

FY2016

FORT GEORGE G MEADE
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, as directed in the Army Defense Environmental Restoration Program (DERP) Management Guidance for Active and Base Realignment and Closure (BRAC) Installations (2012). 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.

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort George G. Meade (FGGM), 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

ACM	Assessment of Corrective Measures
AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
AOI	Area of Interest
AS/SVE	Air sparging/soil vapor extraction
ASP	Ammunition Supply Point
AST	Aboveground Storage Tank
AWG	Asymmetric Warfare Group
BEHP	bis (2-ethylhexyl phthalate)
bgs	below ground surface
Bldg	Building
BRA	Baseline Risk Assessment
BRAC	Base Realignment and Closure
C&D	Construction and Demolition
cal	caliber
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CCl4	carbon tetrachloride
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMS	Corrective Measures Study
COC	Contaminants of Concern
COMAR	Code of Maryland Regulations
COPC	Contaminants of Potential Concern
CSF	Covered Storage Facility
CSL	Closed Sanitary Landfill
CTC	Cost-to-complete
DC	District of Columbia
DCE	dichloroethene
DD	Decision Document
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DERP	Defense Environmental Restoration Program
DES	Design
DOL	Directorate of Logistics
DPDO	Defense Property Disposal Office
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organics
EBS	Environmental Baseline Study
EC	Engineering Controls
ED	Environmental Division
EE/CA	Engineering Evaluation/Cost Analysis
ER,A	Environmental Restoration, Army
ESD	Explanation of Significant Difference

Acronyms

FFA	Federal Facility Agreement
FFS	Focused Feasibility Study
FGGM	Fort George G. Meade
FRA	Final Removal Action
FS	Feasibility Study
FY	Fiscal Year
GIS	Geographic Information System
GPR	Ground Penetrating Radar
GRO	Gasoline Range Organics
HC	Hydraulic Containment
HHRA	Human Health Risk Assessment
IAL2	Inactive Landfill 2
IAP	Installation Action Plan
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operation)
INV	Investigation
IRA	Interim Remedial Action
IRAR	Interim Removal Action Report
IRP	Installation Restoration Program
ISC	Initial Site Characterization
ISCO	In-situ chemical oxidation
J	Estimated Concentration
K	thousand
kg	kilogram
LEL	Lower Explosive Limit
LPA	Lower Patapsco Aquifer
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MCPA	2-methyl-4-chlorophenoxyacetic acid
MCPP	methylchlorophenoxypropionic acid
MDE	Maryland Department of the Environment
MEC	Munitions and Explosives of Concern
mg	milligram
MGW	Methane Generating Waste
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MPPEH	Munitions Potentially Presenting an Explosive Hazard
MRA	Munitions Response Area
MRS	Munitions Response Site
MW	Monitoring Well
N/A	Not Applicable

Acronyms

NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NPL	National Priorities List
NSA	National Security Agency
NTCRA	Non-time critical removal action
OMA	Operations and Maintenance, Army
OU	Operable Unit
OWS	Oil/Water Separator
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PBA	Performance-Based Acquisition
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PLT	Plant
PMR	Phoenix Military Reservation
POE	Point of Exposure
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
ppb	parts per billion
PRG	Preliminary Remediation Goal
PRR	Patuxent Research Refuge
PRR-NT	Patuxent Research Refuge - North Tract
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RAO	Remedial Action Objectives
RBC	Risk-Based Concentration
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
RPMP	Real Property Master Plan
SARA	Superfund Amendments Reauthorization Act
SCL	Site Cleanup Level
SI	Site Inspection
SLERA	Screening-level Ecological Risk Assessment
SRS	Sensitive Receptor Survey
SSI	Supplemental Site Investigation
SVOC	Semi-volatile Organic Compound
SWMU	Solid Waste Management Unit

Acronyms

TAL	Target Analyte List
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethene
TCLP	Target Compound Leachate Procedure
TMP	Transportation Motor Pool
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
ug/L	micrograms per liter
UPA	Upper Patapsco Aquifer
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAOC	US Architect of the Capitol
USATHAMA	US Army Toxic and Hazardous Materials Agency
USDOJ	US Department of the Interior
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VC	vinyl chloride
VOC	Volatile Organic Compound
WR	Washrack
WWI	World War I
WWII	World War II

Acronym Translation Table

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): 5142

City: FGGM

County: Anne Arundel

State: Maryland

Other Locale Information

FGGM is a permanent US Army installation located on 5,142 acres of land in the northwest corner of Anne Arundel County, Maryland. Anne Arundel County is in central Maryland, on the western shore of the Chesapeake Bay estuary, almost equidistant (12 miles) between Baltimore, Maryland and Washington, District of Columbia (DC), southeast of the Baltimore-Washington Parkway, north of Maryland Route 32, and west of Maryland Route 175. Nearby communities include Odenton, Severn, Jessup, and Laurel. FGGM is close to the border of Howard County on the west and Prince Georges County on the south. FGGM is located in a region of significant population. The resident and working populations of FGGM is approaching 90,000.

Installation Mission

The mission of FGGM is to enable critical national security missions by providing its customers and community the facilities and infrastructure they require, the quality of life they deserve, and a safe, secure environment in which to work and live.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

USAEC

FGGM

US Army Corps of Engineers (USACE), Baltimore District

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region III
State	Maryland Department of the Environment (MDE)
Local	Anne Arundel County

National Priorities List (NPL) Status

A score of 54 was recorded on 01-JUL-98.

Date for RA(C) Completion: 204808

Date for NPL Deletion: TBD

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

RAB established 199504

Installation Program Summaries

IRP

Primary Contaminants of Concern: Metals, Munitions and explosives of concern (MEC), Pesticides, Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

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

MMRP

Primary Contaminants of Concern: Metals, Munitions and explosives of concern (MEC)

Affected Media of Concern: Soil

CR

Primary Contaminants of Concern: Asbestos, Other (Medical Waste)

Affected Media of Concern: Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200807	200909	2009
Complete	200307	200409	2004
Underway	201503	201609	2016

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Safety Precautions to be taken at Tipton	FGGM 10, FGGM 31, FGGM 82, FGGM 85

Results Because of the history of ordnance use on the property it is recommended that the recurring review process not be terminated.

Actions Recommended that the PRR continue to enforce their MEC/MPPEH education program. Upgrading the Ball Fields UXO public outreach program to more closely match the PRR-NT education program is recommended

Plans Continuation of the Five-Year Recurring Review process will allow future evaluation of the continuing effectiveness of the removal action.

Recommendations and Implementation Plans:

Please note that all of the five-year reviews listed above are for property already transferred under Public Law 100-526 (1988 BRAC Act). As of this date, there are no completed five-year reviews specific to sites on the active installation. The first five-year review for the active installation commenced in September 2015. This includes FGGM-13 (Former Pesticide Shop) and FGGM-003-R-01 and -02 (Former Mortar Range Munitions Response Sites (MRS)). Other sites will be added as appropriate with the goal of having a single five-year review for all applicable sites.

Land Use Control (LUC) Summary

LUC Title: FGGM-93 LUCs

Site(s): FGGM 93

ROD/DD Title: FGGM93 Record of Decision

Location of LUC

Former Manor View Dump Site, FGGM-93

Land Use Restriction: Landfill restriction - Prohibit excavation on LF cap or cover system, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

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

Date in Place: 201410

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: VOC

Additional Information

N/A

LUC Title: Former Pesticide Shop

Site(s): FGGM 13

ROD/DD Title: September 2012 ROD Former Pesticide Shop

Location of LUC

One-acre parcel at the northeast corner of York and Gordon avenues and associated groundwater well from the site extending southeast for approximately 1,000 ft.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes

Types of Engineering Controls: None

Types of Institutional Controls: Construction Permit, Deed Notices, Deed Restrictions, Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal

Date in Place: 201412

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201412

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PESTICIDES, VOC

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

FGGM was originally authorized by Congress in 1917 as one of 16 training cantonments to be built for troops drafted during World War I (WWI). In 1928 it became a permanent military reservation. During WWI, more than 100,000 troops were trained at the installation. From 1940 to 1946, World War II (WWII) brought 3.5 million men and women to FGGM for training, in different phases. At various times since 1946 FGGM has been involved in the mission of training troops.

Subsequent to the Resource Conservation and Recovery Act (RCRA) Hazardous and Solid Waste Amendments of 1984, FGGM applied for a Part B permit. In 1987, in accordance with RCRA provisions, FGGM began investigating its potential solid waste management units (SWMU). At the same time, a site investigation began at the active sanitary landfill to determine what, if any, impacts the landfill had on local groundwater.

In 1988 Public Law 100-526, the BRAC Act identified FGGM for realignment as an administrative installation, and recommended excessing approximately 9,000 acres used for training. Since that time, in an effort to keep the surrounding community abreast of restoration activities, FGGM has successfully and actively participated in developing a RAB.

As a result of the BRAC Act, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and RCRA statutes, FGGM has remedial actions (RA) ongoing in the base closure account and Environmental Restoration, Army (ER,A) account. In 1989 the installation was placed on the Federal Agency Hazardous Waste Compliance Docket, after issuance of the Part B permit. As of July 28, 1998, FGGM was added to the NPL. This listing was based on an April 1, 1997 proposal by the USEPA. A federal facilities agreement (FFA) was signed in 2009.

FGGM is also responsible for the Granite Nike Fire Control site and the Phoenix Military Reservation (PMR). The Granite site was a state-lead site and received a finding of no further action (NFA) from the MDE in August 2007. The PMR is a former Nike Fire Control Area, which operated from 1955 to 1972. Remedy-in-place (RIP) was completed in 2014.

Installation Program Cleanup Progress

IRP

Prior Year Progress: FGGM-07, 17, 47, 83, 87 and 97 are in the RI/FS phase. An NTCRA is underway for Operable Unit 4 (OU-4) which includes: FGGM-33, 45, 47, 49, 51, 86, 88, 89, 90, 91, and 92. A preliminary assessment (PA)/site investigation (SI) was performed for over 100 areas (FGGM-95 and 96); sites were either recommended for no further action (NFA), a supplemental site inspection, or remedial investigation (RI)/feasibility study (FS).

Future Plan of Action: All sites should have records of decision (ROD) in place before the end of fiscal year (FY)19. Remedial designs (RD) and their implementation should occur for all but the largest and most complex sites, e.g., FGGM-07, -47, and -83. A proposed plan (PP) for FGGM-17 is scheduled for completion in FY17.

MMRP

Prior Year Progress: The annual land use control (LUC) inspection was completed and reported for the Former Mortar Range Munitions Response Area (MRA) (FGGM-003-R-01 and R-02) and Inactive Landfill No. 2 (IAL2) (FGGM-007-R-01). Maintenance and repairs were conducted at IAL2.

Future Plan of Action: Implementation of the LUCs and five-year reviews.

CR

Prior Year Progress: Cell 3 contract was awarded in fourth quarter of FY15. Preliminary field activities to support the RI (e.g., test pits and ground penetrating radar (GPR)) were conducted.

Future Plan of Action: The new contract will place a clean soil cover over the waste and will complete an RI.

FORT GEORGE G MEADE
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 34/10

Installation Site Types with Future and/or Underway Phases

5	Contaminated Buildings (FGGM 33, FGGM 36, FGGM 45, FGGM 49, FGGM 70)
1	Contaminated Fill (FGGM 83)
3	Contaminated Ground Water (FGGM 47, FGGM 87, FGGM 92)
1	Disposal Pit/Dry Well (FGGM 86)
1	Incinerator (FGGM 37)
3	Landfill (FGGM 17, FGGM 93, FGGM-95)
3	Maintenance Yard (FGGM 88, FGGM 89, FGGM-96)
1	Pesticide Shop (FGGM 13)
1	Spill Site Area (FGGM 51)
5	Storage Area (FGGM 07, FGGM 08, FGGM 74, FGGM 90, FGGM 91)

Most Widespread Contaminants of Concern

Metals, Munitions and explosives of concern (MEC), Pesticides, Petroleum, Oil and Lubricants (POL), 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
FGGM 03	WATER TREATMENT PLANT (MEVA)	IRA	OTHER	1994
FGGM 33	BATTERY SHOP BLDG. 2283	IRA	WASTE REMOVAL - SOILS	1994
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	IRA	WASTE REMOVAL - SOILS	1995
FGGM 05	TROOP BOILER PLT (OPERABLE UNIT 2)	FRA	GROUND WATER TREATMENT	1996
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	IRA	OTHER	1997
FGGM 08	COMP AMMO SUPPLY POINT #1	IRA	REMOVAL	1999
FGGM 78	GRANITE NIKE	FRA	REMOVAL	2002
FGGM 83	TRAP AND SKEET RANGE (OU-1)	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2003
FGGM 93	MANOR VIEW DUMP SITE	IRA	CAPPING	2013
FGGM 93	MANOR VIEW DUMP SITE	IRA	REMOVAL	2013
FGGM 93	MANOR VIEW DUMP SITE	IRA	SOIL VAPOR EXTRACTION	2013
PBC at Meade	PBCs at Fort Meade	FRA	OTHER	2014
FGGM 13	PEST. SHOP BLDG. 6621	FRA	REMOVAL	2015
FGGM 13	PEST. SHOP BLDG. 6621	FRA	INSTITUTIONAL CONTROLS	2015

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
FGGM 13	PEST. SHOP BLDG. 6621	FRA	GROUND WATER TREATMENT	2015
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	IRA	SOIL VAPOR TREATMENT	2015
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	IRA	AIR SPARGING	2015
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	IRA	GROUND WATER TREATMENT	2015
FGGM 93	MANOR VIEW DUMP SITE	FRA	INSTITUTIONAL CONTROLS	2015

Duration of IRP

Date of IRP Inception: 198011

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 204808/205010

Date of IRP completion including Long Term Management (LTM): 205010

IRP Contamination Assessment

Contamination Assessment Overview

In 1980 the United States Army Toxic and Hazardous Material Agency (USATHAMA; now USAEC) completed its initial installation assessment for FGGM. This assessment identified the need for an SI for the active sanitary landfill. No further action was taken until 1987, when USATHAMA updated the 1980 assessment to verify conditions at FGGM and determine the next steps to be taken. In 1988, USATHAMA began a preliminary assessment of the active sanitary landfill. In FY1994, ER,A funds were obtained to complete the cap on Cell No. 1 of the landfill and Operation and Maintenance Army (OMA) funds for the liner of active Cell No. 2. Contaminants found in the landfill area include heavy metals, chlorinated solvents, and non-chlorinated solvents.

As of July 28, 1998 FGGM was added to the NPL. This listing was based on an April 1, 1997 proposal by the USEPA. In October 2009, an FFA went into effect. The FFA was signed by the Army, USEPA, US Department of Interior (USDOI), and the US Architect of the Capitol (USAOC).

The general purpose of the FFA is to:

- 1) Ensure that the environmental impacts associated with past and present activities at the site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare and the environment;
- 2) Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the site in accordance with CERCLA, as amended by Superfund Amendments and Reauthorization Act (SARA), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Superfund guidance and policy, RCRA guidance and policy, and applicable Maryland law;
- 3) Facilitate cooperation, exchange of information, and participation of the parties in such actions.

The purposes of the FFA specific to Fort George G. Meade are to:

1. Identify interim remedial action (IRA) alternatives, which are appropriate at the site prior to the implementation of the final remedial action (FRA) for the site. The IRA alternatives shall be identified and proposed to the parties as early as possible prior to formal proposal of IRAs to the USEPA pursuant to CERCLA and applicable Maryland law. This process is designed to promote cooperation among the parties in identifying IRA alternatives prior to selection of final IRAs.
2. Establish requirements for the performance of an RI to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release and threatened release of hazardous substances, pollutants or contaminants at the site and to establish requirements for the performance of an FS for the site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants or contaminants at the site in accordance with CERCLA and applicable Maryland law.
3. Identify the nature, objective and schedule of response actions to be taken at the site. Response actions at the site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA and applicable Maryland law;
4. Implement the selected RA in accordance with CERCLA and applicable Maryland law and meet the requirements of CERCLA Section 120(e)(2) for an interagency agreement among the parties.
5. Ensure compliance, through this agreement, with RCRA and other federal and Maryland hazardous waste laws and regulations for matters covered herein.
6. Establish a procedural framework and schedule for USDOI/US Fish and Wildlife Service (USFWS) and USAOC to participate and cooperate with the Army in its development and implementation of appropriate response actions relating to releases on or migrating to lands formerly managed by the Army and transferred to USDOI/USFWS and USAOC.
7. Coordinate response actions at the site with the mission and support activities at FGGM and lands managed by the USDOI/USFWS and USAOC.
8. Expedite the cleanup process to the extent consistent with protection of human health and the environment.
9. Provide for operation and maintenance of any remedial action selected and implemented pursuant to this agreement.

Cleanup Exit Strategy

Actions will continue to be performed as outlined in the IAP contingent on funding levels. In August 2015 a performance-based acquisition (PBA) was awarded that covers Army Environmental Database-Restoration (AEDB-R) sites FGGM 83, FGGM 87, and FGGM 7. A second FGGM PBA was awarded in September 2009. Sites covered under this contract are FGGM 97, 74, 95, 96, 97, 36, 37, 17, and OU-4. OU-4 includes FGGM 33, 45, 47, 49, 51, 86, 88, 89, 90, 91, and 92. Future costs at these sites include RIP/RC through remedial action (operation) [RA(O)] phase. In December 2015, a third contract was awarded that covers RA(O)/long-term management (LTM) at sites FGGM 13, 93, 74, OU-4, 003-R-01, and 007-R-01.

IRP Contamination Assessment

The Army will continue to investigate and, where appropriate, remediate sites consistent with the requirements of CERCLA and other environmental laws that regulate or are otherwise pertinent to the FGGM restoration program.

IRP Previous Studies

Year	Title	Author	Date
1977	Environmental Impact Statement - Existing Activities and Conditions	Unknown	JUN-1977
1979	Landfill Study	Unknown	JUN-1979
1980	Final - Installation Assessment of FGGM	Unknown	NOV-1980
1981	Final - Overall Environmental Impact Statement	Unknown	AUG-1981
1987	Final - Update of the Initial Installation Assessment of FGGM and Gaithersburg Research Facility	Unknown	DEC-1987
1989	Final - Site Safety & Health Plan for Remedial Investigation at FGGM Landfill and Preliminary Assessment/Site Investigation at the Former Gaithersburg Nike Control and Launch Areas	Unknown	MAR-1989
	Draft - Task Order 2 Preliminary Assessment for Fort Holabird	Unknown	DEC-1989
1990	USATHAMA Task Order 2 Enhanced Preliminary Assessment Fort Holabird Crime Records Center	Unknown	JAN-1990
	Preliminary Draft - Environmental Assessment - Base Closure at Gaithersburg, MD	Unknown	FEB-1990
	Technical and Sampling/Analysis Plan, U.S. Army Toxic and Hazardous Material Agency	EA Engineering	FEB-1990
	Site Safety and Health Plan for Remedial Investigation/Feasibility Studies at FGGM Landfill and Preliminary Assessment/Site Investigation at Former Gaithersburg Nike Control and Launch areas	Unknown	MAR-1990
	Draft - USATHAMA - Appendices for FGGM Active Sanitary Landfill and Clean Fill Dump Remedial Investigation Report	Unknown	APR-1990
	Final - Gaithersburg Research Facility Control Area Site Investigation - Accident Prevention Safety Plan	Unknown	MAY-1990
	USATHAMA - Appendices for FGGM Active Sanitary Landfill and Clean Fill Dump Remedial Investigation Report	Unknown	AUG-1990
	Final - Public Involvement and Response Plan	Unknown	SEP-1990
	Preliminary Assessment Report FGGM - Hazardous Substances Identification and Storage and Potential Receptors for Groundwater, Surface Water and Onsite Pathways	Unknown	NOV-1990
	Preliminary Assessment Report, US Army Toxic and Hazardous Material Agency	Roy F. Weston, Inc.	NOV-1990
	Draft Final Document - USATHAMA Technical Report for Proposed Ordnance Clearance at FGGM	Unknown	DEC-1990
	Draft Final - Gaithersburg Appendices Final Project Report	Unknown	DEC-1990
1991			

IRP Previous Studies

1991	Title	Author	Date
	Final - Remedial Investigations/Feasibility Studies for Proposed Ordnance Clearing at FGGM	Unknown	MAR-1991
	Draft Final Document - USATHAMA Ordnance Clearance Survey	Unknown	MAR-1991
	Final - Gaithersburg Research Facility Central Area Site Inspection	Unknown	MAR-1991
	Draft - Comprehensive Base Realignment and Partial Closure for FGGM & Fort Holabird	Unknown	MAR-1991
	Final - Gaithersburg Project Report Appendices	Unknown	MAR-1991
	Volatile Analysis - Fort Meade Laundry Analytical Data Package	Unknown	AUG-1991
	Environmental Investigation for Property Transfer - Fort Holabird Crime Records Center Environmental Investigation and Alternatives Assessment	Unknown	SEP-1991
	Draft - Addendum Site Health and Safety Plan Ordnance Clearance Survey	Unknown	NOV-1991
	Review of Draft Work Plan for Ordnance Survey of 1,400 Acres - Department of Interior Parcel	Unknown	DEC-1991
	Post Laundry Facility Contaminant Assessment Report	Versar	DEC-1991
1992	Final - Preliminary Assessment Report Addendum for FGGM	Unknown	MAR-1992
	Final Environmental Investigation Report for Fort Holabird Crime Records Center	Unknown	MAR-1992
	Preliminary Assessment Report Addendum, US Army Toxic and Hazardous Material Agency	Roy F. Weston, Inc	MAR-1992
	Work Plan for Unexploded Ordnance Clearance Survey at FGGM	Unknown	APR-1992
	Accident Prevention and Safety Plan - FGGM Ordnance Clearance Survey	Unknown	APR-1992
	Site Health and Safety Plan - FGGM Ordnance Clearance Survey	Unknown	JUN-1992
	Work Plan - FGGM Ordnance Clearance Survey	Unknown	JUN-1992
	Draft Report for Asbestos Investigation and Estimation of Fort Holabird Crime Records Center (CRC)	Unknown	SEP-1992
	Asbestos Investigation and Estimation of Fort Holabird Crime Records Center	Unknown	OCT-1992
	Site Inspection, Volumes I - III - Ordnance Demolition Area, Clean Fill Dump, Fire Training Area, Inactive Landfill No. 1, Inactive Landfill No. 2, Inactive Landfill No. 3, DPDO Salvage Yard, US Army	EA Engineering	OCT-1992
	Remedial Investigation Report and Appendices - Active Sanitary Landfill and Clean Fill Dump, U.S. Army Toxic and Hazardous Material Agency	EA Engineering, Science and Technology, Inc.	DEC-1992
1993	Work Plan Feasibility Study and Remedial Investigation/Site Inspection RI/SI Addendum - Inactive Landfill No. 2, DPDO Salvage Yard and Transformer Storage, Helicopter Hangar Area, Fire Training Area	USAEC, Arthur D. Little	NOV-1993
	Quality Control Plan Feasibility Study and Remedial Investigation/Site Inspection RI/SI Addendum	USAEC, Arthur D. Little	NOV-1993
	Health and Safety Plan, Feasibility Study and Remedial	USAEC, Arthur D. Little	NOV-1993

IRP Previous Studies

1993	Title	Author	Date
	Investigation/Site Inspection Addendum - Inactive Landfill No. 2, DPDO Salvage Yard and Transformer Storage, Helicopter Hangar Area, Fire Train Health & Safety Plan - DRMO	USAEC, Arthur D. Little	NOV-1993
	Work Plan, Feasibility Study and Remedial Investigation/Site Inspection Addendum	USAEC, Arthur D. Little	NOV-1993
	Quality Control Plan Feasibility Study and Remedial Investigation/Site Inspection RI/SI Addendum,	USAEC, Arthur D. Little	NOV-1993
1994	Architect of Capitol - Initial Phase I Report, Site Assessment of 100-Acre Parcel	Rummel, Klipper & Kahl	MAY-1994
	Ordnance Survey Report, 1400 Acre Parcel - 500-acre Dept. of Interior Parcel, Tipton Army Airfield Parcel, Active Sanitary Landfill Parcel, USAEC	International Technology Corp.	JUN-1994
	Cell 2 Modifications - Active Sanitary Landfill	Unknown	AUG-1994
	Initiation of Detection Monitoring Program - Active Sanitary Landfill, U.S. Army Center for Health Promotion and Preventive Medicine	Unknown	SEP-1994
	Feasibility Study Report - Active Sanitary Landfill	USAEC, Arthur D. Little	SEP-1994
	Residential Wells Data - Active Sanitary Landfill	USAEC, Arthur D. Little	OCT-1994
	DRMO - Final Quality Control Plan Remedial Investigation/Feasibility Study	USAEC, Engineering Technologies Associates, Inc.	DEC-1994
1995	DRMO - Quality Control Plan Remedial Investigation and Feasibility Study of the Defense Property Disposal Office	USAEC, Engineering Technologies Associates, Inc.	MAY-1995
	DRMO - Technical Work Plan Remedial Investigation/Feasibility Study	USAEC, Engineering Technologies Associates, Inc.	MAY-1995
	Post Laundry Facility - Safety & Health Program Site Specific Safety and Health Plan, Subsurface Investigation	Versar, Inc.	JUN-1995
	DPDO Sample Analysis Report - GP Work Order #9508083	Baltimore District Corps of Engineers	AUG-1995
	Post Laundry Facility Additional Subsurface Investigation Activities MDE Case # C-0094-132	Versar, Inc.	SEP-1995
	DPDO Semi-volatile Package	Baltimore District Corps of Engineers	SEP-1995
	DRMO - Semi-volatile Package	GP Environmental Services, Inc	SEP-1995
	DPDO Metals Package	Baltimore District Corps of Engineers	SEP-1995
	Metals Package Metals Case Narrative	GP Environmental Services, Inc.	SEP-1995
	DPDO Sample Analysis Report - GP Work Order #9509006	Baltimore District Corps of Engineers	SEP-1995
	Post Laundry Facility - Additional Subsurface Investigation Activities	Versar, Inc.	SEP-1995
	DPDO Sample Analysis Report - GP Work Order #9508056	Baltimore District Corps of Engineers	OCT-1995

IRP Previous Studies

1995	Title	Author	Date
	DPDO Sample Analysis Report - GP Work Order #9508022	Baltimore District Corps of Engineers	OCT-1995
	Sample Analysis Report - GP Work Order #9508037	Baltimore District Corps of Engineers	OCT-1995
	DPDO Sample Analysis Report - GP Work Order #9508018	Baltimore District Corps of Engineers	OCT-1995
	Site Inspection Addendum Report - Defense Reutilization And Marketing Office Inactive Landfill No. 2 Helicopter Hangar Area Fire Training Area Ordnance Demolition Soldiers Lake	USAEC, Arthur D. Little	DEC-1995
1996			
	Solid Waste Management Unit Study	BCM Engineers	JUN-1996
	1996 Active Sanitary Landfill Annual Detection & Assessment Monitoring Report,	CH2M Hill	AUG-1996
	DPDO Draft Final, Phase One HTRW (SCAPS) Investigation,	Baltimore District Corps of Engineers	DEC-1996
	DRMO - Sampling Report Environmental Sampling Activities	USACE	DEC-1996
1997			
	BRAC Clean-up Team (USEPA R3 and State)	Unknown	JAN-1997
	Clean Fill Dump Preliminary Data (surface soils, sediment, groundwater)	Unknown	JAN-1997
	DPDO Environmental Sampling Covered Storage Facility	Baltimore District Corps of Engineers	MAR-1997
	DRMO - Environmental Sampling	USACE	MAR-1997
	Post Laundry Facility comprehensive Site Assessment	Versar	MAR-1997
	DPDO Final Report, Phase One HTRW (SCAPS) Investigation	Baltimore District Corps of Engineers	APR-1997
	Draft, Active Sanitary Landfill Off-Post Drilling and Sampling Results and Surface Water Sampling Results Fort Meade Feasibility Study and Remedial Investigations/Site Inspection	Arthur D. Little	APR-1997
	Post Laundry Facility - Additional Subsurface Investigation Activities	USACE	APR-1997
	DRMO - Phase One HTRW (SCAPS) Investigation	USACE	APR-1997
	Remedial Investigation Addendum - Active Sanitary Landfill	USAEC, Arthur D. Little	MAY-1997
	Draft, Active Sanitary Landfill Atrazine Study Fort Meade Feasibility Study and Remedial Investigation/Site Inspection	Arthur D. Little	JUN-1997
	DRMO - Response to Specific Comments-USEPA	Unknown	AUG-1997
	DRMO - Response to Specific Comments-MDE	Unknown	AUG-1997
	1997 Active Sanitary Landfill Semi-Annual Detection & Assessment Monitoring Report	CH2M Hill	AUG-1997
	1997 Active Sanitary Landfill Annual Detection & Assessment Monitoring Report	CH2M Hill	AUG-1997
	DRMO - Work Plan Phase Two HTRW Investigation	USACE	SEP-1997
1998			

IRP Previous Studies

1998	Title	Author	Date
	Comment-Response Package for Off-Post Drilling Report - Active Sanitary Landfill	USAEC, Arthur D. Little	MAR-1998
	DRMO - Summary Report, Drilling & Testing Activities, Phase II Groundwater Investigation	USACE, Dames & Moore	APR-1998
	Post Laundry Facility Comprehensive Site Assessment	Versar	JUN-1998
	1998 Active Sanitary Landfill Semi-Annual Detection & Assessment Monitoring Report	CH2M Hill	OCT-1998
	Industrial Corridor Risk Assessment	Versar	DEC-1998
1999	Atrazine Study Feasibility Study and Remedial Investigation Site Inspection - Active Sanitary Landfill	USAEC, Arthur D. Little	MAR-1999
	Off-Post Drilling and Sampling Results and Surface Water Sampling Results Feasibility Study and Remedial Investigation/Site Inspection - Active Sanitary Landfill, Clean Fill Dump	USAEC, Arthur D. Little	MAR-1999
	Groundwater Database Report - Active Sanitary Landfill	USACE, Malcolm Pirnie	MAR-1999
	Post Laundry Facility - January 1999 Quarterly Groundwater Sampling Results	Versar, Inc.	MAR-1999
	Comprehensive Site Assessment - Former Incinerator Building 21-1/2 Street	Versar, Inc.	JUN-1999
	Comprehensive Site Assessment - Former Battery Disposal Facility Morrison Street	Versar, Inc.	JUN-1999
	Former Trap And Skeet Range (20th Street) - Comprehensive Site Assessment	Versar, Inc.	JUN-1999
	Post Laundry Facility - May 1999 Quarterly Groundwater Sampling Results	Versar, Inc.	JUN-1999
	Sampling Visits Solid Waste Management Units Volume III	Versar, Inc.	SEP-1999
	Sampling Visits Solid Waste Management Units Volume IV	Versar, Inc.	SEP-1999
	Sampling Visits Solid Waste Management Units Volume V	Versar, Inc.	SEP-1999
	Sampling Visits Solid Waste Management Units Volume VI	Versar, Inc.	SEP-1999
	Sampling Visits Solid Waste Management Units Volume I	Versar, Inc.	SEP-1999
	Sampling Visits Solid Waste Management Units Volume II	Versar, Inc.	SEP-1999
	RCRA Facility Assessment	CH2M Hill	SEP-1999
	Sampling Visit - Building 8881	Versar, Inc.	SEP-1999
	Public Health Assessment	Dept. of Health & Human Services, Agency for Toxic Substances and Disease Registry	NOV-1999
	Post Laundry Facility - December 1999 Quarterly Groundwater Sampling Results	Versar, Inc.	DEC-1999
2000	Summary Report Pump Test for Site-Wide Groundwater Investigation	USACE/Dames & Moore	MAR-2000
	Architect of Capitol - Work Plan Part II -Quality Assurance Project Plan Remedial Investigation	USACE/Malcolm Pirnie	MAR-2000

IRP Previous Studies

2000

Title	Author	Date
Architect of Capitol - Work Plan Part III -HASP Remedial Investigation	USACE, Malcolm Pirnie	MAR-2000
Work Plan Initial Delineation Activities Impacted Solid Waste Management Units	Versar, Inc.	MAR-2000
Community Relations Plan	US Army Corps of Engineers ICF Kaiser/General Physics	JUN-2000
Remedial Investigation Work Plan - Former Tank Cleaning Supply Warehouse (FGGM90) Buildings 2240 - 2243 and 2247 - 2249	USACE, Versar, Inc.	JUN-2000
Sampling Visits (23 Additional Solid Waste Management Units) Volumes I and II	Versar, Inc.	JUL-2000
Draft Initial Delineation Report Department of Logistics Tactical & Support Vehicle/Heavy Equipment Maintenance Facility	Versar, Inc.	AUG-2000
Draft Initial Delineation Reports Wash Rack Oil/Water Separator at Equipment Concentration Station 86 (Building 2120C), Heavy Equipment & Generator Maintenance Shop (Building 2128) & Forensic Toxicology Drug Testing Lab	Versar, Inc.	SEP-2000
Draft Initial Delineation Reports Equipment/Vehicle Storage Yard Wash Rack System (Bldg 1007), 20th Street, and Dept. of Public Works Storage and Receiving Yard (Bldg 2207), 1st Street	Versar, Inc.	SEP-2000
Draft Initial Delineation Reports Department of Logistics, Storage Services and Supply Division Complex, Pepper Road	Versar, Inc.	SEP-2000
Draft Initial Delineation Reports Department of Public Works Storage Yard, 2nd Street	Versar, Inc.	SEP-2000
Draft Initial Delineation Reports Directorate of Office Management Complex, 20th Street	Versar, Inc.	SEP-2000
Draft Initial Delineation Reports the Photo Lab (Bldg 546) and Former Vehicle Maintenance Shop (Bldg 2227)	Versar, Inc.	SEP-2000
Post Laundry Facility - Comprehensive Site Assessment Volume I of II	Versar, Inc.	OCT-2000
Architect of Capitol - Work Plan Part I -Field Sampling Plan Remedial Investigation	USACE, Malcolm Pirnie	NOV-2000

2001

Site Investigation Report - Building 2630 (Washrack) SWMU 78	Versar, Inc.	JUL-2001
Site Investigation Report - Washrack at 4th and Y Streets, SWMUs 143/144	Versar, Inc.	JUL-2001
Results from May 2001 Sampling of Monitoring Well MW-4DR - Active Sanitary Landfill	IT Corp/Advanced Infrastructure Management Technologies	JUL-2001
Site Investigation Report - Building 1251 (SWMU 19)	Versar, Inc.	JUL-2001
Site Investigation Report - Building 2253 (SWMUs 61/62)	Versar, Inc.	JUL-2001
Site Investigation Report - Building 2482 (SWMU 72)	Versar, Inc.	JUL-2001
Site Investigation Report - Former Wash Pack and Oil Separator at Building 940 (SWMUs 12/13)	Versar, Inc.	AUG-2001
Site Investigation Report - Building 2213 SWMU 38	Versar, Inc.	AUG-2001

IRP Previous Studies

2001

Title	Author	Date
Site Investigation Report - Building 2220 SWMU 42	Versar, Inc.	AUG-2001
Site Investigation Report - Building 8688 SWMUs 129/130	Versar, Inc.	AUG-2001
Site Investigation Report - Building 6513, SWMU 150	Versar, Inc.	AUG-2001
Site Investigation Report - Building 2240 SWMUs 45/46	Versar, Inc.	SEP-2001
Site Investigation Report - Building 2276 (SWMUs 63/64)	Versar, Inc.	SEP-2001
Site Investigation Report - Building 2286 (SWMUs 66/67)	Versar, Inc.	SEP-2001
Site Investigation Report - Former Wash Rack at Building 8480 (SWMUs 110/111)	Versar, Inc.	SEP-2001
Site Investigation Report - Building 8549 SWMUs 121/124	Versar, Inc.	SEP-2001
Architect of Capitol - Remedial Investigation Report Volumes I-II	USACE, Malcolm Pirnie	OCT-2001
Soil Background Concentration Report	USACE, Malcolm Pirnie	OCT-2001
Site Investigation Report - Building 2121 (SWMUs 29/30)	Versar, Inc.	OCT-2001
Site Investigation Report - Building 2120C (SWMU 25)	Versar, Inc.	OCT-2001
Site Investigation Report - Building 8486 SWMUs 117/118	Versar, Inc.	NOV-2001
Groundwater Remedial Investigation Work Plan Addendum - Active Sanitary Landfill	IT Corp/Advanced Infrastructure Management Technologies	NOV-2001
Site Investigation Report - Building 8485, SWMU 115/116	Versar, Inc.	NOV-2001
Site Investigation Report - Wash Rack Building 8485 SWMU 116A	Versar, Inc.	NOV-2001
Site Investigation Report - Building 2724 (SWMUs 80 through 86)	Versar, Inc.	DEC-2001
Site Investigation Report - Building 4587 SWMO 101/102	Versar, Inc.	DEC-2001
Site Investigation Report - Building 4680, SWMU 103	Versar, Inc.	DEC-2001
Site Investigation Report - Wash Racks at Building 2728 SWMUs 87, 88, 89, 90, 91, 92	Versar, Inc.	DEC-2001
Site Investigation Report - Golf Course Maintenance Area Buildings 8860, 8880, 8890 and 8896, SWMUs 131-133 and 135-137	Versar, Inc.	DEC-2001

2002

Post Laundry Facility - Response to USEPA Comments on Final Comprehensive Site Assessment	Versar, Inc.	JAN-2002
Architect of Capitol - Quality Control Summary/Analytical Results Volumes I-V	USACE, Malcolm Pirnie	MAR-2002
Site Investigation Report - O'Brien Road	USACE, URS	MAR-2002
Solid Waste Management Unit Project Work Plans Data Gap Sites	Versar, Inc.	MAY-2002
Generic Site Safety & Health Plan	USACE/EM Federal	JUN-2002
Site Investigation Report - Building 2266	Versar, Inc.	SEP-2002

IRP Previous Studies

Year	Title	Author	Date
2002	Former Trap And Skeet Range (20th Street) - Corrective Action Plan	Versar, Inc.	DEC-2002
2003	Partnering Meeting Summaries	US Army	JAN-2003
	Generic Field Sampling Plan	USACE/EM Federal	MAR-2003
	Generic Quality Assurance Plan	USACE/EM Federal	MAR-2003
	Remedial Investigation Work Plan - Former Motor Pool Maintenance Facility (FGGM86) Building 2286	USACE, Versar, Inc.	MAY-2003
	Remedial Investigation Work Plan - Former Heavy Gun Cleaning and Repair Shop (FGGM92) Buildings 2246 and 2253	USACE, Versar, Inc.	MAY-2003
	Remedial Investigation Work Plan - Former Nike Missile Control Site (FGGM87) Buildings 1945, 1946, 1957, 1958, 1974, 1976, 1977, 1978 and 1990	USACE, Versar, Inc.	JUN-2003
	DRMO - Remedial Investigation and Baseline Risk Assessment	URS, USACE	JUL-2003
	Remedial Investigation Work Plan - Former Tank Maintenance Facility (FGGM88) Building 2207	USACE, Versar, Inc.	JUL-2003
	Remedial Investigation Work Plan - Former Tank Maintenance Facility (FGGM89) Building 2217	USACE, Versar, Inc.	JUL-2003
	Field Sampling Plan - Phoenix Military Reservation	Malcolm Pirnie	OCT-2003
	Remedial Investigation Work Plan - Golf Course Maintenance Facility Buildings 8860, 8870, 8880, 8890 and 8890A, SWMUs 131-137	Versar, Inc.	OCT-2003
	Remedial Investigation Work Plan - Golf Course Maintenance Facility Buildings 8860, 8870, 8880, 8890 and 8890A, SWMUS 131-137	USACE, Versar, Inc.	OCT-2003
2004	Site-specific Work Plan - Architect of the Capitol	Malcolm Pirnie	OCT-2004
2005	Final Work Plan - Phoenix Military Reservation	Malcolm Pirnie	DEC-2005
2006	Final Work Plan - Former Pesticide Shop	URS	JAN-2006
	Final RI Work Plan - Operable Unit 3	Kemron Environmental Services	MAR-2006
	1st Quarter 2006 Data Report, Operable Unit 2	USAEC; Kemron	APR-2006
	Final RI Work Plan, Operable Unit 4	Kemron Environmental Services	MAY-2006
	Draft Engineering Evaluation/Cost Analysis Report	USAEC; Kemron	JUN-2006
	Final Remedial Investigation, Architect of Capitol	Baltimore District Corps of Engineers; Malcolm Pirnie	JUL-2006
	3rd Quarter 2006 Data Report, Operable Unit 2	USAEC; Kemron	OCT-2006
2007	4th Quarter 2006 Data Report, Operable Unit 2	USAEC; Kemron	JAN-2007
	Draft Technical Memorandum, Architect of Capitol	Baltimore District Corps of Engineers	JAN-2007

IRP Previous Studies

2007	Title	Author	Date
	1st Quarter 2007 Data Report, Operable Unit 2	USAEC; Kemron	APR-2007
	2nd Quarter 2007 Data Report, Operable Unit 2	USAEC; Kemron	JUL-2007
	Draft Final Remedial Investigation, Former Pesticide Shop	URS Corp	JUL-2007
	Groundwater Remedial Investigation, Closed Sanitary Landfill	Baltimore District Corps of Engineers, EM Federal Corp.	AUG-2007
	Preliminary Assessment/Site Inspection for Suspect Sites	URS	SEP-2007
	Draft Remedial Investigation, Manor View Dump Site	URS Corp	OCT-2007
	Final Memorandum, Human Health Risk Assessment Report, Operable Unit 1	USAEC; Kemron	NOV-2007
	Draft Proposed Plan, DRMO, Operable Unit 5	USAEC; Kemron	NOV-2007
	Draft Final Remedial Investigation/Feasibility Study, Operable Unit 4	USAEC; Kemron	DEC-2007
2008	4th Quarter 2007 Data Report for Operable Unit 2	USAEC; Kemron	JAN-2008
	Draft Final Remedial Investigation/Feasibility Study, Operable Unit 3	USAEC; Kemron	JAN-2008
	Draft Proposed Plan, Operable Unit 4	USAEC; Kemron	FEB-2008
	Final Site Conceptual Model and Assessment Report, Operable Unit 2	USAEC; Kemron	FEB-2008
2009	Integrated Corrective Measures Operations and Maintenance and 4th Quarter Status Report, OU-2	USAEC, Kemron	JAN-2009
	Draft Integrated Base-wide Cleanup Plan & Installation Action Plan	USAEC, URS	JAN-2009
	OU-2 Draft 4th Qtr 2008 Status Report for the Former Troop Housing	USAEC, Kemron	JAN-2009
	Project Management Plan Update for the Performance Based Contract,	USAEC, Kemron	FEB-2009
	Draft Final Addendum Number 3 to the Final Site Work Plan for Mortar Range	USAEC, Malcolm Pirnie	MAR-2009
	OU-5 Pre-Design Plum Delineation and Data Collection Plan	USAEC, Kemron	MAR-2009
	Draft Final Addendum Number 3 to the Final Site Work Plan for	USAEC, Kemron	MAR-2009
	Draft Interim Measures Assessment Report	USAEC, URS	APR-2009
	RCRA Facility Investigation Work Plan	USAEC, URS	MAY-2009
	Final Site Management Plan for Fort Meade	USAEC, URS	MAY-2009
	Draft Pre-investigation Evaluation of Corrective Measures	USAEC, URS	MAY-2009
2010	Draft Focused Feasibility Study Addendum, Technical Report on the Pre-design Plume Delineation and Data Collection Plan	Arcadis	MAR-2010
	Draft Consensus Letter, Preliminary Assessment/Site Inspection Northern Area of Interest Sites	URS Corp.	MAY-2010

IRP Previous Studies

2010

Title	Author	Date
Draft Consensus Letter, Preliminary Assessment/Site Inspection Southeastern Area of Interest Sites	URS Corp	MAY-2010
Draft Consensus Letter, Preliminary Assessment/Site Inspection Southwestern Area of Interest Sites	URS Corp	MAY-2010
Draft Final Consensus Letters Document, Preliminary Assessment/Site Inspection - Golf Course Sites	URS Corp	JUN-2010
Technical Memorandum (Operable Unit No. 4, Architect of the Capitol, and Closed Sanitary Landfill), Drilling and Groundwater Sampling Event of April 2010	Kemron	JUN-2010
Draft Report - Operable Unit 4, Architect of the Capitol, Closed Sanitary Landfill - Drilling and Groundwater Event	Kemron	JUN-2010
Draft Remedial Investigation Report (Former Mortar Range MRA)	Arcadis	JUL-2010
Semi-Annual Monitoring Report (Closed Sanitary Landfill)	Arcadis	AUG-2010
Draft Final Workplan, Attachment B, Preliminary Assessment/Site Inspection for the North, Southeast, and Southwest Areas of Potential Interest	URS Corp	AUG-2010
Draft Feasibility Study (Manor View Dump Site)	Arcadis	SEP-2010
Draft Remedial Investigation Report - Former Pesticide Shop	Arcadis	SEP-2010
Draft Supplemental Remedial Investigation Workplan for Operable Unit No. 4	Arcadis	OCT-2010
Draft Off-Post Groundwater Investigation (Nevada Ave) Workplan for Operable Unit No. 4	Malcolm Pirnie	OCT-2010
Draft Final Sampling and Analysis Plan; Performance-based Acquisition	Arcadis	OCT-2010
Draft Final Waste Management Plan - Performance-based Acquisition	Arcadis	OCT-2010
Draft Final Quality Assurance Project Plan - Performance-based Acquisition	Arcadis	NOV-2010
Draft Final Screening Level Ecological Risk Assessment (Operable Unit No. 1/FGGM-87, Former Nike Fire Control Site)	Arcadis	NOV-2010
Draft Consensus Letter, Preliminary Assessment/Site Inspection, Areas of Interest South of Route 32	URS Corp	NOV-2010
Final Consensus Letter Document, Preliminary Assessment/Site Inspection - Golf Course Sites	URS Corp	DEC-2010
Final Workplan, Preliminary Assessment/Site Inspection	URS	DEC-2010
Draft Remedial Investigation/Phase II, Off-Post Plume Delineation Plan	Arcadis	DEC-2010
Draft Final Remedial Investigation Report (Operable Unit No. 1/FGGM-83, Trap and Skeet Range)	Kemron	DEC-2010

2011

Draft Final PA/SI Summary Report, Golf Course AOIs	URS	JAN-2011
Operable Unit 4 Sub-slab Soil Gas Sampling (Draft Work Plan)	Arcadis	MAR-2011
Final Consensus Letter PA/SI Southwest AOIs	URS	MAR-2011
Final Monitoring Plan, Closed Sanitary Landfill	Arcadis	APR-2011
Final PA/SI Consensus Letter, North AOIs	URS	MAY-2011

IRP Previous Studies

2011

Title	Author	Date
Final PA/SI Work Plan North AOIs	URS	JUN-2011
Final PA/SI Work Plan Southwest AOIs	URS	JUN-2011
Final Site Management Plan (annual report)	URS	AUG-2011
Draft Feasibility Study, Manor View Dump Site	Arcadis	SEP-2011
Off-Post Monitoring Well Repair and Sampling Work Plan, Operable Unit 4	Arcadis	OCT-2011
Draft Final Work Plan, Phase II Off-Post Plume Delineation	Arcadis	OCT-2011
Final Remedial Investigation Report, Pesticide Shop	Arcadis	OCT-2011
Final Engineering Evaluation/Cost Analysis, Manor View Dump Site	Arcadis	OCT-2011
Draft Work Plan and Consensus Letters for Potential Radiation Sites	URS	NOV-2011
Draft Action Memorandum, Non-time Critical Removal Action, Manor View Dump Site	Arcadis	NOV-2011
Final Action Memorandum, Non-time Critical Removal Action Manor View Dump Site	Arcadis	DEC-2011

2012

Final Consensus Letter PA/SI Southeast AOIs	URS	JAN-2012
Draft Final Consensus Letter and Work Plan AOIs South of Rte 32	URS	JAN-2012
Draft Work Plan and Consensus Letter for Select AOIs	URS	JAN-2012
Draft Focused Feasibility Study, Pesticide Shop	Arcadis	FEB-2012
Final Non-time Critical Removal Action Work Plan	Arcadis	FEB-2012
Final Site Management Plan (annual report)	URS	AUG-2012
Final Off-Post Well Investigation, Interim Measures Report	Arcadis	SEP-2012
Closed Sanitary Landfill - Draft Semi-annual Monitoring Report	Arcadis	OCT-2012
Draft: Off-Post Geoprobe WP (benzene) for the Closed Sanitary Landfill	Arcadis	OCT-2012
Final Pre-remedial Design Workplan (Former Pesticide Shop)	Arcadis	NOV-2012
Draft Engineering Evaluation/Cost Analysis for Operable Unit 4	Arcadis	DEC-2012
Inactive Landfill No.2 Final 2012 Annual Inspection Report	Ft. Meade DPW-ED	DEC-2012
Draft Interim Removal Action Report (Manor View Dump Site)	Arcadis	DEC-2012

2013

Draft Final Supplemental Remedial Investigation Work Plan (Operable Unit 4)	Arcadis	JAN-2013
Draft Semi-annual Monitoring Report (Closed Sanitary Landfill)	Arcadis	FEB-2013
Final 2013 Monitoring Plan (Closed Sanitary Landfill)	Arcadis	FEB-2013
Final Remedial Investigation Report (Former Nike Missile Fire Control Site)	Kemron	MAR-2013

IRP Previous Studies

2013

Title	Author	Date
Final Interim Removal Action Report (Manor View Dump Site)	Arcadis	MAR-2013
Final Remedial Investigation Report (Former Trap and Skeet Range)	Kemron	MAR-2013
Draft Permit Equivalency, ESC Plan (Pesticide Shop)	Arcadis	APR-2013
Final Remedial Design (Former Mortar Range MRA)	Arcadis	APR-2013
Final Supplemental Remedial Investigation (Architect of the Capitol)	Arcadis	APR-2013
Quarterly Methane Monitoring Report (Manor View Dump Site)	Arcadis	APR-2013
Final Remedial Design (Former Mortar Range MRA)	Arcadis	APR-2013
Draft Focused Feasibility Study (Architect of the Capitol)	Arcadis	MAY-2013
Internal Draft Proposed Plan (Closed Sanitary Landfill)	Arcadis	MAY-2013
Final Off-Post Monitoring Well Sampling Result Report -Year 2	Arcadis	JUN-2013
Draft NTCRA Work Plan, Operable Unit 4	Arcadis	JUN-2013
Final EE/CA, Operable Unit 4	Arcadis	JUN-2013
Draft Proposed Plan (Architect of the Capitol)	Arcadis	JUN-2013
Draft Annual Monitoring Report (Closed Sanitary Landfill)	Arcadis	JUN-2013
Draft Proposed Plan (Manor View Dump Site)	Arcadis	JUN-2013
Supplemental RI Work Plan, Operable Unit 4	Arcadis	JUL-2013
Internal Draft Record of Decision (Architect of the Capitol)	Arcadis	JUL-2013
Draft Final Remedial Investigation Addendum (Manor View Dump Site)	Arcadis	AUG-2013
Draft Remedial Design (Pesticide Shop)	Arcadis	AUG-2013
Final Variance Request Report (Manor View Dump Site)	Arcadis	AUG-2013
Final Feasibility Study (Manor View Dump Site)	Arcadis	AUG-2013
Internal Draft Record of Decision (Manor View Dump Site)	Arcadis	AUG-2013
Internal Draft Remedial Action Report (Former Mortar Range)	Arcadis	AUG-2013
Final Action Memo, OU-4	Arcadis	AUG-2013
Draft Final Site Management Plan (annual report)	URS	AUG-2013
Draft Final Action Memo, Operable Unit 4	Arcadis	AUG-2013
Draft Plume Delineation and Analytical Data Summary Memorandum (DPT investigation) (Closed Sanitary Landfill)	Arcadis	AUG-2013
Final Decision Document, PMR	Arcadis	OCT-2013
Final RD	Arcadis	NOV-2013
Final NTCRA Work Plan, OU-4	Arcadis	DEC-2013

IRP Previous Studies

2013

Title	Author	Date
Final Annual Maintenance Report, IAL2	Arcadis	DEC-2013

2014

Final RI, OU-1	Kemron	JAN-2014
Final RD Addendum, Pesticide Shop	Arcadis	JAN-2014
Final Monitoring Plan Addendum, CSL	Arcadis	JAN-2014
Revised draft Work Plan for off-post arsenic delineation and data collection, CSL	Arcadis	FEB-2014
Final Vegetation Clearing Work Plan, IAL2	EA Engineering	FEB-2014
Final RI Addendum, Manor View	Arcadis	MAR-2014
Final FS Revision 1, Manor View	Arcadis	MAR-2014
Final RD, PMR	Arcadis	MAR-2014
Draft Revised ROD, Manor View	Arcadis	APR-2014
Final RAR, Mortar Range	Arcadis	MAY-2014
Final PP, Manor View	Arcadis	JUN-2014
Final SMP	URS	JUL-2014
Final Revised FFS, AOC	Arcadis	JUL-2014
Final PP, AOC	Arcadis	JUL-2014
Draft ROD, AOC	Arcadis	JUL-2014
Final Monitoring Report (Semi-Annual), CSL	Arcadis	OCT-2014
Final O&M Report (2nd Quarter), OU-4	Arcadis	OCT-2014
Final Monitoring Report (2nd Quarter), Pesticide Shop	Arcadis	OCT-2014
Final IRAR for AOC 3, OU-4	Arcadis	OCT-2014
Final O&M Report (3rd Quarter), OU-4	Arcadis	NOV-2014
Final Monitoring Report (3rd Quarter), Pesticide Shop	Arcadis	NOV-2014
Final IRAR for AOC 1 & 2, OU-4	Arcadis	DEC-2014
Final FFS, CSL	Arcadis	DEC-2014
Final Monitoring Report (4th Quarter), Pesticide Shop	Arcadis	DEC-2014
Final O&M Report (4th Quarter), OU-4	Arcadis	DEC-2014
Final RACR, Manor View	Arcadis	DEC-2014
Final RD, Manor View	Arcadis	DEC-2014
Final RACR, Pesticide Shop	Arcadis	DEC-2014
Final Annual Soil Gas Report, Manor View	Arcadis	DEC-2014
Final Annual LUC Inspection Report, Mortar Range	Arcadis	DEC-2014

2015

IRP Previous Studies

2015

Title	Author	Date
Final Removal Completion Report for Soil Disposal, Site Y	Plexus	FEB-2015
Final Investigation Report, Nevada Avenue	Arcadis	MAR-2015
Final Monitoring Report (1st Quarter), Pesticide Shop	PIKA/Arcadis	MAY-2015
Final O&M Report (1st Quarter), OU-4	PIKA/Arcadis	MAY-2015
Final Annual Inspection Report, IAL2	FGGM DPW-ED	MAY-2015
Final Annual Inspection Report, IAL2	FGGM DPW-ED	MAY-2015
Final Workplan Addendum PA/SI, Site Y	URS	MAY-2015
Final Consensus Letter PA/SI, Site M Parcel 3	URS	MAY-2015
Final Monitoring Report (Annual), CSL	PIKA/Arcadis	JUN-2015
Final Monitoring Report (Semi-Annual), Pesticide Shop	PIKA/Arcadis	JUL-2015
Final PA/SI, South of Rt 32 Areas of Interest	URS	JUL-2015
Final Revised Maintenance Workplan, IAL2	EA Engineering	JUL-2015
Revised Final RD, Manor View	PIKA/Arcadis	AUG-2015
Final O&M Report (2nd Quarter), OU-4	PIKA/Arcadis	SEP-2015
Final PA/SI, North Areas of Interest	URS	OCT-2015
Final PA/SI, Southeast Areas of Interest	URS	OCT-2015
Final PA/SI, Southwest Areas of Interest	URS	OCT-2015
Final O&M Report (3rd Quarter), OU-4	PIKA/Arcadis	DEC-2015
Revised Final RACR, Manor View	PIKA/Arcadis	DEC-2015
Final Monitoring Report (Semi-Annual), CSL	PIKA/Arcadis	DEC-2015
Final Maintenance Repairs Report, IAL2	EA Engineering	DEC-2015

2016

Final FY16 SMP	Stell	JAN-2016
Final Addendum PA/SI Southeast, Site Y	URS	JAN-2016
Final Annual LUC Inspection Report, Mortar Range	PIKA/Arcadis	FEB-2016
Final QAPP Addendum 1 Preliminary Data Collection, Cell 3	AECOM	FEB-2016

FORT GEORGE G MEADE
Installation Restoration Program
Site Descriptions

Site Name: DRMO DRUM SITE (OPERABLE UNIT 5)

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	199205.....	199405
SI.....	199205.....	199405
RI/FS.....	199409.....	201810
RD.....	201708.....	201910
IRA.....	199503.....	199709
RA(C).....	201808.....	202010
RA(O).....	201908.....	204610
RIP Date:	202010	
RC Date:	204610	

SITE DESCRIPTION

The Defense Reutilization and Marketing Office (DRMO) Drum Site (FGGM-7 & OU-5) at the intersection of Rock Avenue and Remount Road along the southern boundary of the installation. The site is nine acres and is bordered by State Route 32 along the south, Remount Road on the east, Rock Avenue on the north, and wooded areas to the west. The site includes the covered storage facility (CSF) located at the former salvage yard portion of the former Defense Property Disposal Office (DPDO). The CSF is also known as the DRMO warehouse.

In 1988, the DPDO Salvage Yard was an open storage/disposal area for automobiles, drums, water heaters, heating units, dry cleaning machines, spent batteries transformers, pipe, and scrap metal. Operation of the DPDO Salvage Yard ceased in January 1994 in preparation for the CSF warehouse construction. 263 drums, two transformers, and one high voltage box, were discovered on June 15, 1995. 3,500 tons of contaminated soil was removed. Test results of the drums contents found solvents, degreasers, petroleum products metals, pesticides, and polychlorinated biphenyls (PCB). Soil test results found VOCs and SVOCs (primarily fuel compounds), PCBs, and metals were present. After completion of the investigation, the site was completely paved and the operation of the DRMO resumed along with the newly constructed CSF. VOCs were detected in the water table aquifer. The source of contamination appears to be the former buried drums and associated contaminated soil. The primary contaminant of concern (COC) is tetrachloroethene (PCE), detected at elevated levels ranging from 189 micrograms per liter (µg/L) (September 1999) to 128 µg/L (May 2006), which exceed the maximum contaminant level (MCL) of 5 µg/L. The PCE plume is approximately 5,000 feet long.

Although future land use for this site remains industrial, the baseline risk assessment (BRA) reported a lifetime cancer risk of 2.5 x 10⁻⁴ for residential exposure to groundwater used as tap water; PCE, trichloroethene (TCE), carbon tetrachloride (CCl₄), and chloroform in groundwater drive the cancer risks. The human health evaluation did not identify elevated risks associated with the soil under current or projected future land use scenarios. No ecological risks were identified.

In the final focused feasibility study (FFS), simulated solute transport modeling was used to predict future migration of PCE and TCE (degradation daughter product of PCE) plumes under current groundwater conditions. The model results indicated that after 120 years of transport (year 2119), PCE concentrations would not exceed 5 µg/L.

The final FFS, approved by the MDE and the USEPA in 2007, evaluated four remedial alternatives and recommended monitored natural attenuation (MNA)/institutional controls as the preferred remedy for FGGM-7; however, a Draft Final Supplemental Plume Delineation and Data Collection Plan was prepared in September 2008 to address the USEPA and the MDE's concerns about the adequacy of the plume delineation and the applicability of the MNA remedy. A supplemental technical report to the FFS detailing pre-design plume delineation and data collection was submitted to the USEPA for review, commented on, and response to comments generated. A technical meeting with the USEPA and the MDE was held on October 27, 2010 to review each comment/response and to agree on a path forward which was determined an active remedy would be necessary. A work plan is under development to fulfill the remaining RI data gaps. The last round of USEPA comments will be addressed and incorporated into the revised RI.

Site ID: FGGM 07

Site Name: DRMO DRUM SITE (OPERABLE UNIT 5)

CLEANUP/EXIT STRATEGY

The site is currently in the RI/FS phase and a ROD is planned for FY19. The site is contaminated with a large deep diffuse plume of PCE that extends for over 1 mile (at 5 parts per billion (ppb)) from the site onto property owned by the USDOl. The USDOl imposed restrictions on the use of groundwater for potable purposes and the Army anticipates an engineered remedy with RA(O) and LUCs. Due to the size of the plume, groundwater monitoring is anticipated to continue for an extended period of time.

Site ID: FGGM 08

Site Name: COMP AMMO SUPPLY POINT #1

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	199510.....	199604
SI.....	199510.....	201110
RI/FS.....	201110.....	201701
IRA.....	199801.....	199903

RIP Date: N/A

RC Date: 201701

SITE DESCRIPTION

This site, also known as Ammunition Supply Point No. 1 (ASP I), is located within the Closed Sanitary Landfill (CSL) site (FGGM-17). At ASP I, chemical munitions were used including smoke grenades and riot control agents for training purposes (Argonne, 1989). These items were stored at the site. In the 1950s, an unknown number of chemical agent identification sets were also stored in at the site. The final disposition of these sets is unknown.

Over the course of previous investigations, 21 surface soil, six subsurface soil, one surface water sample, and six sediment samples were collected and submitted for laboratory analysis. In addition, both shallow and deep groundwater at the CSL site has been monitored for VOCs and SVOCs, metals, and other parameters including explosives and explosive constituents. Some of the FGGM-17 monitoring wells are located near ASP I.

Soil samples were collected around the magazine locations (EM Federal, 2007). One surface and one subsurface soil sample were collected from each of six former magazine locations in the former ASP area to assess the potential for soil contamination due to spills or leaks. Based on a risk analysis of the analytical results, the risk numbers are below site-specific action levels. No further actions (or costs) are anticipated. Since the site is located completely within the boundary of the CSL, it will be included in the ROD for the CSL (FGGM-17).

CLEANUP/EXIT STRATEGY

No compounds were detected at concentrations that result in unacceptable levels of risk to human health and the environment. This site is located within FGGM-17 CSL (which is part of the PBC at Meade site) and will be closed as part of the CSL soil ROD in FY17.

STATUS

Regulatory Driver: CERCLA
RRSE: LOW
Contaminants of Concern: Metals, Pesticides
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199701.....	199704
SI.....	199701.....	199704
RI/FS.....	200410.....	201209
RD.....	201209.....	201310
RA(C).....	201209.....	201412
RA(O).....	201408.....	201808
LTM.....	201808.....	204808
RIP Date:	201412	
RC Date:	201808	

SITE DESCRIPTION

FGGM-13 is former Building 6621, the former Pesticide Shop, which is at the northwest corner of the intersection of York Avenue and Gordon Street. Between 1958 and 1978, the site was used as a pesticide shop. During this time, it was also used as a maintenance facility for lawn mowers, tractors, and other landscaping equipment. Releases of pesticides during this time were due to spills and the mishandling of pesticides and not due to the legal application of pesticides. Building 6621 was demolished, and the site was re-graded in 1996. The Former Pesticide Shop is presently a 0.9 acre fenced-in lot with no permanent structures.

Remedial Action Objectives (RAOs) were established for the Former Pesticide Shop to address unacceptable risk posed by heptachlor epoxide and chlordane concentrations in soil and chlorinated VOC concentrations in groundwater. Subsequent to the alternatives analysis conducted in the FFS (ARCADIS, 2012), a ROD (U.S. Army, 2012) authorizing the selected remedy was approved and signed by the U.S. Army and USEPA on September 26, 2012, and September 27, 2012, respectively. The remedy selected within the ROD was soil excavation with off-site disposal, enhanced reductive dechlorination with (LTM) of groundwater, and LUCs. The selected remedy was modified by an Explanation of Significant Difference (ESD) (ARCADIS, 2014) to account for an increase in soil quantity. A RD (ARCADIS, 2013) and an RD addendum (ARCADIS, 2014) were developed to direct the implementation of the selected remedy. Implementation of the selected remedy was conducted December 2013 through June 2014 and included the following major components:

- Excavation and disposal of 1,726 tons of pesticide impacted soil;
- Segregation and stockpiling of non-impacted soil;
- Collection of confirmation soil samples from excavation sidewalls and stockpiled soil;
- Backfill of the excavation with the non-impacted stockpiled soil and imported fill to achieve final grades;
- Dewatering of the excavation and treatment and discharge of containerized water;
- Installation of monitoring well (MW)-9;
- Abandonment and re-installation of MW-2R;
- Completion of a baseline groundwater sampling event;
- Injection of 17,685 gallons of a two percent emulsified vegetable oil (EVO) and one percent molasses solution at six injection points using direct-push technologies;
- Site restoration; and
- Implementation of LUCs including engineering controls (ECs) (i.e., retention of the existing chain link fence and installation of signage restricting uncontrolled and unauthorized intrusive activities) and institutional controls (ICs) (i.e., inclusion of the prohibition of residential land use and groundwater use at the site in the FGGM real property master plan (RPMP) and the Installation geographic information system (GIS).

Long-term groundwater monitoring will continue in accordance with the selected remedy presented in the ROD and as outlined in the RD. Comprehensive data evaluations will be conducted and reported annually prior to the end of each calendar year. Additional ongoing activities include annual LUC inspections and CERCLA 5-year reviews.

Site ID: FGGM 13

Site Name: PEST. SHOP BLDG. 6621

CLEANUP/EXIT STRATEGY

The RA(O) started in first quarter FY14 and will continue until FY18 with LTM to follow. The number of groundwater samples collected and the types of analytes tested for is anticipated to decrease with time based on the anticipated performance of the remedy. Site access is controlled through a perimeter fence and signage as per LUCs.

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Pesticides, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198011.....	199212
SI.....	198011.....	199212
RI/FS.....	200109.....	201701
RD.....	201402.....	201701
RA(C).....	201602.....	201808
RA(O).....	201808.....	204608

RIP Date: 201808

RC Date: 204608

SITE DESCRIPTION

FGGM 17 is the FGGM CSL located along the eastern boundary of the installation, south of State Route 32 and adjacent to the Amtrak railroad tracks. FGGM began landfill operations at the site in 1958 using the trench fill method until 1976; the landfill was used for the disposal of mixed residential, commercial, and nonhazardous industrial wastes. The landfill was constructed as an unlined facility with no leachate collection system and was initially designated as the Active Sanitary Landfill. It was divided into Cell 1, which covers approximately 155 acres, and Cell 2, which covers 66 acres. These two cells are separated by a drainage swale. A third area, which lacks topographic expression, has been informally referred to as Cell 3.

A landfill-gas collection system operates along the eastern edge of the landfill cells (prevents off-site migration) to control emissions from the site (this action is part of the FGGM Compliance Cleanup Program). The landfill was officially closed in January 1996 and thereafter referred to as the CSL. Cells 1 and 2 were capped under the MDE Disposal Permit 1992-WSF-0022-0 issued in 1992. The MDE Solid Waste Program has been overseeing post-closure care under Code of Maryland Regulations (COMAR) 26.04.07.21.

A comprehensive groundwater and surface water monitoring program is in place pursuant to the state's post-closure monitoring requirements. MDE has agreed with the Army's proposal to reduce the number of analytes in the post-closure monitoring (number of wells and analytes) to more closely reflect past detections as detailed in the most recent monitoring plan.

The data from the 2007 Final RI and 2014 FFS/Assessment of Corrective Measures(ACM) indicate that the Middle Patapsco clays are thick and act as a confining unit at the CSL; therefore, the CSL is not the source of VOCs detected in the Lower Patapsco aquifer (LPA). The LPA is addressed in FGGM-47 (OU-4) groundwater investigations. The human health risk assessment and follow up supplemental risk evaluation conducted as part of the FFS/ACM concluded that there are no unacceptable risks to human health associated with soil, sediment, and surface water media at the CSL. Therefore, groundwater in the Upper Patapsco aquifer (UPA) is the only impacted medium being addressed.

The extent of contamination in groundwater has been investigated both through the ongoing semi-annual groundwater monitoring conducted pursuant to MDE's solid waste program requirements and the MDE refuse disposal permit since 1994, and through the RI activities conducted under CERCLA, beginning in 2002. During groundwater monitoring events completed in 2013, identified MCL exceedances included arsenic, benzene, and nitrate in groundwater samples from the UPA. Benzene and arsenic are migrating off-site/off-post above their respective MCLs. These constituents are being addressed as part of the preferred remedy in addition to those constituents identified as risk drivers (arsenic, iron, and manganese) in UPA groundwater. A summary of the supplemental evaluation and risk evaluations is presented in the 2014 FFS/ACM.

Comp ASP1 (FGGM-08) is located within the boundary of the CSL and will be closed along with the CERCLA investigations of the near-surface groundwater. ASP1 is recommended for NFA.

Site ID: FGGM 17
Site Name: CLOSED SANITARY Landfill

CLEANUP/EXIT STRATEGY

Cell 1 and Cell 2 have been capped. RCRA post-closure monitoring is currently being conducted around the landfill under the compliance-related cleanup (CC) program. A CERCLA ROD is expected in FY17. An active remedy is anticipated with LUCs. Cell 3 will be addressed under CCFGGM 97.

Site ID: FGGM 33

Site Name: BATTERY SHOP BLDG. 2283

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	199112.....	199303
SI.....	199112.....	201110
RI/FS.....	200901.....	201810
IRA.....	199304.....	199405

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

Former Building 2283 was located in the southeast portion of the installation approximately 500 feet west of the intersection of Morrison Street and Huber Road. The building was formerly used as a motor repair shop or storage facility (from 1941 through 1982) and battery disposal facility (from 1982 through 1992). A wood building constructed in 1941 (Building T-2283) was demolished in the mid-1990s. From 1982 through 1985, battery acid was discharged directly to surface soil in a bermed area along the north wall of the former building. After installation of an acid neutralization tank in 1985, treated fluids from the neutralization tank were discharged to the surface at the northern end. In 1987, discharge of battery acid to the tank ended, but battery rinsing and cleaning operations continued in a sink in the northeast corner of the building; a drain pipe from the sink discharged to the surface soil outside the building. All of the battery repair and maintenance operations ceased in 1992.

Per the FGGM RPMP, the existing land use is professional/institutional. FGGM-33 is part of the Asymmetric Warfare Group (AWG) Complex and is currently a picnic pavilion with grass and tree coverage.

FGGM-33 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47)

Site ID: FGGM 36

Site Name: PHOTO LAB'S BLDG 4553, 6530

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	199601.....	199606
SI.....	200901.....	201708
LTM.....	201708.....	204608

RIP Date: N/A
RC Date: 201708

SITE DESCRIPTION

Building 6530 was a vehicle maintenance facility (SWMU 105) with nearby oil/water separator (OWS) (SWMU 106) and washracks (WR) (SWMUs 107 and 108). Building 6530 is located in the southwestern portion of the installation at the intersection of Taylor Avenue and Gordon Street. The site is currently used as an auto repair clinic and craft center.

No chemicals except typical cleaners are kept in the crafts portion of the building. The auto repair facility stores oil, antifreeze, and Freon. Used oil cans, oil filters, and rags are stored in 55-gallon drums for eventual removal. All floor drains in the auto repair area flow to an OWS (SWMU 106), which also receives wastewater from two WRs (SWMUs 107 and 108) at the site. An 800-gallon waste oil aboveground storage tank (AST) is located at the northern exterior wall of the building.

Per the 1996 SWMU study there are no recorded releases of hazardous substances. There was no sign of a release of contaminants to the environment during the on-site inspection and perimeter survey of the building grounds. Samples were collected around Building 6530 on three occasions; during an RFA 3rd Phase, a Data Gap Investigation, and a PA/SI.

In April 1999, as part of the RFA 3rd Phase, 16 direct-push borings were advanced around the building, WR, and OWS. Three surface soil samples, 12 subsurface soil samples, and one groundwater sample were collected. The samples were analyzed for VOCs, SVOCs, eight RCRA metals, and total petroleum hydrocarbons (TPH) diesel range organic (DRO). In June 2002, as part of the data gap investigation, six new borings were advanced around the northern and eastern edges of Building 6530 and around the WRs and OWS. Six surface soil samples were collected and analyzed for metals, pesticides, and herbicides.

The Final 2015 Southwest PA/SI recommends NFA for surface and subsurface soils at Building 6530. Since only one groundwater sample was previously collected, an additional groundwater sample was collected from a new monitoring well and analyzed for total and dissolved metals. Based on the recent groundwater sample using the monitoring well data, the dissolved metals risk is below site-specific thresholds and NFA is recommended for groundwater at Building 6530.

FGGM-36 also included Building 4553 (non-SWMU 11). The USEPA approved NFA for Building 4553 in June 2011 and the investigation for Building 6530 (FGGM-36) will advance to the RI/FS phase. From this point forward, Building 6530 will be reported under its site designation FGGM-36.

RI/FS will be conducted for Building 6530 with the anticipation that LUCs will be established and maintained for groundwater.

CLEANUP/EXIT STRATEGY

Site ID: FGGM 37

Site Name: KIMBROUGH ARMY HOSPITAL

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199601.....	199606
SI.....	201009.....	201704
RI/FS.....	201504.....	201807
RD.....	201505.....	201807
RA(C).....	201708.....	201808
LTM.....	201808.....	204808

RIP Date: N/A

RC Date: 201808

SITE DESCRIPTION

Kimrough Ambulatory Care Clinic (FGGM-37 and Building 2480) is located approximately 100 feet east of the intersection of Llewellyn and Wilson Avenues and was identified as SWMU 71 during the 1996 SWMU study because it routinely discharged waste from silver recovery units. Building 2480 has been used as a hospital since its construction in 1968. Hospital operations were downsized to those of a clinic in the early-1990s. Chemicals stored in flammable storage cabinets and on shelves during the SWMU study include acetic acid, acetone, alcohol, phenol, trichloric acid, silver nitrate, hydrochloric acid, fixer and developer, iodine, peroxides, and sodium chloride. Areas within the hospital that used chemicals include the pharmacy, laboratories, x-ray rooms, emergency rooms, operating rooms, dental labs, podiatry rooms, and orthopedic rooms. Silver recovered from photographic processing was removed to the warehouse for proper disposal.

The 1996 USEPA historic aerial photographic study of the installation identified the site as a military police (MP) and vehicle service and staging area in 1943 and 1952 aerial photographs. The USEPA study identified stained soils adjacent to buildings at the east side of this site in the 1943 and 1952 aerial photographs.

As part of the March 2000 sampling visit, eight subsurface soil and one groundwater sample were collected and analyzed for TPH, VOCs, SVOCs, and eight RCRA metals. Arsenic exceeded the residential risk based concentrations (RBC) in two of eight soil samples; however, detection limits exceeded both the residential RBC and the industrial RBC. Detected concentrations (arsenic and chromium) in groundwater were above the site-specific threshold for cumulative cancer risk and target organ non-cancer hazard threshold. In addition, the two metals were detected at concentrations in excess of their federal MCL. Therefore, additional groundwater quality data was collected from a new monitoring well during the PA/SI and analyzed for total and dissolved metals. The 2015 Final Southeast PA/SI results showed manganese, cobalt, and thallium in groundwater drove the non-cancer risk above site specific thresholds; therefore, further action for groundwater is required. NFA is required for soil at FGGM-37.

CLEANUP/EXIT STRATEGY

Kimrough Army Community Hospital will undergo an additional supplemental SI during FY16. The Army anticipates an NFA for soil and possible action for groundwater.

Site ID: FGGM 45

Site Name: CALIBRATION LAB BUILDING 2220

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	199601.....	199606
SI.....	199607.....	201110
RI/FS.....	200909.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

Building 2220 is located in the southeastern portion of the installation, approximately 300 feet east of the intersection of 3rd Street and Pepper Road and was identified as SWMU 42 during the 1996 SWMU study because past operations at the building included the use of solvents, which produced waste. Building 2220 was constructed in the late-1950s or early-1960s and was used as a warehouse and troop training center for some unknown period of time. Building 2220 was used in the late-1960s as a missile repair shop, using solvents and producing solvent waste. No hazardous chemicals are currently in use at the facility. Building 2220 is also identified as FGGM 91, Former Missile Repair Shop, which pertains to the groundwater at Building 2220 while FGGM-45 pertains to the building and soil.

FGGM-45 is currently used for storage and administration. Building 2220 is currently used as an electronic maintenance and equipment calibration shop.

FGGM-45 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FGGM 47).

Site Name: POST LAUNDRY (OPERABLE UNIT 4)

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH
Contaminants of Concern: Volatiles (VOC)
Media of Concern: Groundwater

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RD, IRA, RA(C), RA(O), RIP Date, and RC Date.

SITE DESCRIPTION

FGGM 47 is Building 2250, the former Post Laundry Facility, which is located approximately 300 feet northeast of the intersection of Rock Avenue and Huber Road.

- FGGM 47 is also referred to as OU-4 and includes:
- FGGM-33 Battery Shop Building (Building 2283),
- FGGM-45 Calibration Laboratory (Building 2220)
- FGGM-49 Directorate of Logistics (DOL) Buildings 2286 and 2246,
- FGGM-51 Spill Site (Building 2217),
- FGGM-86 Former MP Maintenance Facility (Building 2286),
- FGGM-88 Former Tank Maintenance Facility Shop 1 (Building 2207),
- FGGM-89 Former Tank Maintenance Facility Shop 2 (Former Building 2217),
- FGGM-90 Former Tank Cleaning Warehouse (Building 2240),
- FGGM-91 Former Missile Repair Shop (Building 2220),
- FGGM-92 Former Heavy Gun Cleaning Shop (Buildings 2244, 2245, 2246, 2246D, and 2253),
- FGGM-96 Building 2213, Building 2266, Furniture Repair shop (former building 2276), Building 2287, Paint Storage Shed (Building 2288), WR-5, and Debris and Stain-1975.

Because a drinking water supply (LPA) has been impacted, a NTCRA/ EE/CA was completed to expedite an interim cleanup measure.

The NTCRA implemented at OU-4 to address elevated concentrations of VOCs in groundwater. An EE/CA was conducted in June 2013 and evaluated remedial alternatives to address groundwater contamination at three separate AOCs: AOC 1 - Building 2286/ 2276, AOC 2 - Building 2250, and AOC 3 - the downgradient LPA Study Area.

Long-term groundwater monitoring will continue in accordance with the selected interim remedy presented in the EE/CA and action memorandum and as outlined in the Interim Removal Work Plan (ARCADIS, 2013b).

Site ID: FGGM 47

Site Name: POST LAUNDRY (OPERABLE UNIT 4)

including groundwater sampling, gauging, and contaminant trend analysis.

The interim removal action reports (IRAR) have been completed and the project has reverted back to remedial authority. Actions are being taken to complete the RI/FS, PP, ROD, and assess final remedial action alternatives.

Indications suggest either one large or several closely spaced smaller PCE/CCl4 plumes are present in the LPA. This plume extends over a 1 mile (at concentrations above federal criteria) into the town of Odenton, Maryland. Bottled water is being supplied to several dozen homeowners/businesses with drinking water wells as a precaution. Key to the exit strategy is a good understanding of the source, architecture, and heading of the plume. To this end, three additional groundwater monitoring wells were installed further east into the town of Odenton to better define the leading edge of the plume. The results of this work are still under evaluation, but additional wells may be necessary. This work is currently being done as a NTCRA as the plume has affected a drinking water resource. The collection of groundwater data is expected to continue with a ROD and RA(C) in FY2016 and an estimated 30 years of RA(O) including groundwater monitoring and LUC maintenance. The Army anticipates three engineered interim remedies, two will be located where source levels of PCE and are located (Bldgs 2250 and 2286) including ISCO/LTM with LUC and AS/SVE with LUC. The third interim remedy would consist of a large-scale pump-and-treat system across the path of the plume to stop the continued off-post migration. This system will be installed near the post boundary with the town of Odenton.

CLEANUP/EXIT STRATEGY

An RI/FS is being conducted at OU-4, and the ROD will be completed by the end of calendar year 2018. Based on the existing data, the Army anticipates closure for soils and OU-4 will address groundwater contamination through the existing treatment systems.

Site ID: FGGM 49

Site Name: DOL BUILDINGS 2286, 2246

STATUS

Regulatory Driver: CERCLA
RRSE: LOW
Contaminants of Concern: Volatiles (VOC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199601.....	199606
SI.....	199601.....	199606
RI/FS.....	199607.....	201810
RIP Date:	N/A	
RC Date:	201810	

SITE DESCRIPTION

FGGM 49 concerns Buildings 2286 and 2246 located north of Morrison Street and east of Huber Street, respectively. Building 2286 is also identified as FGGM-86 which covers soil and groundwater actions around the building. Building 2246 is also identified as FGGM-92 which covers soil and groundwater actions around the building.

FGGM-49 is currently used for maintenance, storage, and administration by the DOL and AWG. FGGM-49 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

Indications suggest either one large or several closely spaced smaller PCE/CCI4 plumes are present in the LPA. This plume extends over 1 mile (at concentrations above federal criteria) into the town of Odenton, Maryland. Bottled water is being supplied to several dozen homeowners/businesses with drinking water wells as a precaution. Key to the exit strategy is a good understanding of the source, architecture, and heading of the plume. To this end, three additional groundwater monitoring wells were installed further east into the town of Odenton to better define the leading edge of the plume. The results of this work are still under evaluation, but additional wells may be necessary. This work is currently being done as a NTCRA as the plume has affected a drinking water resource. The collection of groundwater data is expected to continue with a ROD and RA(C) in FY2016 and an estimated 30 years of RA(O) including groundwater monitoring and LUC maintenance. The Army anticipates three engineered interim remedies, two will be located where source levels of PCE and are located (Bldgs 2250 and 2286) including ISCO/LTM with LUC and AS/SVE with LUC. The third interim remedy would consist of a large-scale pump-and-treat system across the path of the plume to stop the continued off-post migration. This system will be installed near the post boundary with the town of Odenton.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47).

Site ID: FGGM 51
Site Name: BUILDING 2217

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199601.....	199606
SI.....	199607.....	199612
RI/FS.....	200901.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

FGGM-51 is Building 2217 which was located in the southeastern portion of the installation west of the intersection of Chisholm Avenue and 2nd Street. Two heating oil underground storage tanks (USTs) were located near Building 2217: UST No. 2217A was a steel UST (unknown size) installed June 1, 1970 and removed on July 14, 1988; UST No. 2217B was a 1,000-gallon capacity steel UST located off the southwest corner of Building 2217 that was installed Aug. 3, 1988 and removed Dec. 11, 1997. The first tank was removed due to corrosion; there were holes at the tank end. There was free-product observed, the saturated soils were removed, and the soil removal project stopped upon finding a clay layer. The new tank was installed and before the hole was completely covered with backfill it filled with rain water. There was no sign of product and the tank installation was completed. In April 2000, the case(s) were closed.

Building 2217 was demolished in 2003. While the concrete foundation (slab) was being removed, environmental sampling from beneath the slab detected a limited area of petroleum contamination to around 3.5 feet beneath the slab. An investigation of the soil beneath the slab was started in October 2005. Six locations were sampled beneath the slab. Six surface and 12 subsurface soil samples were collected. The samples were analyzed for SVOCs, target analyte list (TAL) metals, TPH-DRO, TPH-gasoline range organics GRO), polychlorinated biphenyls (PCB), and target compound leachate procedure (TCLP) metals. TPH-DRO was detected at up to 2,300 milligrams (mg) per /kilogram (kg) in surface soil and up to 1,200 mg/kg in subsurface samples. Arsenic (at 1.9 mg/kg) was the only other compound to exceed an MDE non-residential cleanup standard.

The slab and soil beneath it were removed on April 24, 2007. To assess the cleanup action, five post-excavation soil samples were collected and analyzed for TPH-DRO and TPH-GRO. The highest concentration of TPH-DRO detected was 23 mg/kg. The highest concentration of TPH-GRO detected was 3.5 mg/kg.

Former Building 2217 is also designated as FGGM-89 for the groundwater and soil at the former tank maintenance facility shop while the UST-related spill in soil is FGGM-51. FGGM-51 is currently an undeveloped grass field.

FGGM-51 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47).

Site ID: FGGM 70

Site Name: BLDG 6513 INDOOR RANGE

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Phases	Start	End
PA.....	199601.....	199606
SI.....	200901.....	201710

RIP Date: N/A

RC Date: 201710

SITE DESCRIPTION

FGGM-70 (Former Building 6513) is located in the southern portion of the installation on the northwest corner of the intersection of York Avenue and Simonds Street. Building 6513 was identified as a past SWMU because it was formerly used as an indoor shooting range and disposal practices for the impact range were unknown. Building 6513 was demolished in 2001 after standing vacant (but locked) for several years. A 550-gallon heating oil UST was located outside the southeast corner of Building 6513. The UST was removed in January 1997. The site is currently a parking lot.

FGGM-70 was not identified in the USEPA (1996) review of historic aerial photographs; no stains, stressed vegetation, standing liquid, or other environmental concerns were identified at this location. Over the course of previous investigations, four surface soil samples, five subsurface soil samples, and five groundwater samples were collected and analyzed. As part of the PA/SI, one groundwater monitoring well was installed; groundwater samples were collected and analyzed for VOCs and SVOCs. The final PA/SI report recommends NFA for soils and an supplemental site investigation (SSI) be conducted for groundwater for THP-DRO, total and dissolved metals, including hexavalent and trivalent chromium speciation.

CLEANUP/EXIT STRATEGY

An SSI will be conducted for groundwater for THP-DRO, total and dissolved metals, including hexavalent and trivalent chromium speciation.

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199510.....	199604
SI.....	199605.....	199606
RI/FS.....	200005.....	201410
RD.....	200901.....	201608
RA(C).....	201602.....	201708

RIP Date: N/A

RC Date: 201708

SITE DESCRIPTION

FGGM 74 is the USAOC parcel located in an area along the south border of FGGM; it is situated generally between State Route 32 and Rock Avenue and between Remount and Pepper Roads. This area was authorized by Congressional action for transfer in 1993 (effective date Sept. 30, 1994) from the Department of the Army to the USAOC to accommodate long term storage and service needs of the Library of Congress and other Legislative Branch agencies.

The USAOC parcel is within the FGGM installation boundary; however, the property is not owned or controlled by FGGM. USAOC uses the parcel for long-term storage. The western portion of the parcel is leased to the Army as a transportation motor pool (TMP) (approximately 10 acres). Railroad tracks bisect the USAOC property and are owned by the Maryland State Highway Authority. Regulated wetlands and wetland buffers, other waters of the US, and 100 year floodplains exist on this project site. A stream (Rogue Harbor Branch) flows south through the site, and wetlands are present in the vicinity of the stream.

Contamination on the USAOC parcel is due to past Army activities. The USAOC parcel was used historically for a variety of purposes, including: warehouses and storage for the former DRMO, TMP facility, electrical substation, tractor trailer storage, and additional warehouse storage buildings. Other areas identified on the property include a suspected fill area, a compost area, a gravel fill area, a former railroad bed, and Commissary Warehouse Area. Multiple phases of environmental investigations and sampling have been conducted at FGGM-74 dating back to the late 1980s.

The previously collected data is summarized in the Final RI Package for the USAOC (ARCADIS 2013) and the FFS (ARCADIS, 2014).

The results of the Human Health Risk Assessment (HHRA) detailed in the final RI package indicate that there are no risks posed from soil under current land use; however, unacceptable risks were identified under potential future use scenarios due to exposure to contaminants in soil. Future residential land use is not anticipated at FGGM-74; however these potential risks must be eliminated or controlled. The results of the HHRA indicate that lead concentrations in soil at two hot spot areas at depths of seven and 10 feet bgs present an unacceptable risk to the future commercial worker and hypothetical resident under a hypothetical re-grading or excavation scenario.

The September 2014 ROD identified the RAO as: to prevent human exposure to soil that would cause unacceptable risk to human health.

Per the ROD, the selected remedy (hot spot excavation with off-site disposal) was chosen to mitigate the potential hazards posed by COCs in subsurface soil at FGGM-74. The selected remedy will remove contaminated soil to the established preliminary remediation goal (PRG) or site cleanup level (SCL) and dispose of them off-site at a permitted facility. Upon completion there will be no unacceptable risk under any future land use scenarios (residential or non-residential) and no requirement for LUCs associated with soil. The excavation footprint will focus on the central portion of FGGM-74 where the highest concentrations of lead were detected.

Historical chlorinated solvent use at OU-4 has resulted in groundwater contamination plumes extending south toward USAOC

Site ID: FGGM 74
Site Name: ARCHITECT OF THE CAPITOL

parcel. The areal extent of the OU-4 groundwater contamination, which extends beneath FGGM-74, is being addressed comprehensively as part of OU-4.

CLEANUP/EXIT STRATEGY

A final ROD was signed in September 2014. RD and RA are planned during the fourth quarter FY16. The remedies will include lead hotspot removal.

Site Name: TRAP AND SKEET RANGE (OU-1)

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199901.....	199905
SI.....	199901.....	199905
RI/FS.....	199909.....	201803
RD.....	201708.....	201903
IRA.....	200305.....	200306
RA(C).....	201808.....	204808
RA(O).....	201908.....	204908
RIP Date:	204808	
RC Date:	204908	

SITE DESCRIPTION

The former trap and skeet range (FGGM-83 & OU-1) was used for recreational purposes from the mid-1970s through 1994.

OU-1 is located at the eastern extent of 20th Street, approximately 1,400 feet east of the intersection with State Route 175. The site is a vacant parcel of 66 acres. Approximately 44 acres were used as a trap and skeet range. The former range consisted of a firing line, skeet houses, and the man-made pond. The pond was created by damming a stream.

Historical sampling included shallow soil at 49 locations, sediment at 10 locations (including the flowing stream bed, the dry stream bed, and the pond), surface water at eight locations (including the pond and the stream), and groundwater at four contaminated soil locations and one background location. All samples were analyzed for PAHs and total lead. The highest risk to human health is 2.8x10-4, which exceeds the upper threshold for carcinogenic risk (1x10-4); the human health risks are driven by the presence of PAHs in the surface soils. Analytical results indicated that PAHs and total lead were detected across the site at concentrations exceeding regulatory criteria. Based on results of a sensitive receptor survey (SRS) and a risk assessment concluded that corrective action measures should be implemented to address the PAH-contaminated soils and the deposits of lead shot, skeet fragments, and plastic shell fragments.

The July 2002 corrective action plan (CAP) recommended excavation and removal of these deposits and the PAH-contaminated soils to a maximum estimated depth of 3.5 feet. In addition, draining of the site pond and removal of the deposits from the pond bottom were recommended. In August 2004 over 100 soil samples were collected and analyzed for metals (antimony, arsenic, copper, lead, and zinc) and PAHs. In addition, 10 sediment and seven surface water samples were collected and analyzed for metals and PAHs. Seven groundwater monitoring wells were also installed, developed, and sampled for metals and PAHs.

The findings of the investigation indicate that lead shot, metals, and PAHs have affected portions of the surface soils on-site. PAHs are primarily in front of the former firing line and to the east of the firing line in the woods, just east of one of the former trap-houses of the range. The depth of the PAH impacts extend to the shallow subsurface soils within 150 to 200 feet in front of the former firing line and just to the east of one of the former trap-houses. The lead shot is present in the surface soils east and southeast of the pond in agreement with the azimuth of the former center firing station of the range. A supplemental testing proposal was submitted in September 2007 to determine whether lead concentrations reported in the February draft data report were representative of the lead content in soils excluding any lead shot. To assess potential exposure to human and ecological receptors at the former trap and skeet range, a final memorandum human health risk assessment (HHRA) and site-specific terrestrial ecological risk assessment field study WP were prepared. Upon approval of the WP, ecological-risk field sampling activities took place and a Draft RI Report was submitted in December 2010, which summarized risks to human health and ecological receptors.

The HHRA was approved in Nov 2009. The draft final RI indicated there was a potential for unacceptable ecological risk in soil from lead; PAHs have been determined to not pose an unacceptable ecological risk.

Site ID: FGGM 83

Site Name: TRAP AND SKEET RANGE (OU-1)

A final RI was submitted in the summer of 2011; however, regulatory comments were tendered and addressed. In Sept 2012, the Army submitted another final RI (revision 2) and additional regulatory comments were tendered. The Army has responded to these comments and again submitted the final RI which was reviewed and approved by the USEPA

An FS is currently underway at OU-1 and will evaluate multiple RA alternatives.

CLEANUP/EXIT STRATEGY

Preliminary indications are that a remediation will be needed to reduce the ecological risks. Specifically, the RA is anticipated to address the lead shot and lead in the surface soil. The dimensions of cleanup have not been fully established but likely will include lead contaminated soil and lead shot removal and LUCs. 30 years of LTM and LUCs are anticipated. The RI was accepted by the regulators. The FS is scheduled for completion in 2018

Site Name: MOTORPOOL FAC (OPERABLE UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200306.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The Motor Pool Maintenance Facility (Building 2286) was established in 1941. FGGM-86 consists of Building 2286 and former Buildings 2285 and 2290. Past operations included vehicle painting, sheet metal stamping, and battery charging. This resulted in elevated levels of VOCs in the groundwater including PCE and TCE.

FGGM-86 is part of the AWG Complex and is currently used for storage and administration.

FGGM 86 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

Indications suggest either one large or several closely spaced smaller PCE/CCl4 plumes are present in the LPA. This plume extends over 1 mile (at concentrations above federal criteria) into the town of Odenton, Maryland. Bottled water is being supplied to several dozen homeowners/business with drinking water wells as a precaution. Key to the exit strategy is a good understanding of the source, architecture, and heading of the plume. To this end, three additional groundwater monitoring wells were installed further east into the town of Odenton to better define the leading edge of the plume. The results of this work are still under evaluation, but additional wells may be necessary. This work is currently being done as a NTCRA as the plume has affected a drinking water resource. The collection of groundwater data is expected to continue with a ROD and RA(C) in FY2016 and an estimated 30 years of RA(O) including groundwater monitoring and LUC maintenance. The Army anticipates three engineered interim remedies, two will be located where source levels of PCE and are located (Bldgs 2250 and 2286) including ISCO/LTM with LUC and AS/SVE with LUC. The third interim remedy would consist of a large-scale pump-and-treat system across the path of the plume to stop the continued off-post migration. This system will be installed near the post boundary with the town of Odenton.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47).

Site Name: NIKE CONTROL SITE (OPERABLE UNIT 3)

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200307.....	201810
RD.....	201708.....	201910
RA(C).....	201808.....	202010
RA(O).....	201908.....	205010
RIP Date:	202010	
RC Date:	205010	

SITE DESCRIPTION

The Nike Control Site is a former Missile Master complex that supported the Nike missile program from 1955 to 1972.

As part of the site's RI/FS, lead was detected in surface and subsurface soils above FGGM background levels at concentrations ranging from 0.71 mg/kg to 1,770 mg/kg. Arsenic was detected in subsurface soils above FGGM background levels and above the USEPA Region III industrial RBC of 1.9 mg/kg at concentrations ranging from 0.68 mg/kg to 17.1 mg/kg. TCE was detected in groundwater at concentrations ranging from 0.56 [estimated concentration (J)] ug/L] to 218 ug/L. Building 1945 (the apparent source area of the TCE groundwater plume) was used as a generator plant and for maintenance operations.

The draft final RI/FS was submitted to the USEPA and the MDE and was commented on. In response to comments from the MDE, the Army collected additional soil samples to better define certain metals and VOCs at the former radar tower. The results have shown no source levels of TCE or metals associated with the radar tower. The USEPA requested that a screening level environmental risk assessment (SLERA) be completed and added to the RI/FS. The draft final SLERA was submitted to the USEPA. The USEPA also requested the collection of sediment samples from site intermittent streams, which was completed. No unacceptable risks to ecological receptors exist.

The TCE groundwater plume is approximately 100 feet from the nearest building (Building 1976). This is an unoccupied storage building that is connected to Building 1978, an administrative building. Sediment analysis has been completed and reported in a revised SLERA. The Army and USEPA have worked to finalize the revised SLERA. Several draft final RIs were submitted but additional comments were received. The most recent version of the RI was submitted in January 2013. The RI recommends the preparation of a feasibility study to assess potential remedial action alternatives to address TCE and arsenic in near-surface groundwater as well as potential vapor intrusion in Building 1976. The USEPA tendered additional comments on the last RI which require addressing and incorporation into another RI revision.

A WP is under development to fulfill the remaining RI data gaps.

CLEANUP/EXIT STRATEGY

A groundwater plume of TCE is present beneath part of the site. The Army anticipates an engineered remedy with a ROD in FY18, RA(C) and RA(O) extending through FY20. The number of wells and analytes will be reduced over time as appropriate. An RI/FS is scheduled for completion in 2018.

Site ID: FGGM 88

Site Name: TANK MNT FAC. SHOP-1 (OP UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200309.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The former Tank Maintenance Facility Shop - 1 (FGGM-88) includes Building 2207 (SWMU 37, Directorate of Public Works (DPW) Storage and Receiving Warehouse), Building 2201 (DPW Storage and Supply Warehouse), Building 2206 (thrift store), Building 2205 (storage building), and Building 2200 (metal canopy for outdoor storage). Constructed in 1918, Building 2207 was used as a tank maintenance facility prior to 1973. Since at least the mid-1980s, it has been used by the DPW as a receiving and storage facility. The grounds are also used for storing construction materials, non-PCB-containing transformers, and fluorescent light bulbs. Records indicate that a spill occurred from a transformer in the yard; however, the material was tested and no PCBs were found.

FGGM 88 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

LTM and O&M are underway.

Site Name: TANK MAIN. FAC. SHOP-2 (OP UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200309.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The former Tank Maintenance Facility Shop - 2 (FGGM-89) is located on Second Street between Pepper Road and Chisholm Avenue. Building 2217 was located in the southeast corner of the site. A former WR (SWMU 41) and OWS (SWMU 40) were located in the northwest corner of the site. Constructed in 1918, Building 2217 was used as a tank maintenance facility until 1973. The building was used to store military vehicles, equipment, and small motors. The associated WR was used to wash vehicles and construction equipment; waste wash water was discharged to the OWS and then to the sanitary sewer system. In 1999 or 2000 the WR and OWS were demolished and removed. No permanent structures are located on site and the property is currently used for storage of vehicles and equipment.

Former Building 2217 is also designated as FGGM-51 for the UST-related spill in soil while FGGM-89 is the groundwater and soil at the former tank maintenance facility shop.

An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

FGGM 89 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FGGM 47).

Site ID: FGGM 90

Site Name: TANK CLEANING SUPPLY (OP UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200307.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The former Tank Cleaning Supply Warehouse (FGGM-90) is located in the northwest corner of the intersection of Pepper Road and Rock Avenue. The complex includes Building 2240 (SWMUs 45, 46), Building 2241 (SWMUs 47, 48), Building 2242 (SWMUs 49, 50), Buildings 2243, 2247, and 2248 (SWMUs 51, 52), and Building 2249 (SWMUs 53, 54). Building 2240 is a separate single-story brick structure. Buildings 2241, 2242, and 2243 are connected in sequence and are elevated on wooden piers. Buildings 2247, 2248, and 2249 are smaller, wooden garage-type structures located behind the larger buildings. Building 2240 has been used as a storage and supply facility since its construction in 1934. Buildings 2241 and 2242 were constructed in 1918 and have always been used for receiving and short-term storage of supplies and materials before shipping. Buildings 2247, 2248, and 2249 are currently being used for assorted military administrative/commercial/storage activities.

FGGM 90 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47).

Site ID: FGGM 91

Site Name: MISSILE REPAIR SHOP (OP UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200302.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The former Missile Repair Shop, Building 2220 (FGGM-91) is located approximately 150 feet north of the intersection of Second Street and Pepper Road. Building 2220 is designated as FGGM-45 while FGGM-91 is the groundwater at the site.

The shop was initially used as an electronic maintenance and equipment calibration shop and then later used as a missile repair shop. In the 1960s the shop was a warehouse and troop-training center. No hazardous chemicals are currently in use at the facility. Past activities in the building used solvents and produced solvent waste. Small amounts of cleaning solvent and gasoline were stored in a shed outside the building. The site had two fuel oil USTs; one was removed in 1992, the other replaced in 1988 then removed in 1997. A one-gallon spill of fuel oil reportedly occurred in 1993. FGGM-91 is currently used for storage and administration.

FGGM-91 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4. An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

CLEANUP/EXIT STRATEGY

This site is located within the geographic boundary of OU-4 and is being addressed as part of OU-4 (FFGM 47).

Site Name: HEAVY GUN CLEAN/REPAIR (OP UNIT 4)

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199812.....	199902
SI.....	199812.....	199902
RI/FS.....	200307.....	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The former Heavy Gun Cleaning and Repair facility (FGGM-92) includes Buildings 2246 and 2253, located by Pepper and Huber Roads. The maintenance facility includes two main structures, Building 2246 (SWMUs 55-56) and two smaller structures, Buildings 2244 and 2245. Building 2246 includes a wing containing vehicle service bays. A WR (SWMU 58) and associated OWS (SWMU 57) are at the southwest side of Building 2246D. Building 2246 has been used as a warehouse and vehicle and equipment maintenance facility since 1934. From 1934 until the mid-1980s it was used as a heavy gun repair shop. A portion of the building is also believed to have been used as a tank repair shop. The facility currently provides all levels of maintenance and repair of heavy equipment and base vehicles.

Building 2253 was constructed in 1934, and has been used for administration, vehicle maintenance, as a warehouse, and for the storage and maintenance of grounds-keeping equipment and supplies (e.g., tractors, gas cylinders). The FGGM-92 current use is industrial and administrative.

An interim removal action was completed for OU-4, and associated LTM and O&M activities continue.

FGGM 92 is located in the geographic boundary of OU-4 and is being addressed as part of OU-4.

CLEANUP/EXIT STRATEGY

LTM and O&M are underway.

Site ID: FGGM 93
Site Name: MANOR VIEW DUMP SITE

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

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

Phases	Start	End
PA.....	200301.....	200302
SI.....	200303.....	200304
RI/FS.....	200307.....	201405
RD.....	201403.....	201410
IRA.....	200501.....	201212
RA(C).....	201103.....	201410
LTM.....	201411.....	204611

RIP Date: N/A

RC Date: 201410

SITE DESCRIPTION

Manor View Dump Site is located near the intersection of MacArthur Road and 2nd Corps Boulevard in the northern portion of FGGM. The site is bounded by a group of residential housing and an open field to the north, 2nd Corps Boulevard to the south, Hayden Drive to the west, and Manor View Elementary School to the east.

Landfilled material at the site was discovered in 2003 during excavation and earth moving activities associated with the housing privatization initiative. Following the discovery of landfilled material, various field activities were completed to determine the nature and extent of the waste mass. Materials recovered in test pits and soil borings were dated as originating from the 1940s, and classified into two general categories: methane generating waste (MGW) and construction and demolition (C&D) debris/fill.

The MGW was determined to occupy an approximately one-acre area confined to the western portion of the site; bounded to the east by the north/south oriented drainage swale and to the north and west by the Potomac Place Housing Area. Methane was consistently observed at concentrations exceeding the lower explosive limit (LEL) in various soil gas monitoring locations in this area. This portion of the site was the focus of a NTCRA conducted in 2012, which included the excavation and off-site disposal of approximately 27,700 tons of non-hazardous MGW and soil. Following excavation, the site was backfilled utilizing stockpiled overburden soil, followed by a minimum of 18 inches of clean imported common fill, and six inches of top soil to support vegetative growth.

The remaining approximate nine acres of the site (eastern portion of the site) contains debris/fill and typically consists of C&D debris including rubble and burned material/ash which is more inorganic in nature and does not significantly contribute to methane generation through decomposition. The buried C&D debris remains on the eastern portion of the site beneath a vegetative soil cover approximately two to eight feet thick. A variance from the cap design requirements in COMAR 26.04.7.21 was approved by MDE because installation of an impermeable cap would impede naturally occurring degradation of contaminants in groundwater.

The Remedial Action Completion Report (RACR) summarizes the implementation of the selected remedy at Manor View Dump Site to address unacceptable risk identified under future use scenarios due to exposure to contaminants in groundwater, soil, and indoor air, and the remaining buried waste at the Site.

Subsequent to the alternatives analysis conducted in the FS, a ROD authorizing the selected remedy was signed by the U.S. Army and USEPA on September 30, 2014. The remedy selected within the ROD was maintenance of existing soil cover, LUCs, and LTM. An RD was developed to direct the implementation of the selected remedy. Implementation of the selected remedy was conducted August through October 2014 and included the following components:

- Semi-annual LTM of COCs in groundwater (i.e., arsenic, cadmium, chromium, cobalt, lead, selenium, thallium, TCE and vinyl chloride [VC]);
- Semi-annual LTM of soil gas for methane;
- Annual LTM of indoor air in the crawl space at Manor View Elementary for TCE and its daughter products (i.e., 1,1-

Site ID: FGGM 93
Site Name: MANOR VIEW DUMP SITE

dichloroethene [DCE], cis-1,2-DCE, trans-1,2-DCE, and VC);

- Annual site inspections including operational testing of the methane monitors located in the crawl space at the Manor View Elementary School and in the housing units adjacent to the western portion of the site and maintenance of the soil cover; and
- Implementation of LUCs.

The RACR summarizes the implementation of the selected remedy. Long term monitoring will continue in accordance with the selected remedy presented in the ROD and as outlined in the RD. Comprehensive data evaluations are conducted and reported annually.

CLEANUP/EXIT STRATEGY

With the methane generating waste removed, the data generally show the levels of residual methane are decreasing. Soil gas samples are being collected, but the frequency will decrease with the declining levels of soil-gas methane.

Site ID: FGGM-95
Site Name: LANDFILL SITES (Former)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200406.....	200712
SI.....	200906.....	201710

RIP Date: N/A

RC Date: 201710

SITE DESCRIPTION

FGGM-95 initially included 23 areas of interest (AOI) where data from the 2007 PA/SI and other studies identified site features indicative of past landfill and related activities. The AOIs covered in FGGM-95 are: Possible Dump Site 1957-A, Possible Dump Site 1957-B, Possible Dump Site 1957-C, Possible Dump Site 1957-D, Possible Dump Site 1957-E, Possible Dump Site 1957-F, Possible Dump Sites 1970, Site M Parcel 1, Site M Parcel 2, Site M Parcel 3, Site M Parcel 4, Site M Parcel 5, Site M Parcel 6, Site M Parcel 7, Site M Parcel 8, Site M Parcel 9, Former Burning Waste Site 1957, Inactive Landfill 4, Pre- WWII Laundry on the USAOC property, Taylor Avenue Buried Drum Site, Waste Storage Disposal Area 1938, Fill 1988, Small Pit 1952, Site Y, and buried asphalt at Building 2490. None of these AOIs are currently in operation. These AOIs have been combined into a single site (FGGM-95) due to their proximity and/or similarity in contaminants and affected media. Based on existing data, the AOIs fall into two categories: NFA or further action. For AOIs where the data supports a determination of NFA, the Army prepared consensus letters describing the AOIs and proposed NFA. The Army prepared and submitted numerous consensus letters to the USEPA, and many were approved.

A SSI is planned at six of these AOIs in an effort to close them without conducting a RI/FS. Those AOIs that cannot be closed during the PA/SI or SSI phase will need to progress further through the CERCLA process beginning with an RI/FS. These RI/FS AOIs will be opened as separate sites in AEDB-R.

CLEANUP/EXIT STRATEGY

The PA/SI has been completed with several AOIs receiving NFA letters. An SSI will be conducted at those AOIs that did not receive NFA. Any AOI that does not receive NFA after the SSI will be opened as a separate FGGM # and proceed with an RI.

Site ID: FGGM-96

Site Name: MOTOR POOLS, WASHRACKS, BLDGS (FMR)

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

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

Phases	Start	End
PA.....	200409.....	201412
SI.....	200906.....	201710

RIP Date: N/A

RC Date: 201710

SITE DESCRIPTION

In the mid-1990s, the USEPA conducted a historic aerial photographic study of the installation. At about the same time the Army conducted a study of SWMU. Both studies had the goal of locating potential chemical storage and release sites. The combined results identified dozens of motor pools, washracks, vehicle service and staging areas and buildings where chemical releases may have occurred. A PA/SI of these AOIs was conducted and has concluded there are 38 AOIs where tests and screening-level risk analysis results confirm additional environmental actions are required. The following is a list of the AOIs to be further investigated under FGGM-96: Buildings 546, 1007/MP15/WR10, 1943, 2120c, 2128, (2227, 2224), 2234, 2482, 2490, 2501, 2630, 2724, 2728,(2810, 2811, 2832), 4411, 4587, 4680, 8485, 8486, (8549, 8550, 8551), 9581, MP-1/WR4, MP-2, MP-5, MP-7/WR6, MP-8, MP- 9, MP-10, MP-11/WR7, MP-12/WR8, MP-13/WR9, MP-17, MP-18/WR12, MP-19/WR13, PVSA-A-1943, ASP-2, Chisholm Av & 6th St, Stained Soils at 3rd St, Possible Vehicle Service Area A-1943 and Former Incinerator Building 1943. A summary of each AOI can be found in the August 2014 Site Management Plan, 2014 Annual Update, FGGM.

An SSI is planned at eight of these AOIs in an effort to close them without conducting a RI/FS. Those AOIs that cannot be closed during the PA/SI or SSI phase will need to progress further through the CERCLA process beginning with an RI/FS. These RI/FS AOIs will be opened as separate sites in AEDB-R.

CLEANUP/EXIT STRATEGY

The PA/SI has been completed with several AOIs receiving NFA letters. An SSI will be conducted at those AOIs that did not receive NFA. Any AOI that does not receive NFA after the SSI will be opened as a separate FGGM # and proceed with an RI.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FGGM 03	WATER TREATMENT PLANT (MEVA)	201207	Consensus letter from USEPA July 16, 2012.
FGGM 05	TROOP BOILER PLT (OPERABLE UNIT 2)	201309	No Further Action letter from MDE dated Dec 9, 2009.
FGGM 101	SITE M PARCEL 8	201312	Site is a PA/SI AOI and received NFA letter from EPA.
FGGM 11	GAS TRAINING BUILDING (former)	201503	
FGGM 14	HAZARDOUS WASTE STORAGE (former)	201109	No Further Action letter from USEPA dated Oct 5, 2011.
FGGM 19	ADV. WASTEWATER TREATMENT FACILITY	201206	
FGGM 71	BLDG 6522 EX INDR RNG	201503	
FGGM 75	USTS PRIOR TO 1984	201202	Consensus letter from USEPA dated 23 Feb 2012.
FGGM 78	GRANITE NIKE	200401	No further action letter from State dated Aug 10, 2007.
PBC at Meade	PBCs at Fort Meade	201402	No documentation is necessary because it was a PBA site for tracking purposes.

IRP Schedule

Date of IRP Inception: 198011

Past Phase Completion Milestones

1982

PA (FGGM 03 - WATER TREATMENT PLANT (MEVA), FGGM 14 - HAZARDOUS WASTE STORAGE (former), FGGM 19 - ADV. WASTEWATER TREATMENT FACILITY)

1990

SI (FGGM 47 - POST LAUNDRY (OPERABLE UNIT 4))

PA (FGGM 47 - POST LAUNDRY (OPERABLE UNIT 4))

1992

CS (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

RFI/CMS (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

RFA (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

1993

PA (FGGM 17 - CLOSED SANITARY Landfill, FGGM 33 - BATTERY SHOP BLDG. 2283)

DES (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

SI (FGGM 17 - CLOSED SANITARY Landfill)

1994

PA (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5))

IRA (FGGM 03 - WATER TREATMENT PLANT (MEVA), FGGM 33 - BATTERY SHOP BLDG. 2283)

SI (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5))

1996

SI (FGGM 49 - DOL BUILDINGS 2286, 2246, FGGM 74 - ARCHITECT OF THE CAPITOL)

PA (FGGM 08 - COMP AMMO SUPPLY POINT #1, FGGM 36 - PHOTO LAB'S BLDG 4553, 6530, FGGM 37 - KIMBROUGH ARMY HOSPITAL, FGGM 45 - CALIBRATION LAB BUILDING 2220, FGGM 49 - DOL BUILDINGS 2286, 2246, FGGM 51 - BUILDING 2217, FGGM 70 - BLDG 6513 INDOOR RANGE, FGGM 71 - BLDG 6522 EX INDR RNG, FGGM 74 - ARCHITECT OF THE CAPITOL)

CMI(C) (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

1997

IRA (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5))

SI (FGGM 13 - PEST. SHOP BLDG. 6621, FGGM 51 - BUILDING 2217)

RFA (FGGM 78 - GRANITE NIKE)

PA (FGGM 11 - GAS TRAINING BUILDING (former), FGGM 13 - PEST. SHOP BLDG. 6621)

1998

PA (FGGM 75 - USTS PRIOR TO 1984)

1999

SI (FGGM 83 - TRAP AND SKEET RANGE (OU-1), FGGM 86 - MOTORPOOL FAC (OPERABLE UNIT 4), FGGM 87 - NIKE CONTROL SITE (OPERABLE UNIT 3), FGGM 88 - TANK MNT FAC. SHOP-1 (OP UNIT 4), FGGM 89 - TANK MAIN. FAC. SHOP-2 (OP UNIT 4), FGGM 90 - TANK CLEANING SUPPLY (OP UNIT 4), FGGM 91 - MISSILE REPAIR SHOP (OP UNIT 4), FGGM 92 - HEAVY GUN CLEAN/REPAIR (OP UNIT 4))

IRA (FGGM 08 - COMP AMMO SUPPLY POINT #1)

PA (FGGM 83 - TRAP AND SKEET RANGE (OU-1), FGGM 86 - MOTORPOOL FAC (OPERABLE UNIT 4), FGGM 87 - NIKE CONTROL SITE (OPERABLE UNIT 3), FGGM 88 - TANK MNT FAC. SHOP-1 (OP UNIT 4), FGGM 89 - TANK MAIN. FAC. SHOP-2 (OP UNIT 4), FGGM 90 - TANK CLEANING SUPPLY (OP UNIT 4), FGGM 91 - MISSILE REPAIR SHOP (OP UNIT 4), FGGM 92 - HEAVY GUN CLEAN/REPAIR (OP UNIT 4), PBC at Meade - PBCs at Fort Meade)

2000

CS (FGGM 78 - GRANITE NIKE)

2001

RFI/CMS (FGGM 78 - GRANITE NIKE)

2002

DES (FGGM 78 - GRANITE NIKE)
 CMI(C) (FGGM 78 - GRANITE NIKE)

2003

PA (FGGM 93 - MANOR VIEW DUMP SITE)
 IRA (FGGM 83 - TRAP AND SKEET RANGE (OU-1))
 SI (FGGM 93 - MANOR VIEW DUMP SITE)

2004

LTM (FGGM 78 - GRANITE NIKE)

2007

RI/FS (PBC at Meade - PBCs at Fort Meade)

2008

PA (FGGM-95 - LANDFILL SITES (Former))
 RFA (FGGM 101 - SITE M PARCEL 8)

2009

CMI(O) (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

2011

SI (FGGM 14 - HAZARDOUS WASTE STORAGE (former))

2012

SI (FGGM 03 - WATER TREATMENT PLANT (MEVA), FGGM 08 - COMP AMMO SUPPLY POINT #1, FGGM 19 - ADV. WASTEWATER TREATMENT FACILITY, FGGM 33 - BATTERY SHOP BLDG. 2283, FGGM 45 - CALIBRATION LAB BUILDING 2220, FGGM 75 - USTS PRIOR TO 1984)
 RI/FS (FGGM 13 - PEST. SHOP BLDG. 6621)

2013

LTM (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))
 IRA (FGGM 93 - MANOR VIEW DUMP SITE)

2014

RA(C) (PBC at Meade - PBCs at Fort Meade)
 RD (FGGM 13 - PEST. SHOP BLDG. 6621)
 CS (FGGM 101 - SITE M PARCEL 8)
 RI/FS (FGGM 93 - MANOR VIEW DUMP SITE)
 RA(O) (PBC at Meade - PBCs at Fort Meade)

2015

PA (FGGM-96 - MOTOR POOLS, WASHRACKS, BLDGS (FMR))
 SI (FGGM 11 - GAS TRAINING BUILDING (former), FGGM 71 - BLDG 6522 EX INDR RNG)
 IRA (FGGM 47 - POST LAUNDRY (OPERABLE UNIT 4))
 RA(C) (FGGM 13 - PEST. SHOP BLDG. 6621, FGGM 93 - MANOR VIEW DUMP SITE)
 RD (FGGM 93 - MANOR VIEW DUMP SITE)
 RI/FS (FGGM 74 - ARCHITECT OF THE CAPITOL)

Projected Phase Completion Milestones

See attached schedule

IRP Schedule

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

Site ID

Site Name

ROD/DD Title

ROD/DD Date

Final RA(C) Completion Date: 204808

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of IRP at Installation (including LTM phase): 205010

FORT GEORGE G MEADE IRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 08	COMP AMMO SUPPLY POINT #1	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 13	PEST. SHOP BLDG. 6621	RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 17	CLOSED SANITARY Landfill	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 33	BATTERY SHOP BLDG. 2283	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 36	PHOTO LAB'S BLDG 4553, 6530	SI						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 37	KIMBROUGH ARMY HOSPITAL	SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 45	CALIBRATION LAB BUILDING 2220	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 49	DOL BUILDINGS 2286, 2246	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 51	BUILDING 2217	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 70	BLDG 6513 INDOOR RANGE	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 74	ARCHITECT OF THE CAPITOL	RA(C)						

FORT GEORGE G MEADE IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 83	TRAP AND SKEET RANGE (OU-1)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 86	MOTORPOOL FAC (OPERABLE UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 87	NIKE CONTROL SITE (OPERABLE UNIT 3)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 88	TANK MNT FAC. SHOP-1 (OP UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 89	TANK MAIN. FAC. SHOP-2 (OP UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 90	TANK CLEANING SUPPLY (OP UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 91	MISSILE REPAIR SHOP (OP UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 92	HEAVY GUN CLEAN/REPAIR (OP UNIT 4)	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM 93	MANOR VIEW DUMP SITE	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM-95	LANDFILL SITES (Former)	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM-96	MOTOR POOLS, WASHRACKS, BLDGS (FMR)	SI						

FORT GEORGE G MEADE
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 6/3

Installation Site Types with Future and/or Underway Phases

- 1 Maneuver Area
(FGGM-003-R-02)
- 2 Unexploded Munitions/Ordnance
(FGGM-003-R-01, FGGM-007-R-01)

Most Widespread Contaminants of Concern

Metals, Munitions and explosives of concern (MEC)

Media of Concern

Soil

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

Site ID	Site Name	Action	Remedy	FY
FGGM-007-R-01	Inactive Landfill 2	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2000
FGGM-003-R-01	MORTAR RANGE	FRA	INSTITUTIONAL CONTROLS	2014
FGGM-003-R-02	Training Area MRS	FRA	INSTITUTIONAL CONTROLS	2014

Duration of MMRP

Date of MMRP Inception 198905

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201406/201406

Date of MMRP completion including Long Term Management (LTM): 204601

MMRP Contamination Assessment

Contamination Assessment Overview

In June 2003 a Phase III Army range inventory was completed at FGGM. The inventory identified six sites as eligible for the Military Munitions Response Program (MMRP), though two of the sites (FGGM-001-R-01 and FGGM-002-R-01) have since been determined to be BRAC sites, not MMRP sites. The Phase III range inventory serves as the PA under CERCLA. These sites were investigated as part of a SI.

In 2007 the SI, which focused on military munitions, was conducted. Based on the results of the SI, only one MRA, FGGM-003-R-01 Former Mortar Range, was recommended for an RI. Intrusive investigations conducted as part of the RI have found 2 and 3-inch stokes mortars, 60 mm mortars, 81 mm mortars, Mark II hand grenades, and land mines; all were determined to be practice rounds. Small arms rounds were also found including .20 caliber (cal), .30 cal, and .50 cal rounds.

The munitions items detected and the patterns of detection the site has been split into two separate MRSs: the Former Mortar Range Firing and Impact Site (FGGM-003-R-01) and the Former Mortar Range Training and Maneuver Area (FGGM-003-R-02).

The installation finalized the RI in 2011 and began an FS to evaluate potential RA alternatives. A ROD was signed in September 2012 for the Former Mortar Range MRA (FGGM-003-R-01 and -02).

The second active MRA is Inactive Landfill Number 2 located at the southern tip of the Tipton Army Airfield south of Route 32 in Odenton, Maryland. Initially a BRAC site for transfer to Anne Arundel County as part of the Tipton Army Airfield transfer, the site was retained by FGGM due to the excessive number of magnetic anomalies. The LUCs for this site are based on a BRAC July 1998 DD and include the installation and maintenance of a fence.

Cleanup Exit Strategy

The selected remedy includes LUCs involving annual site sweeps, educational/awareness activities, and the placement of signs. The installation will continue to maintain the fence surrounding Inactive Landfill Number 2.

MMRP Previous Studies

	Title	Author	Date
2003	Final Closed, Transferring, Transferred Range/Site Inventory Report for Fort George G. Meade, MD	Malcolm Pirnie	NOV-2003
2006	Historical Records Review	Malcolm Pirnie	MAY-2006
2007	Site Inspection	Baltimore District Corps of Engineers	APR-2007
	Geophysical Prove-out Plan, Former Mortar Range	Baltimore District, Corps of Engineers	SEP-2007
	Geophysical Prove-out Letter Report	Baltimore District, Corps of Engineers	OCT-2007
2008	Work Plan, Former Mortar Range	Baltimore District Corps of Engineers	MAR-2008
2009	Draft Final Addendum to Work Plan: Sampling and Analysis Plan	Baltimore District Corps of Engineers	MAR-2009
2010	Draft Remedial Investigation Report	Malcolm Pirnie	JUL-2010
2011	Final Remedial Investigation Report, Former Mortar Range	Arcadis	SEP-2011
2012	Revised Draft Feasibility Study, Former Mortar Range	Arcadis	MAR-2012

FORT GEORGE G MEADE
Military Munitions Response Program
Site Descriptions

Site ID: FGGM-003-R-01

Site Name: MORTAR RANGE

STATUS

Regulatory Driver: CERCLA

MRSP Score: 07

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Soil

Phases	Start	End
PA.....	200208.....	200306
SI.....	200509.....	200704
RI/FS.....	200707.....	201209
RD.....	200908.....	201304
RA(C).....	200908.....	201406
LTM.....	201406.....	204306

RIP Date: N/A

RC Date: 201406

SITE DESCRIPTION

The Former Mortar Range MRA is a former range and training area located in the west-central portion of FGGM. The Former Mortar Range MRA (FGGM-003-R) is comprised of the 62-acre Mortar Area (FGGM-003-R-01) and the 260-acre Training Area (FGGM-003-R-02) MRSs.

The MRS was used as a practice/training mortar range beginning in the early 1920s. Based on the 2011 RI, training was assumed to have ended in the 1940s based on munitions debris found during the RI. During the RI field activities, no MEC (except small arms ammunition not presenting a unique explosive hazard) were found on the MRA. However, a variety of munitions debris from 60 and 81 millimeter training mortar rounds, three-inch Stokes training mortar rounds, a training landmine, flares, practice grenades, a dummy grenade, discarded small arms ammunition, and casings from expended small arms ammunition were found. The training mortar rounds, identified during the RI MEC field activities, were concentrated in an area corresponding to the original location of the former Mortar Range shown on maps from the 1920s. An analysis of historical aerial photographs, performed during the RI, confirmed the Mortar Area MRS boundary.

Based on the results of the RI, safety hazards associated with MEC and material potentially presenting an explosive hazard (MPPEH) may exist at the Mortar Range MRA. Although the probability of MEC or MPPEH being encountered is low and slightly different between the two MRSs, the acute nature of the hazard warrants consideration of a munitions response action. Based on the result of HHRA and SLERA, no further investigation or munitions response actions related to MC are warranted as there are no unacceptable risks. Therefore, the MEC/MPPEH presents the only known safety hazard. The RAO for both MRSs include: control and minimize the potential for contact of receptors with possible MEC at the surface and within the subsurface by controlling the specific exposure pathways identified at the two MRSs. The September 2012, ROD identified the selected remedy as LUCs with LTM. The two types of LUCs implemented include: IC and ECs.

Annual inspections are required to establish that all on-site LUCs (e.g., signage) are in good condition, to confirm that the land use has not changed, and to confirm through instrument-assisted surface sweep that no MEC/MPPEH/munitions debris has been exposed through erosion or frost heave. The LUCs are incorporated into the FGGM master plan, included in the installations GIS and dig permit process. The RD has been approved and was implemented in 2013; regulatory approval of the remedial action report was completed in May 2014. The remedy will be reviewed as part of the CERCLA 5-year review process. The most recent inspection is documented in the 2015 Annual Land Use Control Inspection Report.

The site is designated for National Security Agency (NSA) expansion and is an active construction area. Regulated wetlands and wetland buffers, other waters of the US, and 100 year floodplains exist on or near this project site.

CLEANUP/EXIT STRATEGY

Continue annual LTM and five-year reviews.

Site ID: FGGM-003-R-02
Site Name: Training Area MRS

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 08
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Soil

Phases	Start	End
PA.....	200301.....	200311
SI.....	200312.....	200704
RI/FS.....	200704.....	201210
RD.....	200908.....	201304
RA(C).....	200908.....	201401
LTM.....	201401.....	204601
RIP Date:	N/A	
RC Date:	201401	

SITE DESCRIPTION

The Former Mortar Range MRA is a former range and training area located in the west-central portion of FGGM. The Former Mortar Range MRA (FGGM-003-R) is comprised of the 62-acre Mortar Area (FGGM-003-R-01) and the 260-acre Training Area (FGGM-003-R-02) MRSs.

This 260-acre Training Area MRS was used as a training area from the early-1920s to the early-1940s. Five munitions debris items were found throughout the entire 260-acre Training Area MRS during the MEC RI fieldwork. These items include practice grenades, an expended flare, and a small arms ammunition casings disposal pit. The practice grenades and expended flare are indicative of general troop training, and the small arms ammunition casings disposal pit is indicative of disposal.

Because the Mortar Range MRS (FGGM-003-R-01) is very similar to this MRS, all the CERCLA documents prepared have included this MRS. For more information on the CERCLA process at this MRS and the selected remedy, please refer to FGGM-003-R-01.

CLEANUP/EXIT STRATEGY

The cleanup/exit strategy is to continue LTM. This is the same as FGGM-003-R-01 as this is an MRS within the Mortar Range MRA (FGGM-003-R-01).

Site ID: FGGM-007-R-01
Site Name: Inactive Landfill 2

STATUS

Regulatory Driver: CERCLA
MRSPP Score: No longer required
 Contaminants of Concern: Munitions and explosives of concern (MEC)
 Media of Concern: Soil

Phases	Start	End
PA.....	198905.....	198911
SI.....	198905.....	198911
RI/FS.....	198911.....	199801
RD.....	199801.....	199806
RA(C).....	200001.....	200006
LTM.....	201103.....	204303
RIP Date:	N/A	
RC Date:	200006	

SITE DESCRIPTION

The 23-acre IAL2 is part of the Tipton Maneuver and Buffer Area located immediately south of the Tipton Airfield. Historically, the site was included in the Tipton Airfield Area OU (FGGM-31 and FGGM-85) as part of the BRAC property; however, it was not transferred and remains under FGGM accountability. Other portions of FGGM-31 and FGGM-85 are addressed by BRAC.

Historical aerial photographs show that IAL2 was initially operated as a soil borrow area from 1938 and 1943. According to the 1989 Enhanced Preliminary Assessment Report, sometime after 1952 the area was operated as an unlined rubble disposal area that reached its maximum extent by 1963. IAL2 was used sparingly between the years 1963 and 1970 when aerial photographs show the area was being increasingly re-vegetated. A single north-northwest trending trench was reported visible along the east side of the access road in 1970. Continued disposal activities occurred after 1980 in the northern portion of IAL2 where graded and disturbed areas are visible in 1986. During the RI fieldwork, piles of rubble (brush, concrete, and asphalt debris) which appear to be of more recent origin were observed in a pond/wetland area on the north side of IAL2. Approximately 10-acres within the fenced area was used for landfill operations. The site could not be cleared of ordnance due to large amounts of rubble debris and wetlands. In 1998, a DD was signed which states that an EC, a perimeter fence (with warning signs), be installed around IAL2 and that the fence be inspected annually and any damage be repaired. To facilitate the annual inspections vegetation around the fence is cleared annually (five feet inside and outside the fence) as detailed in the 2015 IAL2 Site Specific Maintenance and Repairs Report.

IAL2 remains undeveloped and is vegetated with grass, shrubs, and mature trees. Regulated wetlands and wetland buffers, other waters of the US, and 100 year floodplains exist on this site.

CLEANUP/EXIT STRATEGY

Annual inspections of the security fence and signage will continue and are programmed under LTM. Maintenance of the vegetation will also be conducted to facilitate the annual requirement to visually inspect the fence.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FGGM-004-R-01	GRENADA & BAYONET RANGE	200704	April 2007 Final Site Inspection Report, Fort George G. Meade
FGGM-005-R-01	PISTOL RANGE A	200704	April 2007 Final Site Inspection Report, Fort George G. Meade
FGGM-006-R-01	PISTOL RANGE B	200704	April 2007 Final Site Inspection Report, Fort George G. Meade

MMRP Schedule

Date of MMRP Inception 198905

Past Phase Completion Milestones

1990

PA (FGGM-007-R-01 - Inactive Landfill 2)

SI (FGGM-007-R-01 - Inactive Landfill 2)

1998

RD (FGGM-007-R-01 - Inactive Landfill 2)

RI/FS (FGGM-007-R-01 - Inactive Landfill 2)

2000

RA(C) (FGGM-007-R-01 - Inactive Landfill 2)

2003

PA (FGGM-003-R-01 - MORTAR RANGE, FGGM-004-R-01 - GRENADE & BAYONET RANGE, FGGM-005-R-01 - PISTOL RANGE A, FGGM-006-R-01 - PISTOL RANGE B)

2004

PA (FGGM-003-R-02 - Training Area MRS)

2007

SI (FGGM-003-R-01 - MORTAR RANGE, FGGM-003-R-02 - Training Area MRS, FGGM-004-R-01 - GRENADE & BAYONET RANGE, FGGM-005-R-01 - PISTOL RANGE A, FGGM-006-R-01 - PISTOL RANGE B)

2012

RI/FS (FGGM-003-R-01 - MORTAR RANGE)

2013

RD (FGGM-003-R-01 - MORTAR RANGE, FGGM-003-R-02 - Training Area MRS)

RI/FS (FGGM-003-R-02 - Training Area MRS)

2014

RA(C) (FGGM-003-R-01 - MORTAR RANGE, FGGM-003-R-02 - Training Area MRS)

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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Final RA(C) Completion Date: 201406

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of MMRP at Installation (including LTM phase): 204601

FORT GEORGE G MEADE MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM-003-R-01	MORTAR RANGE	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM-003-R-02	Training Area MRS	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FGGM-007-R-01	Inactive Landfill 2	LTM						

FORT GEORGE G MEADE
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 1/0

Installation Site Types with Future and/or Underway Phases

1 Contaminated Fill
(CCFGGM-97)

Most Widespread Contaminants of Concern

Asbestos, Other (Medical Waste)

Media of Concern

Soil

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

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of CR

Date of CR Inception: 199009

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201902/201902

Date of CR completion including Long Term Management (LTM): 204902

CR Contamination Assessment

Contamination Assessment Overview

Domestic and medical wastes (circa 1960s) were uncovered while re-grading a 2-acre parcel of land approximately 300 yards west of the western boundary of former sanitary landfill Cell 3. The observed wastes match the description of wastes from test pits previously excavated in Cell 3. Composite surface soil samples were collected from the new waste site. The results show regulated levels of PAH, metals, and dioxins. An assessment of the new site was conducted to determine if the new site is a result of isolated uncontrolled dumping or an extension of Cell 3. Existing documents, air photographs and reconnaissance activities were conducted and the results suggest the new site is actually part of Cell 3. Existing soil, sediment, surface water and groundwater data are insufficient to determine the actual size, architecture, and potential impacts to the environment. The objective is to determine the actual size/architecture of Cell 3 and determine if there are any unacceptable risks to human health and the environment, and bring Cell 3 into regulatory compliance.

Cleanup Exit Strategy

The CERCLA process will be followed. Anticipate an engineered remedy for soil and groundwater with LUCs.

CR Previous Studies

Title

Author

Date

There are no Previous Studies

FORT GEORGE G MEADE
Compliance Restoration
Site Descriptions

STATUS

Regulatory Driver: CERCLA

Phases	Start	End
PA.....	199009.....	199109
SI.....	199109.....	199209
RI/FS.....	201308.....	201902
RD.....	201702.....	201902
RA(C).....	201802.....	201902
LTM.....	201902.....	204902
RIP Date:	N/A	
RC Date:	201902	

SITE DESCRIPTION

Cell 3 (FGGM-97) was closed in 1976 with the placement of a 2 foot soil cover (AEHA 1990). As part of the 2007 Groundwater RI for the CSL (EM Federal 2007), one surface soil and two subsurface soil samples were collected from six test pit trenches installed across Cell 3. The subsurface soil samples were collected from the base of the fill materials. All soil samples were analyzed for TCLP VOCs and SVOCs, explosives, pesticides, herbicides, PCBs, and TAL metals. While the referenced 2007 Groundwater RI for the CSL included the limited trenching and sampling, that RI did not evaluate Cell 3 in its entirety; thus, further investigation is necessary to complete a comprehensive RI for Cell 3. Additionally, while a PP and ROD are under regulatory review for the CSL, these documents exclude Cell 3 and also do not address any potential ecological environmental impacts presented by the CSL. Therefore, additional RI field activities are necessary to complete a SLERA for the entire CSL.

Domestic and medical wastes (circa 1960s) were uncovered while re-grading a two-acre parcel of land approximately 300 yards west of the western boundary of former sanitary landfill Cell 3. The observed wastes match the description of wastes from test pits previously excavated in Cell 3. Composite surface soil samples were collected from the new waste site. The results show regulated levels of PAHs, metals, and dioxins. An assessment of the new site was conducted to determine if the new site is a result of isolated uncontrolled dumping or an extension of Cell 3. Existing documents and air photographs were reviewed and reconnaissance activities were conducted. The results suggest the new site is part of Cell 3. Existing soil, sediment, surface water and groundwater data are insufficient to determine the actual size, architecture, and potential impacts to the environment. A contract is in place to determine the actual size/architecture of Cell 3, determine if there are any unacceptable risks to human health and the environment, and bring Cell 3 into regulatory compliance.

A portion of Cell 3 is used for the soil stockpile, and the rest remains undeveloped. Regulated wetlands and wetland buffers, other waters of the US and 100 year floodplains exist adjacent to this project site.

CLEANUP/EXIT STRATEGY

The CERCLA process will be followed. Anticipate an engineered remedy for soil and groundwater with LUCs.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
There are no NFA sites			

CR Schedule

Date of CR Inception: 199009

Past Phase Completion Milestones

1991

PA (CCFGGM-97 - Cell 3)

1992

SI (CCFGGM-97 - Cell 3)

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date: 201902

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of CR at Installation (including LTM phase): 204902

FORT GEORGE G MEADE CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCFGGM-97	Cell 3	RI/FS						
		RD						
		RA(C)						
		LTM						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 200903

Restoration Advisory Board (RAB): RAB established 199504

RAB Adjournment Date: N/A

RAB Adjournment Reason: None

Additional Community Involvement Information

FGGM has an active RAB which was established in 1995 and currently has 12 community members who meet every two months. The RAB meetings have continued through this FY.

Administrative Record is located at

Fort George G. Meade Environmental Office
4216 Roberts Ave
Ft Meade, MD 20755

Information Repository is located at

West County Public Library
1325 Annapolis Road
Odenton MD, 21113
410-222-6277

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

TAPP Title: N/A

Potential TAPP: N/A

