

FY2010

FORT GEORGE G MEADE

Army Defense Environmental Restoration Program

Installation Action Plan

Printed 04 November 2010

Table of Contents

Statement Of Purpose.....	1
Acronyms.....	2
Acronym Translation Table.....	5
Installation Information.....	6
5-Year / Periodic Review Summary.....	8
Cleanup Program Summary.....	9
Installation Restoration Program.....	11
IRP Summary.....	12
IRP Contamination Assessment.....	13
IRP Previous Studies.....	14
Installation Restoration Program Site Descriptions.....	23
FGGM 07 DRMO DRUM SITE (OPERABLE UNIT 5).....	24
FGGM 13 PEST. SHOP BLDG. 6621.....	26
FGGM 17 CLOSED SANITARY LF / MW125 & MW126.....	28
FGGM 47 POST LAUNDRY (OPERABLE UNIT 4).....	30
FGGM 74 ARCHITECT OF THE CAPITAL.....	32
FGGM 83 TRAP AND SKEET RANGE.....	34
FGGM 86 MOTORPOOL FAC (OPERABLE UNIT 4).....	36
FGGM 87 NIKE CONTROL SITE (OPERABLE UNIT 3).....	37
FGGM 88 TANK MNT FAC. SHOP-1 (OP UNIT 4).....	38
FGGM 89 TANK MAIN. FAC. SHOP-2 (OP UNIT 4).....	39
FGGM 90 TANK CLEANING SUPPLY (OP UNIT 4).....	40
FGGM 91 MISSILE REPAIR SHOP (OP UNIT 4).....	42
FGGM 92 HEAVY GUN CLEAN/REPAIR (OP UNIT 4).....	43
FGGM 93 Manor View Dump Site.....	44
FGGM-95 Former Landfill Sites.....	46
FGGM-96 Former Motor Pools 2, 7, 9, & 19.....	47
PBC at Meade PBC at Meade.....	49
Installation Restoration Program Site Closeout (No Further Action) Sites Summary.....	50
Installation Restoration Program Schedule.....	51
Installation Restoration Program Milestones.....	51
IRP Schedule Chart.....	53

Table of Contents

Military Munitions Response Program.....	55
MMRP Summary.....	56
MMRP Contamination Assessment.....	57
MMRP Previous Studies.....	58
Military Munitions Response Program Site Descriptions.....	59
FGGM-003-R-01 MORTAR RANGE.....	60
FGGM-007-R-01 Inactive Landfill 2.....	61
Military Munitions Response Program Site Closeout (No Further Action) Sites Summary.....	62
MMRP Schedule.....	63
Military Munitions Response Program Milestones.....	63
MMRP Schedule Chart.....	64

Statement of Purpose

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

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort George G. Meade (FGGM), the National Capital Region District (NCR-D), 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

AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
AOI	Area of Interest
bgs	below ground surface
BRAC	Base Realignment and Closure
BTAG	Biological Technical Assistance Group
cal	caliber
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMS	Corrective Measures Study
COC	Contaminants of Concern
CSA	Comprehensive Site Assessment
CSF	Covered Storage Facility
CSL	Closed Sanitary Landfill
DCB	1,4 Dichlorobenzene
DCE	cis-1,2 Dichloroethene
DD	Decision Document
DES	Design
DOL	Directorate of Logistics
DPDO	Defense Property Disposal Office
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
EBS	Environmental Baseline Study
EPA	Environmental Protection Agency
ER	Emergency Removal
ER,A	Environmental Restoration, Army
ESD	Explanation of Significant Differences
FFA	Federal Facility Agreement
FFS	Focused Feasibility Study
FGGM	Fort George G. Meade
FS	Feasibility Study
FY	Fiscal Year
GW	Groundwater
HHRA	Human Health Risk Assessment
HRC-A	Hydrogen-releasing compounds-advanced
IAP	Installation Action Plan
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operation)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
J	Estimated Concentration
K	thousand

Acronyms

kg	kilogram
LEL	Lower Explosive Limit
LTM	Long-Term Management
LUC	Land Use Control
LUCAP	Land Use Control Action Plan
LUCIP	Land Use Control Implementation Plan
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
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MPPEH	Munitions Potentially Presenting an Explosive Hazard
N/A	Not Applicable
NCR-D	National Capital Region-District
NFA	No Further Action
NPL	National Priorities List
OMA	Operations and Maintenance Army
OU	Operable Unit
PA	Preliminary Assessment
PAH	Polyaromatic Hydrocarbons
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene or Tetrachloroethene
PLF	Post Laundry Facility
PMR	Phoenix Military Reservation
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
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
RBC	Risk-Based Concentration
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RIP	Remedy-in-Place

Acronyms

ROD	Record of Decision
SI	Site Inspection
SLERA	Screening -Level Ecological Risk Assessment
SRS	Sensitive Receptor Survey
SSL	Soil Screening Level
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TMP	Transportation Motor Pool
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
ug/L	micrograms per liter
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 (currently called USAEC)
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWI	World War I

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: Fort Meade

County: Anne Arundel

State: Maryland

Other Locale Information

Fort Meade 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, MD and Washington, DC, southeast of the Baltimore-Washington Parkway, north of Maryland Route 32, and west of Maryland Route 175, approximately 28 miles from Fort McNair, DC. 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 approach 50,000.

Installation Mission

The mission of Fort Meade 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 - Northeast

Lead Executing Agencies for Installation

USAEC

Fort Meade

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)

National Priorities List (NPL) Status

A score of 52.6 was recorded on 01-JUL-98.

Date for RA(C) Completion: 201311

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), Munitions constituents (MC)

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
Planned	201409	201509	2015

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:

Cleanup Program Summary

Installation Historic Activity

Fort George G. Meade 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 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 Base Realignment and Closure Act (BRAC), 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 Restoration Advisory Board (RAB).

As a result of the BRAC, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and RCRA statutes, FGGM has RAs 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.

At the end of fiscal year (FY) 2001, a number of SWMUs remained to be reviewed by the installation/USEPA/State regulator Tier I partnering team. As of FY03 some of these SWMUs have been geographically consolidated and assigned Army Environmental Database - Restoration (AEDB-R) designations. Currently, 15 AEDB-R sites are under investigation. Completion of remedial investigations (RI) at all 15 sites is anticipated by the end of FY09.

Fort Meade 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. From 1972 to the 1980s the Maryland National Guard used the PMR for training. Historical operations have resulted in environmental impacts at the PMR. Groundwater contamination is present on-site and off-site. An RI is in progress. An RA may be required at PMR.

Fort George G. Meade is now under the IMCOM - National Capital Region District (NCR-D), however, the IAP Tool Software has not yet been updated to include this region as a menu choice under Lead Organization.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Installation Restoration (IR) Program:
All sites continue in the RI/FS phase.

BRAC Program: Continued annual groundwater (GW) LTM at FGGM-20. Continued annual UXO LTM at FGGM-85. As required by the Federal Facilities Agreement (FFA) (effective October 2009); an explanation of significant difference (ESD) for FGGM-85 will be completed in FY10. FGGM-94 RI began in FY09 and will continue in FY10. A PP/ROD will be completed for FGGM-002-R-001 in FY10.

Future Plan of Action: IR Program: Under the performance-based acquisition (PBA) contracts all RI/FS work will be complete and RAs commence.

BRAC Program: Biennial GW monitoring will continue at sites FGGM-10, 31, and 81. Annual GW monitoring will continue at FGGM-20. Annual UXO LTM (sweeps and land use controls [LUCs]) will continue at FGGM-85. No five-year reviews are scheduled for FY11 or FY12.

MMRP

Prior Year Progress: IR Program: The Army completed a revised work plan for the Former Mortar Range (FGGM-003-R-01) to address sampling for munitions constituents; collected and analyzed samples; and began preparing a draft RI report.

Cleanup Program Summary

BRAC Program: For FGGM-002-R-002; a proposed plan (PP)/record of decision (ROD) and LUC implementation plan (LUCIP)/LUC action plan (LUCAP) will be prepared to formally document the results of the 2000 and 2001 action memorandums.

Future Plan of Action: IR Program: An FS is planned as is continued long-term monitoring for FGGM-007-R-01 (Inactive Landfill No. 2).

BRAC Program: A ROD will be implemented with LUCIP/LUCAP.

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: 35/18

Installation Site Types with Future and/or Underway Phases

- 1 Contaminated Fill
(FGGM 83)
- 3 Contaminated Ground Water
(FGGM 47, FGGM 87, FGGM 92)
- 1 Disposal Pit/Dry Well
(FGGM 86)
- 1 Industrial Discharge
(PBC at Meade)
- 3 Landfill
(FGGM 17, FGGM 93, FGGM-95)
- 3 Maintenance Yard
(FGGM 88, FGGM 89, FGGM-96)
- 1 Pesticide Shop
(FGGM 13)
- 4 Storage Area
(FGGM 07, 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	Cost
FGGM 03	WATER TREATMENT PLT. BLDG 8688	FRA	OTHER	1994	TBD
FGGM 33	BATTERY SHOP BLDG. 2283	IRA	WASTE REMOVAL - SOILS	1994	\$310.0 K
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	IRA	WASTE REMOVAL - SOILS	1995	\$800.0 K
FGGM 05	TROOP BOILER PLT (OPERABLE UNIT 2)	FRA	GROUND WATER TREATMENT	1996	TBD
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	IRA	OTHER	1997	\$2,918.0 K
FGGM 08	COMP AMMO SUPPLY POINT #1	FRA	REMOVAL	1999	TBD
FGGM 17	CLOSED SANITARY LF / MW125 & MW126	IRA	CAPPING	1999	TBD
FGGM 78	GRANITE NIKE	FRA	REMOVAL	2002	TBD
FGGM 83	TRAP AND SKEET RANGE	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2003	\$478.0 K

Duration of IRP

Date of IRP Inception: 198011

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201311/202512

Date of IRP completion including Long Term Management (LTM): 202512

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 Fort Meade. This assessment identified the need for a site inspection (SI) for the active sanitary landfill. NFA was taken until 1987, when USATHAMA updated the 1980 assessment to verify conditions at Fort Meade, and determine the next steps to be taken. In 1988, USATHAMA began a preliminary assessment (PA) of the active sanitary landfill. In FY94, 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. All restoration work to date, besides the landfill, was done with OMA funds. Contaminants found in the landfill area include heavy metals, chlorinated solvents, and non-chlorinated solvents.

As of July 28, 1998 Fort Meade was added to the NPL. This listing was based on an April 1, 1997 proposal by the USEPA.

Cleanup Exit Strategy

Actions will continue to be performed as outlined in the IAP contingent on funding levels. In May 2005 a performance-based contract (PBC) was awarded that covers AEDB-R sites FGGM 05, FGGM 07, FGGM 47, FGGM 83, FGGM 86, FGGM 87, FGGM 88, FGGM 89, FGGM 90, FGGM 91, and FGGM 92. The second Fort Meade PBC (PBC #2) was awarded in 21 August 2009. Sites covered under this contract are FGGM-13, 17, 74, 93, 003-R-01, and Operable Unit (OU) 4. OU 4 includes FGGM-47, 86, 89, 90, 91, and 92. Future costs at these sites include remedy-in-place (RIP)/response complete (RC) through RA(O) phase.

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 are pertinent to the Fort Meade restoration program.

IRP Previous Studies

Year	Title	Author	Date
1977	Environmental Impact Statement - Existing Activities and Conditions		JUN-1977
1979	Landfill Study		JUN-1979
1980	Final - Installation Assessment of FGGM		NOV-1980
1981	Final - Overall Environmental Impact Statement		AUG-1981
1987	Final - Update of the Initial Installation Assessment of FGGM and Gaithersburg Research Facility		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		MAR-1989
	Draft - Task Order 2 Preliminary Assessment for Fort Holabird		DEC-1989
1990	USATHAMA Task Order 2 Enhanced Preliminary Assessment Fort Holabird Crime Records Center		JAN-1990
	Preliminary Draft - Environmental Assessment - Base Closure at Gaithersburg, MD		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		MAR-1990
	Draft - USATHAMA - Appendices for FGGM Active Sanitary Landfill and Clean Fill Dump Remedial Investigation Report		APR-1990
	Final - Gaithersburg Research Facility Control Area Site Investigation - Accident Prevention Safety Plan		MAY-1990
	USATHAMA - Appendices for FGGM Active Sanitary Landfill and Clean Fill Dump Remedial Investigation Report		AUG-1990
	Final - Public Involvement and Response Plan		SEP-1990
	Preliminary Assessment Report FGGM - Hazardous Substances Identification and Storage and Potential Receptors for Groundwater, Surface Water and Onsite Pathways		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		DEC-1990
	Draft Final - Gaithersburg Appendices Final Project Report		DEC-1990
1991			

IRP Previous Studies

1991	Title	Author	Date
	Final - Remedial Investigations/Feasibility Studies for Proposed Ordnance Clearing at FGGM		MAR-1991
	Draft Final Document - USATHAMA Ordnance Clearance Survey		MAR-1991
	Final - Gaithersburg Research Facility Central Area Site Inspection		MAR-1991
	Draft - Comprehensive Base Realignment and Partial Closure for FGGM & Fort Holabird		MAR-1991
	Final - Gaithersburg Project Report Appendices		MAR-1991
	Volatile Analysis - Fort Meade Laundry Analytical Data Package		AUG-1991
	Environmental Investigation for Property Transfer - Fort Holabird Crime Records Center Environmental Investigation and Alternatives Assessment		SEP-1991
	Draft - Addendum Site Health and Safety Plan Ordnance Clearance Survey		NOV-1991
	Review of Draft Work Plan for Ordnance Survey of 1,400 Acres - Department of Interior Parcel		DEC-1991
	Post Laundry Facility Contaminant Assessment Report		DEC-1991
	Post Laundry Facility Contaminant Assessment Report	Versar	DEC-1991
1992	Final - Preliminary Assessment Report Addendum for FGGM		MAR-1992
	Preliminary Assessment Report Addendum, US Army Toxic and Hazardous Material Agency	Roy F. Weston, Inc	MAR-1992
	Final Environmental Investigation Report for Fort Holabird Crime Records Center		MAR-1992
	Work Plan for Unexploded Ordnance Clearance Survey at FGGM		APR-1992
	Accident Prevention and Safety Plan - FGGM Ordnance Clearance Survey		APR-1992
	Site Health and Safety Plan - FGGM Ordnance Clearance Survey		JUN-1992
	Work Plan - FGGM Ordnance Clearance Survey		JUN-1992
	Draft Report for Asbestos Investigation and Estimation of Fort Holabird Crime Records Center (CRC)		SEP-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 Arm	EA Engineering	OCT-1992
	Asbestos Investigation and Estimation of Fort Holabird Crime Records Center		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

IRP Previous Studies

Year	Title	Author	Date
1993	Health and Safety Plan, Feasibility Study and Remedial Investigation/Site Inspection Addendum - Inactive Landfill No. 2, DPDO Salvage Yard and Transformer Storage, Helicopter Hangar Area, Fire Train	USAEC, Arthur D. Little	NOV-1993
	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		AUG-1994
	Initiation of Detection Monitoring Program - Active Sanitary Landfill, U.S. Army Center for Health Promotion and Preventive Medicine		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		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)		JAN-1997
	Clean Fill Dump Preliminary Data (surface soils, sediment, groundwater)		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
	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 - Response to Specific Comments-USEPA		AUG-1997
	DRMO - Response to Specific Comments-MDE		AUG-1997
	DRMO - Work Plan Phase Two HTRW Investigation	USACE	SEP-1997
1998			

IRP Previous Studies

Year	Title	Author	Date	
1998	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

	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
	RAB Meeting Minutes	US Army	SEP-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 - OU3	Kemron Environmental Services	MAR-2006
	1st Quarter 2006 Data Report, Operable Unit 2	USAEC; Kemron	APR-2006
	Final RI Work Plan - OU4	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

IRP Previous Studies

2007	Title	Author	Date
	Draft Technical Memorandum, Architect of Capitol	Baltimore District Corps of Engineers	JAN-2007
	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
	Project Management Plan, PBC Sites	USAEC; Kemron	SEP-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			
	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
	Integrated Corrective Measures Operations and Maintenance and 4th	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	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

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.....	201108
RD.....	200409.....	201206
IRA.....	199503.....	199709
RA(C).....	200409.....	201311
RA(O).....	200409.....	202512
RIP Date:	201311	
RC Date:	202512	

SITE DESCRIPTION

FGGM 07 is the DRMO Drum Site at the intersection of Rock Avenue and Remount Road along the southern boundary of the installation. The site is approximately 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. FGGM 07 is identified as OU-5 in the PBC. 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. Future land use at the site, according to the CEMP Land Use Plan dated May 2005, is designated as industrial/installation support (R&K, 2005).

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. However, environmental investigations delayed the CSF construction when several buried drums were discovered on June 15, 1995. A total of 263 drums, two transformers, one high voltage box, and 3,500 tons of contaminated soil were removed. The test results for the drums contents indicated solvents, degreasers, petroleum products metals, pesticides, and polychlorinated byphenls (PCBs) were present in the drums. The soil test results indicated volatile organic compounds (VOCs) and semi-volatile organic compounds (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.

RI activities (Dames & Moore, 2000a and 2000b; URS, 2003) have detected elevated concentrations of VOCs in the water table aquifer at FGGM 07. The source of GW contamination at the site 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. During RI activities, it was estimated that the leading edge of the PCE plume was approximately 5,000 feet from the Little Patuxent River.

Although future land use for this site is industrial/installation support, the Baseline Risk Assessment (URS, 2003) reported a lifetime cancer risk of 2.5×10^{-4} for residential exposure to GW used as tap water; PCE, trichloroethene (TCE), carbon tetrachloride, and chloroform in GW drive the cancer risks. The human health evaluation did not identify elevated risks associated with the soil medium under current or projected future land use scenarios. No ecological risks were identified due to a lack of available ecological habitat and exposure to affected media.

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 GW conditions. The model results indicated that after 120 years of transport (year 2119), PCE concentrations would not exceed the RA objective of 5 µg/L in the site GW. The model also predicted that the PCE plume will never reach the downgradient Little Patuxent River (Arcadis, 2007).

The final FFS, approved by the MDE and the USEPA in 2007, evaluated four remedial alternatives and recommended monitored

Site ID: FGGM 07
Site Name: DRMO DRUM SITE (OPERABLE UNIT 5)

natural attenuation (MNA)/institutional controls as the preferred remedy for FGGM 07. However, a Draft Final Supplemental Plume Delineation and Data Collection Plan (Arcadis, 2008) was prepared in September 2008 to address USEPA and MDE concerns about the adequacy of the plume delineation and the applicability of the MNA remedy. Future work includes a path forward memo, additional data collection to supplement the FS/CMS, and a supplemental technical report.

CLEANUP/EXIT STRATEGY

This site is included in a PBC awarded in FY05. Costs are covered under site PBC at Meade. The PBC will take this site through RIP. RC is expected in FY13.

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.....	201106
RD.....	200908.....	201111
RA(C).....	200908.....	201204
RA(O).....	200908.....	201704
LTM.....	201704.....	202204
RIP Date:	201204	
RC Date:	201704	

SITE DESCRIPTION

FGGM 13 is Building 6621, the former Pesticide Shop, which is south of the Fort Meade golf course at the southwest corner of the intersection of York Avenue and Gordon Street. During WWII, the building served as a mess hall for prisoners of war. Between 1958 and 1978, the site was used as a pesticide shop. Pesticides stored at the building include malathion, diazinon, and baygon. During this time, it was also used as a maintenance facility for lawn mowers, tractors, and other landscaping equipment. The building was demolished in 1996 and the area graded; currently, the site is vacant and covered with grass.

SI's were conducted after the building was demolished and the site regraded (NuTec, 1997b; Versar, 2003j and 2004b). The SI soil sampling results indicate that the following chemicals were detected above USEPA Region 3 risk-based concentrations (RBCs): chlordane, alpha-chlordane, gamma-chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT, 2,4-D, heptachlor, dieldrin, arsenic, and mercury. Neither the horizontal nor the vertical extent of these chemicals in the soil was determined during the SI. GW was not assessed. The numerous risk-based screening exceedances beyond the immediate vicinity where pesticides were reported to have been stored and handled suggest that the site grading activities may have spread contamination at the site.

In June 2007, the Draft Final RI determined that surface and shallow subsurface soils at the former Pesticide Shop are contaminated with pesticides (primarily chlordane) and arsenic. Surface soil contamination primarily drives human health cancer risks and non-cancer hazards that exceed the acceptable USEPA thresholds of 1 by 10⁻⁴ and 1.0, respectively. The extent of contamination is well defined horizontally and vertically and is proximate to the central area of the former Pesticide Shop, where pesticides handling and mixing occurred. The pesticide contamination is more extensive than the arsenic contamination (URS, 2007).

GW is also contaminated with pesticides (primarily chlordane), but not arsenic. GW pesticide concentrations decrease substantially away from the pesticide handling area, but are still high enough near the site boundary to indicate that the contaminant plume extends past the site boundary. The precise horizontal and vertical limits of the contaminant plume are uncertain for the locations of monitoring wells).

The human health risk assessment (HHRA) finds that for current land use receptors, cancer risks and non-cancer hazards do not exceed the USEPA cancer risk and non-cancer hazard thresholds of 1 by 10⁻⁴ and 1.0, respectively. Concerning possible future land use receptors (including residential), the HHRA finds that, although the soil is contaminated with both arsenic and organochlorine pesticides, human health cancer risks and non-cancer hazards above the USEPA cancer risk and non-cancer hazard thresholds are driven by the organochlorine pesticides (primarily chlordane). If chlordane were not present in the soil, human health cancer risks and non-cancer hazards would be below these USEPA thresholds. The screening-level ecological risk assessment findings are consistent with the HHRA findings, indicating that organochlorine pesticides pose elevated risks that justify evaluation of alternatives to remediate the site.

Comments were received on the Draft Final RI; USEPA Region 3 requested installing four additional GW wells, which were installed and sampled. The MDE has requested additional GW plume delineation, which is pending. The internal draft FFS was

Site ID: FGGM 13
Site Name: PEST. SHOP BLDG. 6621

completed in 2008. A Corrective Measures Study (CMS)/FS is planned for FY09 as shown in the schedule in Section 3. The Army anticipates performing soil removal and a GW remedy to reduce pesticide concentrations in soil and GW.

CLEANUP/EXIT STRATEGY

This site is part of the PBA awarded August 2009. Costs are covered under the site PBC at Meade. An RI/FS is ongoing with performance objectives of RC for soil and RIP for GW.

Site Name: CLOSED SANITARY LF / MW125 & MW126

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.....	201109
RD.....	200908.....	201111
IRA.....	199806.....	199812
RA(C).....	200908.....	201201
RA(O).....	200908.....	201701
LTM.....	201701.....	202201
RIP Date:	201201	
RC Date:	201701	

SITE DESCRIPTION

FGGM 17 is the Fort Meade Closed Sanitary Landfill located along the eastern boundary of the installation, south of State Route 32 and adjacent to the Amtrak railroad tracks. Future land use at the site, according to the CEMP Land Use Plan dated May 2005, is designated as Open Space/Outdoor Recreation/Forested (R&K, 2005). Fort Meade began landfilling 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 were separated by a drainage swale. A third area, which lacks topographic expression, has been informally referred to as Cell 3 (EM Federal Corp., 2007). Cell 3 was the only trench type disposal area but the extent of this activity has not been determined. Other features in the vicinity of the landfill include surface water retention ponds along a small stream that bisects the site, flowing from east to west. A landfill-gas collection and treatment system operates along the eastern edge of the landfill cells to control emissions from the site. Much of the site is wooded and there are several areas identified as wetlands. The landfill was officially closed in January 1996 and thereafter referred to as the Closed Sanitary Landfill (CSL). Cells 1 and 2 were capped under the MDE's Disposal Permit 1992-WSF-0022-0 issued in 1992. The approximately 130-acre landfill (the entire FGGM 17 site occupies 367 acres) operated under permit #87-02-00-08A, issued by the state of Maryland Department of Health and Mental Hygiene on June 26, 1987. A new permit No. 1992-WSF-0022-0 was issued by the MDE on Nov. 2, 1995; operations continued under this permit until closure in 1996. Sanitary landfill operations at Fort Meade were managed by the Directorate of Public Works (DPW).

The landfill was closed in accordance with MDE-approved closure plans under RCRA. The Cell 1 closure plan was approved on Dec. 2, 1994, and the Cell 2 closure plan was approved on Aug. 10, 1998. Capping and closure of Cell 1 and Cell 2 were completed under contract in August 1996 and May 1999, respectively. Cap design for both cells included a synthetic liner and a passive gas venting system. No future plans to reopen the landfill are being considered.

A comprehensive program of GW and surface water monitoring is in place and approved by the MDE, effective Aug. 24, 1993 under RCRA. A methane gas monitoring program was implemented in February 2000 in accordance with RCRA requirements. Analytical data from semiannual GW samples collected since December 2000 indicate that several wells have shown statistically significant increases in concentrations of monitored constituents. Three VOCs (carbon tetrachloride, PCE, and benzene) and three metals (arsenic, beryllium, and thallium) have routinely exceeded the MCLs (CH2MHill, 2001; EM Federal Corp., 2003a). The findings of the 2007 Final RI (EM Federal Corp., 2007) are as follows:

- Geologic, hydrogeologic, and hydraulic data 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 carbon tetrachloride, PCE, and TCE present in the Lower Patapsco aquifer. The Lower Patapsco aquifer is addressed further in the OU-4 GW investigations.
- Benzene has been detected above the residential tap water RBC and/or MCL in the Upper Patapsco aquifer in all RCRA semiannual monitoring rounds since May 1995 with concentrations ranging from 2.9 µg/L to 25 µg/L. Benzene is not migrating off-site above MCLs.

Site ID: FGGM 17

Site Name: CLOSED SANITARY LF / MW125 & MW126

CLEANUP/EXIT STRATEGY

This is part of the PBA awarded in August 2009. Costs are covered under site PBC at Meade.

Cell one and cell two have been capped. FGGM is currently monitoring GW and gas. A formal RI to determine the nature and extent of contamination and any associated risk is underway. The 2007 RI remains under regulatory review. GW monitoring will be continued in accordance with the MDE Solid Waste Program requirements. Wells at compliance will be removed from future sampling.

The path forward (MW-125 and MW-126) also includes a reassessment of potential receptors; evaluate the need for continued ongoing interim measures and conduct a full scale area-wide GW investigation.

Site Name: POST LAUNDRY (OPERABLE UNIT 4)

STATUS

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

Phases	Start	End
PA.....	199005.....	199006
SI.....	199005.....	199006
RI/FS.....	199108.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708
LTM.....	201708.....	202208
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

FGGM 47 is Building 2250, the Post Laundry Landfill (PLF), which is located approximately 300 feet northeast of the intersection of Rock Avenue and Huber Road. Building 2250 is also designated SWMU 59 (post laundry) and SWMU 60 (1941 laundry). Future land use at the site, according to the CEMP Land Use Plan dated May 2005, is designated as administration/ operations (R&K, 2005). Building 2250 has also been identified as FGGM's 90-day hazardous waste storage facility in other reports (Versar, Inc., 2001c).

FGGM 47 was constructed in 1941, the building is a single-story warehouse type structure that was used as a laundry from 1941 through 1991, with dry cleaning operations introduced in the late-1960s. In 1991, laundry and dry cleaning operations were discontinued and the facility was converted to its current use as a recycling center. The dry cleaning operations used the solvent PCE, plus much smaller quantities of TCE. Another solvent, carbon tetrachloride, was used for parts cleaning.

In 1989, a preliminary soil investigation identified PCE in soils in an area believed to be a former drum storage area north of the building. Subsequent investigations of soils and GW on the north and east sides of the building were conducted in 1990 and 1991. In 1994, the MDE issued a corrective action order requiring an investigation to delineate the nature and extent of contamination and additional investigations, including quarterly GW monitoring, were conducted in 1995, 1996, 1997, 1998, and 2000.

Surface water samples were collected from a drainage ditch located northeast of the site. During most of the GW sampling events, surface water and sediment samples were collected from the retention pond near State Route 32. The samples were analyzed for VOCs. In the soil samples collected to date at the site, analytical results indicated no detections above screening criteria. In the GW samples, four VOCs (cis-1,2-dichloroethene [DCE], TCE, PCE, and 1,4-dichlorobenzene [DCB]) were detected at concentrations above their respective USEPA Region 3 RBCs for tap water. In surface water in the drainage ditch, three VOCs (cis-1,2-DCE, TCE, and PCE) were detected at concentrations above their respective RBCs for tap water. The only constituent in sediment samples that exceeded RBCs for residential soil was PCE in one sample.

A July 2000 Comprehensive Site Assessment (CSA) concluded that risks associated with current and future exposure to contaminants at the site appear negligible, except for those associated with perched GW. Remediation of the solvents in the perched GW is not essential for the current use scenario, although land use restrictions were recommended to minimize exposure to contaminated GW, surface water, and sediment. Natural degradation appeared to be occurring, based on observed decreases of VOCs within a relatively short distance from the former source areas and the presence of daughter products. Enhancing or accelerating natural biodegradation through the implementation of in situ remediation was suggested, by establishing strong reducing conditions in the perched GW zone.

CLEANUP/EXIT STRATEGY

Site ID: FGGM 47
Site Name: POST LAUNDRY (OPERABLE UNIT 4)

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201202
RD.....	200908.....	201205
RA(C).....	200908.....	201205
RA(O).....	200908.....	201705
LTM.....	201705.....	202205
RIP Date:	201205	
RC Date:	201705	

SITE DESCRIPTION

FGGM 74 is the US Architect of the Capitol (USAOC) parcel located in an area along the south border of Fort Meade; it is situated generally between State Route 32 and Rock Avenue and between Taylor 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. Contamination on the USAOC parcel is due to past Army activities. Currently, much of the improved areas of the USAOC parcel are used for storing documents. Approximately 10-acres of the western extreme part of the USAOC property has been leased back to the Army and is used as a transportation motor pool (TMP). The motor pool is operated by the Army.

This area was evaluated in 1994 for feasibility of development for the needs of the Legislative Branch agencies. At the time of the study, the area contained a temporary warehouse area, buildings formerly used as the Fort commissary, and buildings associated with the TMP facility. A stream (Rogue Harbor Branch) flows south through the site, and wetlands are present in the vicinity of the stream.

A phase I site assessment was performed as part of the 1994 development study (RK&K, 1994). The assessment identified VOC, pesticide, PCB, and metals contamination in the DRMO area. The assessment also identified petroleum hydrocarbon contamination at the TMP and in the vicinity of several USTs in the warehouse area. Based on the results of the 1994 assessment, a Phase II investigation was recommended.

In 2006, an RI was performed to characterize the nature and extent of contamination and to quantify the risk to human health and ecological receptors (Malcolm Pirnie, 2006b). The investigation identified SVOCs, metals (including lead), and a pesticide at concentrations exceeding risk screening criteria for arsenic and lead soil exceedances. The HHRA results indicated a potential risk for future off-site residential (adult and child) exposure to shallow GW. The screening-level ecological risk assessment (SLERA) results indicated that a more thorough assessment of the potential for ecological risk may be warranted, due to the potential for ecological risk to terrestrial wildlife in wooded portions of the site and to the aquatic organisms and benthic invertebrates in Rogue Harbor Branch.

A technical memorandum was prepared in 2007 for the USAOC parcel to further evaluate the HHRA and SLERA results from the RI, present new HHRA evaluations of on-site residential exposure to on-site soil and GW, present refined SLERA results, and to discuss risk management options for the site (Malcolm Pirnie, 2007a). The technical memorandum recommended NFA for soil, GW, surface water, and sediment at the site. Regulatory comments included recommendations for hot spot removal of lead and arsenic in soil; however, the arsenic exceedances were from samples collected on the railroad tracks that bisect the AOC property, which is owned by the Maryland State Highway Authority. No additional work by the Army on the railroad tracks are anticipated at this time.

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

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

Site Name: TRAP AND SKEET RANGE

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.....	201204
RD.....	200508.....	201206
IRA.....	200305.....	200306
RA(C).....	200508.....	201206
LTM.....	201206.....	202206
RIP Date:	N/A	
RC Date:	201206	

SITE DESCRIPTION

FGGM 83 is a former trap and skeet range used by Fort Meade from the mid-1970s through 1994. The site is also known as OU-1 in the Fort Meade PBC. The site is located at the eastern extent of 20th Street, approximately 1,400 feet east of the intersection with State Route 175. The site is not currently used for military purposes. The site is currently a vacant parcel of 66 acres. Approximately 44 acres of the property (site) may have been affected by the trap and skeet range activities. The former range consisted of a firing line, skeet houses, and the man-made pond. The pond was created by damming a stream that traversed the site. A sand berm built across the streambed and shallow vale in the middle of the site allowed an excavation to fill with surface water. The sand used for the berm is believed to have been obtained from the excavation. 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 GW at four contaminated soil locations and one background location. All samples were analyzed for polycyclic aromatic hydrocarbons (PAHs) and total lead (Versar, 1999b). The CSA reported that the highest risk to human health is 2.8 by 10⁻⁴, 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 (Versar, 1999b). 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, Versar (1999b) 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 CAP dated July 2002 recommended excavation and removal of the 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 (Versar, 2002d). Versar, Inc. conducted a field investigation in August 2004. Over 100 samples were collected from surface soil and shallow subsurface soil and analyzed for metals (antimony, arsenic, copper, lead, and zinc) and PAHs. In addition, ten sediment and seven surface water samples were collected and analyzed for metals and PAHs. Seven GW 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 (Versar, 2005b). A supplemental testing proposal (Kemron, 2007a) was submitted in September 2007 to determine whether lead concentrations reported in the February Draft Data Report (Versar, 2005b) 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 (Kemron, 2008m) and Draft Final Site Specific Terrestrial Ecological Risk Assessment Field Study Workplan (Kemron, 2008k) were prepared. The Army is awaiting comments from USEPA on both the Final revision 3 HHRA and Draft Final ERA submittals. Upon approval of the Work Plan, future work includes ecological-risk field sampling activities.

Site ID: FGGM 83
Site Name: TRAP AND SKEET RANGE

CLEANUP/EXIT STRATEGY

This site is included in a PBC awarded in FY05. Costs are covered under site PBC at Meade. The PBC will take this site through RC. The Army revised the future land use from residential to commercial to better reflect the site's future use. As part of the PBC a revised human health risk assessment was prepared with the future land use being commercial. The results show the calculated risk within the acceptable range. The risk assessment memorandum has been approved by the USEPA and the MDE. The Army and the USEPA are evaluating the site to determine if an ecological risk assessment is necessary.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

The motorpool maintenance facility (building 2286) was established in 1941. Past operations included vehicle painting, sheet metal stamping, and battery charging. This resulted in elevated levels of VOCs in the GW including PCE and TCE. Currently the building is used as a utility workshop and for administrative purposes. (For additional information refer to FGGM-47.)

This site is being addressed under OU No. 4 (Southeastern GW Sites) of the Fort George G. Meade PBC. A RI/FS is being conducted at OU No. 4. A draft RI/FS is currently under regulatory review. All costs associated with this site are captured in FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201110
RD.....	200508.....	201201
RA(C).....	200508.....	201208
RA(O).....	200908.....	201708
LTM.....	201708.....	202408
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

The former Nike Control Site is a former a Missile Master complex that supported the Nike missile program from 1955 to 1972. Lead was detected in surface and subsurface soils above Fort Meade background levels at concentrations ranging from 0.71 milligrams per kilogram (mg/kg) to 1,770 mg/kg. Arsenic was detected in subsurface soils above Fort Meade 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 the GW at concentrations ranging from 0.56 [estimated concentration (J)] micrograms per liter (ug/L)] to 218 ug/L. Building 1945 (the apparent source area of the TCE GW plume) was used as a generator plant and for maintenance operations.

In response to comments from the MDE, the Army has 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.

CLEANUP/EXIT STRATEGY

This site is included in a PBC awarded in FY05. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP with five years of MNA in the LTM phase.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

The former Tank Maintenance Facility Shop - 1 Building 2207 (FGGM-88) is presently used by the DPW as a storage and receiving yard. Current land use at the site is commercial/industrial. According to the Fort George G. Meade Land Use Plan dated July 3, 2000, future land use is designated as "administration." The site includes Building 2207 and surrounding areas and support buildings. Constructed in 1918, Building 2207 was used from that time until 1973 as a tank maintenance facility. Since at least the mid-1980s, it has been in use by the DPW as a receiving and storage facility. The main floor is currently used for receiving materials for distribution to other facilities and the upper floor is used for storing supplies such as filters, light bulbs, and pipe clamps. The grounds are also used to store construction materials, refrigerators, 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.

Investigations conducted at the site (Versar, 1999, and Versar,2000d) identified the following exceedances of soil and GW screening criteria. In the soil, arsenic exceeded its RBC-residential, RBC-industrial, and background mean in two of 17 locations tested. TPH-diesel exceeded the MDE cleanup standard at three of 17 locations tested. In the GW arsenic exceeded its RBC, but not its MCL at one of 11 locations tested. Total petroleum hydrocarbons (TPH)-diesel exceeded its draft MDE screening criterion at four of 11 locations tested. TPH-gasoline exceeded its draft MDE screening criterion at two of those locations. An RI/FS is being prepared for the site.

This site is part of the Fort George G. Meade PBC. Phase schedule information is shown under FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

The former Tank Maintenance Facility Shop - 2 (FGGM-89) is located on Second Street between Pepper Road and Chisholm Avenue. According to the Fort George G. Meade Land Use Plans dated Oct. 27, 1999, and July 3, 2000, respectively, current and future land uses at the site are designated as maintenance. Building 2217 is located in the southeast corner of the site. A former washrack (SWMU 41) and a former oil/water separator (SWMU 40) were located in the northwest corner of the site. The asphalt and gravel yard is currently used to store non-PCB electrical transformers, electrical cables, boilers, water heaters, dishwashers, motors, and other equipment and machinery. Constructed in 1918, Building 2217 was used as a tank maintenance facility until 1973. The building is currently used to store military vehicles, equipment, and small motors. The associated washrack was used to wash vehicles and construction equipment; waste wash water was discharged to the oil/water separator and then to the sanitary sewer system. In 1999 or 2000 the washrack and oil/water separator were demolished and removed. Investigations conducted at the site (Versar, 1999, and Versar, 2000) identified the following exceedances of soil, GW, and metals screening criteria. In the soil, arsenic exceeded its RBC-residential and its RBC-industrial at two of 32 locations tested. TPH-gasoline or TPH-diesel exceeded the MDE cleanup standard at 14 of 32 locations tested. In the GW and metals, of dissolved metals, arsenic exceeded its RBC at one location; total metals (arsenic, beryllium, copper, lead, and thallium) exceeded their RBCs. Seven VOCs (benzene; naphthalene; n-propylbenzene; chlorobenzene; 1,4- dichlorobenzene; 1,2,4-trimethylbenzene; 1,3,5- trimethylbenzene) exceeded their RBCs at five of 30 locations tested. TPH- gasoline and TPH-diesel exceeded the draft MDE screening criterion at three of 30 locations tested.

This site is part of the Fort George G. Meade PBC. Phase schedule information is shown under FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708
RIP Date:	201208	
RC Date:	201708	

SITE DESCRIPTION

The former Tank Cleaning Supply Warehouse (FGGM-90) is located in the northwest quadrant of the intersection of Pepper Road and Rock Avenue. According to the Fort George G. Meade Land Use Plans dated Oct. 27, 1999, and July 3, 2000, respectively, current and future land uses at the site are designated for maintenance. 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 [Directorate of Logistics (DOL) Laundry and Dry Cleaning Services] 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
 SOIL: Arsenic exceeded its risk-based criteria (RBC) and background mean in the only sample tested. In Buildings 2241, 2242, 2248, and 2249 arsenic exceeded its RBCs and background mean in at least one of 23 locations tested; however, detection limits exceeded both RBC-residential and RBC-industrial.

GROUNDWATER: VOCs (methylene chloride, PCE) exceeded their RBCs and the MCL for PCE in three wells west of the building. SVOCs (bis(2- ethylhexyl)phthalate, benzo(a)anthracene; benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and indeno(1,2,3)pyrene) exceeded their RBCs, primarily in one well east of the building, but detection limits for other locations were above RBCs and MCLs. Benzo(a)pyrene also exceeded its MCL.

METALS: Of dissolved metals arsenic exceeded its RBC, but not its MCL in one well; of total metals, arsenic, cadmium, copper, lead, mercury, and thallium exceeded their MCLs in well SB7; chromium, lead, and mercury exceeded their MCLs in well SB11. TPH-diesel exceeded its draft MDE screening criterion in three wells (but the detection limit was above the screening criterion). Two herbicides (MCPD and MCPA) exceeded their RBCs in well SB7 (but detection limits at other locations were above RBCs). One pesticide (hepatachlor epoxide) exceeded its RBC and its MCL in one well (but the detection limit at other locations was above the RBC).

Buildings 2241, 2242, 2248, 2249
 SOIL: Arsenic exceeded RBCs and background mean in at least one of 23 locations tested; however, detection limits exceeded both RBC-residential and RBC-industrial.

GROUNDWATER: Three VOCs (PCE, TCE, and vinyl chloride) exceeded their RBCs and MCLs at 12 locations. PCE and TCE detection limits were above RBCs, and the vinyl chloride detection limit was above both its RBC and its MCL. One SVOC (bis(2-ethylhexyl)phthalate) exceeded its RBC in one well, but the detection limit at other locations was above the RBC.

METALS: Of dissolved metals, arsenic exceeded its RBC, but not its MCL in at least two of five locations tested, but detection limits were above the RBC. At 19 of 20 locations, up to five total metals (arsenic, cadmium, copper, nickel, and thallium) exceeded their RBCs. At 17 of 20 locations, up to five total metals (arsenic, cadmium, copper, lead, and thallium) exceeded their MCLs. TPH-diesel exceeded its draft MDE screening criterion in at least three of 20 locations, but the detection limit was above the draft

Site ID: FGGM 90
Site Name: TANK CLEANING SUPPLY (OP UNIT 4)

screening criterion.

This site is part of the Fort George G. Meade PBC. Phase schedule information is shown under FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708

RIP Date: 201208

RC Date: 201708

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. 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. According to the Fort George G. Meade Land Use Plans dated Oct. 27, 1999, and July 3, 2000, respectively, current and future land uses at the site, are designated as maintenance. 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. Two fuel oil USTs were located at the south side of the building; one was removed in 1992 and the other was removed and replaced in 1988 and then removed in 1997. During the 1988 UST removal, corrosion holes were noted at the end of the tank. Investigations conducted at the site identified the following exceedances of soil, GW, and metals screening criteria. There were no exceedances of screening criteria identified in the soil. In the GW, the TPH-diesel range exceeded the draft MDE screening criterion in six of 11 samples tested. For metals, the total exceeded their RBCs in several samples. Dissolved metals (arsenic, iron, manganese) exceeded their RBCs in three locations on the northwest and west sides of the building.

This site is part of the Fort George G. Meade PBC. Phase schedule information is shown under FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201108
RD.....	200908.....	201112
RA(C).....	200908.....	201208
RA(O).....	200908.....	201708

RIP Date: 201208

RC Date: 201708

SITE DESCRIPTION

The former Heavy Gun Cleaning and Repair facility (FGGM-92) includes Buildings 2246 and building 2253, located by Pepper and Huber Roads. Current and future land use is designated as maintenance. 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 washrack (SWMU 58) and associated oil/water separator (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 vehicle maintenance. Since 1992, the Director of Community Activities has used the facility for the storage and maintenance of grounds-keeping equipment and supplies (e.g., tractors, gas cylinders). Prior to 1992 it was used as a warehouse.

At Building 2246 arsenic levels in the soil exceeded RBC-residential in 11 of 37 locations tested. Detection limits exceeded RBC residential, and five of 10 detection limits also exceeded RBC-industrial. TPH-diesel exceeded the MDE cleanup standard in three of 23 samples tested. In the GW, four VOCs (benzene, TCE, PCE, and vinyl chloride) exceeded their RBCs at one or two locations. TCE, PCE, and vinyl chloride also exceeded MCLs. One SVOC [bis(2-ethylhexyl)phthalate] exceeded its RBC at four locations. TPH-diesel exceeded its draft MDE screening criterion at four locations, and TPH-gasoline exceeded at one location. And no dissolved metals exceeded their RBCs or MCLs in the five samples tested. Seven total metals (arsenic, beryllium, cadmium, copper, nickel, lead, and thallium) exceeded their RBCs and MCLs in 17 locations.

At Building 2253 arsenic levels in the soil exceeded its RBC-residential at all eight locations tested; it exceeded the RBC-industrial at five locations and the background mean at seven locations. TPH-diesel at one location exceeded the MDE cleanup standard for UST sites. The herbicide MCPP at one location exceeded its RBC-residential, but not its RBC-industrial. In the GW arsenic exceeded its RBC, but not its MCL at one of three locations tested. TPH-diesel at three locations exceeded the draft MDE screening criterion. The SVOC bis(2-ethylhexyl)phthalate and the herbicide MCPA each exceeded their RBCs at one location.

This site is part of the Fort George G. Meade PBC. Phase schedule information is shown under FGGM-47.

CLEANUP/EXIT STRATEGY

This site is included in a PBA awarded in August 2009. Costs are captured in site PBC at Meade. The PBC will take this site to RIP in FY12. Upon achievement of RIP, RA(O) will be performed through RC.

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.....	201108
RD.....	200908.....	201110
RA(C).....	200908.....	201205
RA(O).....	200908.....	201511
LTM.....	201511.....	202011

RIP Date: 201205

RC Date: 201511

SITE DESCRIPTION

While Picerne Military Housing was moving earth, as part of the construction of new Army family housing in the housing privatization initiative at Fort Meade, this 1940s vintage dump site was discovered immediately adjacent to the Manor View Elementary School. The subsequent spring FY03 PA/SI discovered that the dump site extended beyond the planned limits of the housing area, and onto the Manor View Elementary School property. The waste from the site is mixed with black stained soil. Historic aerial photographs reportedly show an incinerator in the vicinity, so it's possible that ash may have been disposed of in the dump. Surface soil samples collected in the discovery area and the schoolyard revealed that benzo (a) pyrene and arsenic exceeded RBCs. TPH-Diesel Range Organics exceeded the MDE Cleanup Standard in both surface and subsurface soil. The soil mixed with the waste did not exhibit RCRA waste characteristics. The RBCs were exceeded at the surface and down to 12 feet below ground surface (bgs).

Since the PA/SI was limited to surface and subsurface soil in and around the dump area, an RI was completed to evaluate GW, soil gas, sediment/surface water, soil, and air. The size of the dump is estimated at 10 acres. Preliminary GW sample results show that VOCs and metals exceed MCLs. The depth to GW averages 36 feet below bgs. Soil gas samples exceed vapor intrusion screening levels for VOCs near buildings, and methane levels are in the combustible range. Due to public safety concerns stemming from the soil gas data, additional sampling was performed, focusing on indoor air quality sampling, sub-slab air sampling, sub-slab vacuum testing, and ambient air quality sampling at the school near the site. Methane and other potential contaminants were not elevated in the sub-slab zone, or in the indoor air beyond background levels. Because the nature and extent of potential chemical contaminants have not been determined, the proposed plan includes execution of a RI. Based on the current understanding of contaminant levels, viable RA consists of long term GW monitoring of the school's classrooms and offices. The school's concrete slab foundation appears to be acting as an effective barrier to vapor intrusion. Preliminary ambient (outdoor) air sample results show a VOC exceeding a screening level.

Preliminary constituents of potential concern include arsenic, polyaromatic hydrocarbons (PAH), TCE, and dioxin in the soil, and arsenic, PAHs, TCE, vinyl chloride, and dieldrin in the GW.

Data collected near the neighborhood, to the west of the site, showed increased levels of methane in the soil. This has led to the installation of a passive vent trench and subsequent upgrade to an active system on the west side of the dump area to vent methane as an interim measure. In the winter of 2005 and 2006, families were evacuated from 20 military housing units and the utilities in these units were shut off to remove ignition sources.

Interim actions have not been determined to have effectively controlled the migration of methane towards military housing.

CLEANUP/EXIT STRATEGY

Site ID: FGGM 93
Site Name: Manor View Dump Site

This site is included in the PBA awarded in August 2009. Costs are covered under site PBC at Meade. Contracted work will remove all wastes capable of generating methane at concentrations in excess of the lower explosive limit (LEL) and achieve RIP for GW and RC for soils in FY12. GW monitoring will continue through FY15.

STATUS

Regulatory Driver: CERCLA
RRSE: LOW
Contaminants of Concern: Metals, Semi-volatiles (SVOC)
Media of Concern: Groundwater

Phases	Start	End
PA.....	200406.....	200712
SI.....	200906.....	201105

RIP Date: N/A
RC Date: 201105

SITE DESCRIPTION

FGGM-95 includes 23 areas of interest (AOIs) where data from the 2007 PA/SI and other studies identified site features indicative of past landfill and related activities. The sites are:

- Possible Dump Site 1957-A,
- Former Compliance Cleanup site,
- 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 at USAOC5,
- Taylor Avenue Buried Drum Site,
- Waste Storage Disposal Area 1938,
- Fill 1988, and
- Small Pit 1952.

None of these AOIs are currently in operation. These sites have been combined into a single site due to their proximity and/or anticipated similarity in contaminants and affected media. For a complete description of the AOIs and their locations, please refer to the Fort Meade Site Management Plan.

CLEANUP/EXIT STRATEGY

Soil, sediment, and GW sample results will be compared to the appropriate criteria/standards. Sites with exceedances may be subject to future RI. All other sites will be closed out using consensus letters.

Site ID: FGGM-96

Site Name: Former Motor Pools 2, 7, 9, & 19

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Groundwater, Sediment, Surface Water

Phases	Start	End
PA.....	200409.....	200712
SI.....	200906.....	201105

RIP Date: N/A

RC Date: 201105

SITE DESCRIPTION

FGGM-96 includes 79 AOIs where records, including the USEPA 1996 historic aerial photograph study of Ft. Meade, also referred to as the Epic Study, show the presence of motor pools, washracks and buildings with some indication a release may have occurred. Many, but not all of these AOI have undergone some level of investigation i.e., SWMU studies and some were verbally closed as part of the Ft. Meade Partnership meetings which included representative from the USEPA, Maryland Department of the Environmental and the Army. The USEPA now requires additional analysis of all of these AOI. Due to their proximity and/or anticipated similarity in contaminants and affected media, the AOI have been combined into a single site (FGGM-96). For a complete description of the AOIs, please refer to the Fort Meade Site Management Plan. The AOIs included in this site are:

- MP)-1/WR-4,
- MP2,
- MP3/WR2,
- MP4,
- MP5,
- MP6,
- MP7/WR6,
- MP8,
- MP9,
- MP10,
- MP11/WR7,
- MP12/WR8,
- MP13/WR9,
- MP14,
- MP15/WR10,
- MP17,
- MP18/WR12,
- MP19/WR13,
- Washrack 3,
- Washrack 5,
- Debris and Stain 1975,
- Chisholm Ave and 6th Street,
- Buildings 1007, 2213, 2227, 2224, 2266, 2276, 2288, 2724, 2728, 4587, 4680, 8480, 8485, 8486, 8549, 8551, 8860, 8870, 8880, 8890, 8890A, 8891, 8881, and 9581,
- Former Incinerator Building - 1943,
- Oil Tanks,
- Possible Vehicle Service Area A - 1943,
- Possible Vehicle Service Area B - 1943,
- Possible Vehicle Storage Area 1957, and
- Stained Soils along 3rd Street.

Site ID: FGGM-96

Site Name: Former Motor Pools 2, 7, 9, & 19

CLEANUP/EXIT STRATEGY

Soil, sediment, and GW sample results will be compared to the appropriate criteria/standards. Sites with exceedances may be subject to future RI. All other sites will be closed out using consensus letters.

Site ID: PBC at Meade
Site Name: PBC at Meade

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

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

Phases	Start	End
PA.....	199809.....	199810
RI/FS.....	200209.....	200709
RA(C).....	200506.....	201111
RA(O).....	200506.....	201512

RIP Date: 201111

RC Date: 201512

SITE DESCRIPTION

The Fort Meade PBC No. 1 was awarded in 2005. The only future costs on this contract are associated with sites FGGM-07 and FGGM-87 and are captured under site PBC at Meade.

The second Fort Meade PBC No. 2 was awarded in 2009. Fort Meade sites covered under this contract are FGGM-13, 17, 74, 93, 003-R-01, and OU4. OU4 includes FGGM-47, 86, 89, 90, 91, and 92. Future costs at these sites include RIP/RC through RA(O) phase.

CLEANUP/EXIT STRATEGY

Please refer to the individual site descriptions for the cleanup/exit strategy.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FGGM 03	WATER TREATMENT PLT. BLDG 8688	199408	Not Eligible For ER,A/BRAC Funding
FGGM 05	TROOP BOILER PLT (OPERABLE UNIT 2)	200909	
FGGM 08	COMP AMMO SUPPLY POINT #1	199903	No available documentation
FGGM 101	SITE M PARCEL 8	200712	
FGGM 11	CHEMICAL WEAPONS	199708	No available documentation
FGGM 14	HAZARDOUS WASTE STORAGE FACILITY	199410	Not Eligible For ER,A/BRAC Funding
FGGM 18	ASP#2	199605	Not Eligible For ER,A/BRAC Funding
FGGM 19	ADV. WASTEWATER TREATMENT FACILITY	199410	Not Eligible For ER,A/BRAC Funding
FGGM 33	BATTERY SHOP BLDG. 2283	200409	Partnering Meeting Minutes with MDE and EPA
FGGM 36	PHOTO LAB'S BLDG 4553, 6530	199606	Not Eligible For ER,A/BRAC Funding, Active Photo Lab
FGGM 37	KIMBROUGH ARMY HOSPITAL	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 45	CALIBRATION LAB BUILDING 2220	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 49	DOL BUILDINGS 2286, 2246	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 51	BUILDING 2216	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 70	BLDG 6513 INDOOR RANGE	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 71	BLDG 6512 EX INDR RNG	199606	Not Eligible For ER,A/BRAC Funding, Active Facility
FGGM 75	USTS PRIOR TO 1984	199606	Not Eligible For ER,A/BRAC Funding
FGGM 78	GRANITE NIKE	200401	Closure Documentation from MDE pending

Date of IRP Inception: 198011

Past Phase Completion Milestones

1982

CS (FGGM 14 - HAZARDOUS WASTE STORAGE FACILITY)
 RFA (FGGM 14 - HAZARDOUS WASTE STORAGE FACILITY)
 PA (FGGM 03 - WATER TREATMENT PLT. BLDG 8688, FGGM 19 - ADV. WASTEWATER TREATMENT FACILITY)
 SI (FGGM 03 - WATER TREATMENT PLT. BLDG 8688, FGGM 19 - ADV. WASTEWATER TREATMENT FACILITY)

1990

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

1992

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

1993

PA (FGGM 17 - CLOSED SANITARY LF / MW125 & MW126, FGGM 33 - BATTERY SHOP BLDG. 2283)
 DES (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))
 SI (FGGM 17 - CLOSED SANITARY LF / MW125 & MW126)

1994

PA (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5))
 SI (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5), FGGM 33 - BATTERY SHOP BLDG. 2283)
 IRA (FGGM 33 - BATTERY SHOP BLDG. 2283)
 RA(C) (FGGM 03 - WATER TREATMENT PLT. BLDG 8688)

1996

PA (FGGM 08 - COMP AMMO SUPPLY POINT #1, FGGM 18 - ASP#2, FGGM 74 - ARCHITECT OF THE CAPITAL, FGGM 75 - USTS PRIOR TO 1984)
 RI/FS (FGGM 08 - COMP AMMO SUPPLY POINT #1)
 RFA (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 2216, FGGM 70 - BLDG 6513 INDOOR RANGE, FGGM 71 - BLDG 6512 EX INDR RNG)
 SI (FGGM 08 - COMP AMMO SUPPLY POINT #1, FGGM 74 - ARCHITECT OF THE CAPITAL)
 CMI(C) (FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

1997

PA (FGGM 11 - CHEMICAL WEAPONS, FGGM 13 - PEST. SHOP BLDG. 6621)
 RFA (FGGM 78 - GRANITE NIKE)
 IRA (FGGM 07 - DRMO DRUM SITE (OPERABLE UNIT 5))
 SI (FGGM 11 - CHEMICAL WEAPONS, FGGM 13 - PEST. SHOP BLDG. 6621)

1999

SI (FGGM 83 - TRAP AND SKEET RANGE, 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))
 PA (FGGM 83 - TRAP AND SKEET RANGE, 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 - PBC at Meade)
 RA(C) (FGGM 08 - COMP AMMO SUPPLY POINT #1)

IRA 2000	(FGGM 17 - CLOSED SANITARY LF / MW125 & MW126)
CS 2001	(FGGM 78 - GRANITE NIKE)
RFI/CMS 2002	(FGGM 78 - GRANITE NIKE)
DES CMI(C) 2003	(FGGM 78 - GRANITE NIKE)
SI IRA PA 2004	(FGGM 93 - Manor View Dump Site)
LTM RI/FS 2007	(FGGM 83 - TRAP AND SKEET RANGE)
RI/FS 2008	(FGGM 93 - Manor View Dump Site)
RFA PA 2009	(FGGM 78 - GRANITE NIKE)
CMI(O)	(FGGM 33 - BATTERY SHOP BLDG. 2283)
	(PBC at Meade - PBC at Meade)
	(FGGM 101 - SITE M PARCEL 8)
	(FGGM-95 - Former Landfill Sites, FGGM-96 - Former Motor Pools 2, 7, 9, & 19)
	(FGGM 05 - TROOP BOILER PLT (OPERABLE UNIT 2))

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
FGGM 93	Manor View Dump Site	Manor View Soil Removal	20110810
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	Post Laundry Facility	20110830
FGGM 17	CLOSED SANITARY LF / MW125 & MW126	Closed Sanitary Landfill	20110930

Final RA(C) Completion Date: 201311

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of IRP at Installation (including LTM phase): 202512

FORT GEORGE G MEADE IRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 07	DRMO DRUM SITE (OPERABLE UNIT 5)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
FGGM 13	PEST. SHOP BLDG. 6621	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
FGGM 17	CLOSED SANITARY LF / MW125 & MW126	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
FGGM 47	POST LAUNDRY (OPERABLE UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
FGGM 74	ARCHITECT OF THE CAPITAL	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
FGGM 83	TRAP AND SKEET RANGE	RI/FS						
		RD						
		RA(C)						
		LTM						
FGGM 86	MOTORPOOL FAC (OPERABLE UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						

FORT GEORGE G MEADE IRP Schedule

SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 87	NIKE CONTROL SITE (OPERABLE UNIT 3)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 88	TANK MNT FAC. SHOP-1 (OP UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 89	TANK MAIN. FAC. SHOP-2 (OP UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 90	TANK CLEANING SUPPLY (OP UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 91	MISSILE REPAIR SHOP (OP UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 92	HEAVY GUN CLEAN/REPAIR (OP UNIT 4)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM 93	Manor View Dump Site	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM-95	Former Landfill Sites	SI						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM-96	Former Motor Pools 2, 7, 9, & 19	SI						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
PBC at Meade	PBC at Meade	RA(C)						
		RA(O)						

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: 5/3

Installation Site Types with Future and/or Underway Phases

2 Unexploded Munitions/Ordnance
(FGGM-003-R-01, FGGM-007-R-01)

Most Widespread Contaminants of Concern

Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern

Soil

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

Site ID	Site Name	Action	Remedy	FY	Cost
N/A					

Duration of MMRP

Date of MMRP Inception: 198905

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201209/201709

Date of MMRP completion including Long Term Management (LTM): 202209

MMRP Contamination Assessment

Contamination Assessment Overview

In June 2003 a phase 3 Army range inventory was completed at Fort Meade. 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 3 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 site, Former Mortar Range (FGGM-003-R-01), was recommended for a RI. The RI of the Former Mortar Range began in 2007 and is currently underway. Intrusive investigations conducted as part of the RI have found two and three inch stokes mortars, 60mm mortars, 81mm 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.

Cleanup Exit Strategy

The installation plans to finalize the RI in 2010 and begin an FS to evaluate potential RA alternatives.

MMRP Previous Studies

	Title	Author	Date
2003	Final Closed, Transferring, Transferred Range/Site Inventory Report for Fort George G. Meade,	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

FORT GEORGE G MEADE
Military Munitions Response Program
Site Descriptions

STATUS

Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions constituents (MC), White Phosphorous
Media of Concern: Soil

Phases	Start	End
PA.....	200208.....	200306
SI.....	200509.....	200704
RI/FS.....	200707.....	201111
RD.....	200908.....	201202
RA(C).....	200908.....	201209
RA(O).....	200908.....	201709
LTM.....	201709.....	202209
RIP Date:	201209	
RC Date:	201709	

SITE DESCRIPTION

The mortar range is approximately 291 acres located in the southwest portion of the installation. The range was identified on a 1924 War Game Map. It was in use from 1924 until the mid 1940s. The land is currently used as the golf course. During the early 1990s the explosive ordnance division reported a white phosphorous mortar was found on the course. The 2004 environmental baseline study (EBS), for Site M (golf course), stated that spent bullets, training mortar rounds, and pieces of exploded grenades were found as part of routine use and maintenance. The EBS also documented detections of explosives above laboratory detection limits, but below regulatory screening levels in soil and GW, at areas within the Safety Danger Zone of the mortar range.

Intrusive investigations conducted as part of the RI have found two and three inch stokes mortars, 60mm mortars, 81mm mortars, Mark II hand grenades, and land mines; all were determined to be practice rounds. Small arms rounds were also found, including .20cal, .30cal, and .50cal rounds.

An addendum to the work plan is underway to describe the sampling and analysis for munition constituents (MC).

CLEANUP/EXIT STRATEGY

This site is included in the PBA awarded in August 2009. The costs are covered under site PBC at Meade.

The cleanup/exit strategy assumes remedial design and MEC institutional controls.

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
LTM.....	199808.....	202003
RIP Date:	N/A	
RC Date:	198911	

SITE DESCRIPTION

This 23-acre area is part of the General Tipton Maneuver and Buffer Area located south of route 32 in the Tipton Airfield property. The site was addressed as part of FGGM-85 as a BRAC property; however, it will not be transferred, and LTM of the Inactive Landfill 2 will be assumed by the ER,A Munitions Response Program. Other portions of FGGM-85 will remain as a BRAC site.

CLEANUP/EXIT STRATEGY

A yearly inspection of the security fence and signage are programmed under LTM.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FGGM-004-R-01	GRENADE & 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)

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)

2007

SI (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)

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: 201209

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of MMRP at Installation (including LTM phase): 202209

FORT GEORGE G MEADE MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM-003-R-01	MORTAR RANGE	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY11	FY12	FY13	FY14	FY15	FY16+
FGGM-007-R-01	Inactive Landfill 2	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

Fort Meade has an active RAB which was established in 1995 and currently has eight members who meet every two months. The last meeting of the RAB was on March 25, 2010.

Administrative Record is located at

Fort George G. Meade Environmental Office
2212 Chisholm Ave, Suite 5115
Fort Meade, MD 20755-7068
301-677-9648

Information Repository is located at

Fort George G. Meade Environmental Office
2212 Chisholm Ave, Suite 5115
Fort Meade, MD 20755-7068
301-677-9648

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

