial/residential property. Hazardous substances, contaminants, or military training materials remaining at the site require continuation of LUCs and five-year reviews for the site.

51105.1141_FTBL-005-R-09_CDC SOIL AND GROUNDWATER

Env Site ID: FTBL-005-R-09

Cleanup Site: CDC SOIL AND GROUNDWATER

Alias: #

Regulatory Driver: CERCLA

RIP Date: 9/19/2021

RC Date: 8/18/2054

RC Reason: Not assigned

SC Date: 8/18/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 3

Phase	Start	End
PA:	6/15/2009	7/15/2009
SI:	8/15/2009	9/15/2009
RI/FS:	5/15/2011	9/18/2020
RD:	9/29/2016	9/19/2021
IRA:	4/15/2012	6/15/2013
RA(C):	3/15/2016	9/18/2021
RA(O):	9/19/2021	8/18/2054
LTM:	- -	- -

Site Narrative: The FBNA Soils and Groundwater site (FTBL-005-R-09) is located on the FBNA at the existing Child Development Center (CDC). The CDC facility is constructed within the former EPG MRA, FTBL-005-R-01 (51105.1051) and the site was constructed over the southern portion of an equipment test track. Although munitions usage was not previously documented at the site, a MEC clearance was conducted over 8 acres at the site in December 2010. During the clearance, six unfused training landmines were encountered outside the western footprint of the proposed CDC building site in the proximity of the former test track. Several of the mine fields tested positive for explosives. Four of the 6 landmines were described as 12 inches by 10 inches by four-inch wooden boxes that were heavily degraded. The remaining two were metallic anti-tank landmines with unidentified fusing due to the presence of fuse well caps. The items were rendered safe by EOD personnel and disposed of in accordance with Virginia's Solid Waste Disposal regulations.

A phased RI/FS was completed at the CDC site between January 2011 and August 2013. The investigation identified SVOCs above residential regional screening concentrations in soil, and explosives in groundwater above drinking water criteria. An IRA for soil was completed in 2012. The upper three feet of soil was replaced over the proposed building area in 2013 prior to the initiation of the CDC construction. Remaining COCs at the site consisted of low concentrations of RDX detected in groundwater from temporary monitoring wells. The final RI/IRA/FFS report recommended LUCs and MNA as the preferred corrective measure to address groundwater contamination at the site. The USEPA Region III approved this recommendation in a letter dated April 7, 2014. October 2017, discussions with the VADEQ and the Army resulted in agreement to revise the preferred alternative described in the FS report from MNA to long-term groundwater monitoring. As a result, the PP was revised to identify the preferred remedy as Alternative 2 – LUCs, and Alternative 3 – Groundwater long-term monitoring. The PP was approved by VADEQ in February 2019. A DD for groundwater for FTBL-005-R-09 (51105.1141) received concurrence from VADEQ in September 2020. A LTM plan and LUCIP were approved by VADEQ in January 2021.

Semiannual groundwater sampling for PAH, SVOC, and 2,6-dinitrotoluene was conducted in March 2021, March 2022, October 2022, and April 2023 to evaluate the concentrations and spatial distribution of contaminants of concern. The sampling results indicated no COC detections from Spring 2021 to Spring 2023. VADEQ requested an additional year of groundwater monitoring under LTM.

MEC has been addressed at the FBNA-CDC with a site-specific munitions clearance ahead of the MILCON school construction. Future requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain residential (school), groundwater risks are acceptable, and the site achieved final MEC clearance during the MILCON, site conditions will currently allow for UU/UE with no requirement for LUCs or five-year reviews.

51105.1198_FTBL-005-R-10_MUNITIONS DISPOSAL AOPC21

Env Site ID: FTBL-005-R-10

Cleanup Site: MUNITIONS DISPOSAL AOPC21

Alias: AOPC-21

Regulatory Driver: CERCLA

RIP Date: 3/30/2026

RC Date: 10/15/2054

RC Reason: Not assigned

SC Date: 10/15/2054

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 3

Phase	Start	End
PA:	9/15/2008	12/15/2008
SI:	1/15/2009	6/15/2009
RI/FS:	6/15/2009	9/28/2025
RD:	11/15/2025	3/30/2026
IRA:	9/15/2008	10/15/2017
RA(C):	10/15/2022	9/29/2023
RA(O):	3/30/2026	10/15/2054
LTM:	- -	- -

Site Narrative: Munitions Disposal Pit at Range 5 (AOPC-21) was identified in October 2008 located on the northwestern EPG approximately 300 feet from the installation boundary. AOPC-21 encompasses areas in remediation Grids 2U-24, and 2U-25, associated with munitions clearance actions completed between Fall 2008 and July 2009 at SWMU M-34. Grids 2U-24 and 2U-25 contained ten areas where MEC was concentrated with widely varying munitions and construction debris. A large magnetic anomaly excavated on the southeast quadrant of grid 2U-25 led to the recovery of inert landmines, empty plastic bottles of liquid explosives, and general trash/debris. Between 10- and 26-feet trash/debris, blasting caps, base couplers, burned rifle and pistol parts, and MD including inert landmines. MEC items recovered consisted of 66 base couplers, three blasting cap boosters, 46 electric blasting caps, 10 electric squibs, 10 fuze booster cups, 3,821 non-electric blasting caps, and 1000 feet of safety time fuse. A corroded 55-gallon drum was excavated from the area of Grids 2U-24 and 2U-25. TCE was detected in soil collected from below the drum and the surrounding soils were removed in December 2008.

UXO technicians identified a second area of concern containing a dark viscous material directly under surface soil. On completion of the MEC clearance in June 2009, soil samples were collected from the drum location and the dark viscous material and groundwater wells were installed. Contaminants in soil included TCE, PCBs, and 2,4 and 2,6-DNT. Upon completion of the soil sampling approximately 50 tons of soil was removed. COCs in groundwater included TCE, DNT, and RDX. TCE levels in groundwater ranged between 50 ug/L and 200 ug/L.

Live munitions were removed from the disposal pit under an interim action in September 2010 and access to the site was restricted from September 2010 to May 2012 because of BRAC construction. Fort Belvoir submitted an addendum to the investigation plan in May 2012 to delineate TCE contamination in groundwater. A July 2012 sampling event indicated that TCE concentrations were attenuating, however, data indicated TCE migration toward a surface drainage feature east of the site. Constituent concentrations in surface water and sediment samples from a nearby stream tributary were below human health and ecological screening levels. An RI report for the site was approved by the USEPA on

Oct. 16, 2014, with the stipulation that groundwater monitoring will continue until drinking water MCLs or RSLs are attained. An FFS received concurrence from VADEQ on Feb. 28, 2019. Semiannual RA(O) groundwater sampling at AOPC-21 in May 2022 detected concentrations of 2,6-DNT, 2-Nitrotoluene, and RDX above the RSL screening criteria. Volatile chlorinated constituent concentrations were below the MCLs. MILCON activity at AOPC-21 required acceleration of groundwater monitoring to accommodate a rigorous construction schedule.

Semiannual groundwater monitoring was conducted at site AOPC21 in May 2021, November 2021, May 2022, and October 2023. Detected concentrations of explosives compounds and chlorinated solvent were below the remedial goals for groundwater with estimated human health risk within the USEPA risk range. Groundwater wells at AOPC-21 were abandoned in 2023 to accommodate the MILCON construction. Concurrent with the well removals, the site areas were subjected to an additional munitions clearance over 65 acres of property that included proximal SWMUs M-32, M-33, M-34, and M-35. Following the munitions clearance, structures on the property were removed and extensive cut and fill land modification was completed over the entire site area with UXO construction support. MEC has been addressed at AOPC-21 with a site-specific munitions clearance ahead of the MILCON construction and groundwater monitoring data. Future requirements for the site will consist of an ESD, achieving RC, and site close out. Because the future land use will remain industrial, groundwater risks are acceptable, and the site has achieved final MEC clearance during the MILCON, site conditions will allow for UU/UE with no requirement for LUC inspections or five-year reviews. The area of AOPC-21 will be incorporated into a 150-acre MILCON in 2023. Future land use will be monitored through the Fort Belvoir dig permit process and NEPA requirements.

51105.1249_CC-A01_CULLUM WOODS LANDFILL

Env Site ID: CC-A01

Cleanup Site: CULLUM WOODS LANDFILL

Alias: A-01

Regulatory Driver: RCRA

RIP Date: 2/15/2004

RC Date: 2/14/2054

RC Reason: Not assigned

SC Date: 2/14/2054

Program: Compliance-related Cleanup

Subprogram: CC

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP:

Phase	Start	End
PA:	4/15/1992	4/15/1992
SI:	4/15/1992	4/15/1992
RI/FS:	4/15/1992	4/15/1992
RD:	4/15/1992	12/15/1994
IRA:	- -	- -
CMI**(C):**	4/15/1992	2/15/2004
CMI**(O):**	2/15/2004	2/14/2054
LTM:	- -	- -

Site Narrative: Cullum Woods Landfill (SWMU A-01) is located approximately 300 feet south of US. Highway 1 on the Fort Belvoir Southwest Training Area. Disposal activities at Cullum Woods Landfill were initiated in 1977 as two trenches separated by an access road, with stockpiling of excess soil adjacent to the trenches for use as cover material. The unlined landfill waste encompasses a total of 13.8 acres with approximately 4.35 acres of additional former borrows area. The landfill was used for disposal of domestic and administrative sanitary refuse from Fort Belvoir. The Virginia Department of Health issued a permit for landfill activities at Cullum Woods Landfill on Oct. 2, 1980. The landfill ceased accepting waste on April 6, 1992, and was covered with 12 inches of cover soil and seeded. A closure plan was submitted to VADEQ on Dec. 21, 1990, and updated construction plans and specifications for the final closure cap were prepared in February 1993. Closure construction began on Aug. 25, 1993, and was certified complete by regulators in accordance with the closure plan on Sept. 18, 1995. The closure certification report is dated Nov. 16, 1995. A groundwater monitoring plan was prepared in 1998 in compliance with 9 VAC 20-80-300. The plan was prepared to address groundwater protection standard (GPS) exceedances of a select number of VOCs in downgradient monitoring wells. The facility's permit was amended on Aug. 28, 2000, for the establishment of GPSs for a reduced list of parameters. During a June 2001 monitoring event, several constituents exceeded their GPS, and the facility was required to begin the corrective action process. Methane concentrations exceeded the regulatory limit at the original facility boundary in 2001, so a revised LFG remediation plan and an active LFG control system were implemented. The landfill boundary was reestablished to accommodate LFG monitoring for a total of 43 acres.

April 2022 groundwater sampling indicated concentrations of alpha-BHC (0.01 ug/L), 1,1-DCA (4.1-4.5 ug/L), and cobalt (6.5-15 ug/L) GPS exceedances in groundwater at A-01. Future land use is identified as training/range in the garrison master plan. Future requirements for long-term groundwater monitoring, landfill cap inspection, and LFG probe monitoring and reporting are conducted under the RA(O) phase and are expected to continue until remedial objectives have been achieved. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants remain at the site at

concentrations exceeding levels that allow for UU/UE, periodic reviews will continue indefinitely. Fort Belvoir requested revocation of post closure care permit #308 for Cullum Woods Landfill on Oct. 4, 2022, because the landfill is also permitted under Fort Belvoir Part B. Landfill monitoring will continue at Cullum Woods under the Part B RCRA permit consistent with all other landfills on Fort Belvoir.

51105.1250_CC-A02_THEOTE ROAD LANDFILL

Env Site ID: CC-A02

Cleanup Site: THEOTE ROAD LANDFILL

Alias: A-02

Regulatory Driver: RCRA

RIP Date: 2/15/2004

RC Date: 4/28/2054

RC Reason: Not assigned

SC Date: 4/28/2054

Program: Compliance-related Cleanup

Subprogram: CC

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP:

Phase	Start	End
PA:	3/15/1995	7/15/1995
SI:	3/15/1995	7/15/1995
RI/FS:	3/15/1995	7/15/1995
RD:	- -	- -
IRA:	- -	- -
CMI**(C):**	3/15/1995	2/15/2004
CMI**(O):**	12/15/2002	4/28/2054
LTM:	- -	- -

Site Narrative: The Theote Road Construction/Demolition/Debris (C/D/D) Landfill site (SWMU A-02) is located west of Building 768 at the end of Tracy Loop Road. The 4-acre unlined landfill was under Solid Waste Management permit #490, issued by the Virginia Department of Health on Nov. 19, 1985. During operation of the landfill, construction, and demolition debris consisting of lumber, brick, concrete, tree branches, and stumps were disposed of on-site by military units, family housing occupants, or designated contractors for Fort Belvoir. The landfill does not have a leachate or landfill gas collection system but is equipped with landfill gas vents and a surface cap. A closure plan was submitted to VADEQ on Dec. 28, 1990. In September 1993, the plan was updated to comply with State regulations promulgated on March 15, 1993. The facility terminated operation on Oct. 9, 1993. Closure construction was certified complete on Oct. 6, 1995. Fort Belvoir initiated a Phase II monitoring program in December 2003. Tetrachloroethene was the only constituent detected at significant concentrations during the First Determination monitoring events. The 2004 post closure care plan was updated to reflect the current requirements for facility maintenance and groundwater monitoring. Landfill gas monitoring was terminated in 2004 and was approved by VADEQ in March 2007. An alternate source demonstration identified site CC-MP2 (51105.1134) as a possible source for VOC detections in monitoring wells at A-02. Site-specific GPSs were submitted to VADEQ on Nov. 4, 2009. A variance petition was submitted on Nov. 19, 2009, for use of published VADEQ alternate concentration limits (ACL) as GPS. Tentative approval of the ACL variance petition was issued by VADEQ on May 12, 2010. VADEQ revoked Solid Waste Permit 490 for Theote Road Landfill in a letter dated April 28, 2017. As specified in the revocation letter, monitoring of the facility's well network is conducted under site CC-MP2 (51105.1134). Subsequent data gap sampling for MP-2 has indicated that MP-2 may not provide a viable source for the volatile compounds in A-02 groundwater. Groundwater monitoring has resumed at A-02 under RA(O) and VADEQ has requested additional investigation to identify a source for PCE releases near the site. Periodic reviews will continue indefinitely.

SITE SUMMARY

SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
51105.1001	FTBL-01_CLOSED LANDFILL (REVEGETATED)	10/31/1990
51105.1002	FTBL-02_INACTIVE LANDFILL(BORDERS ACCOTI	8/31/1990
51105.1003	FTBL-04_BATTERY STORAGE AREA-BLDGS 324,1	8/31/1990
51105.1004	FTBL-05_LABORATORY STORAGE AREA,#305,307	8/31/1990
51105.1005	FTBL-06_SEWAGE TREATMENT PLANT 1(INACTIV	8/31/1990
51105.1006	FTBL-07_FUEL STORAGE/AREA 300 BLDGS	8/31/1990
51105.1007	FTBL-08_OIL/WATER SEPARATOR (3)	8/31/1990
51105.1008	FTBL-09_THOETE ROAD LANDFILL	10/31/1990
51105.1009	FTBL-10_LEAKING TRANSFORMERS(3)(NEAR DAV	8/31/1982
51105.1010	FTBL-11_FORMER GRENADE STG BUNKER	8/31/1982
51105.1011	FTBL-12_FIRE FIGHTING TRAINING/BURN AREA	8/31/1982
51105.1012	FTBL-13_PESTICIDE MIXING ROOM-BLDG 1490	10/31/1990
51105.1013	FTBL-14_HAZ WST STG BLDGS 317A,327C,362,	10/31/1990
51105.1014	FTBL-15_HAZARDOUS WASTE STORAGE 5 BRICK	10/31/1990
51105.1015	FTBL-16_DEMOLITION RANGE	10/31/1990
51105.1016	FTBL-17_FORMER COAL STORAGE AREA	8/31/1990
51105.1017	FTBL-18_INSTALLATION MOTOR POOL	8/31/1990
51105.1018	FTBL-19_VEHICLE WASH RACKS (10)	8/31/1990
51105.1019	FTBL-20_SUPPLY CENTER-BLDG 712	8/31/1990
51105.1020	FTBL-21_ACID NEUTRALIZATION UNITS (3) BL	8/31/1990
51105.1021	FTBL-22_INDOOR FIRING RANGE	10/31/1990
51105.1022	FTBL-23_TRANSFORMER STORAGE AREA-BLDG 14	8/31/1990
51105.1024	FTBL-25_HAZARDOUS WASTE STORAGE-BLDG 112	8/31/1990
51105.1025	FTBL-30_REACTOR CONTAINMENT BLDG	8/31/1990
51105.1026	FTBL-32_RUNOFF DISCHARGE DITCH(FROM EQUI	8/31/1990
51105.1027	FTBL-33_CULLUM WOODS LANDFILL (ACTIVE)	10/31/1990
51105.1028	FTBL-36_ACID NEUTRALIZATION PIT	8/31/1990
51105.1030	FTBL-39_DRMO SALVAGE STORAGE AREA	8/31/1990
51105.1031	FTBL-40_PESTICIDE STORAGE-BLDG 2505	8/31/1990
51105.1032	FTBL-41_CULLUM WOODS LF CATCHMENT POND	8/31/1990
51105.1033	FTBL-42_AVIATION FUEL STORAGE AREA	8/31/1990
51105.1034	FTBL-45_STEAM CLEANING UNIT (CINDER BLOC	8/31/1990
51105.1035	FTBL-48_SHOP SWEEPER DUMP SITE	8/31/1990
51105.1036	FTBL-49_EXCAVATED DRUMSITE (1985)	8/31/1990
51105.1037	FTBL-50_DUMPS(2) (ABANDONED)	8/31/1990
51105.1039	FTBL-52_UNDERGROUND STORAGE TANKS-INST W	12/31/1996
51105.1040	FTBL-53_ELECTRICAL TRANSFORMERS(17)VAR L	8/31/1990
51105.1041	FTBL-54_AIRFIELD HANGERS-VARIOUS LOCATIO	8/31/1990
51105.1042	FTBL-55_FIRING RANGES-1 PISTOL,2 RIFLE	8/31/1990
51105.1043	FTBL-56_SILVER RECOVERY UNITS (9)	8/31/1990
51105.1044	FTBL-60_PAINTBOOTHS-BLDS 363,1115,1339,1	8/31/1990
51105.1045	FTBL-61_DOGUE CREEK FAMILY HOUSING AREA	4/30/1994

CRL ID	Site Name	Site Closeout Date
51105.1046	FTBL-62_PETROLEUM CONTAMINATION - BUILDI	3/31/2002
51105.1047	FTBL-63_EPG SOLIDWASTE MANAGEMENT UNITS(	9/30/2000
51105.1068	FTBL-64_Leaching Cesspools- Bldg 2073- M	10/31/2007
51105.1069	FTBL-65_Septic Tank & Leach Field (B2075	12/31/2010
51105.1071	FTBL-67_Petroleum Storage Area-2000	9/30/2007
51105.1097	CC-L05_Bldg 307 Concrete Apron Disposal	9/30/2012
51105.1098	CC-A18_Active Coal Storage Wstwtr Trmt U	12/15/2012
51105.1100	CC-L09_FORMER OWS VAULT	9/29/2021
51105.1101	CC-E01_BLDG 3232 WASTE POL & EMPTY DRUM	10/20/2014
51105.1102	CC-F06_Building 1906 Aboveground Waste P	12/15/2013
51105.1105	CCBLDG305_Bldg 305 - Research & Developm	10/31/2010
51105.1106	CCBLDG2209_Bldg 2209/2217- Former Milita	12/15/2013
51105.1107	CC-A19_Active Coal Storage Wstwtr Trmt U	12/15/2012
51105.1108	CCBLDG3161_Bg 3161- Davison Army Airfiel	6/15/2014
51105.1109	CCBLDG1124_Bldg 1124 - Vehicle Fueling F	12/15/2013
51105.1122	CCBLDG773_Former Building 773	4/30/2010
51105.1123	CC-DAAF1_DAAF Flight Tower	3/15/2014
51105.1124	CC-MP1_FORMER POL AREA AT ACCOTINK LANDF	8/12/2016
51105.1126	CCPBA@Belvoir_PBA@IR and CR Belvoir	9/15/2014
51105.1131	CC-MP6_1425 Pipeline Contamination	12/15/2012
51105.1132	CC-MP4_Contaminated Soil at 9th and Guns	2/29/2012
51105.1133	CC-MP5_RECYCLE CENTER CONTAMINATED SOIL	5/31/2017
51105.1135	CC-MP3_Arts & Crafts Cntr Petroleum Cont	2/29/2012
51105.1136	CC-G13_B1453 Former USTs & Related Conta	9/4/2011
51105.1139	CC_E10 _Building 328 Waste POL Storage A	3/31/2009
51105.1142	CC-MP7_Future OSEG Facility	9/30/2011
51105.1143	CC-MP8_AAFES Shoppette Project	12/15/2012
51105.1149	CC-MP10_21ST STREET LIQUID DUMP SITE	12/19/2017
51105.1152	CC-MP11_FORMER PCB TRANSFORMER STORAGE	8/13/2021
51105.1155	CC-MP9_OLD DUMP	6/16/2018
51105.1200	CC-MP14_Building 2476 Hazardous Material	8/13/2021
51105.1204	CC-MP12_Drum Investigation Area	8/13/2021
51105.1048	FTBL-002-R-01_SMALL ARMS RANGE Complex-T	1/31/2008
51105.1052	FTBL-006-R-01_FAIRFAX RANGE	1/31/2008
51105.1054	FTBL-008-R-01_GUNSTON ROAD 1000"" RIFLE	1/31/2008
51105.1055	FTBL-009-R-01_LORTON COMBAT RANGE	1/31/2008
51105.1056	FTBL-010-R-01_LORTON COMBAT RANGE-TD	1/31/2008
51105.1057	FTBL-011-R-01_LORTON LANDSCAPE RANGE	1/31/2008
51105.1058	FTBL-012-R-01_PIG FARM RANGE	1/31/2008
51105.1059	FTBL-013-R-01_PIG FARM RANGE-TD	1/31/2008
51105.1061	FTBL-015-R-01_TRACY ROAD RANGE-TD	1/31/2008
51105.1062	FTBL-001-R-01_SMALL ARMS RANGE COMPLEX	1/31/2008
51105.1063	FTBL-016-R-01_RANGE T-15	1/31/2008
51105.1083	FTBL-023-R-01_Southwest Pistol Range	1/31/2008
51105.1084	FTBL-022-R-01_Mounted Pistol Range	1/31/2008

CRL ID	Site Name	Site Closeout Date
51105.1085	FTBL-017-R-01_Congressional Demonstratio	1/31/2008
51105.1086	FTBL-020-R-01_Gas Area	1/31/2008
51105.1087	FTBL-021-R-01_Mock Village	1/31/2008
51105.1088	FTBL-019-R-01_Entrenchment and Gas Schoo	1/31/2008
51105.1091	FTBL-018-R-02_Demolition Area-02	1/31/2008
51105.1092	PBA@MR Belvoir_PBA@MMRP Ft Belvoir	4/15/2014
51105.1147	CCBLDG202_Bldg 202- Defense Acquisition	8/31/2008
51105.1148	CCBLDG247_Bldg 247 - Army Management Sta	10/31/2007
51105.1150	CCBLDG717_Building 717- Former Fueling T	7/31/2005
51105.1151	CCBLDG773_Bld'g 773 - Former Outdoor Rec	6/30/2007
51105.1153	CCBLDG1197_Bldg 1197 - AAFES Gas and Aut	10/31/2008
51105.1154	CCBLDG1199_Bldg 1199 - Bowling Center	12/31/2005
51105.1156	CCBLDG2444_B2444- Army Intelligence & Se	9/30/2007
51105.1158	CCBLDG900_Dogue Creek Village	12/31/2006
51105.1159	CC-A03_DRMO Stump Dump	9/30/2010
51105.1161	CC-A06_Kingman Road Landfill	1/31/2010
51105.1162	CC-A09_Markham School Landfill & Interce	1/31/2010
51105.1163	CC-A10_Lacey Pit Dump Area	10/31/2014
51105.1164	CC-A11_POE Road Landfill	1/31/2010
51105.1165	CC-A12_Accotink Landfill	1/31/2010
51105.1166	CC-A13_DRMO Spoil Fill	10/31/2011
51105.1167	CC-A14_DRMO Salvage Storage Area	1/31/2011
51105.1168	CC-A22_Former Liquid Oxygen Pond	10/31/2014
51105.1171	CC-H02_Building 1146 Battery Storage Are	7/31/2010
51105.1173	CC-M08_Abandoned Aluminum Drums&Excavati	9/30/2007
51105.1175	CC-M12_Empty Drum Storage Area 2	11/30/2007
51105.1176	CC-M24_Unnamed Dump #3	9/30/2007
51105.1177	CC-M25_Unnamed Dump #4	9/30/2007
51105.1178	CC-M36_Leaching Cesspools (Building 2034	9/30/2007
51105.1179	CC-M37_Leaching Cesspools (Building 2073	3/31/2007
51105.1180	CC-M38_Septic Tank Seepage Pits (Bldg T-	9/30/2007
51105.1181	CC-M39_Unnamed Dry Well	9/30/2007
51105.1182	CC-M40_Leach Bed (Building T-2037)	9/30/2007
51105.1183	CC-M41_Septic Tank and Leach Field (Bldg	2/28/2007
51105.1184	CC-A07_Mulligan Road Landfill	1/31/2010
51105.1185	CC-A08A16_GW Village Landfill & Intercep	1/31/2010
51105.1188	CC-D030405_Building 324 Oil/Water Separa	1/31/2011
51105.1192	CC-L45_Sewage Treatment Plant #1	1/31/2010
51105.1193	CC-N08_Bldg1434 Unused POL&Dead Battery	1/31/2011
51105.1194	CC-N17_Fort Belvoir Marina Battery Stora	10/31/2014
51105.1195	CC-M03M04_Bldg 2041 Frmr Wst POL UST&Dru	8/31/1997
51105.1196	CC-M06M17_Bldg 2014 Washrack & Drainage	3/31/2007
51105.1197	CC-M20_PDO Salvage Yard	9/30/2007
51105.1199	CC-A24_Former DPDO Storage Area-PCB Spil	8/31/1980
51105.1201	CC-A26_Suspected Sanitary Landfill B	1/31/2010

CRL ID	Site Name	Site Closeout Date
51105.1202	CC-A27_Suspected Sanitary Landfill C	10/31/2014
51105.1203	CC-C08_Bldg 2585 Inactive WashRack&Grit	10/31/2014
51105.1205	CC-E02_Building 2476 Waste POL Storage A	4/30/2010
51105.1206	CC-E03_Building 1414 Waste POL Storage A	10/31/2014
51105.1208	CC-H05_Building 1116 Battery Storage Are	10/31/2014
51105.1209	CC-I02_Building 307 Acid Neutralization	10/31/2014
51105.1210	CC-L33_Building 326 Ditch Cont. by Oil S	10/31/2014
51105.1211	CC-44_Bldg T1113 Pesticide Equipment Was	10/31/2014
51105.1212	CC-N05_Building 328A Oil/Water Separator	10/31/2014
51105.1213	CC-N15_600 Area Debris Collection Site L	12/31/2008
51105.1214	CC-E10_Building 328 Waste POL Storage Ar	10/31/2010
51105.1215	CC-C11D11_Bldg 715 Washrack & Oil/Water	10/31/2014
51105.1216	CC-M19_Building 2041 Steam Cleaning Unit	9/30/2007
51105.1217	CC-N23_Post Dump	1/31/2010
51105.1219	CC-M05_Building 2034 Shop Sweeping Dump	4/30/2007
51105.1220	CC-M23_Burning Ground	9/30/2007
51105.1221	CC-M26_Hydrocarbon Spill Area	7/31/2006
51105.1222	CC-M27_Waste Ordnance Pit at Range 1	3/31/2007
51105.1223	CC-M07M18_Inactive Fire Equip test Area	3/31/2007
51105.1224	CC-M_Former Aboveground Test Tank Site	5/31/2007
51105.1226	CC-M28_Tripod at Range 1	9/30/2007
51105.1227	CC-M30_Landmine Weathering Test Area Ran	9/30/2007
51105.1228	CC-M31_Plywood Building at Range 2	9/30/2007
51105.1229	CC-M33_Inert Mine Testing Area at Range	9/30/2007
51105.1230	CC-M34_Waste Ordnance Pits at Range 5	9/30/1997
51105.1231	CC-M44_Radioactive Detector Components	9/30/2007
51105.1232	CC-MAOC01_Suspected Vehicle Maintenance	9/30/2007
51105.1233	CC-MAOC02_Former Gasoline Tanks	9/30/2007
51105.1234	CC-MAOC03_Former Burning Slab	9/30/2007
51105.1235	CC-MAOC04_Structure Next To Former Burni	4/30/2007
51105.1236	CC-MAOC05_Former Open Storage Area	9/30/2007
51105.1237	CC-MAOC09_Suspect Mine Burial Pit	5/31/2008
51105.1238	CC-MAOC12_Burnt Down Bldg 2042 and UST	9/30/2007
51105.1239	CC-M35_Troop Training Area at Range 5B	7/31/2008
51105.1240	CC-MPS2000_Petroleum Storage Area at Bld	3/31/2007
51105.1242	CC-MPS2033_Petroleum Storage Area at Bld	5/31/1997
51105.1243	CC-MPS2034_Petroleum Storage Area at Bld	1/31/1996
51105.1244	CC-MPS2064_Petroleum Storage Area at Bld	3/31/1998
51105.1245	CC-MAOC13_Unnamed Dump #5	10/31/2007
51105.1246	CC-MAOC14_Unnamed Dump #6	10/31/2007
51105.1247	CC-MAOC15_Metal Pipe at Eebee Field	10/31/2007
51105.1248	CC-MAOC16 _Burial Pit at Range 1A	7/31/2008

COMMUNITY INVOLVEMENT

Community Involvement Plan (Date Last Reviewed):	11/22/2023 (in progress)
Technical Review Committee Establishment Date:	N/A
Restoration Advisory Board (RAB) Establishment Date:	01/2024 (Solicitation in progress)
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Reasons for Not Establishing RAB:	No sufficient, sustained community interest in a RAB.
RAB Date of Solicitation from Community:	01/2024 (in progress)
RAB Results of Solicitation:	TBD
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A
Administrative Record Location:	Not NPL Site
Information Repository Location:	US Army Garrison Fort Belvoir, Directorate of Public Works, Room 203, 9430 Jackson Loop Road, Fort Belvoir, Virginia 22060 Kingstowne Library, 6500 Landsdowne Centre Dr, Alexandria, VA 22315

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Completed	PR	3/16/2022	9/9/2023	FTBL-51_Conduct additional evaluations to determine if the groundwater remedial endpoint for ethylbenzene is protective. Current groundwater remedial endpoints do not consider the vapor intrusion pathway.		
Completed	FYR	10/1/2022	5/16/2023	Add FTBL-68 to Preliminary Assessment (PA) to determine if there is sufficient evidence to demonstrate use of fire suppressants containing PFOA and PFOS.		PFAS PA/SI determined no further action for FTBL-68; however, decision was changed based on updated July 2022 OSD screening levels. FTBL-68 will be evaluated under a PFAS RI.
Planned	PR	03/15/2027	12/15/2027	TBD	TBD	TBD
Planned	FYR	03/15/2027	12/15/2027	TBD	TBD	TBD