

FY2012

FORT BELVOIR

Army Defense Environmental Restoration Program

Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA).

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort Belvoir (FTBL), the Installation Management Command (IMCOM), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

AA	Anti-Aircraft
AC	Administrative Closure
AEDB-CC	Army's Environmental Database - Compliance-related Cleanup
AEDB-R	Army's Environmental Database - Restoration
AOC	Area of Concern
AOPC	Area of Potential Concern
AP	Antipersonnel
AS	Air Sparging
AST	Aboveground Storage Tank
Bldg	Building
BNA	Fort Belvoir North Area
BRAC	Base Realignment and Closure
BTAG	Biological Technical Assistance Group
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CDC	Child Development Center
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CLIN	Contract Line Item Number
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
COC	Contaminants of Concern
CR	Compliance Restoration
CS	Confirmatory Sampling
CTC	Cost to Complete
CTT	Closed, Transferring, Transferred
DD	Decision Document
DDT	Dichloro-diphenyl-trichloroethane
DERP	Defense Environmental Restoration Program
DES	Design
DoD	Department of Defense
DPE	Dual-Phase Extraction
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organics
EBS	Environmental Baseline Survey
EFR	Enhanced Fluid Recovery
EIP	Environmental Investigation Plan
EIS	Environmental Impact Statement
ENRD	Environmental and Natural Resources Division
EPG	Engineer Proving Ground
ER,A	Environmental Restoration, Army
ERTC	Engineer Replacement Training Center
FATTS	Former Aboveground Test Tank Site

Acronyms

FBNA	Fort Belvoir North Area, formerly Engineer Proving Ground
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet
FTBL	Fort Belvoir
FY	Fiscal Year
GIS	Geographic Information System
GRO	Gasoline Range Organics
GSA	General Support Artillery
GW	Groundwater
HE	High Explosive
HEC	Humphrey Engineer Center
HRR	Historical Records Review
HTRW	Hazardous, Toxic and Radioactive Waste
HW	Hazardous Waste
IAP	Installation Action Plan
IM	Installation Management
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operations)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
ISR	Investigation Summary Report
K	Thousand
LEED	Leadership in Energy and Environmental Design
LFG	Landfill Gas
LOD	Limit of Detection
LPH	Liquid Petroleum Hydrocarbons
LTM	Long-Term Management
LUC	Land Use Control
MAMMS	Multiple Award Military Munitions Services
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MFR	Memorandum for Record
mg	milligram
mg/kg	milligrams per kilogram
mg/L	milligram per liter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MP	Main Post

Acronyms

MR	Munitions Response
MRA	Munitions Response Area
MRS	Munitions Response Site
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O&M	Operations and Maintenance
ODUSD (I&E)	Office of the Deputy Under Secretary of Defense for Installations and Environment
OE	Ordnance and Explosives
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PC	Pollution Complaint
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene
PHC	Petroleum Hydrocarbons
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
ppb	parts per billion
ppm	parts per million
PRG	Preliminary Remediation Goals
PSA	Petroleum Storage Area
QTR	Quarter
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
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
ROTC	Reserve Officers Training Corps
ROW	Right-of-Way
RRSE	Relative Risk Site Evaluation
RV	Recreational Vehicle
SCR	Site Characterization Report
SDZ	Surface Danger Zone
SI	Site Investigation
SOW	Statement of Work

Acronyms

SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TD	Transferred
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
UAO	Unilateral Administrative Order
ug/L	microgram per liter
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAEHA	United States Army Environmental Hygiene Agency
USATHAMA	US Army Toxic and Hazardous Materials Agency (currently called USAEC)
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VDEQ	Virginia Department of Environmental Quality
VOC	Volatile Organic Compounds
VSI	Visual Site Inspection
WWI	World War I
WWII	World War II

Acronym Translation Table

CERCLA

Preliminary Assessment(PA)
Site Inspection(SI)
Remedial Investigation/Feasibility Study(RI/FS)
Remedial Design(RD)
Remedial Action (Construction)(RA(C))
Remedial Action (Operation)(RA(O))
Long Term Management(LTM)
Interim Remedial Action(IRA)

RCRA

= RCRA Facility Assessment(RFA)
= Confirmation Sampling(CS)
= RCRA Facility Investigation/Corrective Measures Study(RFI/CMS)
= Design(DES)
= Corrective Measures Implementation (Construction)(CMI(C))
= Corrective Measures Implementation (Operation)(CMI(O))
= Long Term Management(LTM)
= Interim Measure(IM)

CERCLA

Preliminary Assessment(PA)
Remedial Investigation(RI)
Feasibility Study(FS)
Remedial Design(RD)
Remedial Action (Construction)(RA(C))
Remedial Action (Operation)(RA(O))
Long Term Management(LTM)
Interim Remedial Action(IRA)

RCRA Underground Storage Tank (UST) Site Phase Terms

= Initial Site Characterization(ISC)
= Investigation(INV)
= Corrective Action Plan(CAP)
= Design(DES)
= Implementation (Construction)(IMP(C))
= Implementation (Operations)(IMP(O))
= Long Term Management(LTM)
= Interim Remedial Action(IRA)

Installation Information

Installation Locale

Installation Size (Acreage): 9094

City: Washington, D.C.

County: Fairfax

State: Virginia

Other Locale Information

Fort Belvoir (FTBL) is located in southeastern Fairfax County, Virginia, approximately 18 miles southwest of Washington, DC and 95 miles north of Richmond, Virginia. The installation's major landholdings are within two separate areas: the 7,678-acre main post and the 807-acre FTBL North Area (FBNA), formerly called Engineer Proving Ground (EPG). Together with the 581-acre Humphreys Engineer Center (HEC) and the 28-acre Rivanna Station, FTBL has management responsibility for a total of 9,094 acres.

Installation Mission

FTBL's mission is to:

- operate and maintain our installations,
- provide quality installation support and services to our customers, and
- execute mobilization requirements, military operations, and contingency/force protection missions.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE)- Baltimore District

Regulator Participation

Federal US Environmental Protection Agency (USEPA), Region 3
State Virginia Department of Environmental Quality (VDEQ)

National Priorities List (NPL) Status

FORT BELVOIR is not on the NPL

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

The community has expressed no sufficient, sustained interest in a RAB.

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Other (Vapor), Sediment, Soil

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC), Polycyclic Aromatic Hydrocarbons (PAH)

Affected Media of Concern: Groundwater, Soil

Installation Information

CR

Primary Contaminants of Concern: Metals, Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Sediment, Soil, Surface Water

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Underway	201110	201210	2013

5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
SWMU M-27	FTBL-69
SWMUs M26 and FATTS	FTBL-68

Land Use Control (LUC) Summary

LUC Title: FTBL-68, M-26-FATTS LUC

Site(s): FTBL-68

ROD/DD Title: SWMUs M26 and FATTS

Location of LUC

LUCs prohibiting groundwater usage. Fairfax County Parkway completed in June 2010.

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Hazardous substance easement, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200610

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: FTBL-69, SWMU M27

Site(s): FTBL-69

ROD/DD Title: SWMU M-27

Location of LUC

Fort Belvoir North Area, formerly EPG, USAG Fort Belvoir, Fairfax County

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Hazardous substance easement, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200811

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200811

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

Fort Belvoir consists of the main post, FTBL North Area (FBNA), HEC, and Rivanna Station. Military use of the FTBL property began in 1915, when the US Army Engineer School, located at Washington Barracks (now Fort McNair), began conducting summer training exercises on a 1,500-acre tract. After the outbreak of World War I (WWI), a temporary cantonment area named Camp A. A. Humphreys was constructed on the peninsula between Accotink Creek and Dogue Creek. Facilities were built to accommodate 20,000 enlisted Soldiers and officers while they attended engineering training.

WWI training included the Engineer Replacement and Training Camp, the Engineer Officers' Training Center the Army Gas School, which provided gas and flamethrower operations training, and the School of Military Mining. Most training was conducted in the area south of US Route 1 between Accotink Bay and Dogue Creek, although parts of the installation east of Accotink Bay were used for rifle ranges.

Camp A. A. Humphreys remained active after WWI. In 1919 the Engineer School moved to the camp from Washington Barracks, and in 1922 was renamed Fort Humphreys. The Engineering School provided training in forestry, road and railroad construction, camouflage, mining, surveying, pontoon bridge construction, photography, printing and cooking. The site also served as a summer training camp for the Reserve Officers Training Corps (ROTC). The ROTC cadets received basic training in bayonet drill, target practice, military administration and law, first aid and sanitation, bridge building (bldg), demolition, reconnaissance, and railroad construction.

In 1924 the Engineer Board, the forerunner of the Belvoir Research, Development and Engineering Center, relocated to Fort Humphreys. The Engineer Board developed many innovations, including assault boats, portable steel bridges and mine detectors. The 1920s was a period of construction when most of the temporary WWI buildings were replaced with permanent structures and many of the officer and enlisted family quarters, were built.

In 1935 Fort Humphreys was renamed Fort Belvoir and in the 1940s it expanded to accommodate increased activity because of the outbreak of World War II (WWII). An additional area of 3,000 acres was acquired for a new Engineer Replacement Training Center (ERTC). The ERTC schooled troops in reconnaissance, unit coordination, road and obstacle construction and demolition. Engineering specialists were trained in carpentry, drafting, surveying and operating construction machinery. Specialized courses were offered in operation of weapons such as tanks, flamethrowers and anti-aircraft weapons. The Davison Army Airfield was constructed in the western quadrant of North Post.

From WWII to the 1980s, the types of training offered reflected shifts in warfare technology. A close combat range was constructed and a Chemical/Biological/ Radiological School started. In the 1950s, the Engineer Research Laboratories developed and tested new techniques for electrical power generation, camouflage and deception, materiel and fuel handling methods, bridging, and mine detection. They experimented with portable copying machines, tropical fungicides, prefabricated buildings, and heavy earth moving equipment. The installation's nuclear plant, SM-1 (stationary medium power, first prototype), became operational in 1957 and was the nation's first national nuclear training facility for military personnel.

In 1988, the Engineer School relocated to Fort Leonard Wood, Missouri and control of FTBL changed from the US Army Training and Doctrine Command to the US Army Military District of Washington. FTBL's mission changed from training to administrative and logistics support for the National Capital Region.

FBNA consists of an 807-acre, noncontiguous parcel of land located approximately 1.5 miles northwest of the FTBL main post. FBNA was acquired in the early-1940s for use by the FTBL Research, Development, and Engineering Center. The principal mission of the FBNA was the testing of military engineering equipment and supplies.

Testing within the eastern portion of FBNA was primarily non-munitions-related and generally included: construction related training; fuels and fuel handling and storage equipment; mobile water purification equipment and waste and sewage structures; climatic effects on paints, tactical sensors and anti-mine systems and techniques; and, dynamometer courses.

Testing on the western portion of FBNA generally included training on the deployment, detection and neutralization of land mines, in addition to the development and testing of anti-tank, anti-personnel, and sensory mines.

Most engineer testing and training activities ceased between the 1970s and 1980s.

As an administrative and logistics support center, FTBL currently provides essential administrative and basic operations support to its tenant organizations. Its location in the national capital region has attracted many tenants from the five military services, as

Cleanup Program Summary

Installation Historic Activity

well as many separate Department of Defense (DoD) agencies.

Relocations to FTBL include the following:

- US Army Intelligence Security Command Headquarters (1989)
- US Army Management Staff College (1993)
- US Army Inspector General School (1993)
- US Army Criminal Investigation Division Command (1993)
- US Army Community and Family Support Center (1997), and
- Defense Threat Reduction Agency (2000).

FTBL is also a receiving installation for many organizations realigned by the Base Realignment and Closure (BRAC) Act. As a result of the closure of the US Army's Cameron Station in 1995, the Defense Logistics Agency Headquarter Complex has relocated to FTBL and in 2003, the US Army Materiel Command relocated to FTBL.

In October 2006 the Army established IMCOM; FTBL became a part of IMCOM in the Northeast Region. With the congressional approval of BRAC 2005, FTBL is slated to gain another 23,000 people, essentially doubling the population. As of August 2007, the cleanup of the EPG was well underway in preparation of BRAC construction. BRAC 2005 is scheduled to be fully implemented by September 2011.

On the FTBL Main Post, BRAC infrastructure construction has begun on roadways around the installation.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Operation and maintenance of a dual-phase extraction system (DPE) and soil vapor extraction (SVE)/air sparging (AS) system at FTBL-51 continued.

Resume groundwater monitoring at FTBL-68. Feasibility study (FS) for FTBL-69 awarded and in development. FTBL-66 is undergoing risk assessment process.

Future Plan of Action: Continue to monitor groundwater at FTBL-68 until cleanup levels are achieved. Complete FS at FTBL-69 and select final remedy. Prepare a FS for FTBL-66 and select final remedy (assume groundwater monitoring). FTBL-51 will continue operation and maintenance (O&M) in fiscal year (FY)13 and LTM in FY14.

MMRP

Prior Year Progress: Completed remedial investigation (RI) for Main Post sites in July 2012. FS is planned for October 2012. FTBL worked with contractor to complete FS and decision document (DD) for munitions response (MR) site FTBL-005-R-01, EPG included in PBA No 1 (W91ZLK-05-D-0010, Task Order 0001). A risk assessment for FTBL-005-R-05 is awaiting regulatory review in August, 2012. Finalize LUCs at MR sites as an interim remedy to be protective of human health until the final remedies are selected.

Future Plan of Action: Award FS for Main Post sites in October 2012, which will include the DD to be signed by September 2014. Finalize FS for FTBL-005-R-05 and select final remedy by September 2013.

CR

Prior Year Progress: The DPE remediation systems at Bldgs. 1124 and 3161 continued to be effective and, operation of an AS/SVE system at Bldg. 2209 continued. Main post work included negotiations with USEPA for no further action (NFA) on previously investigated sites and administrative closure (AC) of 12 sites. Investigations at BNA continued under performance based acquisition (PBA)@MR_Fort Belvoir. Remaining compliance restoration (CR) work at BNA was on hold due to construction.

Future Plan of Action: Sites at Bldgs. 1124, 2209, and 3161 should require one to two years of remediation to achieve the remedial end points mandated in Corrective Action Plan (CAPs) required by the VDEQ. Finalize proposed plans (PPs) and DDs for BNA sites. Work on main post 2010 PBA will continue. Main post sites not included in 2010 PBA will be further evaluated. Continue negotiations with regulators for

Cleanup Program Summary

NFA or closure of 200+ solid waste management units (SWMUs) (both historic and based on recent investigations).

FORT BELVOIR
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 53/48

Installation Site Types with Future and/or Underway Phases

1	Explosive Ordnance Disposal Area (FTBL-69)
1	Fire/Crash Training Area (FTBL-66)
1	Sewage Treatment Plant (FTBL-06)
1	Spill Site Area (FTBL-68)
1	Underground Tank Farm (FTBL-51)

Most Widespread Contaminants of Concern

Explosives, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Other (Vapor), Sediment, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTBL-66	Inactive Fire Equip Test Area & POL	IRA	REMOVAL	1995
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	IRA	GROUND WATER TREATMENT	1997
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	FRA	AIR SPARGING	1997
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	FRA	SOIL VAPOR EXTRACTION	1997
FTBL-63	EPG SOLIDWASTE MANAGEMENT UNITS(28)	FRA	WASTE REMOVAL - SOILS	1999
FTBL-51	TANK FARM - BLDG 324, 325	FRA	AIR SPARGING	2004
FTBL-51	TANK FARM - BLDG 324, 325	FRA	GROUND WATER TREATMENT	2004
FTBL-51	TANK FARM - BLDG 324, 325	FRA	SOIL VAPOR EXTRACTION	2004
FTBL-68	SWMU M-26 Hydrocarbon Spill Area	IRA	REMOVAL	2006
FTBL-69	M-27 Waste Ordnance Pit at Range 1	IRA	REMOVAL	2007
FTBL-51	TANK FARM - BLDG 324, 325	FRA	CHEMICAL REDUCTION/OXIDATION	2008
FTBL-66	Inactive Fire Equip Test Area & POL	IRA	REMOVAL	2008
FTBL-68	SWMU M-26 Hydrocarbon Spill Area	FRA	INSTITUTIONAL CONTROLS	2009
FTBL-68	SWMU M-26 Hydrocarbon Spill Area	FRA	NATURAL ATTENUATION	2009
FTBL-65	Septic Tank & Leach Field (B2075)	FRA	OTHER	2011

IRP Summary

Duration of IRP

Date of IRP Inception: 198009

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 203809/204505

Date of IRP completion including Long Term Management (LTM): 204505

IRP Contamination Assessment

Contamination Assessment Overview

FTBL has four active Environmental Restoration, Army (ER,A) sites. Site FTBL-51 consists of a former tank farm and a generator testing facility at Bldg 324 and was identified following closure activities and a site characterization study. In 1996 10 underground storage tanks (UST) were removed. Five of the USTs were identified as leaking or potentially having leaked. A subsequent site assessment identified contaminated groundwater and a plume that reaches surface water. In May 1999 a CAP was completed. In November 1999 a three zone SVE system and sparge points were installed, in accordance with the CAP, to address the source area and the surface water discharge area. The system was operational in December 1999.

Since there had been no free-phase product at the site in over a year, FTBL petitioned the VDEQ for case closure of this part of the remediation. On March 4, 2008, the VDEQ approved this petition and the pump-and-treat portion of the DPE system was shut down.

The following remediation is occurring at Bldg 324. The DPE system removes vapors and treats them with activated carbon and AS/SVE is the other remediation that is occurring at the site. By adding air into the water column, petroleum hydrocarbons are released and then captured by the system, where they are treated.

DDs recommending groundwater monitoring and natural attenuation (MNA) at FTBL-68 and FTBL-69 were signed in 2006. groundwater MNA at each site was performed two years, after which time FTBL submitted a natural attenuation evaluation report to USEPA. FTBL determined that MNA at FTBL-68 is effective; however, it is not effective at FTBL -69. FTBL is in the process of re-evaluating the risk with this site and developing a FS to reevaluate remedial alternatives.

[Note: Both sites were within the Fairfax County Parkway Extension right of way. Groundwater monitoring has been delayed and many wells were abandoned to facility construction of the Fairfax County Parkway extension at BNA.]

A risk assessment is currently being drafted for FTBL-66. Upon completion, an FS, a PP and a DD will be completed.

Cleanup Exit Strategy

Additional recovery wells were installed at FTBL-51 to be used in the DPE system to dewater the area with the highest presence of liquid petroleum hydrocarbons (LPH) (well W324-24). The installation of these wells is helping to dewater the area and improve mass removal efficiency. In addition, remedial action (operation [RA(O)]) of the SVE/AS and DPE systems will continue and adjustments made to zoned response based on system hydrocarbon recovery data. RA(O) of the expanded system will be conducted to address residual-phase petroleum hydrocarbons (PHC) outside of the source area, and areas where surface water discharges have occurred in the past. In addition, RA(O) of total fluids recovery to recover LPH, depress the water table, and facilitate the SVE/AS system effectiveness will be conducted.

Groundwater monitoring at sites FTBL-66 and FTBL-68 will resume. Monitoring will cease when remedial end points are met. Data at FTBL-69 will be reevaluated to determine whether there is risk associated with this site. FTBL anticipates DD revision in FY12.

IRP Previous Studies

Year	Title	Author	Date
1988	Phase II RCRA Facility Assessment (RFA) at US Army Garrison Fort Belvoir	AT Kearney	JAN-1988
1990	Environmental Baseline Study at Engineer Proving Grounds	USATHAMA	JAN-1990
	Environmental Baseline Study at EPG Volume I: Phase I, Scope Definition. and Phase II, Environmental Survey	USATHAMA	SEP-1990
	Environmental Baseline Study, EPG, Volume II to Phase III Sampling	USATHAMA	SEP-1990
1992	SWMU Study	CH2MHill	JAN-1992
	Solid Waste Management Unit Study Appendix D DRAFT RFA Report	AT Kearney	JUL-1992
1993	Environmental Impact Statement	USACE	MAR-1993
1994	Fort Belvoir Solid Waste management Units Vol 1	Department of the Army	JAN-1994
	Fort Belvoir Solid Waste management Units Vol 2	Department of the Army	JAN-1994
1995	Site Characterization Report of Building 1803 Area	Koester Environmental	FEB-1995
1997	Underground Storage Tank Activity Reports	Koester Environmental	AUG-1997
1998	Site Characterization Report	LAW Environmental	MAR-1998
1999	Corrective Action Plan Building 324	LAW Environmental	MAY-1999
2000	Site Characterization Report Addendum Building 324	LAW Environmental	JUN-2000
2001	Corrective Action Plan Addendum Building 324	LAW Environmental	JUN-2001
2002	Closure Plan Site M-27, Waste Ordnance Pits at Range 1 Engineer Proving Ground	Dewberry	APR-2002
2005	Addendum to the Investigation Summary Report SWMU M-27 at EPG	Dewberry	JAN-2005
	Groundwater Investigation Summary Report, SWMU M-27 at Engineer Proving Ground	Dewberry	MAR-2005
	Site Investigation Summary Hydrocarbon Spill Area SWMU-M-26	Dewberry	APR-2005
	SWMU M-26 Site Investigation Summary Report	Dewberry	MAY-2005
	Groundwater Investigation Summary, SWMU M-27 at Engineer Proving Ground	Dewberry	MAY-2005

IRP Previous Studies

2005	Title	Author	Date
	Groundwater Investigation Summary-SWMU M-27 at EPG	Dewberry	JUN-2005
	Phase III Soil and Groundwater Investigation Report, SWMU-M-26	Mactec	OCT-2005
	Stakeholder Draft: Historical Records Review, Fort Belvoir	Malcolm Pirnie	NOV-2005
2006	Groundwater Investigation Summary Report, Phase III, SWMU-M-27	TetraTech, Inc.	JAN-2006
	Environmental Investigation and Removal Action: EPG, Fort Belvoir, Final Site Safety and Health Plan August 27, 2003; Addendum No 1	Conti	MAR-2006
	Environmental Investigation and Removal Action at SWMU-M-27, Part 1 of 2	Conti	MAR-2006
	Phase III Groundwater Investigation Summary Report	TetraTech, Inc.	APR-2006
	Environmental Investigation Plans-Areas of Potential Concern Volume 3	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-SWMU-East Volume 1	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-PSA Volume 4	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-SWMU-West Volume 2	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-PSA Volume 5	TetraTech, Inc.	DEC-2006
2007	Investigation Summary Report SWMU M41 at EPG	Tidewater	APR-2007
	Final Environmental Investigation Summary Report SWMU M-7/M-18	Tidewater/Mactec	MAY-2007
	Final Environmental Investigation Summary Report AOPC-04	Mactec	MAY-2007
	Final Environmental Investigation Summary Report PSA-2000	Tidewater	MAY-2007
	Final Environmental Investigation Summary Report PSA-2034	Tidewater	MAY-2007
	Final Environmental Investigation Summary Report PSA-2009	Tidewater	MAY-2007
	Final Environmental Investigation Summary Report, PSA-2033	Tidewater	MAY-2007
	Phase 2 Environmental Investigation Action Plan IHL	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan PSA-2000 at EPG	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan M41 EPG	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan Fire Training Area EPG	Tetra Tech	JUN-2007
	Phase III Environmental Investigation Plan, SWMU M-7/M-18	Tetra Tech	SEP-2007
	Phase 2 Investigation Summary Report IHL at EPG	Tetra Tech	NOV-2007
	Phase 2 Environmental Investigation Report PSA-2000 at EPG	Tetra Tech	DEC-2007
	Phase III Investigation Summary Report FTA	Tetra Tech	DEC-2007

IRP Previous Studies

	Title	Author	Date
2008	Phase 2 Environmental Investigation Plan M-41 EPG	Tetra Tech	JAN-2008
	Final Environmental Investigation Summary Report PSA-2064	Tidewater	MAR-2008
	Technical Memo for SWMU M33 Preliminary Groundwater Investigation	Hydrogeologic, Inc (HGL)	OCT-2008
	Draft Final AOPC-16 Addendum	Hydrogeologic, Inc (HGL)	NOV-2008
	Environmental Investigation Plan, SWMU-M-33	Hydrogeologic, Inc (HGL)	DEC-2008
	Final EIP SWMU M-32	Hydrogeologic, Inc (HGL)	DEC-2008
2009	Final Technical Memo Sampling Plan -- MEC Burial Pits AOPC-17 and AOPC-18 and Final Tech Memo Sampling Plan additional Soil Stockpile from AOPC-17 and AOPC-18	Hydrogeologic, Inc (HGL)	APR-2009
	Final Feasibility Study, SWMU M-41	Hydrogeologic, Inc.	APR-2009
	Final Investigation Summary Report SMWU M-32	Hydrogeologic, Inc (HGL)	MAY-2009
	Final Technical Memo Sampling Plan -- MEC Burial Pits 2O-16 and 2P-16 (AOPC-19)	Hydrogeologic, Inc.	MAY-2009
	Final Investigation Summary Report , AOPC-17 and AOPC-18	Hydrogeologic, Inc.	JUN-2009
	Final Investigation Summary Report-- MEC Burial Pits 2O-16 and 2P-16 (AOPC-19)	Hydrogeologic, Inc.	JUN-2009
	Final Remedial Action Work Plan, SWMU M-41	Hydrogeologic, Inc.	JUN-2009
	Proposed Plan, SMWU M-41	Hydrogeologic, Inc.	JUL-2009
	Final Investigation Summary Report, AOPC-16	Hydrogeologic, Inc.	AUG-2009
	Final Removal Action Report, SWMU M-41	Hydrogeologic, Inc.	DEC-2009
2010	FTBL-51 / Bldg 324 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc. for Fort Belvoir	AUG-2010
2011	FTBL-51 / Bldg 324 - Annual Corrective Action Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort Belvoir	AUG-2011

FORT BELVOIR
Installation Restoration Program
Site Descriptions

Site ID: FTBL-06

Site Name: SEWAGE TREATMENT PLANT 1(INACTIVE)

STATUS

Regulatory Driver: OTHER

RRSE:

Contaminants of Concern: Other (Total petroleum hydrocarbons)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199004.....	199008
LTM.....	201204.....	201312

RIP Date: N/A

RC Date: 199008

SITE DESCRIPTION

Five groundwater monitoring wells are required to be abandoned at this site. The LTM phase is being opened only for this activity in FY12, and then the site will be closed again.

CLEANUP/EXIT STRATEGY

The planned strategy is to abandon the five monitoring wells and close the site after state approval. Site closure is expected in FY12.

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil, Surface Water

Phases	Start	End
ISC.....	199605.....	199606
INV.....	199704.....	199806
CAP.....	199810.....	199905
DES.....	199905.....	199906
IMP(C).....	199906.....	200802
IMP(O).....	199912.....	201309
LTM.....	201310.....	201409

RIP Date: 200802

RC Date: 201309

SITE DESCRIPTION

Bldg 324 is a military generator testing and research bldg located south of Beach Road at FTBL, Virginia. Leaking USTs were identified following closure activities and a site characterization study. In May and June 1996 10 USTs were removed from the former tank farm. The tanks contained gasoline, diesel, fuel oil, and jet propellant fuels (JP5, JP6, JP7 and JP8). Five of the USTs were identified as leaking. Approximately 2,200 cubic yards of petroleum contaminated soils were removed from the subject site during tank removal activities. The release was reported to the VDEQ and Pollution Complaint (PC) No. 1998-3593 was assigned. In April 1998 a site characterization report (SCR) was completed which identified contaminated groundwater and a PHC plume which reached surface water. The VDEQ mandated a CAP for the site.

The CAP was developed between October 1998 and May 1999 and was submitted to the VDEQ on May 18, 1999. It was approved by the VDEQ on May 26, 1999. CAP Tracking No.148 was assigned to the site. A three zone SVE system and AS points were installed in accordance with the CAP to address the source area and the surface water discharge area. In November 1999 the system was installed and start-up was initiated in December. An SCR Addendum was prepared in June 2001 to investigate potential additional source areas and delineate the plume on the northern and southern areas of the site. The relative risk site evaluation (RRSE) was revised in September 2002, (1A), incorporating the June 2002 data. A DPE system was constructed and started in April 2002 in accordance with approved CAP Addendum. The DPE system recovered 1,644 gallons of free-product from April 2002 through March 2008, when this portion of the system was shut-down (with VDEQ approval). The SVE system has recovered approximately 10.75 tons of cumulative mass of hydrocarbons between December 1999 and December 2011. The DPE system has removed, in vapor phase, approximately 18.01 tons cumulative mass of total petroleum hydrocarbons (TPH) between April 2002 and December 2011. No free-product has been gauged in any of the site wells since October 2006.

CLEANUP/EXIT STRATEGY

The SVE/AS system continues to remediate the dissolved groundwater plume and treat the off-vapors. This system is estimated to actively operate for another two years. LTM is estimated to start in FY13 and last for approximately one year. Well abandonment and system dismantling costs are included in the LTM phase as well.

Site Name: Inactive Fire Equip Test Area & POL

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198806.....	198809
SI.....	200610.....	200703
RI/FS.....	200706.....	201509
IRA.....	199506.....	200710
RA(C).....	200808.....	201604
RA(O).....	201605.....	204505

RIP Date: 201605

RC Date: 204505

SITE DESCRIPTION

FTBL-66 includes SWMUs M-07 and M-18 and AOPC-4.

SWMU M-07 was originally identified as a 90 foot diameter, circular concrete pad used to test-fire- fighting equipment in the 1950s through the early-1970s. SWMU M-18 consisted of three diesel fuel USTs.

The 1956 as-built drawings for the slab indicated that an eight-inch drainage pipe which ran 125 feet from the slab to an outlet along the bank of the nearby creek. The associated USTs were located approximately 75 feet to the west.

The 1993 and 1999 SWMU action plans recommended removal of the concrete pad, decommissioning of the tanks, and removing the associated piping, followed by sampling. In 1995, the concrete pad, the piping, and three USTs were removed and were disposed of. Analytical results at both sites identified the presence of TPH above the VDEQ action level (100 milligrams per kilograms (mg/kg)) for soil. Additional investigations performed in 2001 and 2002 also identified petroleum impacts to groundwater in the vicinity of M-18.

The FTBL September 2005 visual site inspection (VSI) identified an approximately 100 by 30 by 15 foot pit where the tanks were previously located. The pit was surrounded by a chain-link fence in disrepair. Additionally, soil appeared to be sloughing off the steep sides and falling into the pit.

An SI was conducted during 2006, during which time VOCs and SVOCs were identified in the groundwater; however, there were no detections in soil above residential or industrial risk based concentrations. No soil remediation was required for this site. Subsequent groundwater investigations were performed to delineate the nature and extent of the contamination.

Area of potential concern (AOPC)-4 (carbon tetrachloride) was identified in groundwater approximately 100 feet south of SWMU M-18 during the Phase II investigation. AOPC-4 was combined with SWMUs M-07 and M-18 for management purposes.

In March 2008, the groundwater contamination was fully delineated; however, follow-on work was placed on hold until the 2005 BRAC related construction was completed. Options for groundwater monitoring are included under the FTBL 2009 MR PBA (MR-PBA@Fort Belvoir). In 2011, FTBL submitted a risk assessment for review to USEPA which indicated unacceptable risk to human health and the environment was present at this site. An FS is planned for October 2012, pending risk assessment review. Additional investigation may be required to re-delineate this site due to impacts related to construction. FTBL will potentially include site work for CC-AOPC20, BNA under this site due to their close proximity.

CLEANUP/EXIT STRATEGY

Risk assessments are expected to be completed in September 2012, after which time FSs, PPs and DDs will be completed. FTBL

Site ID: FTBL-66

Site Name: Inactive Fire Equip Test Area & POL

anticipates groundwater sampling as the selected remedy.

Site Name: SWMU M-26 Hydrocarbon Spill Area

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198809.....	198909
SI.....	199001.....	199009
RI/FS.....	200111.....	200512
IRA.....	200604.....	200607
RA(C).....	200610.....	200907
RA(O).....	200908.....	203809

RIP Date: 200908

RC Date: 203809

SITE DESCRIPTION

FTBL-68 is located on the southern portion of FTBL North Area, approximately 1,000 ft east of Accotink Creek. The site consists of SWMU M-26, a former AST release site, and the Former Above Ground Tank Test Site (FATTS). In August 1968, between 30,000 and 100,000 gallons of gasoline were released from an aboveground storage tank (AST) (SWMU M-26). The gasoline flowed from the tank and over the protective berm to a nearby stream and into Accotink Creek. The gasoline was then ignited and the subsequent fire burned trees, structures, and the I-95 Bridge over Accotink Creek.

Five investigations have occurred at this site over the past 15 years; the first was by the US Army Toxic and Hazardous Materials Agency (USATHAMA) in 1990 and most recently by Mactec, Inc. in fall 2005 TPH was detected in soil samples collected at SWMU M-26 during all five investigations at concentrations up to 10,200 to 11,000 mg/kg, in addition to VOCs and SVOCs. LPHs were not detected in any of the groundwater monitoring wells installed at SWMU M-26. Benzene, toluene, ethylbenzene, and xylene (BTEX) were detected above their corresponding maximum contaminant level (MCL) in groundwater wells. Naphthalene was detected in groundwater wells above its USEPA, Region III Tap Water risk based concentrations (RBC).

In winter 2005-06 the Army developed a remediation plan for SWMU M-26. In 2006, the PP was published for public comment and the DD was signed in 2006. In 2007, approximately 13,000 tons of soil were removed from the M-26 area. A long-term monitoring plan was subsequently developed and additional permanent monitoring wells were installed in April 2007 as part of the final remedy.

While performing soil remediation at M-26, additional underground piping and petroleum contamination was found in soils and groundwater to the south at the FATTS site. Excavation of FATTS was conducted in spring 2007 and groundwater monitoring wells were installed and monitored under the SWMU M-26 MNA program.

FTBL discontinued groundwater monitoring after eight quarters of sampling to facilitate construction related to the 2005 BRAC legislation and the Fairfax County Parkway extension. The last two quarters of the groundwater sampling at SWMU M-26 indicated that the remedial goals were met; however, due to the nature of the Fairfax County Parkway project to the south, it is likely that FTBL will be required to continue to monitor. Levels at FATTS had not met their remedial goals upon completion of the quarterly sampling.

FTBL reinstalled groundwater monitoring wells in September 2011 and revised the LTM sampling plan. Groundwater sampling will resume in 2nd QTR FY12. Groundwater sampling is included in PBA contract No. 2, under AEDB-R Site PBA@MR Belvoir through 2014.

Site ID: FTBL-68

Site Name: SWMU M-26 Hydrocarbon Spill Area

CLEANUP/EXIT STRATEGY

Groundwater wells will be re-installed in second quarter FY12 and GW monitoring will resume under PBA@MR Belvoir once construction is complete.

Site Name: M-27 Waste Ordnance Pit at Range 1

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198809.....	198909
SI.....	200306.....	200311
RI/FS.....	200312.....	200606
IRA.....	200609.....	200703
RA(C).....	200610.....	203809
RA(O).....	200909.....	203809

RIP Date: 203809

RC Date: 203809

SITE DESCRIPTION

FTBL-69 was identified as a five by 20 ft pit located approximately 300 ft south of Bldg 2081 on Range 1 at BNA, formerly called EPG. The site was used in the mid- to late-1950s for about 10 years for the demilitarization of a variety of waste ammunition and explosives.

In April 2002 a closure plan was prepared and submitted to the USEPA, Region III for approval.

Between 2003 and 2005, FTBL performed surface and subsurface MEC investigation and clearance at Range 1, during which time several disposal pits were identified and excavated. Additionally, in 2004 and 2005, FTBL performed a series of GW and soil investigations. In March 2005, low level explosives were detected in GW above the corresponding RBCs. Two additional phases of GW investigations were performed to delineate the nature and extent of the contamination. The March 2006 soil investigation results indicated that soil contamination was not present at the site.

Additionally, FTBL performed a natural attenuation study in March 2006.

In April 2006 a DD and an LTM Plan were prepared and sent to the USEPA. Due to the uncertainty of explosives characteristics to naturally attenuate in GW, the USEPA's response to the LTM plan requested that eight quarters of monitoring be conducted before LTM-MNA would be determined acceptable. The first two years of LTM was completed in December 2008, after which time the GW data was evaluated to determine the effectiveness of the remedy. As a result of the 2009 MNA evaluation, FTBL will develop a risk assessment to determine appropriate clean up levels and will conduct an FS to evaluate remediation alternatives.

CLEANUP/EXIT STRATEGY

FTBL is conducting risk assessment to determine what human health and the environment risks, if any, are present at this site. In addition, FTBL has contracted an FS to reevaluate potential remedial alternatives. FTBL anticipates the completion and regulatory review of the risk assessments in fourth quarter FY12 and completion of the FS shortly thereafter.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-01	CLOSED LANDFILL (REVEGETATED)	199010	FTBL was unable to determine the exact location and corresponding SWMU ID.
FTBL-02	INACTIVE LANDFILL(BORDERS ACCOTINK CREEK	199008	This site, known as SWMU A-12, was entered into the CC database August 2005 under Site ID CC-A12. The Phase I RFI was performed under CC database. The site was reopened in AEDB-R as CC-A12. A Phase II investigation has been funded under -R site CCPBA@Belvoir. Future costs will be programmed under CC-A12.
FTBL-04	BATTERY STORAGE AREA-BLDGS 324,1146	199008	This site includes SWMUs H-02 and H-03. H-02 was entered into the CC database as CC-H02. A Phase I investigation was performed and FTBL received formal NFA closure(EPA) for H-02. H-03 was not entered into the CC-database. FTBL is currently seeking NFA based on historical documentation for H-03.
FTBL-05	LABORATORY STORAGE AREA,#305,307,357	199008	This site includes SWMUs B-17 (Bldg 305), B-18 (Bldg 307), and B-19 (Bldg 357). FTBL is seeking administrative closure as there was no known release to the environment. These sites were not entered in the CC database.
FTBL-07	FUEL STORAGE/AREA 300 BLDGS	199008	This site includes SWMUs L-14 and L-15. FTBL is seeking administrative closure for these sites. These sites were not entered in the CC database.
FTBL-08	OIL/WATER SEPARATOR (3)	199008	FTBL was unable to determine the exact location of this site and the corresponding SWMU ID.
FTBL-09	THOETE ROAD LANDFILL	199010	This landfill, designated SWMU A-02, is a closed landfill subject to Post Closure Care (PCC) under a permit issued by Virginia DEQ. This site was transferred to CC as CC-A02. Future groundwater monitoring requirements will be funded under the CC database.
FTBL-10	LEAKING TRANSFORMERS(3)(NEAR DAVISON AF)	198208	This site is known as SWMU L-04. FTBL is seeking formal administrative closure for this site. This site was never in the CC database.
FTBL-11	FORMER GRENADE STG BUNKER	198208	It is unknown with certainty which site this is however, it may be SWMU M-22 located at Building 2095 (now 5095). This site was not entered in the CC database. FTBL has received NFA for this site.
FTBL-12	FIRE FIGHTING TRAINING/BURN AREA	198208	This site may potentially include the Davison Airfield Fire Training Area SWMUs K01-K05 or EPG's Fire Training Area SWMU M-07. M-07 was entered into the CC database under site ID CC-M07M18. M-07 was later transferred to -

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			R as FTBL-66. FTBL is seeking formal NFA for K01-K05 based on historical documentation. These sites were not entered in the CC database.
FTBL-13	PESTICIDE MIXING ROOM-BLDG 1490	199010	This site, known as SWMU B-16, was formerly a pesticide mixing area and is now an active Part B Hazardous Waste Permitted Storage Facility. This site was not entered in the CC database. FTBL is seeking administrative closure for this site. It is an active storage area.
FTBL-14	HAZ WST STG BLDGS 317A,327C,362,362A,363	199010	This site most likely includes the hazardous waste storage areas at Bldg 363 (SWMUs B14, B15, B20, B21, & B22), Bldg 317A (SWMU B11), 327C (SWMU B12) & 362A (SWMU B13). None of the sites were entered in the CC database. FTBL is seeking regulator concurrence for closure of all these sites.
FTBL-15	HAZARDOUS WASTE STORAGE 5 BRICK BLDGS	199010	Includes buildings 625 (SWMU B-1), 627 (SWMU B-2), 632 (SWMU B-3), 633 (SWMU B-4), 634 (SWMU B-5). None of these sites were entered in the CC database. FTBL is seeking formal NFA for all these sites based on historical documentation.
FTBL-16	DEMOLITION RANGE	199010	This site, known as SWMU A-15, may potentially be the site known as T6-A. Though described here as a range, this site was actually a disposal area within a range. This site was not entered in the CC database. FTBL is seeking formal NFA based on historical documentation.
FTBL-17	FORMER COAL STORAGE AREA	199008	This site, known as SWMU A-04, was combined with SWMU A-23 due to proximity and entered into the CC database as CC-A04A23. A Phase I investigation was performed for A-04 under the CC database. This site was later transferred to -R as CC-A04A23. FTBL is seeking NFA for A-04 based on the Phase I results. Future costs for A-23 will be tracked under CC-A04A23 in -R.
FTBL-18	INSTALLATION MOTOR POOL	199008	FTBL was unable to determine the exact location and corresponding SWMU ID.
FTBL-19	VEHICLE WASH RACKS (10)	199008	This site may include ten of the SWMUs C-01 through C-12. C-08 and C-11 were entered into the AEDB-CC as CC-C08 and CC-C11D11, respectively. A Phase I investigation was performed for both C-08 and C-11. FTBL is seeking NFA for C-08 and C-11 based on the Phase I results. FTBL is seeking administrative closure for C-01-6,9,10 and 12. C-07 is an active wash rack that

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			may require additional investigation. Program management funds will be used to fund any additional investigation.
FTBL-20	SUPPLY CENTER-BLDG 712	199008	This site is the UST at Building 712. The UST has been removed. This site was closed in the -R database under the Petroleum Program. It was closed in 2000 after the receipt of a DEQ Closure Letter dated October 10, 2000.
FTBL-21	ACID NEUTRALIZATION UNITS (3) BLDG 707	199008	This site includes SWMU I-04. FTBL is seeking NFA on this site based on historical documents. This site was not entered into the CC database.
FTBL-22	INDOOR FIRING RANGE	199010	FTBL is unable to identify the exact location of this site. However, this site would not be eligible for -CC or -R funding.
FTBL-23	TRANSFORMER STORAGE AREA-BLDG 1430	199008	This site includes SWMU B-09. FTBL is currently seeking administrative closure for B-09. This site was not entered in the -CC database.
FTBL-24	SEWAGE TREATMENT PLANT 2	199008	This site is known as SWMU L-11. FTBL has proposed CC-L-11 as a new site in -R database. It has not been approved. FTBL will use PM \$ for the preliminary assessment of this site. Depending on the results of the PA, FTBL may seek funds for FY12 for CC-L-11 under the -R database.
FTBL-25	HAZARDOUS WASTE STORAGE-BLDG 1124	199008	This site is known as SWMU B-07. FTBL is seeking NFA based on historical documents. This site was not entered into the -CC database.
FTBL-30	REACTOR CONTAINMENT BLDG	199008	This site is not eligible for DERP funding.
FTBL-32	RUNOFF DISCHARGE DITCH(FROM EQUIP AREA)	199008	This site includes SWMU L-02. FTBL is currently seeking administrative closure for this site. This site was not entered into the -CC database.
FTBL-33	CULLUM WOODS LANDFILL (ACTIVE)	199010	This landfill is designated SWMU A-01. This site was entered as CC-A01 in the -CC database. FTBL is currently seeking administrative closure for this site under the SWMU program. This is a closed landfill subject to Post Closure Care (PCC) under a permit issued by Virginia DEQ.
FTBL-36	ACID NEUTRALIZATION PIT	199008	This site may include the following SWMUs: I01 - I03. FTBL is seeking NFA for I-01 based on historical documents. FTBL is seeking administrative closure for site I-03. I-01 and I-03 were not entered in the -CC database. I-02 was entered in the -CC database as CC-I02. A Phase I investigation was performed under -CC funding. FTBL received informal (e-mail)

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			NFA Phase I approval for I-02.
FTBL-38	DRMO STUMP DUMP	199008	This site is known as SWMU A-03. This site was entered into the CC database as CC-A03. A Phase I investigation was performed under -CC and FTBL received formal NFA Phase I closure for the site.
FTBL-39	DRMO SALVAGE STORAGE AREA	199008	This site may include the following SWMUs: A14, L35, M20, and N11. SWMUs A14 & M20 were entered into the CC database under site IDs CC-A14 and CC-M20. FTBL received NFA for M-20. CC-A14 was opened in the -R database as CC-A14. Funding for landfill gas monitoring will be funded under -R site CC-A14. N-11 and L-35 were not entered in the -CC database. FTBL has formal NFA closure on N-11 and is awaiting NFA closure on L-35.
FTBL-40	PESTICIDE STORAGE-BLDG 2505	199008	This site is known as SWMU L-46. This site was not entered in the -CC database. FTBL is seeking administrative closure for L-46.
FTBL-41	CULLUM WOODS LF CATCHMENT POND	199008	This site is known as A-20. This site is not eligible for DERP funding. A-20 was not entered in the -CC database. FTBL is currently seeking administrative closure for A-20. This site is subject to Post Closure Care (PCC) under the Cullum Woods PCC permit issued by Virginia DEQ.
FTBL-42	AVIATION FUEL STORAGE AREA	199008	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-45	STEAM CLEANING UNIT (CINDER BLOCK BLDG)	199008	This site is known as SWMU M-19. This site was entered and closed in the -CC database as CC-M19.
FTBL-48	SHOP SWEEPER DUMP SITE	199008	This site is known as SWMU M-05. The site was entered and closed in the -CC database as CC-M05.
FTBL-49	EXCAVATED DRUMSITE (1985)	199008	This site is SWMU M-08. This site was entered and closed in the -CC database as CC-M08.
FTBL-50	DUMPS(2) (ABANDONED)	199008	FTBL was unable to determine the exact location of this site and the corresponding SWMU ID.
FTBL-52	UNDERGROUND STORAGE TANKS-INST WIDE	199909	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-53	ELECTRICAL TRANSFORMERS(17)VAR LOCATIONS	199008	This site was unable to be identified upon searching Fort Belvoir's records. However, when taken out of service, all transformers are sampled and analyzed for PCBs and managed through Fort Belvoir's hazardous waste mgmt program.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-54	AIRFIELD HANGERS-VARIOUS LOCATIONS	199008	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-55	FIRING RANGES-1 PISTOL,2 RIFLE	199008	This site may potentially include the following units: L-39, L-40 and L-41. These units, upon further review, were determined to not fall under the definition of a SWMU by the USEPA (55 FR 30809, July 27, 1990) and by the RCRA Facility Assessment Guidance Document. FTBL received formal administrative closure on L-41. FTBL is currently seeking administrative closure for L-39 and L-40. None of these sites were entered in the -CC database.
FTBL-56	SILVER RECOVERY UNITS (9)	199008	This site may include 9 of the following SWMUs: L19 (bldg 320-4 units), L20 (Bldg 1809), L21 (Bldg 2593), L22 (bldg 2595), N12 (Bldg 214-3 units). None of these sites were entered in the -CC database. FTBL has received formal administrative closure for L-19. FTBL is seeking administrative closure for L-20,21 and 22. FTBL is seeking NFA for site N-12 based on a Phase I investigation.
FTBL-60	PAINTBOOTH-BLDS 363,1115,1339,1349,1462	199008	FTBL was unable to properly identify these site locations and corresponding SWMU IDs. These buildings may still be active storage facilities.
FTBL-61	DOGUE CREEK FAMILY HOUSING AREA	199404	This site is known as Building 900. This site was entered and closed into the CC database under CC-BLDG900. .
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	200203	This site was caused by a leaking UST at Building 1803. This site was entered and closed to -R as FTBL-62. FTBL received formal NFA for this site in 2001 after the receipt of a DEQ Closure Letter dated March 13, 2001.
FTBL-63	EPG SOLIDWASTE MANAGEMENT UNITS(28)	200009	This site contains various EPG SWMUs (44 total) all subject to the Unilateral Administrative Order issued in September 2005. Such sites are typically named M sites. All of these sites were entered into -CC or -R and are being managed appropriately according to their current database.
FTBL-64	Leaching Cesspools- Bldg 2073- M37	200710	This site was entered in the -CC database as CC-M37. It was later transferred to -R as FTBL-64. FTBL received formal NFA from regulators for this site.
FTBL-65	Septic Tank & Leach Field (B2075)	201012	This site is known as SWMU M-41. It was entered in the -CC database as CC-M41 and transferred and closed in -R as FTBL-65. There is a decision document associated with this site. An unrestricted

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-67	Petroleum Storage Area-Bldg. 2000	200709	<p>land use was achieved upon completion of selected remedy (soil and material removal).</p> <p>This site underwent Phase I and Phase II site investigations in 2006-07. This site was opened in -CC as CC-MPS2000 and transferred to -R as FTBL-67. Due to proximity to SWMU M-26, the groundwater will be monitored for natural attenuation as part of the M-26 monitoring program. As a result, this site was closed out in both AEDB-CC and -R. Monitoring will continue until remedial end points are met.</p>

IRP Schedule

Date of IRP Inception: 198009

Past Phase Completion Milestones

1982

RFA (FTBL-10 - LEAKING TRANSFORMERS(3)(NEAR DAVISON AF), FTBL-12 - FIRE FIGHTING TRAINING/BURN AREA)
PA (FTBL-11 - FORMER GRENADE STG BUNKER)
CS (FTBL-10 - LEAKING TRANSFORMERS(3)(NEAR DAVISON AF), FTBL-12 - FIRE FIGHTING TRAINING/BURN AREA)
SI (FTBL-11 - FORMER GRENADE STG BUNKER)

1988

PA (FTBL-66 - Inactive Fire Equip Test Area & POL)

1989

PA (FTBL-68 - SWMU M-26 Hydrocarbon Spill Area, FTBL-69 - M-27 Waste Ordnance Pit at Range 1)
RFA (FTBL-64 - Leaching Cesspools- Bldg 2073- M37, FTBL-65 - Septic Tank & Leach Field (B2075))

1990

PA (FTBL-06 - SEWAGE TREATMENT PLANT 1(INACTIVE), FTBL-07 - FUEL STORAGE/AREA 300 BLDGS, FTBL-08 - OIL/WATER SEPARATOR (3), FTBL-17 - FORMER COAL STORAGE AREA, FTBL-18 - INSTALLATION MOTOR POOL, FTBL-19 - VEHICLE WASH RACKS (10), FTBL-20 - SUPPLY CENTER-BLDG 712, FTBL-24 - SEWAGE TREATMENT PLANT 2, FTBL-30 - REACTOR CONTAINMENT BLDG, FTBL-32 - RUNOFF DISCHARGE DITCH(FROM EQUIP AREA), FTBL-39 - DRMO SALVAGE STORAGE AREA, FTBL-42 - AVIATION FUEL STORAGE AREA, FTBL-45 - STEAM CLEANING UNIT (CINDER BLOCK BLDG), FTBL-53 - ELECTRICAL TRANSFORMERS(17)VAR LOCATIONS, FTBL-54 - AIRFIELD HANGERS-VARIOUS LOCATIONS, FTBL-56 - SILVER RECOVERY UNITS (9))
RFA (FTBL-01 - CLOSED LANDFILL (REVEGETATED), FTBL-02 - INACTIVE LANDFILL(BORDERS ACCOTINK CREEK, FTBL-04 - BATTERY STORAGE AREA-BLDGS 324,1146, FTBL-05 - LABORATORY STORAGE AREA,#305,307,357, FTBL-09 - THOETE ROAD LANDFILL, FTBL-13 - PESTICIDE MIXING ROOM-BLDG 1490, FTBL-14 - HAZ WST STG BLDGS 317A,327C,362,362A,363, FTBL-15 - HAZARDOUS WASTE STORAGE 5 BRICK BLDGS, FTBL-16 - DEMOLITION RANGE, FTBL-21 - ACID NEUTRALIZATION UNITS (3) BLDG 707, FTBL-22 - INDOOR FIRING RANGE, FTBL-23 - TRANSFORMER STORAGE AREA-BLDG 1430, FTBL-25 - HAZARDOUS WASTE STORAGE-BLDG 1124, FTBL-33 - CULLUM WOODS LANDFILL (ACTIVE), FTBL-36 - ACID NEUTRALIZATION PIT, FTBL-38 - DRMO STUMP DUMP, FTBL-40 - PESTICIDE STORAGE-BLDG 2505, FTBL-41 - CULLUM WOODS LF CATCHMENT POND, FTBL-48 - SHOP SWEEPER DUMP SITE, FTBL-49 - EXCAVATED DRUMSITE (1985), FTBL-50 - DUMPS(2) (ABANDONED), FTBL-55 - FIRING RANGES-1 PISTOL,2 RIFLE, FTBL-60 - PAINTBOOTH-BLDS 363,1115,1339,1349,1462)
SI (FTBL-68 - SWMU M-26 Hydrocarbon Spill Area)
CS (FTBL-64 - Leaching Cesspools- Bldg 2073- M37, FTBL-65 - Septic Tank & Leach Field (B2075))

1991

CS (FTBL-01 - CLOSED LANDFILL (REVEGETATED), FTBL-09 - THOETE ROAD LANDFILL, FTBL-13 - PESTICIDE MIXING ROOM-BLDG 1490, FTBL-14 - HAZ WST STG BLDGS 317A,327C,362,362A,363, FTBL-15 - HAZARDOUS WASTE STORAGE 5 BRICK BLDGS, FTBL-16 - DEMOLITION RANGE, FTBL-22 - INDOOR FIRING RANGE, FTBL-33 - CULLUM WOODS LANDFILL (ACTIVE))

1993

INV (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
ISC (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)

1994

ISC (FTBL-61 - DOGUE CREEK FAMILY HOUSING AREA)

1996

RFA (FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
ISC (FTBL-51 - TANK FARM - BLDG 324, 325)
CAP (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)

IRP Schedule

1997

IMP(C) (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
 IRA (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
 ISC (FTBL-52 - UNDERGROUND STORAGE TANKS-INST WIDE)
 DES (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)

1998

INV (FTBL-51 - TANK FARM - BLDG 324, 325)

1999

DES (FTBL-51 - TANK FARM - BLDG 324, 325)
 CMI(C) (FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
 CAP (FTBL-51 - TANK FARM - BLDG 324, 325)

2000

CMI(O) (FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
 IMP(O) (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)

2002

LTM (FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
 PA (FTBL-67 - Petroleum Storage Area-Bldg. 2000)

2004

SI (FTBL-69 - M-27 Waste Ordnance Pit at Range 1)

2006

RI/FS (FTBL-68 - SWMU M-26 Hydrocarbon Spill Area, FTBL-69 - M-27 Waste Ordnance Pit at Range 1)
 IRA (FTBL-68 - SWMU M-26 Hydrocarbon Spill Area)

2007

RI/FS (FTBL-67 - Petroleum Storage Area-Bldg. 2000)
 IRA (FTBL-67 - Petroleum Storage Area-Bldg. 2000, FTBL-69 - M-27 Waste Ordnance Pit at Range 1)
 SI (FTBL-66 - Inactive Fire Equip Test Area & POL, FTBL-67 - Petroleum Storage Area-Bldg. 2000)

2008

IMP(C) (FTBL-51 - TANK FARM - BLDG 324, 325)
 RFI/CMS (FTBL-64 - Leaching Cesspools- Bldg 2073- M37)
 IRA (FTBL-66 - Inactive Fire Equip Test Area & POL)

2009

RA(C) (FTBL-68 - SWMU M-26 Hydrocarbon Spill Area)
 DES (FTBL-65 - Septic Tank & Leach Field (B2075))
 RFI/CMS (FTBL-65 - Septic Tank & Leach Field (B2075))

2011

CMI(O) (FTBL-65 - Septic Tank & Leach Field (B2075))
 CMI(C) (FTBL-65 - Septic Tank & Leach Field (B2075))

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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IRP Schedule

Final RA(C) Completion Date: 203809

Schedule for Next Five-Year Review: 2012

Estimated Completion Date of IRP at Installation (including LTM phase): 204505

FORT BELVOIR IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-06	SEWAGE TREATMENT PLANT 1(INACTIVE)	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-51	TANK FARM - BLDG 324, 325	IMP(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-66	Inactive Fire Equip Test Area & POL	RI/FS						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-68	SWMU M-26 Hydrocarbon Spill Area	RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-69	M-27 Waste Ordnance Pit at Range 1	RA(C)						
		RA(O)						

FORT BELVOIR
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 37/22

Installation Site Types with Future and/or Underway Phases

- 1 Contaminated Ground Water
(FTBL-005-R-09)
- 1 Disposal Pit/Dry Well
(FTBL-005-R-10)
- 3 Explosive Ordnance Disposal Area
(FTBL-018-R-01, FTBL-025-R-01, PBA@MR Belvoir)
- 3 Firing Range
(FTBL-001-R-02, FTBL-026-R-01, FTBL-027-R-01)
- 4 Small Arms Range
(FTBL-003-R-01, FTBL-004-R-01, FTBL-007-R-01, FTBL-014-R-01)
- 1 Storage Area
(FTBL-005-R-01)
- 2 Training and Maneuver Area
(FTBL-005-R-05, FTBL-024-R-01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC), Munitions constituents (MC), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTBL-005-R-01	EPG AREA	FRA	UXO CLEARANCE	2009
FTBL-005-R-10	Munitions Disposal Pit at Range 5	IRA	UXO CLEARANCE	2009

Duration of MMRP

Date of MMRP Inception: 200110

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201610/204609

Date of MMRP completion including Long Term Management (LTM): 204609

MMRP Contamination Assessment

Contamination Assessment Overview

FTBL's 2002 site inventory identified 15 ranges, documented in the Closed, Transferring and Transferred (CTT) Range/Site Inventory Report (Malcolm Pirnie, June 2002). In May 2003 the Phase III Army range inventory was completed at FTBL, which identified 16 sites eligible for the Military Munitions Response Program (MMRP). The Phase III inventory serves as the preliminary assessment (PA) under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

The March 2006 historical records review (HRR) identified a total of 20 MMRP eligible sites. One additional MR site was officially closed by FTBL and thus became eligible for the MMRP after the HRR was completed.

MEC clearance was performed on Fort Belvoir North Area (FBNA), formerly Engineer Proving Ground between 2002 and 2009, to facilitate two major construction projects (Fairfax County Parkway, and 2005 Base Realignment and Closure related construction). Additionally, FTBL's 2008 MMRP SI discussed 21 MMRP eligible sites, eight of which were recommended for RI. The RIs at six sites are scheduled to be completed no later than July 2012. Two sites are scheduled for RIP by April 2014. FTBL will plan for FSs at the five MMRP sites in FY12.

Cleanup Exit Strategy

MEC clearance at FTBL-005-R-01, EPG (Fort Belvoir North Area) was completed in 2009. FTBL anticipates LUCs to be finalized by the end of 2012. RIs for six Main Post sites will be completed by July 2012, after which time FSs will be contracted. Two sites are schedule for RIP by April 2014. FTBL anticipates RIP/RC for all MR sites by October 2016.

MMRP Previous Studies

	Title	Author	Date
2006	Final Historical Records Review for Fort Belvoir	Malcolm Pirnie, Inc.	MAR-2006
	Final Work Plan for Fort Belvoir	Malcolm Pirnie, Inc.	AUG-2006
2008	Final Site Inspection for Fort Belvoir	Malcolm Pirnie, Inc.	JAN-2008
2009	Final Environmental Investigation Plan for Engineer Proving Ground (FTBL-005-R-001)	Hydrogeologic, Inc.	MAY-2009
	Final Investigation Summary Report for Engineer Proving Ground (FTBL-005-R-001)	Hydrogeologic, Inc.	JUN-2009
	Removal Action Work Plan-Booby Trap Site (FTBL-024-R-01)	Shaw Environmental Inc.	NOV-2009
2010	Final Site Specific MEC Removal Action Report	Hydrogeologic, Inc.	MAR-2010
	Site Specific Removal Action Report, Booby Trap Site, Booby Trap Fence Extension	Shaw Environmental, Inc.	APR-2010
2011	Remedial Investigation Report, T-16 (FTBL-027-R-01)	Shaw Environmental, Inc.	JUL-2011

FORT BELVOIR

Military Munitions Response Program

Site Descriptions

Site ID: FTBL-001-R-02
Site Name: Infiltration Course

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 06
Contaminants of Concern: Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201404
RIP Date:	N/A	
RC Date:	201404	

SITE DESCRIPTION

This munitions response site (MRS) was originally part of the FTBL-001-R-01 site, but as a result of observations made during the SI field activities, the Small Arms Range Complex munitions response area (MRA) has been separated into two MRSs: the Small Arms Range Complex and the Infiltration Course. The Infiltration Course is located north of Accotink Bay and adjacent to the Pig Farm Range. The 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. A 1944 memorandum shows three machine gun emplacements along an enemy trench behind the control tower. Firing occurred from the enemy trench downrange toward the starting trench. Barbed wire is stretched along the course in two locations. According to the 1944 memorandum, the circles on the diagram are craters in which explosives were set. The charges were not to exceed one-half pound and were required to be set in pits below ground.

The Infiltration Course appears on multiple installation maps between 1943 and 1956. The site is currently undeveloped. No MEC or munitions debris was observed at the Infiltration Course during SI field activities. Remnants of a possible machine gun emplacement were observed. The soil sample did not exceed the lead preliminary remediation goals (PRG). Due to the historical use of explosives at the Infiltration Course and the uncertainty associated with the lack of explosive MC data there, the final SI Report (2008) recommended further investigation for MC at the site.

RIP for this site is expected to be complete no later than April 30, 2014 under FTBL's PBA@MR Belvoir (2009 award). No additional funding required.

CLEANUP/EXIT STRATEGY

FTBL's 2009 PBA will reach RIP at this site by April 2014.

Site ID: FTBL-003-R-01
Site Name: COMBAT RANGE COMPLEX

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201409
RD.....	201410.....	201509
IRA.....	201103.....	201409
RA(C).....	201504.....	201609
RA(O).....	201610.....	204609
RIP Date:	201610	
RC Date:	204609	

SITE DESCRIPTION

This 320-acre Munitions Response Site (MRS) includes the downrange portion of three overlapping closed ranges. Historical documentation indicates the ranges were primarily operational in the 1940s and 1950s, but references to operational use between the 1930s and 1970s have been identified. This MRS is part of the Accotink Bay Wildlife refuge and is mainly undeveloped. Munitions reported in historical documentation included: fragmentation grenades, rifle grenades, mortars, and small arms. The FTBL 2008 SI reported observation bunkers, munitions debris, including small arms. No explosives were detected in surface soil samples, but numerous metals exceeded Biological Technical Assistance Group (BTAG) benchmarks.

The SI recommended RI, which began in July 2010, under PBA@MR_Belvoir (PBA 2). Limited MEC and munitions debris (MD) were identified on one of the 25 sample grids; however the area appears to have been used as a limited disposal point. A small arms disposal area was identified adjacent to the discussed grid. Soil samples collected exhibited elevated metals. A MEC removal is not likely; however, a FS is planned for October 2012 to evaluate remedial alternatives. LUCs are likely along with soil remediation on the lead contaminated areas. This site was also included in a LUC project to develop interim LUCs until the final remedy can be selected.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected.

Site ID: FTBL-004-R-01

Site Name: Combat/Small Arms Range Complex-TD

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This MRS was originally defined as the 566-acre Combat Range Complex. The portion of the MRS which extends over the Accotink and Pohick Bays was separated from this site into the 286-acre MRS, FTBL-004-R-01. This 320-acre MRS includes the downrange portion of three overlapping closed range fans. Historical documentation indicates the ranges were primarily operational in the 1940s and 1950s, but references to operational use between the 1930s and 1970s have been identified. This site is part of the Accotink Bay Wildlife refuge and is undeveloped except for trails and unimproved roads. Munitions were used primarily in the 1940s and 1950s. Munitions reported in historical documentation included: fragmentation grenades, rifle grenades, mortars, and small arms. The FTBL 2008 SI reported observation bunkers, munitions debris, including small arms. No explosives were detected in surface soil samples, but numerous metals exceeded BTAG benchmarks. Based on the recommendation of the SI, fieldwork for a RI began in July 2010, under PBA@MR_Belvoir (PBA 2). Limited MEC and MD were identified on one of the 25 grids. The RI report and risk assessment is scheduled to be completed in July 2012. A MEC removal action is not likely to be required at this site. This site includes the water portion of the overall MRS. FTBL is awaiting guidance on cleanup procedures for those sites included in the MRS.

CLEANUP/EXIT STRATEGY

This is the portion of FTBL-003-R-01 that extends over water. Funding requirements will be programmed upon receipt of DoD guidance regarding water ranges.

Site ID: FTBL-005-R-01
Site Name: EPG AREA

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 03
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200807.....	200906
RA(C).....	200611.....	200909
RA(O).....	200909.....	201302
LTM.....	201303.....	204303

RIP Date: 200909
RC Date: 201303

SITE DESCRIPTION

This site is identified as EPG.

Fort Belvoir North Area (FBNA), formerly called Engineer Proving Ground, is an 807-acre noncontiguous parcel located 1.5 miles northwest of the FTBL Main Post, in Fairfax County. FBNA was acquired by the Army in the early-1940s for use by the FTBL Research, Development, and Engineering Center. The FBNA boundary was first identified on a 1941 archival map. The principal mission at FBNA was the testing of Army engineer equipment and supplies. During the 1940s, a primary focus of the research and development of landmines. In the 1960s and 1970s, commercial and residential encroachment led to limited research and development activities. FBNA was returned to FTBL in 1989. Ten range areas are located on FBNA: 1, 1A, 2, 3, 4, 5, 5A, 5B, 5C, and Eebee Field. Munitions found on-site during range clearance activities at the site include various mortars, mines, rockets, grenades, and small arms. BRAC 2005 construction encompasses the majority of the eastern portion of FBNA and the southwestern corner. In addition, Fairfax County Parkway Extension project has taken the southern and western boundaries.

This site is included in PBA@MR Fort Belvoir, under PBA 1 (2008 award). Tasks include LUC inspections, maintenance, and five-year reviews through FY15. FTBL has completed MEC removal and clearance operations under PBA 1, and has received NFA with regards to MEC from regulators. The PP and DD are currently being drafted.

The acreage for sites FTBL-005-R-04 through FTBL-005-R-08 has been subtracted from the 807-acre parcel, reducing it to 806.59.

CLEANUP/EXIT STRATEGY

The PP, DD, and LUCs are currently in draft (under PBA No.1) and are expected to be complete in FY12. PBA No.1 is funded through 2015.

Site ID: FTBL-005-R-05

Site Name: Inert Mine Testing Area at Range 5

STATUS

Regulatory Driver: RCRA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	200803.....	200803
CS.....	200807.....	200912
RFI/CMS.....	201001.....	201302
CMI(C).....	201011.....	201306
CMI(O).....	201306.....	204209

RIP Date: 201306

RC Date: 204209

SITE DESCRIPTION

This site was identified as M-33 in the 1990 USATHAMA Phase I/II Environmental Baseline Survey (EBS) and is described as a 10-acre open field located approximately 200 feet east of Bldg 2091, on the west side of FTBL North Area, formerly Engineer Proving Ground. The 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. Since its last use, the surface of the site has been disturbed several times during various MEC removal actions.

Preliminary sampling was performed in an area measuring 75 feet by 100 feet that contained the detonation pits. Various metals were detected in the soil samples, but at levels below site background concentrations for FBNA. The sampling efforts did not address the potential occurrence of MEC or MC, or potential impacts to areas outside the detonation pits. In 2006, FTBL investigated SWMU M-33 and identified explosives in groundwater. A Phase II investigation was conducted as under Fort Belvoir's MR PBA 1, site ID MR_PBA @Belvoir, (contract number W91ZLK-05-D-0010, DO 0001). An investigation summary report risk assessment was submitted to regulators in August 2009. USEPA requested additional sampling for explosives and perchlorate. A revised risk assessment was submitted in December 2010. The risk assessment remains at USEPA for review. The contractor is preparing an FS and anticipates LTM-MNA for the final remedy. LTM-MNA will be performed under the above PBA through 2015. The estimate for RA-O starting in 2016 was created using the final year of PBA costs.

An adjacent site (M-32, site ID FTBL-005-R-08) has been combined with this site for regulatory and funding purposes, because the constituents and media of concern are identical.

[Note: As of September 2010, FTBL lost access to this site due to 2005 BRAC related construction on FBNA. FTBL anticipates access in spring 2012.]

CLEANUP/EXIT STRATEGY

Finalize a PP and a DD under PBA@MR_Belvoir (2008 award). FTBL anticipates groundwater monitoring will continue as the selected remedy.

Site ID: FTBL-005-R-09
Site Name: BNA Soils and Groundwater

STATUS

Regulatory Driver: RCRA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern (MEC), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200906.....	200907
CS.....	200908.....	200909
RFI/CMS.....	201105.....	201509
CMI(C).....	201510.....	201604
CMI(O).....	201605.....	204505

RIP Date: 201605

RC Date: 204505

SITE DESCRIPTION

FTBL's 2007 BRAC Environmental Impact Statement (EIS) proposed a child development center (CDC) on FBNA. Due to the former military uses at FBNA, FTBL performed a MEC clearance and environmental investigation to ensure no risk of MEC, and that soils and groundwater were compared against residential standards. During the MEC clearance, six emplaced unexploded ordnance (UXO) items were identified and properly disposed of in accordance with Virginia's Solid Waste Regulations. Upon completion of the MEC clearance, FTBL performed an extensive soil and groundwater investigation. Soil samples taken from four borings exhibited polycyclic aromatic hydrocarbons (PAH)s above residential standards. Additionally, soil samples collected from the UXO locations exhibited MCs. One groundwater sample collected from a groundwater well adjacent to the site exhibited MC, which was not the same type of MC found at the UXO locations.

In January, 2012, FTBL performed a subsequent investigation to further evaluate the contaminated groundwater and to isolate the areas with PAH contamination. During that investigation, several groundwater wells associated with CC-MPS2009 were sampled and analyzed for explosives. Two wells exhibited low-levels explosives, further indicating the source of the MC was not within the CDC site.

An additional investigation and FS, which will likely combine the two sites, are planned in October 2012.

CLEANUP/EXIT STRATEGY

An additional investigation and FS are planned for FY13. Upon completion, FTBL anticipates groundwater monitoring as the selected remedy.

Site ID: FTBL-005-R-10
Site Name: Munitions Disposal Pit at Range 5

STATUS

Regulatory Driver: CERCLA
MRSPP Score:

Phases	Start	End
PA.....	200809.....	200812
SI.....	200901.....	200906
RI/FS.....	200906.....	201309
RD.....	201310.....	201406
IRA.....	200809.....	200907
RA(C).....	201406.....	201412
RA(O).....	201412.....	204411
LTM.....	204412.....	204501

RIP Date: N/A
RC Date: 201309

SITE DESCRIPTION

This site was identified as a MEC disposal pit in September-October 2008. In addition to the MEC, field crews excavated a 55-gallon eroded drum which exhibited odors on October 2008. Subsequent air samples from the drum and soil samples collected from below the drum indicated the presence of tetrachloroethylene (PCE). The drum and contaminated soils were removed and disposed of.

Upon completion of the MEC clearance in June, 2009, the contractor collected numerous soil samples from within the pits and installed groundwater wells. Contaminants in soils identified included: PCE, PCBs, and 2,4/6-dinitrotoluene. Contaminants in groundwater included PCE, naphthalene, 2,4/6-dinitrotoluene, and RDX. PCE levels from several wells ranged between 50 ug/L and 200 ug/L. As of September 2010, the down-gradient extent of the contamination had not been identified.

Fort Belvoir and therefore, the contractor lost access to the site in September 2010, due to BRAC related construction. The access point was re-opened in May, 2012. The contractor submitted an addendum to the investigation plan, which included 3 down gradient wells to assist with delineation. US EPA requested a series of 7 sets of nested wells to determine the thickness of the PCE plume. The contractor subsequently collected samples from existing wells to assist with placement of new wells.

This site is located approximately 300 feet from the installation boundary. Data indicates that plume is migrating towards drainage feature which bisects the private property and the installation. At this time, there is no data to determine whether contamination is migrating off-site and onto private property. However, the natural drainage feature does appear to separate the residence and Fort Belvoir North Area. Additionally, the residence appears to be at a higher elevation than the disposal pit.

The work for this site is currently conducted under Contract # W91ZLK-05-D-0010, Task Order 0001. Period of Performance ends December 2015.

CLEANUP/EXIT STRATEGY

Site ID: FTBL-007-R-01
Site Name: GRENADE COURT

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 05
Contaminants of Concern: Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201409
RA(C).....	201410.....	201505
RA(O).....	201506.....	201509
LTM.....	201510.....	204409
RIP Date:	201506	
RC Date:	201509	

SITE DESCRIPTION

This 100-acre MRS is located centrally located on the installation, and lies on Accotink Creek and is divided lengthwise by Poe Road. An unpermitted landfill is adjacent to the site (CC-A12). Historical reports indicate MRS construction began March 21, 1941, and appear to be operation until 1949, at which time a large AST farm appears to have been built. Potential munitions used were live and practice hand grenades. Sandbag emplacements were built on the north end of the range and appeared to have been designed for live ordnance usage. From a map titled Belvoir General Site Plan, the tank farm appears to have been removed and dismantled by 1961. The majority of the area is currently unoccupied and heavily wooded.

The 2008 FTBL SI recommended a RI with regards to MC. Two of the three surface soil samples collected from this site exhibited elevated levels of metals, not all of which were MC. RI fieldwork began in July 2010, under PBA@MR_Belvoir (PBA 2) and is scheduled for completion in July 2012. No MEC or MD indicating use of live ordnance were identified. As a result, FTBL will propose no MC sampling based on the lack of MD. In 2010, the boundary of the adjacent landfill was expanded to include a larger portion of the surface danger zone associated with grenade use. If additional sampling with regards to Resource Conservation and Recovery Act (RCRA) metals is required, sampling will likely be performed under Installation Restoration Program (IRP). Funding for an FS in October 2012 is planned. LUCs are anticipated, although LUC management will be minimal.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected. FTBL anticipates that LUCs will be selected as final remedy.

Site ID: FTBL-014-R-01
Site Name: TRACY ROAD RANGE

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 06
Contaminants of Concern: Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201404
RD.....	200907.....	201404
RA(C).....	200907.....	201404

RIP Date: N/A
RC Date: 201404

SITE DESCRIPTION

This site is located on the southern portion of FTBL and covers 33 acres. According to historical reports, the Tracy Road Range was constructed in 1941. Range features visible on historical maps included firing lines, target berms, and range buildings. The range was constructed with 88 targets with 200 and 300 yard firing points; 40 of these targets had an undeveloped 500 yard firing line. An impact berm is evident between Tracy Road and Accotink Creek. Potential munitions used include small arms rounds. The Tracy Road Range was closed between 1956 and 1960. The berm is still present at the range, but a bldg has been built on the firing area along Tracy Road. The range and the areas lying to the north, south, and east are developed with numerous buildings and paved or landscaped areas occupying much of the land surface. The areas to the west, northwest and southwest of the range lie within an undeveloped portion of FTBL. Soil samples collected during the 2008 SI exhibited elevated lead levels. This is contracted through RIP under PBA@MR Belvoir (2009 award).

CLEANUP/EXIT STRATEGY

This site is under contract (PBA@MR_Belvoir) to reach RIP by April 2014.

Site ID: FTBL-018-R-01
Site Name: Demolition Area - 01

STATUS

Regulatory Driver: CERCLA

MRSP Score: 03

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201309
IRA.....	201103.....	201310
RA(C).....	201401.....	201506
RA(O).....	201506.....	201509
LTM.....	201510.....	204310
RIP Date:	201506	
RC Date:	201510	

SITE DESCRIPTION

This 420-acre MRS is located in the northeastern portion of FTBL. It was first identified on a 1940 archival map displaying tactical training areas and appeared to have been used between 1940 and 1951. A housing area was constructed in the central portion of this MRS in the 1980s. A fence separating the housing area from the surrounding natural areas is maintained by FTBL, but the MRS is accessible to the public. In 2008, a SI recommended that the MRS be separated into MRSs: Demolition Area - 01 (312.5 acres) and Demolition Area - 02 (107.5 acres). This MRS was designated Demolition Area - 01, and the two westernmost sections should be designated Demolition Area - 02 (FTBL-018-R-02). Historical documentation from 1944 states this site was used for combat engineer demolition training. Demolition materials likely to be used include: bulk explosives, shape charges, cratering charges, and time fuse. Other materials include blasting caps, dynamite, and flare signal rockets. The area, primarily undeveloped, consists of a portion of the Jackson Miles Abbott Wetland Refuge and a wildlife corridor. Evidence of training activities includes one MEC item (smoke grenade) and several possible blast holes. No soil samples collected during the SI exceed the range of background levels for MC. As a result of the SI findings and based on historical usage of the MRS, the site was recommend RI for MEC and MC. RI fieldwork began in July 2010, during which time no MEC was identified; however, numerous training landmines and an area where the fusing mechanisms were disposed of were identified. A FS is planned for October 2012 to evaluate remedial technologies.

LUCs are being developed as an interim remedy under a USACE centrally managed contract.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected.

Site ID: FTBL-024-R-01
Site Name: Booby Trap Site

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201409
IRA.....	201106.....	201409
RA(C).....	201410.....	201505
RA(O).....	201506.....	201509
LTM.....	201510.....	204310
RIP Date:	201506	
RC Date:	201510	

SITE DESCRIPTION

This MRS is located in the southeastern portion of FTBL along Gunston Cove. The site was initially identified from a 1983 memorandum that identified it as a one-acre site within Training Area T-1A, and was used for 24 days during 1983. The MRS was subsequently identified on several installation Training Area maps dating from 1987 and 1989. The installation maps indicated the MRS was approximately four acres, but there was no additional information was provided regarding the about the amount of use or training activities which took place. It is believed this MRS may have been associated with the Engineering School, and included activities such as arming and disarming of practice firing devices and/or the installation and removal of booby traps within an area.

FTBL-024-R-01 is currently undeveloped and wooded. 2008 SI recommended RI for this MRS with regards to MEC and MC. In the fall of 2008, a recreational vehicle travel camp and cabin area was identified for construction at an adjacent site. As a result, FTBL installed fencing as interim measures until the RI could be completed. During the fence installation, construction workers identified several emplaced training landmines along an old access road, outside of the 4-acre MRS. Consequently, the MRS was expanded and a MEC removal action was planned. In 2009, a contract was awarded for RI with an MEC removal action at this site. A FS is planned in October 2012. Although there was no evidence of MEC during the RI or the removal action, LUCs are planned for this site.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected. FTBL anticipates that LUCs will be selected as final remedy.

Site ID: FTBL-025-R-01
Site Name: Demolition Area - USACE

STATUS

Regulatory Driver: CERCLA

MRSP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201409
IRA.....	201103.....	201409
RA(C).....	201410.....	201505
RA(O).....	201506.....	201509
LTM.....	201510.....	204310
RIP Date:	201506	
RC Date:	201510	

SITE DESCRIPTION

This 489-acre MRS is located in the northeastern portion of FTBL and was first identified as a demolition training area on a 1940 archival map displaying tactical training areas. Northeastern portion of the MRS is currently operated by the USACE-Humphrey Engineer Center, and the remainder of the MRS is undeveloped. The Demolition Area is separated into two MRS bases on the recommendation of the 2008 SI.

Memoranda from 1944 state that the MRS was used primarily to train engineers 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 include explosives, shape charges, cratering charges, and time fuze. Other items that may have been used within the MRS include: blasting caps, dynamite, and flare signal rockets. Based on installation maps, the Demolition Area - USACE operated between 1940 and approximately 1951.

In 2008, the site description for this MRS changed from Demolition Area-transferred (TD) to Demolition Area USACE, as sites that are under Army or DoD control are not TD property. In 2008, a SI report recommended RI for this MRS with regards to MEC and MC.

The RI under FTBL's PBA@MR Belvoir (2009 award) is expected to be complete by July 2012. Soil samples collected did not indicate the presence of MC above RBCs. A FS is planned for October 2012. MEC removal is not anticipated; however, LUCs are likely for the final remedy.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected. FTBL anticipates that LUCs will be selected as final remedy.

Site ID: FTBL-026-R-01
Site Name: Mines and Booby Trap Area

STATUS

Regulatory Driver: CERCLA
MRSP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	201110.....	201409
RA(C).....	201410.....	201506
RA(O).....	201506.....	201509
LTM.....	201510.....	204310
RIP Date:	201506	
RC Date:	201510	

SITE DESCRIPTION

The Mines and Booby Traps Area encompasses 110 acres within the western portion of the installation near Davison Army Airfield. According to historical documents from 1943, the following practical exercises took place at the site: installation and removal of booby traps in wire entanglements; demonstrations and training with arming and disarming three types of antipersonnel (AP) mines; installation of AP mines of each type into double apron fence sections followed by removal of mines; and training in the arming and disarming of detonating devices. The Mines and Booby Traps Area was operational between 1943 and 1947. Potential munitions used at the site include demolition firing devices and practice AP mines. The majority of the area is currently undeveloped with the exception of one road and a small parcel of land in the eastern portion of the site that contains buildings and a parking lot. No MEC, munitions debris, or evidence of former range activities was observed at the MRS. No explosives were detected above laboratory reporting limits, and none of the soil samples exceed the documented range of background levels for MC. The Final SI Report (2008) recommended NFA at the site.

In 2010, a landmine was discovered and as a result an RI is planned for FY12. A future removal action is not anticipated.

CLEANUP/EXIT STRATEGY

An RI/FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected. FTBL anticipates that LUCs will be selected as final remedy.

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 05
 Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201309
RA(C).....	201106.....	201506
RA(O).....	201506.....	201509
LTM.....	201510.....	204310
RIP Date:	201506	
RC Date:	201510	

SITE DESCRIPTION

This 232-acre site is in the north central portion of FTBL, immediately east of the T-15 Training Area. 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 areas between 1926 and 1987. A reference as to the specific type of munitions usage was not located. This site is currently undeveloped, with the exception of a communications facility on the eastern side. The site is bisected by a newly construction road. The western side is anticipated to be converted a wetland refuge. Three unpermitted solid waste landfills were identified in this area. The FTBL 2008 SI reported numerous depressions which appeared to be fighting positions and weapons emplacements. Small arms blank were identified. The SI recommended RI for this site.

The RI, scheduled for completion in July 2011, began in July 2010 under the FTBL PBA@MR Belvoir (2009 award). MEC was not identified. Regulators concurred with no sampling at this site with regards to MC. The RI for this site was originally accelerated due to potential expansion of school, which as of FY11 is not funded. The FS is planned for October 2012. Final remedy is likely to be LUCs. This site was also included in a 2011 USACE contract to develop interim LUCs until the final remedy is selected.

CLEANUP/EXIT STRATEGY

An FS is planned for October 2012. LUCs are expected to be finalized by October 2012 as an interim remedy in accordance with CERCLA until the final remedy can be selected. FTBL anticipates that LUCs will be selected as final remedy.

Site ID: PBA@MR Belvoir
Site Name: PBA@MMRP Ft Belvoir

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Explosives, Munitions and explosives of concern (MEC), Munitions constituents (MC), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
PA.....	200110.....	200305
SI.....	200504.....	200801
RI/FS.....	200907.....	201409
IRA.....	200907.....	201409
RA(C).....	200907.....	201409
RA(O).....	200907.....	201512

RIP Date: 201409

RC Date: 201512

SITE DESCRIPTION

FTBL currently has two MR PBA contracts which were combined under this site identification number. PBA 1 W91ZLK-05-D-0010, TO 0001, awarded in July 2008 includes work for the following sites:
FTBL-005-R-01 FTBL-005-R-04 FTBL-005-R-05 FTBL-005-R-06
FTBL-005-R-07 FTBL-005-R-08 FTBL-65.

FTBL is finalizing PPs and DDs for FTBL-005-R-01, FTBL-005-R-04, FTBL-005-R-06, FTBL-005-R-07, FTBL-005-R-08. Future RA(O) costs will be required for FTBL-005-R-05 beyond contract terms, which are identified in site records.

[Note: Fieldwork for this PBA is approximately two years behind. Contract Line Item Number (CLINs) identified in PBA for specific years are pushed back two years.]

PBA II (W912DR-09-D-0005, DO 0003) includes RI for the following MR sites:
FTBL-003-R-01 FTBL-007-R-01 FTBL-018-R-01
FTBL-024-R-01 FTBL-025-R-01 FTBL-027-R-01.

RIP for sites: FTBL-001-R-02 and FTBL-014-R-01, in addition to MEC removal up to two feet for site FTBL-024-R-01.

Options for groundwater sampling at the four IR sites are included; however, will be de-scoped in 2012 due to changes in site conditions. Groundwater sampling for FTBL-68 will continue as planned.

CLEANUP/EXIT STRATEGY

See individual PBA I and II site cleanup/exit strategies.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-001-R-01	SMALL ARMS RANGE COMPLEX	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-002-R-01	SMALL ARMS RANGE Complex-TD	200801	Based on the Final Site Inspection dated January 2009, this MRS was combined with the adjacent Combat Range Complex-TD to form Combat and Small Arms Range Complex-TD FTBL-004-R-01. All future site actions will be carried out under FTBL-004-R-01.
FTBL-005-R-04	Burial Pit at Range 1A	200909	
FTBL-005-R-06	Waste Ordnance Pits at Range 5	200909	A draft and a final investigation summary report for this soil and groundwater investigation were submitted to the regulators in January and in May 2007, respectively. This investigation found low level explosives in the groundwater. Costs are covered under PBA@MR Belvoir.
FTBL-005-R-07	Troop Training Area at Range 5B	201006	
FTBL-005-R-08	Range 5 (Building 5091)	201006	
FTBL-006-R-01	FAIRFAX RANGE	200801	Based on the Final HRR dated March 2006, this MRS was determined to be part of AA Range and not a separate range. Combined with adjacent ranges to form Small Arms Range Complex FTBL-001-R-01. All future site actions will be carried out under FTBL-001-R-01.
FTBL-008-R-01	GUNSTON ROAD 1000" RIFLE RANGE	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-009-R-01	LORTON COMBAT RANGE	200801	Based on the Final HRR dated March 2006, this MRS was combined with adjacent ranges to form Combat Range Complex FTBL-002-R-01. All future site actions will be carried out under FTBL-002-R-01.
FTBL-010-R-01	LORTON COMBAT RANGE-TD	200801	Based on the Final HRR dated March 2006, this MRS was combined with adjacent ranges to form Combat Range Complex - TD FTBL-004-R-01. All future site actions will be carried out under FTBL-004-R-01.
FTBL-011-R-01	LORTON LANDSCAPE RANGE	200801	Based on the Final HRR dated March 2006, it was determined that the range fan should be shortened, thereby causing the entire range to be located within the operational range.
FTBL-012-R-01	PIG FARM RANGE	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-013-R-	PIG FARM RANGE-TD	200801	Based on the Final HRR dated March

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
01			2006, this MRS was eliminated when acreage reduction resulted from the elimination of the firing fan, which was based on presence of a berm.
FTBL-015-R-01	TRACY ROAD RANGE-TD	200801	Based on the Final HRR dated March 2006, this MRS was eliminated when acreage reduction resulted from the elimination of the firing fan, which was based on presence of a berm.
FTBL-016-R-01	RANGE T-15	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-017-R-01	Congressional Demonstration Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-018-R-02	Demolition Area-02	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-019-R-01	Entrenchment and Gas School Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-020-R-01	Gas Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-021-R-01	Mock Village	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-022-R-01	Mounted Pistol Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-023-R-01	Southwest Pistol Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.

MMRP Schedule

Date of MMRP Inception 200110

Past Phase Completion Milestones

2003

PA (FTBL-001-R-01 - SMALL ARMS RANGE COMPLEX, FTBL-001-R-02 - Infiltration Course, FTBL-002-R-01 - SMALL ARMS RANGE Complex-TD, FTBL-003-R-01 - COMBAT RANGE COMPLEX, FTBL-004-R-01 - Combat/Small Arms Range Complex-TD, FTBL-005-R-01 - EPG AREA, FTBL-006-R-01 - FAIRFAX RANGE, FTBL-007-R-01 - GRENADE COURT, FTBL-008-R-01 - GUNSTON ROAD 1000" RIFLE RANGE, FTBL-009-R-01 - LORTON COMBAT RANGE, FTBL-010-R-01 - LORTON COMBAT RANGE-TD, FTBL-011-R-01 - LORTON LANDSCAPE RANGE, FTBL-012-R-01 - PIG FARM RANGE, FTBL-013-R-01 - PIG FARM RANGE-TD, FTBL-014-R-01 - TRACY ROAD RANGE, FTBL-015-R-01 - TRACY ROAD RANGE-TD, FTBL-016-R-01 - RANGE T-15, FTBL-017-R-01 - Congressional Demonstration Area, FTBL-018-R-01 - Demolition Area - 01, FTBL-018-R-02 - Demolition Area-02, FTBL-019-R-01 - Entrenchment and Gas School Area, FTBL-020-R-01 - Gas Area, FTBL-021-R-01 - Mock Village, FTBL-022-R-01 - Mounted Pistol Range, FTBL-023-R-01 - Southwest Pistol Range, FTBL-024-R-01 - Booby Trap Site, FTBL-025-R-01 - Demolition Area - USACE, FTBL-026-R-01 - Mines and Booby Trap Area, FTBL-027-R-01 - T-16, PBA@MR Belvoir - PBA@MMRP Ft Belvoir)

2008

SI (FTBL-001-R-01 - SMALL ARMS RANGE COMPLEX, FTBL-001-R-02 - Infiltration Course, FTBL-002-R-01 - SMALL ARMS RANGE Complex-TD, FTBL-003-R-01 - COMBAT RANGE COMPLEX, FTBL-004-R-01 - Combat/Small Arms Range Complex-TD, FTBL-005-R-01 - EPG AREA, FTBL-006-R-01 - FAIRFAX RANGE, FTBL-007-R-01 - GRENADE COURT, FTBL-008-R-01 - GUNSTON ROAD 1000" RIFLE RANGE, FTBL-009-R-01 - LORTON COMBAT RANGE, FTBL-010-R-01 - LORTON COMBAT RANGE-TD, FTBL-011-R-01 - LORTON LANDSCAPE RANGE, FTBL-012-R-01 - PIG FARM RANGE, FTBL-013-R-01 - PIG FARM RANGE-TD, FTBL-014-R-01 - TRACY ROAD RANGE, FTBL-015-R-01 - TRACY ROAD RANGE-TD, FTBL-016-R-01 - RANGE T-15, FTBL-017-R-01 - Congressional Demonstration Area, FTBL-018-R-01 - Demolition Area - 01, FTBL-018-R-02 - Demolition Area-02, FTBL-019-R-01 - Entrenchment and Gas School Area, FTBL-020-R-01 - Gas Area, FTBL-021-R-01 - Mock Village, FTBL-022-R-01 - Mounted Pistol Range, FTBL-023-R-01 - Southwest Pistol Range, FTBL-024-R-01 - Booby Trap Site, FTBL-025-R-01 - Demolition Area - USACE, FTBL-026-R-01 - Mines and Booby Trap Area, FTBL-027-R-01 - T-16, PBA@MR Belvoir - PBA@MMRP Ft Belvoir)

RFA (FTBL-005-R-04 - Burial Pit at Range 1A, FTBL-005-R-05 - Inert Mine Testing Area at Range 5, FTBL-005-R-06 - Waste Ordnance Pits at Range 5, FTBL-005-R-07 - Troop Training Area at Range 5B, FTBL-005-R-08 - Range 5 (Building 5091))

2009

RFA (FTBL-005-R-09 - BNA Soils and Groundwater)

CS (FTBL-005-R-04 - Burial Pit at Range 1A, FTBL-005-R-06 - Waste Ordnance Pits at Range 5, FTBL-005-R-09 - BNA Soils and Groundwater)

SI (FTBL-005-R-10 - Munitions Disposal Pit at Range 5)

IRA (FTBL-005-R-10 - Munitions Disposal Pit at Range 5)

PA (FTBL-005-R-10 - Munitions Disposal Pit at Range 5)

RA(C) (FTBL-005-R-01 - EPG AREA)

RI/FS (FTBL-005-R-01 - EPG AREA)

2010

CS (FTBL-005-R-05 - Inert Mine Testing Area at Range 5, FTBL-005-R-07 - Troop Training Area at Range 5B, FTBL-005-R-08 - Range 5 (Building 5091))

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

MMRP Schedule

Final RA(C) Completion Date: 201609

Schedule for Next Five-Year Review: 2012

Estimated Completion Date of MMRP at Installation (including LTM phase): 204609

FORT BELVOIR MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-001-R-02	Infiltration Course	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-003-R-01	COMBAT RANGE COMPLEX	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-004-R-01	Combat/Small Arms Range Complex-TD	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-005-R-01	EPG AREA	RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-005-R-05	Inert Mine Testing Area at Range 5	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-005-R-09	BNA Soils and Groundwater	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-005-R-10	Munitions Disposal Pit at Range 5	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-007-R-01	GRENADE COURT	RI/FS						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-014-R-01	TRACY ROAD RANGE	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-018-R-01	Demolition Area - 01	RI/FS						
		IRA						
		RA(C)						
		RA(O)						
		LTM						

FORT BELVOIR MMRP Schedule

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-024-R-01	Booby Trap Site	RI/FS						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-025-R-01	Demolition Area - USACE	RI/FS						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-026-R-01	Mines and Booby Trap Area	RI/FS						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTBL-027-R-01	T-16	RI/FS						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
PBA@MR Belvoir	PBA@MMRP Ft Belvoir	RI/FS						
		IRA						
		RA(C)						
		RA(O)						

FORT BELVOIR
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 44/10

Installation Site Types with Future and/or Underway Phases

2	Contaminated Fill (CC-MP1, CC-MP5)
5	Contaminated Ground Water (CC-MP2, CCBLDG1124, CCBLDG2209, CCBLDG3161, CCPBA@Belvoir)
1	Contaminated Sediments (CC-AOPC-20 BNA)
12	Landfill (CC-A025, CC-A05, CC-A06, CC-A07, CC-A08A16, CC-A09, CC-A11, CC-A12, CC-A26, CC-A28, CC-A29, CC-N23)
1	Oil Water Separator (CC-L09)
1	Sewage Treatment Plant (CC-L45)
1	Soil Contamination After Tank Removal (CC-MPS2009)
2	Spill Site Area (CC-A04A23, CC-A24)
4	Storage Area (CC-E01, CC-E06, CC-E14, CC_E10)
3	Surface Disposal Area (CC-L05, CC-MP8, CC-MP9)
2	Waste Treatment Plant (CC-A18, CC-A19)

Most Widespread Contaminants of Concern

Metals, Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Sediment, Soil, Surface Water

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-MPS2009	PSAs 2009, 2033, and 2034	IRA	REMOVAL	1997
CCBLDG3161	Bg 3161- Davison Army Airfield Fuel Yard	FRA	DUAL-PHASE EXTRACTION	2002
CCBLDG773	Former Building 773	FRA	OTHER	2003
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	FRA	GROUND WATER TREATMENT	2004
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	FRA	SOIL VAPOR EXTRACTION	2008
CCBLDG305	Bldg 305 - Research & Development Center	FRA	DUAL-PHASE EXTRACTION	2008
CCBLDG1124	Bldg 1124 - Vehicle Fueling Facility	FRA	DUAL-PHASE EXTRACTION	2009
CC-G13	B1453 Former USTs & Related Contam.	IRA	REMOVAL	2011
CC-MP3	Arts & Crafts Cntr Petroleum Cont.	IRA	WASTE REMOVAL - SOILS	2011
CC-MP4	Contaminated Soil at 9th and Gunsto	IRA	WASTE REMOVAL - SOILS	2011
CC-MP6	1425 Pipeline Contamination	FRA	WASTE REMOVAL - SOILS	2011

CR Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-MP7	Future OSEG Facility	IRA	WASTE REMOVAL - SOILS	2011

Duration of CR

Date of CR Inception: 197306

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 204309/204709

Date of CR completion including Long Term Management (LTM): 204709

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the IRP and MMRP. On Dec. 29, 2008, the Office of the Deputy Under Secretary of Defense for Installations and Environment [ODUSD (I&E)] issued an interim policy for Defense Environmental Restoration Program (DERP) eligibility that rescinded the 1986 eligibility date for the IRP and the 2002 eligibility date for the MMRP. This made many sites previously addressed in the Army's compliance-related cleanup (CC) program eligible for the DERP. Sites that are now eligible for the MMRP have been migrated from Army Environmental Database - Compliance-related Cleanup (AEDB-CC) and given the naming convention of other munitions response (MR) sites. The newly eligible non-MR type sites are considered to be installation restoration (IR) sites; however, the newly eligible sites are being coded as compliance restoration (CR) in AEDB-R to distinguish them from the original IR sites and IR metrics.

Due to ongoing BRAC construction, several sites have been opened as new, or (in the case of G-13), reopened due to the presence of contamination discovered during construction. It is anticipated that all of these sites will have immediate needs completed shortly (some already have).

PETROLEUM

CCBLDG1124 and CCBLDG3161 continue to utilize DPE systems to remediate the petroleum impacted soils and dissolved groundwater plume, while treating the groundwater and vapor through carbon treatment. CCBLDG1124 is estimated to have three more years until case closure may be petitioned; CCBLDG3161 is estimated to have one to two years.

The AS/SVE system continues to remediate the dissolved groundwater plume and treat the off-vapors at CCBLDG2209. This system has not been remediating the site as well as expected, so additional funding was requested to enhance the system. A DPE pilot study will occur in FY12 and determine if this will assist in moving the site toward case closure faster than the current remediation option.

MAIN POST SWMUs

These sites make up the majority of the CR sites. These include various types of sites- landfills, sewage treatment plants, dump sites, POL storage areas, etc. The overall strategy for the Main Post SWMU program is to administratively close 89 sites and receive concurrence on historical NFA for 42 sites which were placed on the Main Post permit. These sites, for the most part, are not itemized within the CR list of sites.

Those sites which are itemized in this IAP are in various stages of investigation and closure and are best understood when looking at each site individually.

Cleanup Exit Strategy

Due to nature and number of sites, it is recommended to view this information on a site by site basis.

CR Previous Studies

Year	Title	Author	Date
1985	Prelim Phase I investigation -- BLDG 1124	USAEHA	JUL-1985
1986	GW Mont at B 1124	Dept of Army	JUL-1986
1988	Phase II RCRA FAc Ass at FTBL	AT Kearney	JUL-1988
1989	Area 600 Inspection and Permit Troubles	Commonwealth of VA	SEP-1989
1990	Haz Waste Permit App Vol 1 of 2, Rev 0 (HW Storage)	CH2MHill	JAN-1990
	Env Baseline Study ar EPG	USATHAMA	JAN-1990
	Draft Report, Phase III Collection of Env Field Data, EPG	FTBL Argonne National Labs	FEB-1990
	Haz Waste Permit App for Dept of Army FTBL	Dept of Army	APR-1990
	Env Baseline Study, EPG, Vol II to Phase III Sampling	USATHAM	SEP-1990
	Soil Gas Survey and Sampling Plan Fire Training Pit, DAAF FTBL	US Army Eng District, Baltimore Eng Division, Geotech Engineering Branch	SEP-1990
	Env. Baseline Study at EPG Vol I, Scope Def.	USATHAMA	SEP-1990
1991	Federal Facilities Compliance Agreement Doc/Correspondence	Various	MAR-1991
	Haz Materials Inform System (HMIS) printouts, Vol II	Unknown	MAY-1991
	Tank Investigations Bldgs 190, 677, 788, 1116, 1146, 1197, 1949, 2034, 2041	Dewberry and Davis	JUN-1991
	FTBL SWMU Study Photographs	CH2MHill	DEC-1991
1992	SWMU Study	CH2MHill	JAN-1992
	Interim Hydrogeologic Study Report DAAF Fire Train Sites	Directorate of Engineering and Housing	JAN-1992
	Removal Action EPG	International Tech Corp	FEB-1992
	Prelim Assessment Report for Addendum	ACOE	MAR-1992
	Virginia Waste Mgmt Act and RCRA, 3 Volumes	Dept of Army	APR-1992
	URADS/UXO Survey Conducted at EPG	International Tech Corp	MAY-1992
	Personnel Training Program of Haz Waste Mgmt	Unknown	JUN-1992
	Virginia Waste Mgmt Act and RCRA, revision, 3 volumes	Dept of Army	JUN-1992
	SWMU Study Appendix D Draft RFA Report	AT Kearny, Inc	JUL-1992
	Part B Permit VA7210000906 EPG	Commonwealth of Virginia	OCT-1992
	Part B Permit VA7210000906 EPG	Commonwealth of Virginia	OCT-1992

CR Previous Studies

	Title	Author	Date
1993	Part B Permit VA7213720082 (Bldg 1490 and 2991 DRMO and UST...)	Commonwealth of Virginia	JAN-1993
	Haz Waste Mgmt Plan and Haz Waste Generation Survey	Bregman and Company Inc	FEB-1993
	Env Impact Statement	ACOE	MAR-1993
	Haz Waste Mgmt Permit FTBL, Main Post, VA 72131720082	Unknown	MAR-1993
	EPG, SWMU Closure Plans	Dewberry and Davis	OCT-1993
	Final Dioxin/Furan Report, Vol 1 Report and Data Summary	IT Analytical	DEC-1993
	Final Dioxin/Furan Report, Vol 1 Report and Data Summary, 7 Volumes	IT Analytical	DEC-1993
1994	GW Investigation: Compound 300 -- Totten Road	Vista Technologies	JAN-1994
	Phase I Petroleum Hydrocarbon Assesment at Dogue Creek Village	USAEHA	APR-1994
	FTBL SWMUs Vols 1 and 2	Dept of Army	JUL-1994
	Facility Investigation of Pile of Black Sandy Material near Bldg 383	Vista Technologies	JUL-1994
1995	Tompkins Basin Recreation Area, Dredging and Dredge Material Disposal Site DRAFT (Spe 94) and Final Phase II GW Quality Investig --Bldge 1124	Unknown	MAR-1995
		USAEHE	SEP-1995
	Certificate of Closure, Bldg 625	Dewberry	DEC-1995
	Certificate of Closure, Bldg 627	Dewberry	DEC-1995
	Certificate of Closure, Bldg 632	Dewberry	DEC-1995
	Certificate of Closure, Bldg 633	Dewberry	DEC-1995
	Certificate of Closure, Bldg 634	Dewberry	DEC-1995
	Certificate of Closure, Bldg 363	Dewberry	DEC-1995
1996	Closure Plan UST Bldg 2034 Working Book	Unknown	JAN-1996
	Certificate of Closure, Bldg 714	Unknown	JAN-1996
	Closure Plans 600 Area Workbook	Unknown	JAN-1996
	Env Investigation at SWMU A3 DRMO Stump Dump Vol I and II	Dewberry	FEB-1996
	Closure Report Bldg 625	Dewberry	JUL-1996
	Closure Report Bldg 627	Dewberry	JUL-1996
	Closure Report Bldg 633	Dewberry	JUL-1996
	Closure Report Bldg 634	Dewberry	JUL-1996
	Closure Report Bldg 632	Dewberry	JUL-1996
	SWMU Closure Report, Waste Fuel Drum Storage Pad	Dewberry	DEC-1996

CR Previous Studies

1996	Title	Author	Date
	Closure Report Bldg 363	Dewberry	DEC-1996
	Closure Report Bldg 714	Dewberry	DEC-1996
1997	Closure Plan, Battery Acid Trtmt Pit at B2021 Working Book	Unknown	JAN-1997
	Closure Plan DAAF Training Pit Working Book	Unkowns	JAN-1997
	Closure Plan, B 1957 Battery Acid Pit Working Book	Unkown	JAN-1997
	Closure Plan, Bldg 1957 Battery Acid Pit Working Book	Unknown	JAN-1997
	FTBL SWMU Vol III	DPW ENRD	JAN-1997
	FTML SWMU VOI II	Dept of Army	JAN-1997
	Haz Waste Closure Sites, Letters, DOx, 30357A and Marina	Unkown	JAN-1997
	Closure Plan UST Working Book, Tanks 181, 714, 363, and 324	Unkown	JAN-1997
	Closure Plan and Correspondence B 707 RCRA Closures DEQ 1997	Unknown	JAN-1997
	Tank Invest (B190, 677, 788, 1116, 1146, 1197, 1949, 2034, 2041, 2457, 2585, and Marina) Correspondence	Unknown	JAN-1997
	DROM Debris Landfill Exc Activity Final Report as Port of VDOT Beulah	Dept of Army	JUN-1997
	UST Activity Reports	Koester	AUG-1997
	Closure Report UST and Bldg 322	Dewberry	NOV-1997
	Closure Report, Battery Acid Disposal Pit 1957	Dewberry	NOV-1997
	Closure Report, Container Storage Area at B308	Dewberry	NOV-1997
	Closure Report Fire Trng Area at DAA	Dewberry	NOV-1997
	Closure Report AST and OWS at B1949/1950	Dewberry	NOV-1997
	Closure Report, Battery Acid Disp Pit at B1957	Dewberry	NOV-1997
	Closure Report, Battery Acid Trtmny Fac at B707	Dewberry	DEC-1997
	Closure Report Container Storage Area at Building 357A	Dewberry	DEC-1997
	Closure Rept Correspondence AST and OWS at 1959/1950	Unkown	DEC-1997
1998	Closure Report, Oil-Water Separator and Underground Storage Tank at Building 324	Dewberry	JAN-1998
	Closure Report, Underground Storage Tanks at Building 181	Dept of Army	JAN-1998
	Closure Report, Underground Storage Tanks at Building 1146	Dewberry	FEB-1998
	Closure Report, Underground Storage Tanks at Building 190	Dewberry	FEB-1998
	Closure Report Underground Storage Tanks at Building 1116	Dewberry	FEB-1998
	Closure Report AST at Building 677	Dewberry	FEB-1998

CR Previous Studies

1998	Title	Author	Date
	FFCA Closure Site Manifest Books 1 and 2	FTBL Directorate of Installation Support	MAR-1998
	Quarterly Groundwater Sampling Results (Feb 1998 and Oct 1997) at Buildings 2021 and 1957 and Davison Airfield	Dept of Army	APR-1998
	Fort Belvoir Solid Waste Management Units Volume IV	Dewberry	APR-1998
	Final Groundwater Well Survey and Assessment Data Summary Report	CDM	MAY-1998
	Groundwater Monitoring Well Closure Report Davison Army Airfield Fire Training Area	Law Engineering	JUN-1998
	Groundwater Flow Modeling of the Aquifer System at Fort Belvoir, Phase I	Dames and Moore	AUG-1998
	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dames and Moore	AUG-1998
1999	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (June 1998) at Battery Acid Pit	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (Sept 1998) at Building 2021 and 1957 and Davison Army Airfield	Dept of Army	JAN-1999
	VDEQ GW Closure Correspondence 1997-1999	Dames and Moore	MAR-1999
	Quarterly Groundwater Sampling Results (Dec 1998) at Building 2021 and 1957 and Davison Army Airfield	Dewberry	MAR-1999
	Fort Belvoir Action Plans for Solid Waste Management Units Volumes I-VI	Dewberry	APR-1999
	Fort Belvoir Action Plans for 32 SWMUs, Volume 5	Dewberry	APR-1999
2002	Environmental Study Part II	Dewberry	JAN-2002
	Solid Waste Management Unit Geographic Information System	Dewberry	JUL-2002
	Closure Plan for HWMU- 1124	NA	SEP-2002
	RCRA Hazardous Waste Permit Application Main Post	Dewberry	SEP-2002
	Closure Plan HWMU 1124 Underground Storage Tank Building 01124	Dewberry	OCT-2002
	General Site History and Initial Abatement Measure Plan	Dewberry	OCT-2002
2003	Revised Closure Plan HWMU 1124 Underground Storage Tank Building 1124	Dewberry	APR-2003
	Draft Permit for Hazardous Waste Storage	Commonwealth of Virginia	NOV-2003
2004	Final Permit for Hazardous Waste Storage	VA Dept of Env Qual	OCT-2004

CR Previous Studies

2009

Title	Author	Date
Phase I RCRA Facility Investigation SWMU A-03	Tidewater	AUG-2009
Phase I RCRA Facility Investigation SWMU A8/16	Tidewater	AUG-2009
Phase I RCRA Facility Investigation SWMU A-09/17	Tidewater	AUG-2009
Phase I RCRA Facility Investigation SWMU A-10	Tidewater	AUG-2009
Phase I RCRA Facility Investigation SWMU A-13	Tidewater	AUG-2009
Phase I RCRA Facility Investigation SWMU A-12	Tidewater	OCT-2009
Phase I RCRA Facility Investigation SWMU N23	Tidewater	NOV-2009
Phase I RCRA Facility Investigation SWMU E-03	Tetra Tech	DEC-2009
Phase I RCRA Facility Investigation SWMU I02	Tetra Tech	DEC-2009

2010

Phase I RCRA Facility Investigation DRMO SWMUs A-14 A-29 H-01 L-01 L-35	Tidewater	MAR-2010
Phase I RCRA Facility Investigation SWMU A-11	Tidewater	APR-2010
CCBLDG1124 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2010
CCBLDG2209 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2010
Phase II EIP SWMU A-05	ECC	JUL-2010
Phase II EIP SWMU E14F06	ECC	JUL-2010
Phase II EIP SWMU A-7/25	ECC	AUG-2010
Phase I RCRA Facility Investigation SWMU E-06	Tetra Tech	SEP-2010
Phase I RCRA Facility Investigation SWMU E-14	Tetra Tech	SEP-2010
Phase I RCRA Facility Investigation SWMU F06	Tetra Tech	SEP-2010
Phase I RCRA Facility Investigation SWMU L05	Tetra Tech	SEP-2010
Phase II EIP SWMU A06	ECC	SEP-2010
Phase II EIP SWMU A-11	ECC	SEP-2010
Phase II EIP SWMU A-12	ECC	OCT-2010
Phase II EIP SWMU A-26	ECC	OCT-2010
Phase II EIP SWMU A-8/9	ECC	NOV-2010
Phase II EIP SWMU A-8/9	ECC	NOV-2010
Phase II EIP SWMU E06	ECC	NOV-2010
Phase II EIP SWMU A-11	ECC	NOV-2010

2011

CCBLDG3161 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	JAN-2011
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CR Previous Studies

	Title	Author	Date
2011	CCBLDG1124 - Annual Corrective Annual Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2011
	CCBLDG2209 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2011
2012	CCBLDG3161 - Annual Corrective Action Monitoring Report	AMEC Environment and Infrastructure, Inc., for Fort Belvoir	FEB-2012

FORT BELVOIR
Compliance Restoration
Site Descriptions

Site ID: CC-A025

Site Name: Suspected Sanitary/Debris Landfill A

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200610.....	200812
RFI/CMS.....	200909.....	201302
CMI(C).....	201203.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This site was described as an open dump sanitary/debris landfill which operated prior to 1940. Evidence of dumping was observed during a 1988 site visit. [NOTE: Site ID should be CC-A25.]

SWMU A-25 is a forest clearing south of Kingman Road, approximately 1,200 feet southwest of the intersection of Kingman and Mulligan Roads. The 1988 RCRA facility assessment (RFA) described an area in this vicinity as a sanitary landfill operated prior to 1940. The FTBL Directorate of Public Works (DPW) - Environmental and Natural Resources Division (ENRD) Chief observed concrete curb/gutter and sidewalks from an USACE on-post project disposed of at this unit in 1979 and 1980. The unit was covered with more than two feet of clean fill in the mid-1980s. During the 1988 site visit there was evidence of surface dumping in several locations.

FTBL conducted a Phase I RFI at this site during 2008. Based on the results of the 2008 RFI, a Phase II RFI was performed to determine the full nature and extent of contamination. Based on preliminary phase II results, FTBL will seek NFA for this site with respect to contamination.

CLEANUP/EXIT STRATEGY

Based on preliminary Phase II results, FTBL will seek NFA for this site with respect to contamination; however, funding for groundwater wells and groundwater monitoring has been programmed for this site. Regardless of these actions, administrative LUCs will be required for the site. The LUC Implementation Plan will be funded under upcoming CMS PBA. Therefore, no cost estimate has been prepared for this site. Future LUC requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Site Name: Former Coal Storage Area & PCB Spill Sit

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	201109.....	201309
DES.....	201309.....	201309
CMI(C).....	201309.....	201309
CMI(O).....	201310.....	204309

RIP Date: 201310

RC Date: 204309

SITE DESCRIPTION

SWMU A04 was originally entered in the AEDB -R as FTBL-17; SWMU A04 and A23 were then combined and entered into the AEDB-CC as site CC-A04A23. This site (CC-A04A23) was then transferred to AEDB-R. Costs for SWMU A-23 will be tracked under AEDB-R site CC-A04A23, while any future costs for A04 will be tracked under FTBL-17.

SWMU A04, a former coal storage area, was combined with SWMU A23, the site of a one-time polychlorinated biphenyl (PCB) spill, due to the proximity of the sites. The joint site, SWMU A04/A23, is on South Post, south of building 607 and west of building 606. The site area, now known as the 21st Street Debris Collection Point, is currently used to sort construction debris and recyclable material for future off-site transportation and management.

Both sites were identified during the 1988 Draft Phase II RFA. The PCB spill (SWMU A23) occurred in March 1979 on a concrete pad where transformers were stored. Reports indicate that 197 liters of PCB coolant leaked from two vandalized electrical transformers onto the concrete pad and into adjacent soils. Remediation began in 1981 when the concrete pad was cleaned with solvents and then removed. Further remediation included excavation of contaminated soils and subsequent transport to an approved disposal facility. Post-remediation soil and concrete removal, concentrations of PCBs were reportedly less than 50 parts per million (ppm). SWMU A04 was identified in the RFA as a staging area for facility contractors; an unknown "black tarry substance" was noted leaking out of an overturned drum into an adjacent ditch. During the September 2005 SI, there was no evidence of the former coal storage area or PCB spill.

FTBL conducted a Phase I RFI at SWMU A04 in 2008 which included sediment and soil sampling. Upon completion of the investigation it was determined that there is no risk to human or environmental health at SWMU A04; however SWMU A23 is still being evaluated by the EPA.

CLEANUP/EXIT STRATEGY

FTBL conducted a Phase I RFI at SWMU A04 in 2008 which included sediment and soil sampling. Arsenic was detected above the FTBL background range but below the naturally occurring average level in US coals; SVOCs were detected above residential but below industrial soil screening levels. FTBL is seeking NFA at A04; however, regulators may require additional action such as capping and administrative LUCs to address the PCB site A-23; therefore, an estimate has been prepared to reflect expected costs for managing site A-23.

Site Name: Road and Grounds/Land Mgmt Storage Area

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Pesticides, Volatiles (VOC)
Media of Concern: Groundwater, Sediment, Soil

Table with 3 columns: Phases, Start, End. Rows include RFA, CS, RFI/CMS, DES, CMI(C), CMI(O), RIP Date, and RC Date.

SITE DESCRIPTION

SWMU A-05 was identified in the 1988 RFA as the Roads and Grounds Land Management storage area; determined to be a 400 by 600 foot area located in the northwest quarter of the yard. The site was characterized as a suspected unlined landfill which was in use prior to 1968. Historical aerial photographs (1968 to 1992) did not indicate evidence of landfill activity within the yard. The SI mentioned the presence of surface debris which included abandoned 55-gallon drums, paint cans, tires, and construction debris. During the September 2005 VSI, the area was observed as being part of the Roads and Grounds/Land Management Yard.

A Phase I RFI was completed in 2009. Investigation results determined the presence of VOCs in groundwater. Based on the results of the 2009 RFI, a Phase II RFI was performed to determine the nature and extent of contamination at the site. The 2010/2011 Phase II RFI evaluated soil gas, subsurface soil, groundwater, surface soil, sediment, and surface water. Compounds detected above screening criteria from the Phase I and Phase II RFIs included PCE, methylene chloride, carbon disulfide, and pesticides in groundwater, PCE in subsurface soil, pesticides in surface soil, pesticides and PCE in sediment, carbon disulfide, barium, manganese and PCE in surface water. Human health risk and ecological screening found that there are potential concerns for human exposure at SWMU A-05. The site is currently being evaluated for a Corrective Measures Study (CMS).

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is recommended to address PCE in groundwater at SWMU A-05.

Costs for the CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining outyear amounts are tracked under this site.

Site ID: CC-A06

Site Name: Kingman Road Landfill

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201302
CMI(C).....	201202.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

SWMU A-06 is an inactive landfill of approximately seven acres south of Kingman Road and east of Woodlawn Road. A storm water management pond is located along the southern edge of the unit that drains into an unnamed tributary to Dogue Creek. There is no record of a liner or other release control installed prior to land filling operations. Soil borings, taken October-November 1983, indicated buried debris in the vicinity of the unit. Several previous encounters with fill material included waste debris such as wood, glass, fabric, metal, cinders, paper, and rubber. A non-specified odor was previously noted at several of the boring locations.

The Phase I investigation conducted in 2008 determined a need for further investigation. For this reason a Phase II investigation was completed. The 2010/2011 Phase II RFI was conducted to further evaluate groundwater, potential landfill gas migration, landfill cap thickness, and the horizontal limits of the landfill at SWMU A-06. Compounds detected above screening criteria included manganese in groundwater. The human health risk ratio evaluation found that there were no potential concerns for residential and industrial exposure to subsurface soil. Risk results for groundwater are above the levels of concern identified for SWMU A-06. However, the constituents of potential concern are naturally occurring inorganics and do not reveal a release from the landfill. Based on phase II results, FTBL will seek NFA for this site with respect to contamination. FTBL is planning for NFA for SWMU A-06 but is currently awaiting regulator concurrence.

CLEANUP/EXIT STRATEGY

Based on Phase II results, FTBL will seek NFA for this site with respect to contamination. FTBL has received preliminary concurrence from the USEPA to move forward with NFA for SWMU A-06; however, administrative LUCs and an internal Army DD will be needed. This will be funded under upcoming CMS PBA. Future LUC requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Costs associated with this site are limited to Administrative LUC development which has been funded with FY11 funds. No future costs are anticipated for this site.

Site ID: CC-A07

Site Name: Mulligan Road Landfill

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198701.....	198701
CS.....	198701.....	198706
RFI/CMS.....	200909.....	201302

RIP Date: N/A
RC Date: 201302

SITE DESCRIPTION

Site A-07 was identified by the 1988 Draft Phase II RFI as an inactive debris landfill several acres in size, located on North Post approximately 1,000 feet southwest of the intersection of Kingman and Mulligan Roads. This area operated as a troop borrow area until 1978. The resulting hole was filled with WWII era wood building debris. The deepest area is along the west side of the site, approximately 20 feet. The site depth goes to zero at the top on the ridge line to the east. Asbestos covered piping, lead paint, No.2 heating oil tanks (250-gallon) were disposed in this site. Building demolition activities occurred from 1978 until 1986. The entire area was covered with two feet of clean fill.

The environmental operations review prepared in 1987 reported that low concentrations of five organic compounds were detected in groundwater samples collected from a down gradient monitoring well. In September 2005 DPW placed fill soil from ongoing residence unit construction projects on top of the landfill, and then stabilized with a native grass seed. A Phase I SI was conducted in 2008 which investigated soil, groundwater and landfill gas. The Phase II RFI in 2010 included additional groundwater monitoring wells at SWMU A-07. Organic compounds exceeding screening criteria were sporadic and no site-wide groundwater impacts were observed. Metals above screening criteria in groundwater included beryllium, cadmium, and manganese. Analysis of groundwater sampling was evaluated for potential risk to human health. The evaluation of the samples revealed no concerns to human health. Based on Phase II results, FTBL will seek NFA for this site with respect to contamination. FTBL is planning for NFA at SWMU A-07 but is currently awaiting regulator concurrence.

CLEANUP/EXIT STRATEGY

Based on Phase II results, FTBL will seek NFA for this site with respect to contamination. FTBL has received preliminary concurrence from the USEPA to move forward with NFA for SWMU A-07. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site. The LUC Implementation Plan will be funded under upcoming CMS PBA. Therefore, no cost estimate has been prepared for this site. Future LUC requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Site ID: CC-A08A16

Site Name: GW Village Landfill & Interceptor T

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Sediment, Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201305
DES.....	201202.....	201403
CMI(C).....	201203.....	201409
CMI(O).....	201410.....	204409

RIP Date: 201410

RC Date: 204409

SITE DESCRIPTION

SWMUs A-08 and A-16 are located on South Post near Dogue Creek and were combined to form SWMU A06A16, due to their proximity. SWMU A-08 is a closed, inactive landfill, operating from the 1930s to 1956. SWMU A-16 is a two foot wide, 400 feet long limestone-filled trench installed in 1982 as a landfill gas mitigation measure on the western edge of the landfill.

During a site study conducted in 1982 samples were taken and analyzed. There were no detections of contamination, with the exception of trace levels of tetrachloroethane. Later it was noted, during the 2005 VSI, that there was no discoloring to the gravel within the trench and no odors suggesting contamination. FTBL conducted a Phase I and a Phase II environmental investigation at this site. Results from the investigations were evaluated for potential risk to human health and ecological receptors. Landfill gas (methane) was only detected in high amounts in the center of SWMU A-08 and at trace levels in a few other areas. It was found that there are no potential concerns for residential or industrial exposure to surface soil, subsurface soil and sediment. Therefore site A16 has been closed, while A08 remains open due to PCE and TCE contamination. However, there are no current exposure pathways for the contamination to adversely affect human health. Currently FTBL is developing a CMS for a path forward.

CLEANUP/EXIT STRATEGY

Results from the Phase II RFI, human health and ecological risk screening, recommend a CMS SWMU A-08. While the 2009 Phase I Investigation Summary Report recommends NFA for the interceptor trench (SWMU A-16).

Costs for the CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining outyear amounts are tracked under this site.

Site ID: CC-A09

Site Name: Markham School Landfill & Intercept

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201305
DES.....	201203.....	201403
CMI(C).....	201203.....	201409
CMI(O).....	201410.....	204409

RIP Date: 201410

RC Date: 204409

SITE DESCRIPTION

SWMUs A-09 and A-17 are located on South Post near Dogue Creek and were combined to form SWMU A-09A-17, due to their proximity. SWMU A-09 (Markham School Landfill) is an inactive landfill operating between the 1930s and 1956. SWMU A-17 is a gravel-filled trench, 1.5 feet by 270 feet, installed as a mitigation measure to vent LFG generated from SWMU A-09. The trench was installed in 1981 and is still in use. Due to the close proximity of Markham School, a methane monitoring system was installed inside the school in 1980 and wired to the FTBL fire department. A foundation air flushing and vent system was installed in 1982.

During a study conducted in 1982 at the site samples were taken and analyzed. There were no detections with the exception of tetrachloroethane at 100-200 micrograms per liter and trace levels of naphthalene. FTBL conducted a Phase I and a Phase II environmental investigation at this site. After the investigations FTBL recommended NFA for the interceptor trench (SWMU A-17), which has now been formally closed. At A09 analytical results of the groundwater samples reported metals, VOCs and SVOCs above MCL standards. The metals and compounds detected in groundwater are common contaminants encountered at inactive landfills. Landfill gas was only detected at trace levels in a few areas. Results from the Phase I and Phase II RFI were evaluated for potential risk to human health and ecological receptors. It was found that there are no potential pathways for residential or industrial exposure to surface soil, subsurface soil, sediment and groundwater. Currently FTBL is developing a CMS for a path forward.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is recommended at SWMU A-09. Founded on the Phase I environmental investigation FTBL recommends NFA for the interceptor trench (SWMU A-17).

Costs for the CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining outyear amounts are tracked under this site.

Site ID: CC-A11
Site Name: POE Road Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	197306.....	197309
CS.....	197306.....	198906
RFI/CMS.....	200909.....	201305
DES.....	201203.....	201408
CMI(C).....	201203.....	204309
CMI(O).....	201310.....	204309

RIP Date: 204309

RC Date: 204309

SITE DESCRIPTION

This site was first identified in the 1988 Draft Phase II RFA, as an approximately 20-acre, unlined landfill, operating between 1967 and 1977. In 1977, municipal waste operations were moved to Cullum Woods and debris waste operations were moved to Thoete Road Debris Landfill. This site is located within an active training area.

Sample results from a November 1973 solid waste survey indicated that leachate from the landfill had impacted Accotink Creek. At the time, there were two natural springs that flowed through the landfill, on the northeast and southeast sections of the site. The southeastern spring leads to a drainage ditch and then into the Accotink Creek. The consultant took additional samples in 1974 which showed lower pollutant levels than the 1973 survey. In 1978, an investigation by the USACE Waterways Experiment Station indicated that the leachate was still a problem and recommended corrective actions. The landfill was closed, but was continued to be used as a debris dump site. In 1979, the USACE corrective action recommendations were completed which included: lining of the drainage ditches; monitoring well installation (three wells); burying the debris dump; and capping the landfill (to reduce infiltration). During the September 2005 VSI, the landfill cover appeared to be physically stable without significant surface erosion. No stained soils or unusual odors were noted.

FTBL completed a Phase I and Phase II investigation. The investigations evaluated groundwater, potential landfill gas migration, landfill cap thickness, and the horizontal limits of the landfill as SWMU A-11. After the completion of the Phase II RFI the compounds detected above screening criteria included TAL metals, VOCs, and PAHs in groundwater. The human health risk ratio evaluation found that there were no potential concerns for residential or industrial exposure to subsurface soil. Risk analysis for groundwater is above the levels of concern for SWMU A-11, however there are no current pathways for human exposure. Currently FTBL is developing a CMS for a path forward.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is recommended at SWMU A-11.

Costs for the RFI/CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining outyear amounts are tracked under this site.

Site ID: CC-A12

Site Name: Accotink Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201305
DES.....	201203.....	201408
CMI(C).....	201203.....	204309
CMI(O).....	201310.....	204309

RIP Date: 204309

RC Date: 204309

SITE DESCRIPTION

This site was originally entered into the AEDB-R database as FTBL-02 but was subsequently transferred to the AEDB-CC database as site CC-A12. The site was then transferred back to AEDB-R as CC-A12; future requirements will be tracked under AEDB-R site CC-A12.

SWMU A-12 is an inactive landfill, located in the southwest area of FTBL and operated between 1956 and 1973. Historical records indicate that the landfill accepted construction and municipal waste. A review of historical aerial photographs identified four large tanks with berms along Poe Road on either side of the landfill entrance. The tanks, only identified in photographs from 1953, are believed to be used as a petroleum storage area (PSA). The pine plantations on both sides of the entrance are the extent of the sanitary fill. The center section was filled with debris. Accotink Bay and wetlands were filled with debris until ordered to stop by Congressional inquiry. The landfill operations moved up to the Poe Road Landfill.

During a September 2005 VSI, the landfill was covered with a layer of soil and supports old field vegetation. Portions of the landfill surface support planted stands of loblolly pine and black locust. The landfill is within the Accotink Bay Wildlife Refuge and is traversed by several unpaved hiking trails. There is no visual evidence of the storage tanks.

FTBL completed a Phase I environmental investigation at this site in 2009 and then in 2010/2011 a Phase II RFI was conducted to further evaluate groundwater, potential landfill gas migration, landfill cap thickness, and horizontal limits of the land fill at SWMU A-12. The landfill gas monitoring survey included the installation of three additional probes for a total of eight landfill gas probes. Compounds detected above screening criteria included TAL metals, VOCs, and PAHs in groundwater. The human health risk evaluation found that there were no potential concerns for residential or industrial exposure to surface or subsurface soil. Currently FTBL is developing a CMS for a path forward.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is recommended at SWMU A-12.

Costs for the RFI/CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining outyear amounts are tracked under this site.

Site Name: Active Coal Storage Wstwtr Trmt Unit 1

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Sediment

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201312
CMI(C).....	201210.....	201412

RIP Date: N/A

RC Date: 201412

SITE DESCRIPTION

This unit was first identified as a SWMU during the 1988 phase II RFA. SWMU A-18 was described as a concrete structure designed to control coal dust carried off-site by water runoff; the unit became operational between 1982 and 1983. A second, almost identical structure, identified as SWMU A-19, is located on the northeastern boundary of the facility.

During the 2005 VSI, the treatment basins were filled with sediment from runoff at the inactive facility. It is unknown if the material residing in the three collection basins was residue from previous facility operations. The primary collection basin supported vegetation such as cattails and wool grass and the secondary and neutralization basins fostered young tree saplings. There were no odors, sheens, or other visible indicators of any contamination in the three concrete basins, outflow pipes, or the stream to which the unit discharged. Coal is no longer stored at this facility, but it is unknown when it was removed from the area. A Phase I RFI was conducted at SWMU A18 in 2008. Levels of arsenic above background screening levels were identified in the sediment at SWMU A-18 during the Phase I RFI. Fort Belvoir is currently evaluating a path forward with regulators for this site.

CLEANUP/EXIT STRATEGY

Future costs for this site include the cost to demolish the associated structure.

Site ID: CC-A19

Site Name: Active Coal Storage Wstwtr Trmt Unit 2

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals

Media of Concern: Sediment, Surface Water

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201312
CMI(C).....	201210.....	201412

RIP Date: N/A

RC Date: 201412

SITE DESCRIPTION

This unit was first identified as a SWMU during the 1988 phase II RFA. SWMU A19 was described as a concrete structure designed to control coal dust carried off-site via water runoff. The 1999 Action Plan figures show SWMU A19 on the northwestern end of the inactive GSA coal storage facility, located east of Beulah St. It should be noted that there is a second coal wastewater treatment facility almost identical to SWMU A19 known as SWMU A18, located on the southwestern boundary of the GSA coal storage facility. A19 became operational between 1982 and 1983; its discharge was regulated under NPDES Permit. Coal is no longer stored at this facility, but it is unknown when it was removed from the area.

During the 2005 VSI, it was observed that the treatment basins were filled with sediment from runoff at the facility. It is unknown if the material residing in the three collection basins contains material resulting from facility activities. The primary collection basin contained approximately three inches of standing water on top of sediment that has collected on the bottom of the basin. The secondary and neutralization basins fostered young tree saplings. There were no odors, sheens, or stressed vegetation at any of the collection basins or outflow pipes. The Phase I RFI at SWMU A19 was conducted in 2008 and coincided with the investigation at A18. Though arsenic was detected above background levels in one sediment sample at A19, this sample was collected inside the structure. Arsenic detections in sediment collected from the outfall of the unit and from the nearby stream were within the FTBL background range, therefore Fort Belvoir recommended No Further Action and is awaiting regulator concurrence.

CLEANUP/EXIT STRATEGY

Planned future actions at this site involve demolition of the associated structure.

Site Name: Former DPDO Storage Area- PCB Spill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polychlorinated Biphenyls (PCB)

Media of Concern: Soil

Phases	Start	End
RFA.....	197904.....	198108
RFI/CMS.....	201109.....	201309
DES.....	201309.....	201309
CMI(C).....	201309.....	201309
CMI(O).....	201310.....	204309

RIP Date: 201310

RC Date: 204309

SITE DESCRIPTION

SWMU A-24 was identified in the 1988 Draft Phase II RFA and located on South Post as a four-acre open area immediately south of building 1131 that was fenced and planted with Scottish pine. In 1978, 163 liters of PCB dielectric fluid were spilled from electrical transformers improperly stored in the fenced area. The RFA did not note any visible markers (such as stressed vegetation) to indicate the exact location of the PCB spill. FTBL has exact records of the spill location and flow. Remediation of the PCB spill began in 1980 and involved the excavation and removal of contaminated soils in the yard and adjacent stream. Post-remediation concentrations of PCB in the soil and stream were less than 50 ppm. The entire area was covered with over two feet of clean fill and planted with trees. A future path forward is currently being evaluated by regulators.

CLEANUP/EXIT STRATEGY

Future anticipated requirements at this site include additional soil capping and administrative LUCs, though this is pending further negotiation with regulators.

Site ID: CC-A26

Site Name: Suspected Sanitary Landfill B

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200909.....	201302

RIP Date: N/A

RC Date: 201302

SITE DESCRIPTION

SWMU A-26, identified as an inactive landfill, is bounded to the north by Pohick Road and to the south and east by an unnamed tributary to Accotink Creek. The area is approximately 1,000 feet by 700 feet. No evidence of filling activities has been found, only surface debris resulting from troop training activities.

During the 1980s, the USACE Water Ways Experiment Station surveyed this area, collecting samples from soil borings and groundwater wells, which were also installed. No evidence of waste disposal was found. During a February 1988 RFA site visit, evidence of surface dumping was found along the edges of the unit, with a high concentration around the eastern slope near the tributary. No evidence of a release, such as free-product, staining, dead vegetation, or unusual odor, was noted around the debris. During a September 2005 VSI, it was noted that the site supported deciduous forest. Visible remnants of surface debris were found along the edges of the unit with a high concentration around the eastern slope near the tributary. No evidence of stained soils, stressed vegetation, odors, or other indicators of contamination was observed. Debris included five-gallon containers, pipes, hoses, 55-gallon drums, and concrete.

Action plans for cleanup at this site were developed under the 1993 and 1999 FTBL SWMU action plans, but were never implemented. FTBL completed both a Phase I and Phase II environmental investigation to evaluate the existence of a cap. Landfill gas was not detected. Two groundwater monitoring wells were installed to evaluate migration of the groundwater constituents. Metals detected in the intermittent drainage channel did not negatively affect aquatic habitat in the perennial stream. There are no potential concerns for residential or industrial exposure to surface soil, subsurface soil, surface water and sediment. Contaminants of Potential Concern (COPCs) in groundwater (arsenic, iron and manganese) are naturally occurring metals and do not reveal a release from the SWMU. FTBL received regulator concurrence for NFA in May 2012.

CLEANUP/EXIT STRATEGY

Based on Phase II results, FTBL will seek NFA for this site with respect to contamination. FTBL has received preliminary concurrence from the USEPA to move forward with NFA for SWMU A-26; however, It should be noted that regulators have not provided formal acceptance of the report. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site. The LUC Implementation Plan will be funded under CC PBA@Belvoir. Future LUC requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Site ID: CC-A28

Site Name: Non-Authorized Debris Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Semi-volatiles (SVOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200908.....	201303

RIP Date: N/A

RC Date: 201303

SITE DESCRIPTION

This site was described as a non-authorized dump which received debris between 1978 and 1980. Both a Draft Phase II RCRA RFA and a 1992 SWMU Study have been completed. This was reportedly covered by soil and vegetation, however the 1992 site visit mentioned the observation of debris. A Phase I site investigation was conducted at this site in the fall/winter of 2008. NFA was recommended based on the results of the Phase I. FTBL received regulator concurrence for NFA in July 2010.

CLEANUP/EXIT STRATEGY

A Phase I site investigation was conducted at this site in the fall/winter of 2008. An NFA was recommended based on the results of the Phase I. Fort Belvoir received regulator concurrence for NFA in July 2010. Since waste was left in place, LUCs and five-year reviews are required. These requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Site ID: CC-A29

Site Name: Mason Pit Debris Fill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Other (LFG)

Media of Concern: Other (LFG)

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	201003
RFI/CMS.....	201003.....	201309
CMI(C).....	201212.....	201412
CMI(O).....	201212.....	201612
LTM.....	201612.....	204312
RIP Date:	201412	
RC Date:	201612	

SITE DESCRIPTION

SWMU A-29 is an inactive landfill located on North Post south of Telegraph Road and west of Woodlawn Road. Installation records state the site was formerly a five-acre sand and gravel pit, which operated in the 1950s and was later used as a storage yard for salvage material by the DRMO. A FTBL representative stated that the 11th Engineering Battalion under command of Lieutenant Colonel Cooksey filled this borrow pit with WWII era building demolition debris. Demolition debris includes WWII era wooden barracks, administration buildings, and associated infrastructure.

In 2008 a Phase I RFI was conducted at SWMU A-29. Methane was detected above the lower explosive limit during the investigation, though detections are thought to be the result of landfill activities. Furthermore, given the age of the landfill and the distance to the occupied building, FTBL concluded that monitoring of the existing landfill gas probes would be sufficient to protect human health and the environment. Based on the findings of this investigation, FTBL is currently seeking NFA at the site and awaiting EPA concurrence.

CLEANUP/EXIT STRATEGY

Based on the findings of this investigation, FTBL is currently seeking NFA at the site; however, FTBL will take the following voluntary actions:

1. Add a LUC for the site into the GIS to document that waste management plans and health and safety precautions may be needed if development of the landfill site is considered;
2. Voluntarily monitor methane levels at the existing LFG probes and inside the adjacent structure (Bldg 2990) during two sampling events over the course of a year.

Costs for these actions have been included in the estimate for site CC-A14; therefore, no estimate has been prepared for this site.

Site ID: CC-AOPC-20 BNA

Site Name: Contaminated Soil and Groundwater

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200811.....	200812
CS.....	200901.....	200903
RFI/CMS.....	201010.....	201509
IRA.....	201006.....	201309
CMI(C).....	201510.....	201604
CMI(O).....	201605.....	204509
RIP Date:	201605	
RC Date:	204509	

SITE DESCRIPTION

This site was identified at BNA during BRAC related utility construction. Initial sampling results indicated that soils above USEPA Region III screening levels are present. Additionally, groundwater samples taken from this area indicate the presence of petroleum contamination.

A Phase II investigation has been pushed back to October 2012, during which time the site will be in addition to FTBL-66 an adjacent site not yet under RA-O.

This site was identified at BNA during BRAC related utility construction, adjacent to FTBL-66 and FTBL-68, when construction workers observed soil staining and petroleum odors while excavating pits for directional boring of utility conduits. Initial sampling results indicated that soils above USEPA Region III screening levels are present. Additionally, groundwater samples taken from this area indicate the presence of petroleum contamination.

A Phase II investigation has been pushed back to October 2012, during which time the site will be in addition to FTBL-66 an adjacent site not yet under RA-O.

This site is located adjacent to FTBL-66 (AOPC-4, and SWMUs M-07/M-18) and FTBL-68 (SWMU M-26). The Phase I summary report is in review.

CLEANUP/EXIT STRATEGY

Phase II investigation, risk assessment are planned for Oct 2012. FS will follow. Fort Belvoir anticipates rolling this site into FTBL-66.

Site Name: Bldg 3232 Waste POL & Empty Drum Storage

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Semi-volatiles (SVOC)
Media of Concern: Soil

Table with 3 columns: Phases, Start, End. Rows include RFA, CS, RFI/CMS, RIP Date, and RC Date.

SITE DESCRIPTION

SWMUs E-01 and L-12 were identified as waste POL and empty drum storage areas, respectively, and were combined due to proximity. Historical accounts and photographs indicate that both units were located on the northwest side of building 3232. SWMU L-12 was reportedly removed in 1990; E-01 was reportedly still in use in 1991, but removed by 1997.

The 1988 Draft Phase II RFA describes SWMU E-01 and L-12 as an area used to store POL. During an October 2005 VSI, a rusty and stained drum rack, which was used to store drums on their sides, remained at this site, though no drums were present. The site visit confirmed that the POL area no longer exists and that a new storage area is located east of building 3232. In 2009 a Phase I investigation was performed and reported that SVOCs were detected above residential screening levels in soil. However, risk to the environment and human health is limited and therefore NFA was recommended and awaiting regulator confirmation.

CLEANUP/EXIT STRATEGY

The 2009 Phase I Draft RFI reported that SVOCs were detected above residential screening levels in soil. Based on these results, NFA was recommended; however, Fort Belvoir is currently awaiting regulator confirmation for NFA and the implementation of Administrative LUCs. FTBL will also draft a DD for this site. No CTC estimate was performed as no additional costs will be required until FTBL receives regulator response.

If a Phase II investigation is required, FTBL will investigate the nature and extent of contamination in soil and groundwater.

Site Name: Building T-1423 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Semi-volatiles (SVOC)
Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200908.....	201404
RIP Date:	N/A	
RC Date:	201404	

SITE DESCRIPTION

This site is located south of building 1430 and west of building 1423. SWMU E-06 was identified as a POL storage area, but the exact start-up date is unknown for this unit. During the 2005 VSI, this site was contained in a fenced-in area near an AST. According to the report components of the waste POL storage had been removed and an active AST had been put in its place.

CLEANUP/EXIT STRATEGY

A Phase I environmental investigation was performed during 2008. Investigation results identified the presence of SVOCs in soils. Based on the results of the Phase I investigation, FTBL determined the need for further investigation with regards to contamination in soils and groundwater. This site is included in the FTBL 2010 Main Post Phase II PBA (CCPBA@Belvoir), and was recommended for NFA based on Risk Assessment; however, regulatory approval of risk assessment has not yet been received. Under the assumption that NFA will be approved, future work for this site is anticipated to include site close out documentation only (internal army DD, and Administrative LUCs), the costs of which have been included in this site.

Site ID: CC-E14

Site Name: Building 1939 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200903.....	201404

RIP Date: N/A

RC Date: 201404

SITE DESCRIPTION

SWMU E-14 is located at the edge of an asphalt parking lot, west of the former location of building 1939 and north of a storage shed along a fence. It was used for the storage of used POL and may have managed waste solvents. During a September 2005 VSI, a faint stain on the pavement (approximately ten feet by six feet) was observed.

In 2008 FTBL performed Phase I SI activities at this SWMU. Results indicated the presence of SVOCs above remedial end points. The contaminants include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and naphthalene. Following these results a Phase II investigation was performed and found no impacts to groundwater and soil contamination was below site specific risk, based on a formal risk assessment. This site was then recommended for NFA based on the completed risk assessment.

CLEANUP/EXIT STRATEGY

The results of the Phase II investigation recommended NFA for this site based on Risk Assessment; however, regulatory approval of risk assessment has not yet been received. Under the assumption that NFA will be approved, future work for this site is anticipated to include site closeout documentation only (internal army DD, and Administrative LUCs), the costs of which have been included in this site.

Site Name: Bldg 307 Concrete Apron Disposal Area

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200912.....	201303
RIP Date:	N/A	
RC Date:	201303	

SITE DESCRIPTION

SWMU L-05 is located on South Post and is identified as a 20 by 20 foot, un-diked concrete pad located next to building 307. It is believed that very small quantities of waste solvents, generated during activities from building 307, were dumped on the pad and allowed to evaporate. Previous documentation indicates that the concrete pad was originally installed to support an air conditioning unit, which has since been removed and replaced with a smaller unit.

A Phase I SI was conducted in 2008. With the exception of vanadium and arsenic, none of the detected analytes exceeded the U.S. EPA Region III RBC standards for residential or industrial soils. The vanadium concentrations are significantly below the industrial value of 1,000 ppm and are therefore not considered significant. The arsenic levels were above background levels but the high concentrations were isolated to a small area. Based upon the results of the Phase I RFI addendum from March 2011 and the human health risk ratio evaluation, there is no concern for human health exposure to soils at SWMU L-05. There are also no complete current or future exposure pathways for ecological receptors at SWMU L-05. Consequently, no remedial action is necessary to ensure protection of human health and the environment. FTBL is proposing NFA for SWMU L-05. Formal regulatory acceptance of the recommendation has not yet been received.

CLEANUP/EXIT STRATEGY

Based upon the results of the Phase I RFI addendum from March 2011 and the human health risk ratio evaluation, there is no concern for human health exposure to soils at SWMU L-05. There are also no complete current or future exposure pathways for ecological receptors at SWMU L-05. Consequently, no remedial action is necessary to ensure protection of human health and the environment. The US Army is proposing NFA for SWMU L-05. Under the NFA no additional response action will be taken at SWMU L-05. This site will remain as is, with no containment, removal, treatment or other mitigating measures. Additionally, no land use or deed restrictions will be placed on the site and the site would be available for unrestricted use. However it should be noted, that formal regulatory acceptance of the recommendation has not yet been received.

Site Name: Former Coal Storage Area In-Ground Concr

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	201109.....	201303
CMI(C).....	201210.....	201310

RIP Date: N/A

RC Date: 201310

SITE DESCRIPTION

A 1992 CH2M Hill SWMU study noted that the unit was located behind former building 607 and directly next to former building 601. The area was reported to contain concrete dividers, two tanks, light poles, mulch and trash. The unit was vegetated at the time of the investigation and any releases from the unit were unknown. In 2008 a Phase I RFI was performed and soil was tested for metals, SVOCs and VOCs. With the exception of arsenic none of the detected analytes exceeded U.S. EPA Region III standards in soil. Arsenic, lead and mercury were detected in sediment above industrial standards and five SVOCs were detected above residential or industrial screening levels. Finally six metal analytes, one VOC and three SVOCs exceeded MCL water standards in surface water. FTBL is awaiting regulator concurrence on future path forward with this site.

CLEANUP/EXIT STRATEGY

Recommendations based on the investigation note that while impact to the environment was not present, and that therefore NFA is appropriate, that to ensure contaminates within the structure are properly handled that an interim removal action is appropriate to properly remove the structure. While formal regulator acceptance has not yet been provided, this CTC includes requirements for the above mentioned removal. FTBL will also draft a DD for this site upon formal acceptance of NFA by regulators.

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Pesticides
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	200803.....	201309
DES.....	201309.....	201409
CMI(C).....	201404.....	201609
CMI(O).....	201504.....	204404
RIP Date:	201609	
RC Date:	204404	

SITE DESCRIPTION

The 1988 RFA described the unit as an inactive sanitary sewage treatment plant that accepted sewage generated throughout the installation; records indicate that the unit also accepted hazardous constituents. The site is located on South Post on the corner of Johnston Road and Morrow Road. The 1993 action plan stated that the site included two buildings (687 and 681), two clarifiers, six sludge digestion tanks, two siphon tanks, a trickling filter area, four sludge drying units, and a concrete chlorine contact chamber. An underground 12-inch cast iron pipe reportedly extended from the chlorine contact chamber to the Potomac River. The trickling filter area was filled with approximately six feet of limestone rock. A concrete moat approximately 2 feet wide and 4 feet deep was observed east of the unit. In 2005, water flow was observed in an exposed flow chamber pipe on the northern portion of the property, destination unknown. The site was overgrown with vegetation and portions of the existing infrastructure were corroded. A small construction supply/storage area was observed on southwest portion of the site. In spring 2008, vegetation overgrowth was still noted. A small amount of standing water was observed in the clarifiers and digestion tanks; the water resulted from precipitation, not the former activities at L45.

Results of a Phase I investigation showed that VOCs did not exceed RBCs or MCLs values in soil, groundwater or sediment samples. Bis(2 ethylhexyl) phthalate was the only SVOC above the screening level and was detected in the groundwater. Arsenic and lead exceeded the RBC screening levels in sediment samples. However, pesticides exceeded RBCs in soil and sediment and MCLs in groundwater. Based on these findings further investigation is recommended to determine the extent of impacts at the sewage treatment facility. A Phase II investigation is planned to be completed in the near future.

CLEANUP/EXIT STRATEGY

Based on these findings further investigation is recommended to determine the extent of impacts at the sewage treatment facility. Future work includes sampling of material remaining in structures, sampling of structures themselves, and demo and removal of contaminated material and contaminated structures. RFI costs are funded under the FY12 contract. All remaining CTC to include remediation activities are currently planned for FY13.

Site ID: CC-MP1

Site Name: Former POL Area at Accotink Landfil

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	200907.....	200907
CAP.....	200912.....	201308

RIP Date: N/A

RC Date: 201508

SITE DESCRIPTION

This site is located near Poe Road and was identified as a potential Area of Concern (AOC) during a Phase I RFI at CC-A12. Historic aerial photographs of this site show the presence of ASTs. The A-12 Phase I RFI determined the presence of petroleum contamination in the vicinity of the historical tanks. The Phase II investigation confirmed the presence of petroleum contamination at MP1. However, FTBL is currently evaluating its plan with EPA and VADEQ to determine the appropriate path forward.

CLEANUP/EXIT STRATEGY

This is a zero cost site until resolution is reached.

Site ID: CC-MP2
Site Name: 1124 PCE detections

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Other (PCE)
Media of Concern: Groundwater

Phases	Start	End
RFA.....	201006.....	201008
RFI/CMS.....	201212.....	201412
DES.....	201310.....	201503
CMI(C).....	201504.....	201604
CMI(O).....	201604.....	204504
RIP Date:	201604	
RC Date:	204504	

SITE DESCRIPTION

This site is a region that is located in an industrial area on South Post near Accotink Bay. The need for investigation at this site developed when the presence of PCE in groundwater was discovered. It is unknown whether the presence of this contamination was from multiple source areas, or whether one major source exists. It is also unknown whether the contamination consists of small individual plumes, multiple sites, or whether they are connected. However, it has been determined in the best interest of the Army to ensure that all of this information be handled together as one site (MP-2).

Sampling of mixed media at SWMU A-05 indicated concentrations of PCE and various other potential contaminants. SWMU A-05 is separated by topography into two major areas, upper and lower. PCE contamination in the lower portion is being handled under site CC-A05 and is separated from the upper portion by sample results. PCE contamination in the upper portion, however, suggests that a larger (regional) PCE plume could potentially exist. During evaluation of a regional storm water pond, three sets of groundwater monitoring wells (one shallow, one deep per set) were installed north of 1124. PCE was detected in two of the three deep wells. Additional indication of a regional PCE concern stem from sample results from wells installed up-gradient of Theote Landfill (site CC-A02).

Based on these results, additional investigation may be warranted to define the nature and extent of the PCE contamination. Daughter product evaluation should be included in any PCE study to ascertain the degree to which natural attenuation is occurring and to assess concerns that may arise should a build-up of daughter products such as vinyl chloride occur.

CLEANUP/EXIT STRATEGY

Based on the above results, additional investigation may be warranted to define the nature and extent of the contamination.

Costs for RFI/CMS were funded for FY12 and are being scoped under upcoming Investigation PBA. Remediation activities and sampling are being requested under FY13.

Site ID: CC-MP5

Site Name: Recycle Center Contaminated Soil

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	201009.....	201010
RFI/CMS.....	201210.....	201510
DES.....	201510.....	201610
CMI(C).....	201610.....	201710
CMI(O).....	201710.....	204709

RIP Date: 201710

RC Date: 204709

SITE DESCRIPTION

This site is located off Pohick Road near building 1089. After initial grading for a manhole along this site, a tar like substance was found. Sample results showed total petroleum hydrocarbons at 778 ppm and dimethyl phthalate at 1190 ug/kg. The construction contractor was required to remove around the area and backfill with clean soil to ensure manhole/pipeline did not have contaminated material along side. Once the material was removed, the construction contractor took confirmation samples which indicated that contamination is still present outside of the construction limit of disturbance. At this time a Phase I investigation is planned for the future.

CLEANUP/EXIT STRATEGY

Expected future actions include additional investigation of soil and groundwater contamination, excavation, and groundwater monitoring. Future costs will include those for RFI/CMS, CMI(C) and CMI(O).

Site ID: CC-MP8
Site Name: AAFES Shoppette Project

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Dioxins/Dibenzofurans, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
RFA.....	201103.....	201103
RFI/CMS.....	201103.....	201212
IRA.....	201103.....	201212

RIP Date: N/A

RC Date: 201212

SITE DESCRIPTION

This site is located near the new AAFES Shoppette Project off of John J. Kingman Road. On June 9th, 2011 utility workers reported finding munitions debris while excavating a trench for a waste water line repair. Additionally, utility workers reported soil staining and debris indicative of a burn area. USACE UXO Safety has determined the probability to be low for exposure to MEC. The material was excavated and disposed of apparently. DPW-ENRD collected soil samples from the burnt materials and below in the clean soils. The soil samples exhibited elevated TPH-DRO, in addition two dioxins were identified above their industrial RSL. Soil removal activities began in 2011. Such activities included additional confirmation sampling to determine the exact impact area and excavation and removal of subject soils. Additional confirmation samples were taken after the excavation which verified removal was complete. A report has been submitted to regulators and is awaiting concurrence.

CLEANUP/EXIT STRATEGY

Remediation activities were funded during FY12. Such activities included additional confirmation sampling to determine the exact impact area and excavation and removal of subject soils. Additional confirmation samples were taken after the excavation which verified removal was complete. A report is currently being drafted and will be submitted to regulators. No further action is anticipated for this site.

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
RFA.....	201108.....	201110
RFI/CMS.....	201210.....	201509
DES.....	201509.....	201610
CMI(C).....	201510.....	201610
CMI(O).....	201610.....	204609

RIP Date: 201610

RC Date: 204609

SITE DESCRIPTION

This site was discovered in the summer 2010. The site is north of a steep ravine and opposite of CC-A05. The dump site is wooded and consists of surface debris including rusted gas tanks, a car door, old pipe, tires, tubing, metal scrap, and an axle from a car. It is unknown at this time whether any buried debris exists within the site.

CLEANUP/EXIT STRATEGY

The current hypothesis is that this site represents an unauthorized, undocumented surface dump site, though further investigation is required to determine the extent to which the site has impacted the environment.

Site ID: CC-MPS2009
Site Name: PSAs 2009, 2033, and 2034

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
Media of Concern: Groundwater

Phases	Start	End
RFA.....	198909.....	199009
CS.....	199601.....	199705
RFI/CMS.....	200609.....	201509
IRA.....	199601.....	199705
CMI(C).....	201510.....	201604
CMI(O).....	201605.....	204505
RIP Date:	201605	
RC Date:	204505	

SITE DESCRIPTION

This site consists of three historical petroleum releases (Petroleum Storage Areas 2009, 2033, and 2034). The sites were listed in a January 2002 Environmental Study, Part II, which summarized the findings of a 2001 site reconnaissance and document review. The original USTs were investigation and closed in 1996 and 1997, and FTBL subsequently performed biannual groundwater sampling over six sampling events, and then requested site closure from VDEQ.

In 2005, the USEPA issued a unilateral administrative order (UAO) in response to the 2005 BRAC recommendations for development at Fort Belvoir North Area, formerly Engineer Proving Ground. The UAO required assessment and investigation of various known releases to the environment. As a result, additional investigation began at these sites in 2006.

Between 2006 and 2008, FTBL performed several phases of investigations to determine the full nature and extent of the contamination. Results from the investigations show little or no residual soil contamination present; however, several groundwater plumes remain. Contaminants of concern (COC) are mainly petroleum related.

Many of the investigation wells were abandoned as a result of the BRAC construction.

Optional CLINs for groundwater MNA were included under FTBLs 2009 MR PBA (MR PBA@ Fort Belvoir; however, a FS had not previously been funded. Due to the extensive impact of BRAC construction and the need for a FS, additional funding will be required for October 2012 for limited RI and FS. FTBL plans to modify the PBA to remove the MNA options.

CLEANUP/EXIT STRATEGY

FS is planned for this site in FY13. FTBL anticipates final remedy to be groundwater monitoring.

Site ID: CC-N23
Site Name: Post Dump

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Semi-volatiles (SVOC)
Media of Concern: Groundwater

Phases	Start	End
RFA.....	199108.....	199207
CS.....	200803.....	200812
RFI/CMS.....	200909.....	201302

RIP Date: N/A
RC Date: 201302

SITE DESCRIPTION

SWMU N-23 is an inactive landfill located on South Post, north of the current Recycling Area. The former landfill area is bounded by Pohick Road to the south, railroad tracks to the east, and an unnamed stream to the northwest. No information is known about the design and construction of the landfill unit or about the waste disposed there. Given the age of the unit, it is unlikely that there is a liner or other release control in place. At the time of the September 2005 VSI, the site was being used primarily for wood chipping, mulching, and composting. Debris including old drums and steel trusses was observed scattered throughout the site. Two active seeps were observed at the base of the northwest face of the lower slope during the SI. The observations of the seeps were identical to the 1992 description.

A Phase I environmental investigation was performed during 2008. Investigation results identified the presence of SVOCs in soil and sediment. Based on the results of the Phase I Investigation, FTBL determined the need for further investigation, particularly with regards to potential ecological risk. The Phase II PBA was conducted during 2010/2011. Based upon the human health and ecological risk assessment during the Phase II, there are no potential concerns for residential or industrial exposure to soil, groundwater, sediment, and surface water. There were no indications of significant releases of harmful constituents, with the exception of select metals (manganese, cobalt, and thallium) in groundwater and PAHs in groundwater at a single monitoring well location down gradient of the landfill. This site is currently being evaluated by regulators.

CLEANUP/EXIT STRATEGY

Based upon the human health and ecological risk assessment during Phase II, there are no potential concerns for residential or industrial exposure to soil, groundwater, sediment, and surface water. There were no indications of significant releases of harmful constituents, with the exception of select metals (manganese, cobalt, and thallium) in groundwater and PAHs in groundwater at a single monitoring well location downgradient of the landfill. Consequently, NFA is recommended for SWMU N-23, since there are no current unacceptable cancer risks and non cancer hazards. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site; however, administrative LUCs and an internal Army DD will be needed, and will be conducted under CMS PBA. Future LUC requirements, since minimal, are planned to be conducted in house, therefore no future costs are planned outside the PBA.

Site ID: CCBLDG1124

Site Name: Bldg 1124 - Vehicle Fueling Facility

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil, Surface Water

Phases	Start	End
ISC.....	198507.....	198509
INV.....	198608.....	200203
CAP.....	200204.....	200707
IMP(C).....	200803.....	200810
IMP(O).....	200810.....	201303
LTM.....	201303.....	201406

RIP Date: 200810

RC Date: 201303

SITE DESCRIPTION

In the late-1970s a new 15,000-gallon gasoline tank ruptured spilling all 15,000 gallons into the subsurface. In the mid-1980s, 15,000-gallons of waste oil leaked from an old UST. This tank was permitted under RCRA Part A Permit. Clean closure from this spill was approved by the VDEQ in late-1980s.

A CAP was submitted and approved by the VDEQ in July 2007. The FTBL ENRD constructed a DPE remediation system to treat soil, groundwater and vapor contamination. The DPE system became operational September 2008. The site is estimated to require three to four years of O&M on the DPE system before all remedial end points will have been met. At that time, post operational / LTM will take place before the ENRD may petition for official case closure with the VDEQ.

The VDEQ required an air permit for the site. The permit was approved by the VDEQ Air Division on Sept. 11, 2008.

Through the third quarter of 2011, two monitoring wells contained LPH. LPH ranged from 0.01 feet to 0.04 feet of product atop the water table. Dissolved contamination levels remain elevated for nine site groundwater wells for analytes TPH-GRO, TPH-DROs, and BTEX. Approximately 73 gallons of LPH have been recovered by the system since system startup in September 2008.

CLEANUP/EXIT STRATEGY

Continue operation and maintenance of dual phase extraction system and quarterly sampling through FY13. LTM in FY14.

Site Name: Bldg 2209/2217- Former Military Barracks

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil

Phases	Start	End
ISC.....	199609.....	199702
INV.....	199702.....	199710
CAP.....	199711.....	200703
IMP(C).....	199901.....	200711
IMP(O).....	200807.....	201212
LTM.....	201212.....	201312

RIP Date: 200807

RC Date: 201212

SITE DESCRIPTION

Until 1995, this site contained 62 military barracks buildings. Each bldg had its own No. 2 heating oil UST providing heat. All of the USTs associated with these buildings were removed in 1995, when the barracks were demolished. Since that time, the site was an open field and paved area, and then the Motorpool and office bldg were constructed at the subject site in 2001.

In March 2000, 400 cubic yards of petroleum impacted soils were removed from the site during intrusive construction activities. The site had a mobile DPE well for several years. It removed all of the vapor fuel problems, but the LPH still exist. Once the LPH is less than 0.01 feet, FTBL will request case closure from the State regulators.

This site is located in the installation's 2200 area, formerly military barracks, near the intersection of Goethals Road and Foster Road. A motor pool and an Army Reserve Center are currently at the site. Heating oil USTs that served the barracks were removed in early-1995. Several releases from these tanks occurred, and were assigned VDEQ PC No.96-3053.

Site characterization field activities were performed in September and October 1996, and an SCR dated Feb. 24, 1997 was submitted to the VDEQ. A total of 30 soil borings and 10 temporary groundwater monitoring points were installed during these field activities. The SCR identified residual phase hydrocarbons in the soil with TPH concentrations exceeding 100 mg/kg near old demo barracks Bldg 2217 (just east of the new reserve center). In addition, dissolved phase TPH in groundwater was detected at concentrations exceeding one mg/L near Bldg 2217. An LPH thickness of 0.05 and 1.36 feet was detected in two site monitoring wells, near Bldg 2217.

A CAP for the subject site was submitted to the VDEQ in March 1998. The approved CAP recommended periodic vacuum truck enhanced fluid recovery (EFR) events for LPH recovery at the site. The EFR were to occur for a year and then future activities would be evaluated. Asymptotic recovery or LPH <0.01 feet was required for site closure; no post-operational monitoring was required. The VDEQ assigned CAP No.119 to this facility.

Between the fourth quarter of 1998 and the second quarter of 1999, EFR events occurred. LPH thicknesses ranged from zero feet to 1.01 feet. A CAP Addendum was submitted in November 1999. It provided guidelines for the management of petroleum-impacted soils excavated throughout the Bldg 2200 area during construction activities, which were proposed at that time. Presently, the site still has greater than 0.01 ft of LPH in two on-site monitoring wells.

A CAP for the site was submitted and approved by the VDEQ in July 2007. An AS/SVE was installed in early 2008 and the system started during May 2008.

Through the third quarter of 2011, two wells contained LPH. The two wells with LPH contained free-product ranging from a sheen to 0.01 feet of product atop the water table.

Approximately 39 gallons of LPH has been recovered by the SVE system between Second Quarter 2008 and Third Quarter 2011.

Site ID: CCBLDG2209

Site Name: Bldg 2209/2217- Former Military Barracks

CLEANUP/EXIT STRATEGY

Continue operation and maintenance of dual phase extraction system and quarterly sampling through FY13. LTM in FY14.

Site ID: CCBLDG3161

Site Name: Bg 3161- Davison Army Airfield Fuel Yard

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil

Phases	Start	End
ISC.....	199911.....	200012
CAP.....	200101.....	200108
IMP(C).....	200111.....	200202
IMP(O).....	200202.....	201303
LTM.....	201303.....	201403

RIP Date: 200202

RC Date: 201303

SITE DESCRIPTION

The fueling terminal formerly had two 10,000-gallon JP-4 USTs. The two former 10,000-gallon USTs were removed from the site on June 22, 1994.

Petroleum-impacted soil excavated during the old tank removals was segregated for off-site disposal; approximately 100 cubic yards of petroleum-impacted soils were removed from the former tank pit. This former tank basin was then backfilled with clean fill material. The TPH concentrations were detected in several grab soil samples collected beneath the former USTs at concentrations up to 1,600 mg/kg, which exceeds the VDEQ release reporting limit of 100 mg/kg. The site was assigned PC No.2000-3092 by the VDEQ.

In August 1999, additional petroleum-contaminated soils were encountered. The JP-8 fuel release contaminated both in the soil and the groundwater at this site. Approximately 130 tons of soil was removed from the site during this time. As a result, the site was assigned PC 2000-3092 by the VDEQ. Field activities, in preparation of the development of the CAP, took place between January 2001 and May 2001. The CAP was submitted to the VDEQ, approved by the VDEQ in August 2001, and assigned CAP tracking No.242. A DPE remediation system was installed at the subject site in February 2002, based on the approved CAP. System start-up was initiated on Feb. 15, 2002.

The most notable change observed at Bldg 3161 during 2004 was the thickness of LPH in the newly installed recovery well R3161-4. A new recovery well was installed on April 29, 2004 to address the increasing LPH thickness in the vicinity of monitoring well W3161-3. On July 20, 2004 LPH were detected on the water table in R3161-4 at a thickness of 7.35 feet. Subsequent trenching and plumbing in the third quarter of 2004 connected this new well to the DPE system. R3161-4 was initiated on Aug. 19, 2004, and is primarily responsible for the significant increase in LPH recovered by the system during the third and fourth quarters of 2004. The addition of recovery well R3161-4 has been very effective in decreasing LPH thickness in monitoring well W3161-3.

Through the third quarter of 2011, four wells contained LPH. The four wells with LPH contained free-product ranging from 0.01 - 0.98 feet of product atop the water table. Dissolved contamination levels remain elevated for seven site wells for analytes TPH - DRO, and BTEX. 2,985 gallons of LPH have been recovered from the site since system start-up in February 2002.

CLEANUP/EXIT STRATEGY

Continue operation and maintenance of dual phase extraction system and quarterly sampling through FY13. LTM in FY14.

Site ID: CCPBA@Belvoir
Site Name: PBA@IR and CR Belvoir

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
RFA.....	201001.....	201001
RFI/CMS.....	201004.....	201309
CMI(C).....	201212.....	201409
CMI(O).....	201310.....	201709

RIP Date: 201409

RC Date: 201709

SITE DESCRIPTION

This site is a cumulative site to address funding of PBA contracts for multiple SWMUs within AEDB-R (CR Program). Since these are associated with specific contract costs, only costs for applicable CLINs are included. Outyear costs for the individual CR sites will be addressed at the site level.

Previous funding was used to address the completion of RFI (under a separate contract) at the following Main Post SWMUs: CC-A05, A06, A07, A0816, A09, A11, A12, A025, A26, E06, E14, F06 L05, MP1, and N23. This RFI PBA includes the following contract line item numbers (CLINs):

- 1004AA -- PMP and QASP
- 1004BA -- RFI at E14
- 1004BB -- RFI at F06
- 1004BC -- RFI at A05
- 1004BD -- RFI at A025
- 1004BE -- RFI at A06
- 1004BF -- RFI at A07
- 1004BG -- RFI at A08A16
- 1004BH -- RFI at A09
- 1004BJ -- RFI at A11
- 1004BK -- RFI at A12
- 1004BL -- RFI at A26
- 1004BM -- RFI at N23
- 1004BN -- RFI at E06
- 1004BP -- RFI at L05
- 1004BQ -- RFI at MP1

Current/future year costs associated with the PBA site will be used to address CMS activities for SWMUs (CR sites) outlined in below CLIN list. Please note that this CMS PBA is pending award. CLINs associated with these activities are:

- CLIN010
- A05 Option - Road and Grounds/Land Management Storage Area - RIP in two years
- CLIN011
- A08/09 Option - GW Village landfill & Interceptor Trench - RIP in two years
- CLIN012
- A11 Option - Poe Road Landfill - RIP in two years
- CLIN013
- A12 Option - Accotink Landfill - RIP in two years
- CLIN014
- A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
- CLIN015

Site ID: CCPBA@Belvoir
Site Name: PBA@IR and CR Belvoir

A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
CLIN016
A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
CLIN017
A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN018
A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN019
A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN020
A11 Option - RAO/LTM/Exit/Rampdown for one year
CLIN021
A11 Option - RAO/LTM/Exit/Rampdown for one year
CLIN022
A11 Option - RAO/LTM/Exit/Rampdown for one year
CLIN023
A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN024
A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN025
A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN026
A05 Option - Road and Grounds/Land Management Storage Area - Site Closeout
CLIN027
A08/09 Option - Road and Grounds/Land Management Storage Area - Site Closeout
CLIN028
A11 Option - Site Closeout
CLIN029
A12 Option - Site Closeout

CLEANUP/EXIT STRATEGY

N/A -- based on PBA contracts.

Site ID: CC_E10

Site Name: Building 328 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Soil

Phases	Start	End
RFA.....	198809.....	198909
CS.....	200803.....	200903
RFI/CMS.....	201212.....	201410
CMI(C).....	201310.....	201410
CMI(O).....	201310.....	204309

RIP Date: 201410

RC Date: 204309

SITE DESCRIPTION

The site is located on South Post in the building 300 area. This inactive unit is a 300-gallon aboveground waste POL tank resting on a 10-foot by 20-foot by two-inch concrete pad with berm. There is a 70-gallon underground catch basin used for spill containment. The tank was active from 1985 until about 2002 and has historically been used to manage used POL generated at building 328. The existing concrete pad, catch basin, and steel tank were added to the site after the 1988 Phase II RCRA Facility Assessment. Around 2002, the concrete pad, catch basin and aboveground tank were removed by a Research and Development contractor. FTBL is currently evaluating a path forward with regulators.

CLEANUP/EXIT STRATEGY

Fort Belvoir is currently undergoing negotiations with regulators, who have voiced concerns with the NFA recommendation. Pending the results of this negotiation, and planned limited sampling, it is unknown what future actions are required at this site; however in order to achieve the RIP goal of FY14 FTBL has determined that a proactive budget approach needs to be followed. This will include Phase II (FY13), CMS (FY14) and RA(C)/RA(O) in FY14.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CC-A14	DRMO Salvage Storage Area	201112	
CC-DAAF1	DAAF Flight Tower	201111	
CC-F06	Building 1906 Aboveground Waste POL Tank	201202	
CC-G13	B1453 Former USTs & Related Contam.	201108	
CC-MP3	Arts & Crafts Cntr Petroleum Cont.	201202	
CC-MP4	Contaminated Soil at 9th and Gunsto	201202	
CC-MP6	1425 Pipeline Contamination	201101	
CC-MP7	Future OSEG Facility	201109	
CCBLDG305	Bldg 305 - Research & Development Center	201010	
CCBLDG773	Former Building 773	201004	

CR Schedule

Date of CR Inception: 197306

Past Phase Completion Milestones

1973

RFA (CC-A11 - POE Road Landfill)

1981

RFA (CC-A24 - Former DPDO Storage Area- PCB Spill)

1985

ISC (CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)

1987

RFA (CC-A07 - Mulligan Road Landfill)

CS (CC-A07 - Mulligan Road Landfill)

1989

RFA (CC-A025 - Suspected Sanitary/Debris Landfill A, CC-A04A23 - Former Coal Storage Area & PCB Spill Sit, CC-A05 - Road and Grounds/Land Mgmt Storage Area, CC-A06 - Kingman Road Landfill, CC-A08A16 - GW Village Landfill & Interceptor T, CC-A09 - Markham School Landfill & Intercept, CC-A12 - Accotink Landfill, CC-A14 - DRMO Salvage Storage Area, CC-A18 - Active Coal Storage Wstwtr Trmt Unit 1, CC-A19 - Active Coal Storage Wstwtr Trmt Unit 2, CC-A26 - Suspected Sanitary Landfill B, CC-A28 - Non-Authorized Debris Landfill, CC-A29 - Mason Pit Debris Fill, CC-E01 - Bldg 3232 Waste POL & Empty Drum Storage, CC-E06 - Building T-1423 Waste POL Storage Area, CC-E14 - Building 1939 Waste POL Storage Area, CC-L05 - Bldg 307 Concrete Apron Disposal Area, CC-L09 - Former Coal Storage Area In-Ground Concr, CC-L45 - Sewage Treatment Plant #1, CC_E10 - Building 328 Waste POL Storage Area)

CS (CC-A11 - POE Road Landfill)

1990

RFA (CC-MPS2009 - PSAs 2009, 2033, and 2034)

1992

RFA (CC-N23 - Post Dump)

1996

CS (CC-A14 - DRMO Salvage Storage Area)

1997

IRA (CC-MPS2009 - PSAs 2009, 2033, and 2034)

ISC (CCBLDG2209 - Bldg 2209/2217- Former Military Barracks)

CS (CC-MPS2009 - PSAs 2009, 2033, and 2034)

1998

INV (CCBLDG2209 - Bldg 2209/2217- Former Military Barracks)

1999

ISC (CCBLDG305 - Bldg 305 - Research & Development Center)

RFA (CC-F06 - Building 1906 Aboveground Waste POL Tank)

2001

CAP (CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard, CCBLDG773 - Former Building 773)

ISC (CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard, CCBLDG773 - Former Building 773)

2002

INV (CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)

IMP(C) (CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard)

2003

IMP(C) (CCBLDG773 - Former Building 773)

2005

INV (CCBLDG305 - Bldg 305 - Research & Development Center)

2007

CAP (CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility, CCBLDG2209 - Bldg 2209/2217- Former Military Barracks, CCBLDG305 - Bldg 305 - Research & Development Center)
 IMP(O) (CCBLDG773 - Former Building 773)

2008

IMP(C) (CCBLDG2209 - Bldg 2209/2217- Former Military Barracks, CCBLDG305 - Bldg 305 - Research & Development Center)

2009

ISC (CC-MP1 - Former POL Area at Accotink Landfil)
 IMP(C) (CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)
 RFA (CC-AOPC-20 BNA - Contaminated Soil and Groundwater)
 CS (CC-A025 - Suspected Sanitary/Debris Landfill A, CC-A04A23 - Former Coal Storage Area & PCB Spill Sit, CC-A05 - Road and Grounds/Land Mgmt Storage Area, CC-A06 - Kingman Road Landfill, CC-A08A16 - GW Village Landfill & Interceptor T, CC-A09 - Markham School Landfill & Intercept, CC-A12 - Accotink Landfill, CC-A18 - Active Coal Storage Wstwtr Trmt Unit 1, CC-A19 - Active Coal Storage Wstwtr Trmt Unit 2, CC-A26 - Suspected Sanitary Landfill B, CC-A28 - Non-Authorized Debris Landfill, CC-AOPC-20 BNA - Contaminated Soil and Groundwater, CC-E01 - Bldg 3232 Waste POL & Empty Drum Storage, CC-E06 - Building T-1423 Waste POL Storage Area, CC-E14 - Building 1939 Waste POL Storage Area, CC-F06 - Building 1906 Aboveground Waste POL Tank, CC-L05 - Bldg 307 Concrete Apron Disposal Area, CC-L09 - Former Coal Storage Area In-Ground Concr, CC-L45 - Sewage Treatment Plant #1, CC-N23 - Post Dump, CC_E10 - Building 328 Waste POL Storage Area)

2010

RFA (CC-DAAF1 - DAAF Flight Tower, CC-MP2 - 1124 PCE detections, CC-MP4 - Contaminated Soil at 9th and Gunsto, CCPBA@Belvoir - PBA@IR and CR Belvoir)
 CS (CC-A29 - Mason Pit Debris Fill)
 LTM (CCBLDG773 - Former Building 773)
 ISC (CC-G13 - B1453 Former USTs & Related Contam., CC-MP3 - Arts & Crafts Cntr Petroleum Cont.)
 IMP(O) (CCBLDG305 - Bldg 305 - Research & Development Center)

2011

INV (CC-G13 - B1453 Former USTs & Related Contam., CC-MP7 - Future OSEG Facility)
 ISC (CC-MP7 - Future OSEG Facility)
 CMI(C) (CC-MP6 - 1425 Pipeline Contamination)
 IRA (CC-G13 - B1453 Former USTs & Related Contam., CC-MP3 - Arts & Crafts Cntr Petroleum Cont., CC-MP4 - Contaminated Soil at 9th and Gunsto, CC-MP7 - Future OSEG Facility)
 LTM (CCBLDG305 - Bldg 305 - Research & Development Center)
 RFA (CC-MP5 - Recycle Center Contaminated Soil, CC-MP6 - 1425 Pipeline Contamination, CC-MP8 - AAFES Shoppette Project)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

CR Schedule

Final RA(C) Completion Date: 204309

Schedule for Next Five-Year Review: 2012

Estimated Completion Date of CR at Installation (including LTM phase): 204709

FORT BELVOIR CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-A025	Suspected Sanitary/Debris Landfill A	RFI/CMS						
		CMI(C)						
CC-A04A23	Former Coal Storage Area & PCB Spill Sit	RFI/CMS						
		CMI(O)						
CC-A05	Road and Grounds/Land Mgmt Storage Area	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
CC-A06	Kingman Road Landfill	RFI/CMS						
		CMI(C)						
CC-A07	Mulligan Road Landfill	RFI/CMS						
CC-A08A16	GW Village Landfill & Interceptor T	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
CC-A09	Markham School Landfill & Intercept	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
CC-A11	POE Road Landfill	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
CC-A12	Accotink Landfill	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
CC-A18	Active Coal Storage Wstwr Trmt Unit 1	RFI/CMS						
		CMI(C)						
CC-A19	Active Coal Storage Wstwr Trmt Unit 2	RFI/CMS						
		CMI(C)						

FORT BELVOIR CR Schedule

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-A24	Former DPDO Storage Area- PCB Spill	RFI/CMS						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-A26	Suspected Sanitary Landfill B	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-A28	Non-Authorized Debris Landfill	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-A29	Mason Pit Debris Fill	RFI/CMS						
		CMI(C)						
		CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-AOPC-20 BNA	Contaminated Soil and Groundwater	RFI/CMS						
		IRA						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-E01	Bldg 3232 Waste POL & Empty Drum Storage	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-E06	Building T-1423 Waste POL Storage Area	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-E14	Building 1939 Waste POL Storage Area	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-L05	Bldg 307 Concrete Apron Disposal Area	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-L09	Former Coal Storage Area In-Ground Concr	RFI/CMS						
		CMI(C)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-L45	Sewage Treatment Plant #1	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MP1	Former POL Area at Accotink Landfil	CAP						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MP2	1124 PCE detections	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						

FORT BELVOIR CR Schedule

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MP5	Recycle Center Contaminated Soil	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MP8	AAFES Shoppette Project	RFI/CMS						
		IRA						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MP9	Old Dump	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-MPS2009	PSAs 2009, 2033, and 2034	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC-N23	Post Dump	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCBLDG1124	Bldg 1124 - Vehicle Fueling Facility	IMP(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	IMP(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCBLDG3161	Bg 3161- Davison Army Airfield Fuel Yard	IMP(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCPBA@Belvoir	PBA@IR and CR Belvoir	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CC_E10	Building 328 Waste POL Storage Area	RFI/CMS						
		CMI(C)						
		CMI(O)						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 200709

Restoration Advisory Board (RAB): No

Reason Not Established: The community has expressed no sufficient, sustained interest in a RAB.

Community Interest Solicited on: TBD

Efforts Taken to Determine Interest

In September 2007 a community involvement plan was finalized. Also, in order to comply with the facility's RCRA permit, a public meeting was held on April 7, 2008. Because only one person came to this meeting, the determination was made that there was a lack of community interest in the Main Post Site Investigation work. FTBL solicited the community in October 2008 to determine interest in establishing a RAB. No interest was shown. In the event a RAB is not established, fact sheets with milestone information will be distributed to the public.

Results

N/A

Follow-up Procedures

N/A

Additional Community Involvement Information

There has been no interest from the public in forming a RAB. The latest notice soliciting for community interest was placed in the newspaper in January 2011.

Administrative Record is located at

US Army Garrison Fort Belvoir
Directorate of Public Works,
Room 200
9430 Jackson Loop
Fort Belvoir, VA 22060-5116

Contact POC: Amy Martin (703) 806-0030

Information Repository is located at

US Army Garrison Fort Belvoir
Directorate of Public Works,
Room 200
9430 Jackson Loop
Fort Belvoir, VA 22060-5116

There is currently no IR off post.

Contact POC: Amy Martin (703) 806-0030

Current Technical Assistance for Public Participation (TAPP):N/A

TAPP Title: N/A

Potential TAPP: N/A

