

FY2016

ABERDEEN PROVING GROUND
Army Defense Environmental Restoration Program
Installation Action Plan

Printed 01 June 2017

Table of Contents

Statement Of Purpose.....	1
Acronyms.....	2
Acronym Translation Table.....	7
Installation Information.....	8
5-Year / Periodic Review Summary.....	10
Land Use Control (LUC) Summary.....	12
Cleanup Program Summary.....	36
Installation Restoration Program.....	38
IRP Summary.....	39
IRP Contamination Assessment.....	48
IRP Previous Studies.....	50
Installation Restoration Program Site Descriptions.....	59
AAML01 MICHAELSVILLE LANDFILL-OU1 (SOURCE).....	60
AAML02 MICHAELSVILLE LANDFILL-OU2 (GW).....	61
AAOA01 OTHER ABERDEEN AREAS-LANDFILLS.....	62
AAOA02 OTHER ABERDEEN AREAS-SURFACE DISPL AREAS.....	63
AAOA03 OTHER ABERDEEN AREAS-DRAINAGE DITCHS.....	65
AAOA08 OTHER ABERDEEN AREAS- GW Sites.....	66
AAWB01 WESTERN BOUNDARY AREA GROUNDWATER-OU1.....	68
AAWB02 PAAF LANDFILL/CITY OF ABERDEEN WELLS-OU2.....	69
AAWB04 OTHER MEDIA OU3(SW, SED, SOIL).....	70
EABR00 Bush River Area.....	71
EABR03-A OLD BUSH RIVER ROAD DUMP-CLUSTER 3.....	72
EABR03-B TRANSFORMER STORAGE-CLUSTER 3.....	73
EABR03-C SURFICIAL AQUIFER-CLUSTER 3.....	74
EABR07-A BOAT CLUB FILL SITE(4)-CLUSTER 7.....	75
EABR07-B BIO-SENSOR FACILITY-CLUSTER 7.....	76
EABR11-A 26TH STREET DISPOSAL SITE (1)-CLUSTER 11.....	77
EABR11-B 26TH STREET DISPOSAL SITE (2)-CLUSTER 11.....	78
EABR11-C 22ND STREET LANDFILL-CLUSTER 11.....	79
EABR11-D BLDG 45-A AMMO RENOVATION FCTY-CLU 11.....	80
EABR11-E CASY INCINERATOR-CLUSTER 11.....	81
EABR11-F SURFICIAL AQUIFER-CLUSTER 11.....	82

Table of Contents

EABR11-G UNDERGROUND STORAGE TANK.....	83
EABR11-H ADAMSITE STORAGE PIT - CLUSTER 11.....	84
EABR11-I RADIOACTIVE MATERIAL DISPOSAL FACILITY.....	85
EABR15-A KINGS CRK CHEMICAL DISPOSAL SITE CLU 15.....	86
EABR15-B 30TH STREET LF-CLUSTER 15.....	87
EABR15-C TON CONTAINER STORAGE-CLUSTER 15.....	88
EABR18-A TAPLER PT DREDGE MATERIAL SITE-CLU 18.....	89
EABR18-B CHEM MUNITION BURIAL SITE(4)-CLUSTER 18.....	90
EABR18-C IGLOO STORAGE AREAS-CLUSTER 18.....	91
EABR18-D A-FIELD TEST SITE(2)-CLUSTER 18.....	92
EABR18-E BUSH RIVER DOCK(E2396)-CLUSTER 18.....	93
EABR18-F SURFICIAL AQUIFER - CLUSTER 18.....	94
EABR35-A MAINTENANCE YARD-CLUSTER 35.....	95
EABR35-B BLDG E2144/2148/2150-CLUSTER 35.....	96
EABR36-A WAREHOUSE STORAGE AREAS-CLUSTER 36.....	97
EABR36-B BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36.....	98
EACC1A-A RAILROAD YARD-CLUSTER 1A.....	99
EACC1A-B G STREET SALVAGE YARD-CLUSTER 1A.....	100
EACC1D DM FILLING PLANT-CLUSTER 1D.....	101
EACC1E BUILDING 87 COMPLEX-CLUSTER 1E.....	102
EACC1F-A BUILDING E5604 AREA-CLUSTER 1F.....	103
EACC1F-B BLDG 80 SERIES SMOKE LABS-CLUSTER 1F.....	104
EACC1G-A BLDG E5185 WWII MTD FILLING PNT-CLU 1G.....	105
EACC1G-B BLDG E5188 WP FILLING PNT-CLUSTER 1G.....	106
EACC1H-A 1937 MUSTARD DISPOSAL PIT-CLUSTER 1H.....	107
EACC1H-B WWII CHLORINE PLANT-CLUSTER 1H.....	108
EACC1H-C BLDG E5483 PROTECT CLOTH LDY-CLUSTER 1H.....	109
EACC1H-D PHOSGENE PLANT AREA-CLUSTER 1H.....	110
EACC1H-E BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H.....	111
EACC1H-F EXPER CHEM PLANT AREA-CLUSTER 1H.....	112
EACC1H-G MUSTARD PLANT AREA-CLUSTER 1H.....	113
EACC1I-A BUILDING 106/107 AREA-CLUSTER 1I.....	114
EACC1I-B BLDG 113 GAS INST CHAMBER-CLUSTER 1I.....	115
EACC1J LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1.....	116
EACC1K CANAL CRK MARSH AND LANDFILL-CLUSTER 1K.....	117
EACC1L-A BLDG 503 SMK MIX BURNING SITES-CLU 1L.....	118
EACC1L-B BUILDING 503 SMOKE POT PLANT-CLUSTER 1L.....	119
EACC2A OLD HOSP AND ADMIN AREA-CLUSTER 2A.....	120
EACC2B BLDG E5023 WWI WP FILLING PNT-CLU 2B.....	121
EACC2C BLDG E5238 CLOTH IMPREG FCLY-CLU 2C.....	122
EACC2D LAB TOXIC WASTE DISPOSAL PITS-CLU 2D.....	123

Table of Contents

EACC2E NOBLE ROAD INCINERATORS-CLUSTER 2E.....	124
EACC2F BLDG 99 (E5032) EXP FILLING PNT-CLU 2F.....	125
EACC2G BLDG E5103 PHOTO LAB-CLUSTER 2G.....	126
EACC2H-A BLDG 501 FILLING PNT/E5100 LAB-CLU 2H.....	127
EACC2H-B WWI SHELL DUMPS-CLUSTER 2H.....	128
EACC2H-C FILLING PLANTS NO 1&2-CLUSTER 2H.....	129
EACC2I-A AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I.....	130
EACC2I-B OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I.....	131
EACC3A LAB TOXIC WASTE DIS PIT-BLDG E3330-CL 3A.....	132
EACC3B BUILDING E2100 LABORATORY-CLUSTER 3B.....	133
EACC3C BLD E32XX/E3100/3081 MED RESH LABS-CL 3C.....	134
EACC3D BUILDING E3160 COMPLEX-CLUSTER 3D.....	135
EACC3E BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E.....	136
EACC3F BUILDING E35XX AREA-CLUSTER 3F.....	137
EACC3G BLDG E360X/E361X/E362X AREA-CLUSTER 3G.....	138
EACC3H E3560 TEST CHAMBER COMPLEX-CLUSTER 3H.....	139
EACC3I BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I.....	140
EACC3J BLDG E3580 PYROTECH LDG FACILITY-CLU 3J.....	141
EACC3K-A BUILDING E37XX COMPLEX-CLUSTER 3K.....	142
EACC3K-B B-FIELD KINGS CREEK DUMP CLUSTER 3K.....	143
EACC3L BLDG E3640 PROCESS LAB-CLUSTER 3L.....	144
EACC3M-A WASTEWATER TREATMENT AREA-CLUSTER 3M.....	145
EACC3N BEACH POINT TEST SITE-CLUSTER 3N.....	146
EACC3O B-FIELD RANGE AREA-CLUSTER 3O.....	147
EACC3P MOSQUITO TEST GRID AREA-CLUSTER 3P.....	148
EACC4A EAST AREA CC AQUIFER-CLUSTER 4A-A.....	149
EACC4A-B WEST AREA CC AQUIFER-CLUSTER 4A-B.....	150
EACC5A CANAL CREEK BED SED.SOURCE AREA CLUST 5A.....	151
EACC5B KINGS CREEK SEDIMENT PESTICIDE SOURCE AR.....	152
EACI00 CARROLL ISLAND STUDY AREA.....	153
EAGQ00 GRACES QUARTERS STUDY AREA.....	154
EAGQ02-D SURFICIAL AQUIFER-CLUSTER 2.....	155
EAJF00 J-FIELD STUDY AREA.....	156
EALC09-F SURFICIAL AQUIFER-CLUSTER 9.....	157
EALC13-D SURFICIAL AQUIFER-CLUSTER 13.....	158
EANS01-A UNCONFINED GROUNDWATER.....	159
EANS01-D SOUTHWEST LAUNCH LANDFILL.....	160
EAOE04 D-FIELD AERIAL SPRAY GRID-CLUSTER 4.....	161
EAOE08 G-FIELD WASTEWATER TREATMENT AREA-CLU 8.....	162
EAOE12 H-FIELD WASH RACK AND STORAGE AREA-CL 12.....	163
EAOE16 M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16.....	164

Table of Contents

EAOE19 FORT HOYLE TRAINING AREA-CLUSTER 19.....	165
EAOE22 L-FLD DEMO AND PROPELL DISP SITE-CLU 22.....	166
EAOE23 I-FIELD JAPANESE BUNKER AREA CLUSTER 23.....	167
EAOE24 M-FLD SOUTHEAST TEST AND BURN AREA CL 24.....	168
EAOE26 M-FLD TUNNELS AND TEST SLAB AREA CLU 26.....	169
EAOE27 M-FIELD PRE-WWII AGENT TEST SITE CLU 27.....	170
EAOE28 H-FIELD CONCRETE TARGET AREA CLUSTER 28.....	171
EAOE29 MAXWELL POINT TEST SITE CLUSTER 29.....	172
EAOE30 C-FIELD MUNITIONS BURIAL SITE CLUSTER 30.....	173
EAOE31 H-FIELD TANK TEST RANGE CLUSTER 31.....	174
EAOE37 D-FLD CHEMICAL AGENT TEST GRID CLU 37.....	175
EAOE38 K-FIELD DEMOLITION FIELD CLUSTER 38.....	176
EAOE39 C-FIELD WASTEWATER SYSTEM CLUSTER 39.....	177
EAOE41 G-FIELD TUNNEL COMPLEX CLUSTER 41.....	178
EAOE42 M-FIELD CLOTHING SHACK AREA CLUSTER 42.....	179
EAOE44 M-FIELD BOMLET PROJECTOR CLUSTER 44.....	180
EAOE46 E-FIELD DREDGE SPOIL AREA CLUSTER 46.....	181
EAOE50 G-FIELD TRAINING AREA CLUSTER 50.....	182
EAOE51 K-FIELD PISTOL RANGE CLUSTER 51.....	183
EAOE53 I-FIELD IMPACT AREA CLUSTER 53.....	184
EAOF01 OLD O-FIELD GWTS-OU1.....	185
EAOF02 OLD O-FIELD SOURCE AREA-OU2.....	186
EAOF03 WATSON CREEK SEDIMENT & SW-OU3.....	187
EAOF04 NEW O-FIELD GW AND SOURCE AREA-OU4.....	188
EAWW00 WESTWOOD AREA.....	189
Installation Restoration Program Site Closeout (No Further Action) Sites Summary.....	190
IRP Schedule.....	195
Installation Restoration Program Milestones.....	195
IRP Schedule Chart.....	206
Military Munitions Response Program.....	214
MMRP Summary.....	215
MMRP Contamination Assessment.....	216
MMRP Previous Studies.....	217
Military Munitions Response Program Site Descriptions.....	218
APG-001-R-02 Former Demolition Area - Ruggles GC.....	219
APG-001-R-04 Gas Identification/Detonation Area.....	220

Table of Contents

APG-001-R-05 Multi-Purpose Range.....	221
APG-003-R-01 BUSH RIVER AREA.....	222
APG-003-R-04 Chemical Munitions Burial Site.....	223
APG-003-R-05 A-Field.....	224
APG-003-R-06 Kings Creek Chemical Disposal Site.....	225
APG-004-R-01 CANAL CREEK AREA.....	226
APG-004-R-02 B-Field Kings Creek Dump.....	227
APG-004-R-03 B-Field.....	228
APG-004-R-04 F-Field.....	229
APG-006-R-01 FORT HOYLE.....	230
APG-011-R-01 WESTWOOD AREA.....	231
APG-011-R-02 West Range.....	232
APG-011-R-03 Hog's Point Bomb Target.....	233
APG-14-R-01 Aberdeen Area EUL Site.....	234
Military Munitions Response Program Site Closeout (No Further Action) Sites Summary.....	235
MMRP Schedule.....	236
Military Munitions Response Program Milestones.....	236
MMRP Schedule Chart.....	237
Compliance Restoration.....	238
CR Summary.....	239
CR Contamination Assessment.....	240
CR Previous Studies.....	241
Compliance Restoration Site Descriptions.....	242
CCAPG00345 BUILDING 345	243
CCAPG04031 BUILDING 4031.....	244
CCAPGAAVI Aberdeen Area Vapor Intrusion	245
CCAPGEAVI Edgewood Area Vapor Intrusion.....	246
CCEACCX1 CCSA Glassware Site.....	247
Compliance Restoration Site Closeout (No Further Action) Sites Summary.....	248
CR Schedule.....	249
Compliance Restoration Milestones.....	249
CR Schedule Chart.....	251

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, 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), Aberdeen Proving Ground (APG), the Installation Management Command (IMCOM), the executing agencies, regulatory agencies and the public, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all major Army installation cleanup programs.

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

Acronyms

AA	Aberdeen Area
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AFTA	Aberdeen Fire Training Area
AMC	Army Materiel Command
APG	Aberdeen Proving Ground
APG-AA	Aberdeen Proving Ground-Aberdeen Area
ARL	Army Research Laboratory
ASG	Aerial Spray Grid
ASR	Archive Search Report
AST	Aboveground Storage Tank
ATC	(US Army) Aberdeen Test Center
BRDA	Burn Residue Disposal Area
BRRMDF	Bush River Radioactive Material Disposal Facility
BRSA	Bush River Study Area
BTAG	Biological Technical Assistance Group
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
BZ	3-quinuclidinyl benzilate
CADDD	Chemical Agent Demilitarization Disposal Defense
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CCA	Canal Creek Aquifer
CCSA	Canal Creek Study Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CISA	Carroll Island Study Area
CMI (C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
CMS	Corrective Measures Study
CN	Chloroacetophenone
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
CR	Compliance Restoration
CS	Confirmation Sampling
CS	ortho-chlorobenzylidenemalonitrile
CSTA	Combat Systems Test Activity
CTC	Cost-to-Complete
CTT	Closed, Transferred or Transferring
CVOC	Chlorinated Volatile Organic Compound
CWM	Chemical Warfare Materiel
DCJA	Doves COve Investigation Area
DD	Decision Document
DDT	Dichloro-diphenyl-trichloroethane
DDTr	Dichlorodiphenyltrichloroethane and its residues
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program

Acronyms

DIMP	Diisopropyl methylphosphonate
DM	Adamsite
DMM	Discarded Military Munitions
DNAPL	Dense Non-aqueous Phase Liquid
DoD	Department of Defense
DPT	Direct-Push Technology
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organic
EA	Edgewood Area
ECCA	East Canal Creek Area
ER	Emergency Removal
ER,A	Environmental Restoration, Army
ERA	Ecological Risk Assessment
ERH	Electrical Resistance Heating
ERT	Emergency Response Team
ESD	Explanation of Significant Differences
EUL	Enhanced Use Leasing
FFA	Federal Facilities Agreement
FFS	Focused Feasibility Study
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet
FY	Fiscal Year
GA	Tabin
GAC	Granular Activated Carbon
GB	Sarin
GD	Soman
GIS	Geographic Information System
GQSA	Graces Quarters Study Area
GW	Groundwater
GWTF	Groundwater Treatment Facility
GWTP	Groundwater Treatment Plant
HE	High Explosive
Hg	Mercury
HHRA	Human Health Risk Assessment
HMF	Hazardous Materials Facility
HQ	Hazard Quotient
HRR	Historical Records Review
HRS	Hazardous Ranking System
I&D	Identification and detonation
IAP	Installation Action Plan
IM	Interim Measure
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)

Acronyms

IMPA	Isopropyl Methyl Phosphonic Acid
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
K	thousand
KD	Known Distance
kg	kilogram
L	liter
LF	Landfill
LPH	Liquid Petroleum Hydrocarbon
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituent
MCL	Maximum Contaminant Level
MD	Munitions Debris
MDE	Maryland Department of the Environment
MEC	Munitions and Explosives of Concern
mg	milligram
mg/kg	milligram per kilogram
MLF	Michaelsville Landfill
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MPA	Methyl Phosphonic Acid
MR	Munitions Response
MRA	Munitions Response Area
MRICD	Medical Research Institute of Chemical Defense
MRS	Munitions Response Site
N/A	Not applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
O&M	Operations and Maintenance
OB	Open Burning
OB/OD	Open Burning/Open Detonation
OBRRD	Old Bush River Road Dump
OC&S	(US Army) Ordnance Center and Schools
OD	Open Detonation
OEA	Other Edgewood Area
OU	Operable Unit
OUB	Operable Unit B
PA	Preliminary Assessment
PAAF	Phillips Army Air Field
PAH	Polycyclic Aromatic Hydrocarbons

Acronyms

PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PETN	Pentaerythritol Tetranitrate
PIU	Permeable Infiltration Unit
POL	Petroleum, Oil and Lubricant
PP	Proposed Plan
ppb	parts per billion
PPE	Personal Protective Equipment
ppm	parts per million
R&D	Research and Development
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RAC	Risk Assessment Code
RACR	Response Action Completion Report
RAD	Radiological
RBC	Risk-Based Concentration
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy-in-Place
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SC&RA	Site Characterization and Removal Assessment
SI	Site Inspection
SLERA	Screening Level Ecological Risk Assessment
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SW	Surface Water
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TCRA	Time-Critical Removal Action
TEA	Triethylaluminum
TGY	Toxic Gas Yard
TI	Technical Impracticability

Acronyms

TNT	2,4,6-Trinitrotoluene
TPH	Total Petroleum Hydrocarbon
TRC	Technical Review Committee
TRV	Toxicity Reference Value
TSCA	Toxic Substances Control Act
TVOC	Total Volatile Organic Compound
ug/L	microgram per Liter
USAEC	US Army Environmental Command
USAEHA	US Army Environmental Hygiene Agency
USAPHC	US Army Public Health Command
USATHAMA	US Army Toxic and Hazardous Materials Agency
USEPA	US Environmental Protection Agency
USGS	US Geological Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
VOC	Volatile Organic Compound
VX	o-ethyl s-[2-(diisoproylamino)ethyl] methylphosphonothioate
WBSA	Western Boundary Study Area
WCCA	West Canal Creek Area
WCIA	Wright Creek Investigation Area
WP	White Phosphorus
WSA	Westwood Study Area
WSIA	Western Shore Investigation Area
WWI	World War I
WWII	World War II
XRF	X-Ray Fluorescence

Acronym Translation Table

CERCLA

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

RCRA

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

Installation Information

Installation Locale

Installation Size (Acreage): 72500

City: Aberdeen

County: Harford

State: Maryland

Other Locale Information

The APG lies in Harford and Baltimore Counties in Maryland near the head of the Chesapeake Bay. The installation [Aberdeen Area (AA) and Edgewood Area (EA)] comprises approximately 72,500 acres, much of which is underwater or marshy, wooded terrain. The Aberdeen Proving Ground-Aberdeen Area (APG-AA) portion of the installation, located in the southeastern part of Harford County, is three miles southeast of the city of Aberdeen. Firing ranges, impact areas, vehicle test tracks, and other test facilities extend southwest to Bush River and include Spesutie Island and Pooles Island. Of the 72,500 land and water acreage, 17,000 acres of land are within the AA. The APG-EA (formerly Edgewood Arsenal) lies adjacent to the towns of Edgewood and Joppatowne in the southern part of Harford County. Test areas of the EA include:

- Gunpowder Neck: extending south into the Chesapeake Bay between Bush River and Gunpowder River.
- Graces Quarters: a peninsula between Gunpowder River and Saltpeter Creek.
- Carroll Island: a peninsula between Saltpeter Creek and the Chesapeake Bay.

The Graces Quarters and Carroll Island areas lie across the Gunpowder River in the southeastern corner of Baltimore County. The APG-EA comprises of 13,000 land acres of the 72,500 land and water acreage of the installation.

Installation Mission

The mission of the APG is to serve as a center for Army materiel testing, laboratory research, and military training. The post is a key element in the nation's defense. All tanks and wheeled vehicles which have served US forces for over 50 years have been tested for performance and durability at APG, from the M4 Sherman tank of World War II (WWII) to the M1 tank and High Mobility Multipurpose Wheeled Vehicle and family of Stryker Vehicles of today.

APG is home to 11 commands and supports 90+ tenants, 20 satellite and 17 private activities. The installation provides facilities to perform research, development, testing and evaluation of Army materiel. Facilities include laboratories for research investigations, state-of-the-art ranges, engineering test courses for wheeled and tracked vehicles and a wide variety of research.

The installation also supports a wide variety of training, including mechanical maintenance, health promotion and preventive medicine, chemical and biological defense, and chemical casualty care, chemical demilitarization. APG also is host to the National Guard and US Army Reserve operations and training. Major tenants include:

US Army Research, Development and Engineering Command
US Army Research Laboratory [APG (ARL)]
US Army Edgewood Chemical Biological Center
US Army Materiel Systems Analysis Activity
US Army Communications-Electronics Research, Development and Engineering Center
US Army Contracting Command Aberdeen Proving Ground
US Army Test and Evaluation Command
US Aberdeen Test Center (ATC)
US Army Evaluation Center (USAEC)
US Army Public Health Command (USAPHC) US Army 20th Support Command
US Army 22nd Chemical Battalion
US Army Communications-Electronics Command Life Cycle Management Center
US Army Medical Research Institute of Chemical Defense (MRICD)
US Army 203rd Military intelligence Battalion
US Army Chemical Materials Agency

Installation Information

Lead Organization

IMCOM

Lead Executing Agencies for Installation

ABERDEEN PROVING GROUND

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 54 was recorded on 01-OCT-89.

Date for RA(C) Completion: 202406

Date for NPL Deletion: TBD

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

RAB established 199501

Installation Program Summaries

IRP

Primary Contaminants of Concern: Asbestos, Chemical weapon munitions (CWM)/Chemical agent, Dioxins/Dibenzofurans, Explosives, Herbicides, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC), Perchlorate, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Radionuclides, Semi-volatiles (SVOC), Volatiles (VOC), White Phosphorous

Affected Media of Concern: Groundwater, Other (Air), Sediment, Soil, Surface Water

MMRP

Primary Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Affected Media of Concern: Groundwater, Soil

CR

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

Affected Media of Concern: Groundwater, Other (vapor), Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200707	200809	2008
Complete	201207	201510	2016
Complete	199609	199609	1996
Complete	199907	199907	1999
Complete	200207	200207	2002

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Action Memo for D-Field Removal Action	EAOE04
BEACH POINT TEST SITE ROD	EACC3N
BLDG.503 SMOKE PLANT BURN SITES SOILS OU	EACC1L-A
BUILDING 103 DUMP OU1 ROD	EACC1H-E
CARROLL ISLAND OPERABLE UNIT A ROD	EACI01-A, EACI01-C, EACI02-A, EACI02-C, EACI03, EACI04-B, EACI04-C, EACI04-D, EACI05-D, EACI05-E, EACI06-B, EACI08
CLUSTER 1 FORMER NIKE SITE ROD	EANS01-A, EANS01-C, EANS01-D, EANS01-F
Carrol Island/Graces Quarters OUB ROD	EACI00, EACI01-B, EACI01-D, EACI02-B, EACI04-A, EACI04-C, EACI05-A, EACI05-B, EACI05-C, EACI05-D, EACI06-A, EACI06-B, EACI06-D, EACI06-E, EACI07-A, EACI07-B, EACI07-C, EAGQ00, EAGQ01-A, EAGQ01-B, EAGQ01-C, EAGQ01-D, EAGQ01-E, EAGQ01-F, EAGQ01-G, EAGQ01-H, EAGQ01-I, EAGQ02-A, EAGQ02-B, EAGQ02-C, EAGQ03-A, EAGQ03-B, EAGQ03-C, EAGQ03-D, EAGQ03-E
Cluster 3 Lead-Contaminated Soil Area	EABR03-B
E. Canal Creek Area Plume, CC Aquifer	EACC4A
FIVE YEAR REVIEW REPORT-WHITE PHOSPHORUS	AAWP01
J-FIELD SOIL OPERABLE UNIT ROD	EAJF05, EAJF05-A
MLF OU1 (SOURCE AREA) ROD	AAML01
MLF OU2 (GW) ROD	AAML02
OAA 5 Sediment Sites - Aberdeen Area	AAOA02
OAA Pistol, KD Ranges, 23 Other Sites	AAOA02, AAOA06, AAOA08, AAOA12, AAOA14
OLD O-FIELD OU1 (GROUNDWATER) ROD	EAOF01
OLD O-FIELD OU2 (SOURCE AREA) ROD	EAOF02
Old Bush River Road Dump Final ROD	EABR03-A
Overall J-Field Study Area ROD	EAJF00, EAJF02, EAJF03, EAJF05-B, EAJF06, EAJF07, EAJF08, EAJF09, EAJF10, EAJF11, EAJF12, EAJF13, EAJF14
RA at the Other Lauderick Creek Clusters	EALC05-A, EALC05-B, EALC05-C, EALC05-D, EALC09-A, EALC09-B, EALC09-D, EALC17-A, EALC20, EALC32, EALC33
ROD - 6 Groundwater Site - Aberdeen Area	AAOA08
ROD Edgewood Area Clusters 9 and 19 GW	EALC09-F, EAOE19
ROD for Remaining WSA Sites	EAWW00, EAWW02-D, EAWW06, EAWW10-B
Remedial Action - G-Street Salvage Yard	EACC1A-B
Remedial Action at White Phosphorus Pits	EAJF01
WATSON CREEK SEDIMENT & SW - OU3	EAOF03
WSA ROD for Clusters 2, 6, 10, 14, and 21	EAWW00, EAWW02-A, EAWW02-B, EAWW02-C, EAWW02-D, EAWW02-E, EAWW06, EAWW10-A, EAWW10-C, EAWW10-D, EAWW10-E, EAWW10-F, EAWW14-A,

5-Year / Periodic Review Summary

Associated ROD/DD Name	Sites
	EAWW14-B, EAWW14-C, EAWW21-A, EAWW21-B, EAWW21-C, EAWW21-D, EAWW21-E
Western Boundary Study Area OU1	AAWB01

Results EAJF00; Final Remedial Action at J-Field Study Area, cannot be made at this time until further evaluation is performed. EAGQ02 - The remedy for OU A did not function as intended by the Decision Document.

Actions EAJF00; The relative significance of the small area where sediment toxicity was identified should be addressed. EAGQ02- Develop a plan to modify the active treatment component to further reduce concentrations of COCs in the aquifer.

Plans EAJF00 - Install monitoring wells to fill in the gap identified in the 5 YR Review. EAGQ02 - APG is currently working on reevaluating the system and determining what can be done vs what is practical.

Recommendations and Implementation Plans:

Land Use Control (LUC) Summary

LUC Title: Beach Point Test Site ROD

Site(s): EACC3N

ROD/DD Title: BEACH POINT TEST SITE ROD

Location of LUC

Beach Point peninsula is located at the end of Beach Point Road.

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Signs

Types of Institutional Controls: Deed Notices, Deed Restrictions, Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictive covenants, Zoning

Date in Place: 199809

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Other Federal Agency

Record of LUC: Master Plan or Equivalent

Documentation Date: 199709

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Blg503SmokePlantBurnSite

Site(s): EACC1L-A

ROD/DD Title: BLDG.503 SMOKE PLANT BURN SITES SOILS OU

Location of LUC

These burn sites were located behind (east of) Bldg. E5265, adjacent to the horse grazing pastures.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Restrictions on land use

Date in Place: 199707

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Other Army Entity

Record of LUC: Master Plan or Equivalent

Documentation Date: 199604

LUC Enforcement: Other

Contaminants: METALS, ORGANICS

Additional Information

Land Use Control (LUC) Summary

N/A

LUC Title: Building 103 Dump OU1 ROD

Site(s): EACC1H-E

ROD/DD Title: BUILDING 103 DUMP OU1 ROD

Location of LUC

In the Canal Creek Study Area, the 103 Dump site sits southwest of the intersection of Williams and Hoadley Roads.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Zoning

Date in Place: 199910

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199502

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: CCSA 13 Select Sites

Site(s): EACC1A-A, EACC1D, EACC1G-B, EACC2A, EACC2B, EACC2C, EACC2F, EACC2G, EACC2H-A, EACC2I-A, EACC2I-B, EACC3B, EACC3H

ROD/DD Title: Canal Creek Study Area - 13 Select Sites

Location of LUC

13 Sites within the Canal Creek Study Area: EACC1A-A, EACC1D, EACC2F, EACC1G-B, EACC2A, EACC2B, EACC2C, EACC2G, EACC2H-A, EACC2I-A, EACC2I-B, EACC3B, EACC3H

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Restrictions, Dig Permits, Notations in Master Plan

Date in Place: 200609

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200609

Land Use Control (LUC) Summary

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH

Additional Information

N/A

LUC Title: CI/GQ OUB LUC

Site(s): EACI01-B, EACI01-D, EACI02-B, EACI04-A, EACI05-A, EACI05-B, EACI05-C, EACI06-A, EACI06-D, EACI06-E, EACI07-A, EACI07-B, EACI07-C, EAGQ01-A, EAGQ01-B, EAGQ01-C, EAGQ01-D, EAGQ01-E, EAGQ01-F, EAGQ01-G, EAGQ01-H, EAGQ01-I, EAGQ02-A, EAGQ02-B, EAGQ02-C, EAGQ03-A, EAGQ03-B, EAGQ03-C, EAGQ03-D, EAGQ03-E

ROD/DD Title: Carrol Island/Graces Quarters OUB ROD

Location of LUC

All of Carroll Island and Graces Quarters (OUB)

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Deed Notices, Deed Restrictions, Notations in Master Plan, Notices (in the grantor/grantee index, newspapers, etc.), Restrictions on land use

Date in Place: 200105

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200105

LUC Enforcement: Annual Inspections, 5 Year Reviews, Other

Contaminants: METALS, PCBs, PESTICIDES, PETROLEUM HYDROCARBON, Unexploded Ordnance(UXO), VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Canal Creek 10 Soil Sites

Site(s): EACC1F-A, EACC1F-B, EACC1G-A, EACC1H-D, EACC1I-B, EACC3E, EACC3F, EACC3I, EACC3O, EACC3P

ROD/DD Title: Canal Creek Study Area - 10 Soil Sites

Location of LUC

The 10 sites are all located in the Canal Creek Area.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

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

Date in Place: 200811

Modification Date: N/A

Land Use Control (LUC) Summary

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200809

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH, PESTICIDES, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: Canal Creek MIA-NW 3 Site

Site(s): EACC1E, EACC1J, EACC2D

ROD/DD Title: RA at MIA-NW Canal Creek Study Area

Location of LUC

3 sites within the Canal Creek Area.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Signs

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

Date in Place: 201109

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200909

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: INORGANICS, METALS, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: Cl. 1 Former Nike Site

Site(s): EANS01-A, EANS01-C, EANS01-D

ROD/DD Title: CLUSTER 1 FORMER NIKE SITE ROD

Location of LUC

Southwest landfill - EANSO1-D and Groundwater at EANSO1-A. Restrictions will be placed in APG's GIS system.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Prohibit installation of utility system lines through the site, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Landfill restriction - Restrict plantings that interfere LF cap or cover system (roots that penetrate the cap or cover system), Landfill restriction - Restrict vehicular traffic, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Fences, Signs

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

Land Use Control (LUC) Summary

Date in Place: 200106

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199609

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, ORGANICS, PESTICIDES, VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Cl.3 ROD LUCs

Site(s): EABR03-B

ROD/DD Title: Cluster 3 Lead-Contaminated Soil Area

Location of LUC

Cluster 3 Lead-Contaminated Soil Area located in the Bush River Study Area.

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

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

Date in Place: 200509

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200509

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: Cluster 19 - LUCs

Site(s): EAOE19

ROD/DD Title: ROD Edgewood Area Clusters 9 and 19 GW

Location of LUC

Cluster 19, Other Edgewood Areas Study Area, APG

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: None

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

Date in Place: 200709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200709

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

LUC Title: Cluster 9 - LUCs

Site(s): EALC09-F

ROD/DD Title: ROD Edgewood Area Clusters 9 and 19 GW

Location of LUC

Cluster 9, Lauderick Creek Study Area, APG

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200809

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200709

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

LUC Title: DCIA LUCs

Site(s): EAOE30, EAOE39

ROD/DD Title: Doves Cove Investigation Area

Location of LUC

The Doves Cove Investigation Area (DCJA), located within the Edgewood Area of Aberdeen Proving Ground (APG), Maryland
The Other Edgewood Area (OEA) lies in the southern portion of the Edgewood Area of APG on the Gunpowder Neck peninsula
EAOE30 Sites:

> Building E1407/E1415 Wastewater System (Vibratory Facility)

> Building E1412 Munitions Burial Site

Land Use Control (LUC) Summary

> Barren Soil Area

EAOE39 Sites:

> Building E1400 Wastewater System

> Munition Remnants Disposal Area

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Restrictions on land use

Date in Place: 201202

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201108

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: E. Canal Creek Area Plume

Site(s): EACC4A

ROD/DD Title: E. Canal Creek Area Plume, CC Aquifer

Location of LUC

The E. Canal Creek Area plume straddles the Wiede Airfield in the Edgewood Area of Aberdeen Proving Ground.

Land Use Restriction: Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Signs

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

Date in Place: 200309

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Other Army Entity

Record of LUC: Master Plan or Equivalent

Documentation Date: 200007

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

Land Use Control (LUC) Summary

LUC Title: EAOE29 LUC

Site(s): EAOE29

ROD/DD Title: ROD - RA at Maxwell Point (EAOE29)

Location of LUC

Maxwell Point - Other Edgewood Areas

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards, Markers, Signs

Types of Institutional Controls: Deed Restrictions, Dig Permits, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 201409

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Other Army Entity

Record of LUC: Master Plan or Equivalent

Documentation Date: 201409

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: G-Street Salvage Yard LUC

Site(s): EACC1A-B

ROD/DD Title: Remedial Action - G-Street Salvage Yard

Location of LUC

LUCs for G-Street Salvage Yard sites located within the Canal Creek Study Area of APG.

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200709

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, PCBs, Unexploded Ordnance(UXO)

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to

Land Use Control (LUC) Summary

prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: GQSA OUA - LUCs

Site(s): EAGQ02-D

ROD/DD Title: Graces Quarters Operable Unit A ROD

Location of LUC

Graces Quarters Study Area Operable Unit A Primary Test Area

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Signs

Types of Institutional Controls: Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200409

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200409

LUC Enforcement: Annual Inspections, 5 Year Reviews, Other

Contaminants: VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Hog Point Site LUCs

Site(s): EAWW10-B

ROD/DD Title: ROD for Remaining WSA Sites

Location of LUC

Hog Point Site (EAWW10-B)

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Signs

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

Date in Place: 200802

Modification Date: N/A

Land Use Control (LUC) Summary

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200707

LUC Enforcement: 5 Year Reviews, Other

Contaminants: INORGANICS

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: J-Field

Site(s): EAJF05, EAJF05-A

ROD/DD Title: J-FIELD SOIL OPERABLE UNIT ROD

Location of LUC

J-Field Study Area

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Education programs, Notations in Master Plan, Restrictions on land use, Zoning

Date in Place: 199609

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200609

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PCBs, VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: KD & Pistol Ranges AAOA12

Site(s): AAOA12

ROD/DD Title: OAA Pistol, KD Ranges, 23 Other Sites

Location of LUC

KD Range and Pistol Range in the Other Aberdeen Areas

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200812

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: LUC - 6 Groundwater Sites

Site(s): AAOA08

ROD/DD Title: ROD - 6 Groundwater Site - Aberdeen Area

Location of LUC

DRMO Metal Scrap Yard, Building 525 Site, Building 3327 UST Site, Tower Road Site, Building 507 Site, and Building M600 Site

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: None

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

Date in Place: 200709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200601

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: LUCs & NFA for AAOA02

Site(s): AAOA02

ROD/DD Title: OAA Pistol, KD Ranges, 23 Other Sites

Location of LUC

LUCs: Site 11, Old Burn Trench on Spesutie Island; Site 18, Barrels Near Bldg 510; Site 19, Sandblast Area Near Bldg 523

NFA: Site 13, Chem Dump Ponds on Spesutie Isl; Site 15, Metal Barricade Near Bldg 1122; Site 31, Proverty Island Potential

Land Use Control (LUC) Summary

Mine Burial Site

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200708

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: LUCs & NFA for AAOA06

Site(s): AAOA06

ROD/DD Title: OAA Pistol, KD Ranges, 23 Other Sites

Location of LUC

15 Other Sites

These LUCs are applicable to:

Outdoor Pesticide Mixing Area at Building 5010,

Department of Public Works Backyard Storage Area near Building 5262,

DDT Spill Near Building 450,

Spent Lead Acid Battery Site Near Building 2351,

Building 5039 Battery Shop,

Old Burn Trench on Spesutie Island,

Barrels near Building 510,

Sandblast Area Near Building 523,

Potential Explosives in Groundwater Area, Petroleum, Oil, and Lubricants (POL) Facility, Sand Pit Near Building 5215,

Building 309 and 390 Storm Sewer Outfalls,

German Ammunition Train Explosion Area,

Bldg 2458 Underground Storage Tank (UST) Site, Building 3329 UST Site, and

Building 3505 UST Site.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200812

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

LUC Enforcement: Annual Inspections, 5 Year Reviews

Land Use Control (LUC) Summary

Contaminants: METALS

Additional Information

N/A

LUC Title: LUCs & NFA for AAOA08

Site(s): AAOA08

ROD/DD Title: OAA Pistol, KD Ranges, 23 Other Sites

Location of LUC

UST sites at Bldgs 2458, 3329, and 3505. NFA sites are UST Bldg 436 and AST Bldg 456.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200708

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PAH, PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: LUCs for 5 Sediment Sites

Site(s): AAOA02

ROD/DD Title: OAA 5 Sediment Sites - Aberdeen Area

Location of LUC

Discarded Batteries at Abbey Point Navigational Light, Discarded Batteries at Spesutie Island Navigational Light, Old Chemical Dump on Spesutie Island, DRMO Metal Scrap Yard, and Silver Contaminated Ditch in Transonic Range Area

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200909

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200603

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

Land Use Control (LUC) Summary

N/A

LUC Title: Land Use Control

Site(s): EABR11-C

ROD/DD Title: BRSA Rad Yard & 22 Street Landfill

Location of LUC

Installation Master Plan and GIS

Land Use Restriction: Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Restrict land use - No residential use

Types of Engineering Controls: Signs

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

Date in Place: 201309

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201309

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: MLF OU1 (Source Area) ROD

Site(s): AAML01

ROD/DD Title: MLF OU1 (SOURCE AREA) ROD

Location of LUC

Michaelsville Landfill is located in the north-central portion of the Aberdeen Area of APG. OU1 is a 20-acre, unlined municipal-type landfill.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Restrict plantings that interfere LF cap or cover system (roots that penetrate the cap or cover system)

Types of Engineering Controls: Fences

Types of Institutional Controls: Notations in Master Plan, Zoning

Date in Place: 199412

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199206

Land Use Control (LUC) Summary

LUC Enforcement: Annual Inspections

Contaminants: METALS, PCBs, PESTICIDES, VOC

Additional Information

N/A

LUC Title: MLF OU2 (Groundwater) ROD

Site(s): AAML02

ROD/DD Title: MLF OU2 (GW) ROD

Location of LUC

Michaelsville Landfill is located in the north-central portion of the Aberdeen Area of APG. OU2 addresses contaminated sediment, surface water, and groundwater at or near the landfill.

Land Use Restriction: Media specific restriction - restrict drinking water well installation

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Zoning

Date in Place: 199710

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199709

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, PCBs, PESTICIDES, VOC

Additional Information

N/A

LUC Title: Old Bush River Road Dump

Site(s): EABR03-A

ROD/DD Title: Old Bush River Road Dump Final ROD

Location of LUC

Presently under development. Restrictions will be placed in APG's GIS system.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Restrict access to the site

Types of Engineering Controls: Fences, Signs

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

Date in Place: 200106

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199906

LUC Enforcement: Annual Inspections, 5 Year Reviews

Land Use Control (LUC) Summary

Contaminants: METALS, PESTICIDES

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Old O-Field OU1 ROD

Site(s): EAOF01

ROD/DD Title: OLD O-FIELD OU1 (GROUNDWATER) ROD

Location of LUC

Old O-Field Source Area is on the eastern side of Watson Creek Road, immediately adjacent to the road. It is between Watson Creek Road and Watson Creek and discharges to Watson Creek.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Notations in Master Plan, Restrictions on Groundwater Withdrawal, Zoning

Date in Place: 199109

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199109

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, ORGANICS, VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Old O-Field OU2 ROD

Site(s): EAOF02

ROD/DD Title: OLD O-FIELD OU2 (SOURCE AREA) ROD

Location of LUC

Old O-Field Source Area is on the eastern side of Watson Creek Road, immediately adjacent to the road. It is between Watson Creek Road and Watson Creek.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Prohibit installation of utility system lines through the site, Landfill restriction - Restrict access to the site, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Landfill restriction - Restrict plantings that interfere LF cap or cover system (roots that penetrate the cap or cover system), Landfill restriction - Restrict vehicular traffic, Restrict land use - No

Land Use Control (LUC) Summary

daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use, Zoning

Date in Place: 199410

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199410

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: INORGANICS, METALS, NITROAROMATICS, ORGANICS, Unexploded Ordnance(UXO), VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Other Lauderick Creek Cls

Site(s): EALC05-A, EALC05-B, EALC05-C, EALC05-D, EALC09-A, EALC09-B, EALC09-D, EALC17-A, EALC20, EALC32, EALC33

ROD/DD Title: RA at the Other Lauderick Creek Clusters

Location of LUC

Other Lauderick Creek Clusters (Clusters 5, 17, 20, 32, and 33), Lauderick Creek Study Area

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200804

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200804

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PESTICIDES

Additional Information

N/A

LUC Title: Overall J-Field ROD

Site(s): EAJF02, EAJF03, EAJF05-B, EAJF06, EAJF07, EAJF08, EAJF09, EAJF10, EAJF11, EAJF12, EAJF13, EAJF14

ROD/DD Title: Overall J-Field Study Area ROD

Location of LUC

J-Field is located on the southern peninsula of the Edgewood Area. The LUCs specified apply to the surficial aquifer.

Land Use Control (LUC) Summary

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Signs

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

Date in Place: 200112

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: RA @ 26th Street

Site(s): EABR11-A, EABR11-B

ROD/DD Title: RA Bush River OU2A, 26th Street Disposal

Location of LUC

The BR Study Area lies in the NE portion of Edgewood Area, APG.

Land Use Restriction: Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

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

Date in Place: 201110

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: EPA

Record of LUC: Master Plan or Equivalent

Documentation Date: 201110

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: RD Kings Creek Disp & 30

Site(s): EABR15-A, EABR15-B

Land Use Control (LUC) Summary

ROD/DD Title: OU2B Kings Creek Disp. Site and 30th LF

Location of LUC

The sites comprise Operable Unit (OU) 2B within the Bush River Study Area (BRSA). The BRSA, located in the northeastern portion of the Edgewood Area, occupies the peninsula between Lauderick Creek, the Bush River, and Kings Creek.

Land Use Restriction: Landfill restriction - Prohibit installation of utility system lines through the site, Landfill restriction - Restrict access to the site, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - Mitigation area(s) protection, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

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

Date in Place: 201005

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201005

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: ROD OU4: New O-Field GW

Site(s): EAOF04

ROD/DD Title: O-Field Study Area Operable Unit 4

Location of LUC

New O-Field Areas - Southwest of Watson Creek and South of the Old O-Field PIU.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Guards, Signs

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 201006

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200907

LUC Enforcement: 5 Year Reviews, Other

Contaminants: METALS, VOC

Additional Information

N/A

Land Use Control (LUC) Summary

LUC Title: Shell Washout WW Ditch

Site(s): AAOA03

ROD/DD Title: ROD AAOA03: Shell Washout WW Ditch 700B

Location of LUC

Shell Washout Wastewater Ditch at Bldg 700B

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 201010

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: EPA

Record of LUC: Master Plan or Equivalent

Documentation Date: 201010

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: WBSA Operable Unit 1

Site(s): AAWB01

ROD/DD Title: Western Boundary Study Area OU1

Location of LUC

Western Boundary Study Area, Operable Unit 1, Aberdeen Proving Ground - Aberdeen Area.

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

Types of Engineering Controls: Fences

Types of Institutional Controls: Notations in Master Plan, Restrictions on Groundwater Withdrawal, Zoning

Date in Place: 200007

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200007

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

LUC Title: WCIA LUCs

Site(s): EAOE08, EAOE51

Land Use Control (LUC) Summary

ROD/DD Title: Wright Creek Investigation Area

Location of LUC

The Wright Creek Investigation Area (WCIA) (approx. 495 acres) lies on the Gunpowder Neck Peninsula along the Gunpowder River within Aberdeen Proving Ground, Maryland. Contained within the WCIA are the northern portion of Cluster 8 (G-Field), the eastern and northern portions of Cluster 51 (K-Field), and the majority of F-Field.

EAOE08 Sites:

- ~ K-Field Training Area 1
- ~ G-Field Real Time Analytical Platform Garage
- ~ G-Field Bunker Sites
- ~ G-Field Container Dump Site
- ~ G-Field Impact Area North
- ~ "Goat Yard" Storage Area
- ~ Marsh Dump Sites
- ~ Building E1421 Fonner Supply Well and Associated Holding Tank
- ~ G-Field Fonner Drum Disposal Site
- ~ G-Field Wastewater Treatment System
- ~ G-Field Weapons Assembly Plant

EAOES1 Sites:

- ~ K-Field Pistol Range

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

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

Date in Place: 201202

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201105

LUC Enforcement: 5 Year Reviews, Other

Contaminants: METALS, PAH, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: WSA ROD CI 2,6,10,14, 21

Site(s): EAWW00

ROD/DD Title: WSA ROD for Clusters 2, 6, 10, 14, and 21

Location of LUC

Entire Westwood Study Area, a total of 850 acres.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200601

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Land Use Control (LUC) Summary

Record of LUC: Master Plan or Equivalent

Documentation Date: 200512

LUC Enforcement: 5 Year Reviews, Other

Contaminants: METALS

Additional Information

N/A

LUC Title: WSIA LUCs

Site(s): EAOE12

ROD/DD Title: Western Shore Investigation Area

Location of LUC

The Western Shore Investigation Area (WSIA), located within the Edgewood Area of Aberdeen Proving Ground (APG), Maryland

The Other Edgewood Area (OEA) lies in the southern portion of the Edgewood Area of APG on the Gunpowder Neck peninsula

EAOE12 Sites:

- ~ H-Field Pre-World War II (WWII) Artillery Target Area 1
- ~ H-Field Building E1464 Septic Tank Site
- ~ H-Field Building E1467 Storage Site
- ~ H-Field Washrack Wastewater Site
- ~ H-Field Groundwater Supply Well
- ~ Debris Mounds

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Restrict land use - No daycare/hospital/school use

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Restrictions on land use

Date in Place: 201202

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201108

LUC Enforcement: 5 Year Reviews, Other

Contaminants: METALS, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: WW-90 Fill Area LUCs

Site(s): EAWW02-D

ROD/DD Title: ROD for Remaining WSA Sites

Location of LUC

WW-90 Fill Area (EAWW02-D)

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Prohibit installation of utility system lines through the site, Landfill restriction - Restrict construction of buildings

Land Use Control (LUC) Summary

that may interfere with LF cap or cover system, Landfill restriction - Restrict vehicular traffic, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

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

Date in Place: 200802

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200705

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PESTICIDES, Unexploded Ordnance(UXO)

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

LUC Title: Watson Creek ROD

Site(s): EAOF03

ROD/DD Title: WATSON CREEK SEDIMENT & SW - OU3

Location of LUC

Watson Creek is east of Watson Creek Road on the Gunpowder peninsula.

Land Use Restriction: Media specific - Prohibit activities that results in contact with contaminated sediments, Media specific restriction - Prohibit fishing except for recreational purposes (catch and release), Media specific restriction - Prohibit swimming and/or wading, Media specific restriction - Restrict activities in surface water that result in contact with contaminated bottom sediments such as boating, diving, and swimming

Types of Engineering Controls: Guards, Signs

Types of Institutional Controls: Deed Notices, Deed Restrictions, Education programs, Notations in Master Plan, Zoning

Date in Place: 199709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 199709

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post GIS. A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

Land Use Control (LUC) Summary

LUC Title: White Phosphorus Pits LUC

Site(s): EAJF01

ROD/DD Title: Remedial Action at White Phosphorus Pits

Location of LUC

AEDB-R Site EAJF01, White Phosphorus Pits site located in the J-Field Study Area in APG's Edgewood Area.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200709

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

LUC Title: Woodrest Swan Creek Dumps

Site(s): AAOA01

ROD/DD Title: ROD for Woodrest and Swan Creek Old Dump

Location of LUC

Former dump sites in the Aberdeen Area of APG.

Land Use Restriction: Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Notations in Master Plan, Restrictions on land use

Date in Place: 200910

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200902

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

The APG is an active installation and Harford County's largest employer with more than 21,000 civilian, military, and contractor employees. APG is home to 11 major commands and supports more than 80 tenants, 20 satellite, and 17 private activities. APG's parent organization is the IMCOM-Northeast Region. APG provides facilities to perform research, development, testing and evaluation of Army materiel. Facilities include laboratories, ranges, mechanical maintenance, health promotion and preventative medicine, chemical and biological defense, and chemical casualty care, chemical demilitarization. APG consists of two functional areas: AA and EA.

In December 1917, the APG-AA was established as the Ordnance Proving Ground and in January 1919, it became a permanent military post, designated as APG. In January 1918, ammunition and materiel testing began. The original area was comprised of 29,162 upland acres and 34,600 acres of water. In 1919, ordnance officer training began with the activation of the Ordnance School of Application. Prior to WWII, activities at APG were characterized by intense research and development, and large-scale testing of a wide variety of munitions, weapons, and materiel. In 1940, enlisted specialist training was consolidated with the officers' training. On July 1, 1940 the Ordnance School became operational.

From 1939 to 1942, during the WWII build-up, the Army acquired approximately 6,800 acres adjacent to the reservation and purchased an additional 244 acres near Churchville for automotive testing. Spesutie Island, providing an additional 1,834 acres, was added to the APG-AA in 1945.

During the Korean and Vietnam conflicts, smaller scale increases in munitions and materiel development and testing activities occurred at APG. During the Korean conflict, the Ordnance Training Command was established and the Ordnance School was placed under this command. In 1962, with the advent of the Army Materiel Command (AMC), the Ordnance Training Command was discontinued.

In October 1917, by Presidential Proclamation, land southwest of the APG-AA was appropriated for use as a military reservation known as the Gunpowder Reservation. In May 1918, this reservation was officially designated as Edgewood Arsenal. Edgewood Arsenal remained an ordnance installation until July 1, 1918, when it was transferred to the newly created Chemical Warfare Service. During the 1920s, the Chemical Warfare School was established. In 1940, the Fort Hoyle Military Reservation became part of Edgewood Arsenal, adding 5,000 acres to the APG-EA. In 1942, the installation was designated as the Chemical Warfare Center and in 1945, the name of the installation was changed to the Army Chemical Center. In 1962, with the organization of AMC once again became Edgewood Arsenal, and the US Army Chemical- Biological-Radiological Agency was organized. On July 1, 1971, Edgewood Arsenal became a part of APG.

Historically, all of the military chemical warfare research, development, and related activities at APG have occurred in the APG-EA. Since 1917 the APG-EA has been the site of laboratory research, field testing of chemical materiel and munitions, pilot-scale manufacturing, production-scale chemical agent manufacturing (during WWII), and related test and disposal operations. The APG-EA has also been a center for the storage of chemical warfare materiel and a major receiving center for waste handling operations, including low-level radiological (RAD) waste.

The ATC, located in the APG-AA, conducts plans and development tests, production tests of weapons and weapons systems, and survey and target acquisition equipment. The ATC also provides advice and guidance on test and evaluation materials to materiel developers, materiel producers, and others. The ARL is the Army's corporate basic and applied research laboratory. Their mission is to provide innovative science, technology, and analysis to enable full-spectrum operations. The USAPHC and MRICD are headquartered in the APG-EA. USAPHC is vital in supporting the Army's total preventive medicine program and encompasses essentially all occupational and environmental health disciplines.

The MRICD conducts research on medical protection against chemical and biological weapons.

The Ordnance Center and Schools (OC&S) headquarters is located in the APG-AA. The OC&S has long been the largest training center for military and civilian personnel in the field of materiel, maintenance, and integrated materiel management of combat fire power and ground mobility materials in the US.

Since 1976, the APG has been participating in the Department of Defense (DoD) Installation Restoration Program (IRP) in order to identify the locations and contents of past hazardous waste disposal sites having a detrimental environmental impact and to control the migration of hazardous constituents from these sites. The DoD IRP closely parallels the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act (SARA) program.

Cleanup Program Summary

Installation Historic Activity

Prior to 1983, the key agency in executing IRP actions at the APG was the USAEC [formerly US Army Toxic and Hazardous Materials Agency (USATHAMA)]. In 1983, the APG assumed total management responsibility of IRP projects.

The state of Maryland is not a formal party to the federal facilities agreement (FFA), but they have actively participated in all aspects of the APG IRP effort. The APG has ensured that state representatives have adequate opportunity to participate in the planning and selection of response actions including, but not limited to, review of all applicable data as it becomes available, the development of studies and reports, and review of and comment on response action proposals and activities prior to the initiation of any action.

During 1984 and 1985, the APG was evaluated as a potential CERCLA (Superfund) NPL site. In April 1985, the USEPA published a Federal Register notice which proposed that all of the APG-EA and Michaelsville Landfill (MLF) at the APG-AA be included in the NPL. For purposes of the hazard ranking system (HRS) scoring, the APG was separated into the AA and the EA due to the large acreage involved and the many waste disposal considerations. Prior to NPL placement, the IRP study and remediation activities of past releases from solid waste management units (SWMU) at APG were regulated through a Resource Conservation and Recovery Act (RCRA) corrective action plan (CAP) issued in September 1986 and renewed in September 1988.

On Oct. 4, 1989, MLF was listed on the NPL with an HRS score of 31.45 due to groundwater contamination beneath the landfill. On Feb. 21, 1990, the entire APG-EA was listed on the NPL with an HRS score of 53.57. In March 1990, an FFA signed by the USEPA, Region III, and the US Army established a procedural framework and schedule for compliance with CERCLA, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), RCRA, and other applicable federal and state laws and regulations.

This agreement requires thorough investigations and appropriate responses to environmental impacts deemed necessary to protect public health, welfare, and the environment.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Two major contracts were awarded. The Canal Creek study area contract is to complete the RI and provide the draft an FS to the Army. The contractor worked on a data gap analysis plan which includes field activities. The Bush River study area contractor worked on a work plan and FS for the groundwater sites. The phase schedule has been updated based on the new awards. The Maxwell Point record of decision (ROD) was completed.

Future Plan of Action: The Canal Creek and the Bush River (soil sites) Study Area RI fieldwork will be starting for the remaining soil sites. The ROD for the Bush River area groundwater sites will begin and the LTM and RA(O) operations at the sites will continue. Continue operations of LTM and RAO sites.

MMRP

Prior Year Progress: The Aberdeen Area and the Edgewood Area Military Munitions Response Program (MMRP) RI was completed.

Future Plan of Action: Fiscal year (FY)15 planned contract award to take the Aberdeen Area and the Edgewood Area MMRP sites to RA.

CR

Prior Year Progress: One site was closed by the state of Maryland. A contract was awarded for a removal action to take place in FY15 and another contract awarded to start a remediation investigation. Phase I of the vapor intrusion investigation has been completed.

Future Plan of Action: The focus will continue to be on closing sites. A removal action is planned for FY15 and site closure within a year. An RI will start and the Phase II of the vapor intrusion sampling will begin in December and continue through March. Additional sampling may be conducted in the summer if needed.

ABERDEEN PROVING GROUND
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 254/126

Installation Site Types with Future and/or Underway Phases

8	Burn Area (EABR15-A, EABR36-B, EACC1L-A, EACC1L-B, EAJF00, EAOE22, EAOE24, EAOE38)
3	Chemical Disposal (EABR11-A, EABR18-B, EABR18-E)
1	Contaminated Buildings (EACC2H-C)
3	Contaminated Fill (AAWB04, EABR07-A, EABR18-A)
18	Contaminated Ground Water (AAML02, AAWB01, EABR03-C, EABR11-F, EABR18-F, EACC3N, EACC4A, EACC4A-B, EAGQ00, EAGQ02-D, EALC09-F, EALC13-D, EANS01-A, EAOE19, EAOE26, EAOE41, EAOF01, EAOF04)
6	Contaminated Sediments (EABR00, EACC5A, EACC5B, EACI00, EAOE46, EAOF03)
6	Disposal Pit/Dry Well (EACC1H-A, EACC1J, EACC2D, EACC2H-B, EACC3A, EAOE30)
1	Drainage Ditch (AAOA03)
2	Firing Range (EAOE31, EAOE44)
2	Incinerator (EABR11-E, EACC2E)
22	Industrial Discharge (EACC1D, EACC1E, EACC1F-A, EACC1F-B, EACC1H-B, EACC1H-C, EACC1H-D, EACC1H-F, EACC1H-G, EACC2A, EACC2B, EACC2C, EACC2F, EACC2G, EACC2H-A, EACC3E, EACC3F, EACC3G, EACC3H, EACC3J, EACC3K-A, EACC3L)
11	Landfill (AAML01, AAOA01, AAWB02, EABR03-A, EABR11-B, EABR11-C, EABR15-B, EACC1H-E, EACC1K, EANS01-D, EAOF02)
1	Leach Field (EACC1G-B)
4	Maintenance Yard (EABR35-A, EACC1G-A, EACC2I-A, EACC2I-B)
1	Sewage Treatment Plant (EABR07-B)
1	Small Arms Range (EAOE51)
1	Spill Site Area (EAOE42)
14	Storage Area (EABR03-B, EABR11-H, EABR11-I, EABR15-C, EABR18-C, EABR35-B, EABR36-A, EACC1A-A, EACC1I-A, EACC1I-B, EACC3B, EACC3I, EAOE16, EAOE23)
11	Surface Disposal Area (AAOA02, EABR11-D, EABR18-D, EACC1A-B, EACC3K-B, EAOE04, EAOE12, EAOE27, EAOE29, EAOE37, EAOE50)
1	Surface Impoundment/Lagoon (EACC3P)
3	Underground Storage Tank (AAOA08, EABR11-G, EACC3D)
1	Underground Tank Farm (EACC3C)

- 4 Unexploded Munitions/Ordnance
(EACC3O, EAOE28, EAOE53, EAWW00)
- 3 Waste Treatment Plant
(EACC3M-A, EAOE08, EAOE39)

Most Widespread Contaminants of Concern

Asbestos, Chemical weapon munitions (CWM)/Chemical agent, Dioxins/Dibenzofurans, Explosives, Herbicides, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC), Perchlorate, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Radionuclides, Semi-volatiles (SVOC), Volatiles (VOC), White Phosphorous

Media of Concern

Groundwater, Other (Air), Sediment, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
AAOA13	CSTA BURIED DRUM SITE - BLDG 896	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
EACC1A-B	G STREET SALVAGE YARD- CLUSTER 1A	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
AAML01	MICHAELSVILLE LANDFILL- OU1 (SOURCE)	IRA	DRAINAGE CONTROLS	1991
AAOA04	OTHER ABERDEEN AREAS- SPILL SITE AREAS	IRA	WASTE REMOVAL - SOILS	1991
AAOA04	OTHER ABERDEEN AREAS- SPILL SITE AREAS	IRA	WASTE REMOVAL - SOILS	1991
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
EABR03-A	OLD BUSH RIVER ROAD DUMP-CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
EACC1A-B	G STREET SALVAGE YARD- CLUSTER 1A	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1991
EANS01-F	UNDERGROUND FUEL TANK (E6871)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
AAOA07	OTHER ABERDEEN AREAS- STORAGE AREAS	IRA	WASTE REMOVAL - SOILS	1992
EACC1H-E	BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1992
EACC1H-E	BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1992
EACC3D	BUILDING E3160 COMPLEX- CLUSTER 3D	IRA	OTHER	1992
EACC3J	BLDG E3580 PYROTECH LDG FACILITY-CLU 3J	IRA	WASTE REMOVAL - SOILS	1992
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
AAWB01	WESTERN BOUNDARY AREA GROUNDWATER-OU1	IRA	GROUND WATER TREATMENT	1993
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
EACC3N	BEACH POINT TEST SITE- CLUSTER 3N	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
EACI06-A	WIND TUNNEL-CLUSTER 6	IRA	OTHER	1993
EACI08	DISPOSAL SITE-CLUSTER 8	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
AAOA02	OTHER ABERDEEN AREAS- SURFACE DISPL AREAS	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
AAOA07	OTHER ABERDEEN AREAS- STORAGE AREAS	IRA	WASTE REMOVAL - SOILS	1994
AAOA07	OTHER ABERDEEN AREAS- STORAGE AREAS	IRA	WASTE REMOVAL - SOILS	1994
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
AAOA08	OTHER ABERDEEN AREAS- GW Sites	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
AAWB03	FIRE TRAINING AREA	IRA	WASTE REMOVAL - SOILS	1994
APGSC00	SHORELINE CLEAN-UP	IRA	OTHER	1994
EACI00	CARROLL ISLAND STUDY AREA	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1994
EAGQ00	GRACES QUARTERS STUDY AREA	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1994
EAGQ01-A	DISPOSAL AREA-CLUSTER 1	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
EALC09-C	NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
EANS01-G	UNDERGROUND FUEL TANKS BARRACKS AREA	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
EAOE19	FORT HOYLE TRAINING AREA-CLUSTER 19	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
AAOA02	OTHER ABERDEEN AREAS- SURFACE DISPL AREAS	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1995
AAOA02	OTHER ABERDEEN AREAS- SURFACE DISPL AREAS	IRA	WASTE REMOVAL - SOILS	1995
AAOA07	OTHER ABERDEEN AREAS- STORAGE AREAS	IRA	WASTE REMOVAL - SOILS	1995
APGSC00	SHORELINE CLEAN-UP	IRA	OTHER	1995
EACC1E	BUILDING 87 COMPLEX- CLUSTER 1E	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EACC1G-B	BLDG E5188 WP FILLING PNT-CLUSTER 1G	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EACI06-C	UST AT WIND TUNNEL- CLUSTER 6	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ01-H	TEST HUTS-CLUSTER 1	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ01-I	SECONDARY TEST AREA- CLUSTER 1	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
EAGQ02-A	NORTHERN PERIMETER DUMP-CLUSTER 2	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ02-B	S & SW PERIMETER DUMP-CLUSTER 2	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ02-C	PRIMARY TEST AREA-CLUSTER 2	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ03-A	SERVICE AREA-CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ03-B	DUGAWAY PROVING GROUND TEST SITE-CL 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ03-D	DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAGQ03-E	USTS AT SERVICE AREAS-CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAJF00	J-FIELD STUDY AREA	IRA	OTHER	1995
EALC00	LAUDERICK CREEK	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1995
EALC05-C	CONCRETE SLAB DUMP AREA 1-CLUSTER 5	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EALC13-A	SCHOOL FLD NO I TEST AREAS(2)-CLU 13	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EALC13-B	SCHOOL FIELD NO II DUMPS-CLUSTER 13	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EALC20	SCHOOL FIELD NO III TEST AREA-CLUSTER 20	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EANS01-D	SOUTHWEST LAUNCH LANDFILL.	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EANS01-H	NIKE BARRACKS SEPTIC SYSTEM	IRA	OTHER	1995
EANS01-K	SCHOOL FIELD IV	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAOE16	M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16	IRA	REMOVAL	1995
EAOE24	M-FLD SOUTHEAST TEST AND BURN AREA CL 24	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
EAOE50	G-FIELD TRAINING AREA CLUSTER 50	IRA	WASTE REMOVAL - SOILS	1995
AAOA01	OTHER ABERDEEN AREAS-LANDFILLS	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
AAOA02	OTHER ABERDEEN AREAS-SURFACE DISPL AREAS	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
AAOA04	OTHER ABERDEEN AREAS-SPILL SITE AREAS	IRA	WASTE REMOVAL - SOILS	1996
EABR03-A	OLD BUSH RIVER ROAD DUMP-CLUSTER 3	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1996
EABR11-H	ADAMSITE STORAGE PIT - CLUSTER 11	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
EAWW14-C	GAS MASK FACTORY/WWI CHLORINE PLANT	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
AAML02	MICHAELSVILLE LANDFILL-OU2 (GW)	FRA	OTHER	1997
APGSC00	SHORELINE CLEAN-UP	FRA	OTHER	1997

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
EABR03-A	OLD BUSH RIVER ROAD DUMP-CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR03-B	TRANSFORMER STORAGE- CLUSTER 3	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR07-A	BOAT CLUB FILL SITE(4)- CLUSTER 7	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR07-B	BIO-SENSOR FACILITY- CLUSTER 7	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR11-B	26TH STREET DISPOSAL SITE (2)-CLUSTER 11	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR11-H	ADAMSITE STORAGE PIT - CLUSTER 11	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR15-A	KINGS CRK CHEMICAL DISPOSAL SITE CLU 15	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR15-B	30TH STREET LF-CLUSTER 15	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR15-C	TON CONTAINER STORAGE- CLUSTER 15	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR18-A	TAPLER PT DREDGE MATERIAL SITE-CLU 18	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR18-B	CHEM MUNITION BURIAL SITE(4)-CLUSTER 18	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR18-C	IGLOO STORAGE AREAS- CLUSTER 18	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR18-D	A-FIELD TEST SITE(2)- CLUSTER 18	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR18-E	BUSH RIVER DOCK(E2396)- CLUSTER 18	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR35-A	MAINTENANCE YARD- CLUSTER 35	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR35-B	BLDG E2144/2148/2150- CLUSTER 35	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR36-A	WAREHOUSE STORAGE AREAS-CLUSTER 36	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR36-B	BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EALC05-A	NIKE EAST WOODS SITE 6- CLUSTER 5	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
EABR11-B	26TH STREET DISPOSAL SITE (2)-CLUSTER 11	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1998
EANS01-C	LAUNCH AREA SEPTIC SYSTEM	FRA	OTHER	1998
EAWW06	RAD MAT'L DISPOSAL FACILITY/DEMIL SITE	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1998
EABR18-B	CHEM MUNITION BURIAL SITE(4)-CLUSTER 18	IRA	WASTE REMOVAL - SOILS	1999
EACC1A-B	G STREET SALVAGE YARD- CLUSTER 1A	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1999
EACI02-A	SERVICE AREA-CLUSTER 2	IRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	1999

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
EANS01-D	SOUTHWEST LAUNCH LANDFILL.	FRA	CAPPING	1999
EAOFO3	WATSON CREEK SEDIMENT & SW-OU3	FRA	OTHER	1999
EACC1H-E	BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H	FRA	CAPPING	2000
EACI03	EPG DUMP-CLUSTER 3	FRA	OTHER	2000
EACI08	DISPOSAL SITE-CLUSTER 8	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	2000
EAJF00	J-FIELD STUDY AREA	IRA	OTHER	2000
EANS01-A	UNCONFINED GROUNDWATER	FRA	GROUND WATER TREATMENT	2000
EAWW02-E	DISPOSAL/BURN PITS	IRA	REMOVAL	2000
EABR03-A	OLD BUSH RIVER ROAD DUMP-CLUSTER 3	FRA	CAPPING	2001
EABR03-B	TRANSFORMER STORAGE- CLUSTER 3	IRA	REMOVAL	2001
EALC09-B	NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9	FRA	REMOVAL	2001
EAGQ00	GRACES QUARTERS STUDY AREA	FRA	INSTITUTIONAL CONTROLS	2002
EAJF05	TOXIC BURNING PIT	FRA	CAPPING	2002
EAJF05-A	TBP-SOUTHERN MAIN PITS OVERALL	FRA	CAPPING	2002
EAOE04	D-FIELD AERIAL SPRAY GRID-CLUSTER 4	IRA	REMOVAL	2002
AAWB01	WESTERN BOUNDARY AREA GROUNDWATER-OU1	FRA	CARBON ADSORPTION	2003
EACC4A	EAST AREA CC AQUIFER- CLUSTER 4A-A	FRA	GROUND WATER TREATMENT	2003
EACC6	HMF/UST REMOVAL/CLOSURE	IRA	REMOVAL	2003
EACC6	HMF/UST REMOVAL/CLOSURE	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	2003
EAJF05-B	TBP-SURFICIAL AQUIFER	FRA	OTHER	2003
EACI00	CARROLL ISLAND STUDY AREA	FRA	INSTITUTIONAL CONTROLS	2004
EAJF00	J-FIELD STUDY AREA	FRA	OTHER	2004
EALC00	LAUDERICK CREEK	IRA	REMOVAL	2004
EALC00	LAUDERICK CREEK	FRA	REMOVAL	2004
EALC05-C	CONCRETE SLAB DUMP AREA 1-CLUSTER 5	FRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	2004
EACC1G-B	BLDG E5188 WP FILLING PNT-CLUSTER 1G	FRA	INSTITUTIONAL CONTROLS	2005
EACC2A	OLD HOSP AND ADMIN AREA-CLUSTER 2A	FRA	INSTITUTIONAL CONTROLS	2005
EACC2B	BLDG E5023 WWI WP FILLING PNT-CLU 2B	FRA	INSTITUTIONAL CONTROLS	2005
EACC2C	BLDG E5238 CLOTH IMPREG FCLY-CLU 2C	FRA	INSTITUTIONAL CONTROLS	2005
EACC2G	BLDG E5103 PHOTO LAB- CLUSTER 2G	FRA	INSTITUTIONAL CONTROLS	2005

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
EACC2H-A	BLDG 501 FILLING PNT/E5100 LAB-CLU 2H	FRA	INSTITUTIONAL CONTROLS	2005
EACC2I-A	AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I	FRA	INSTITUTIONAL CONTROLS	2005
EACC2I-B	OLD SHOP AND MOTORPOOL AREA- CLUSTER 2I	FRA	INSTITUTIONAL CONTROLS	2005
EACC3B	BUILDING E2100 LABORATORY-CLUSTER 3B	FRA	INSTITUTIONAL CONTROLS	2005
EACC3H	E3560 TEST CHAMBER COMPLEX-CLUSTER 3H	FRA	INSTITUTIONAL CONTROLS	2005
EAOFO4	NEW O-FIELD GW AND SOURCE AREA-OU4	IRA	WASTE REMOVAL - SOILS	2005
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	IRA	WASTE REMOVAL - SOILS	2006
EACC1A-A	RAILROAD YARD-CLUSTER 1A	FRA	INSTITUTIONAL CONTROLS	2006
EAGQ02-D	SURFICIAL AQUIFER- CLUSTER 2	FRA	NATURAL ATTENUATION	2006
EAGQ02-D	SURFICIAL AQUIFER- CLUSTER 2	FRA	CHEMICAL REDUCTION/OXIDATION	2006
EAOE04	D-FIELD AERIAL SPRAY GRID-CLUSTER 4	IRA	REMOVAL	2006
EAWW10-B	HOG POINT SITE-CLUSTER 10	IRA	WASTE REMOVAL - SOILS	2006
AAOA08	OTHER ABERDEEN AREAS- GW Sites	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2007
EAWW02-E	DISPOSAL/BURN PITS	FRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	2007
EAWW06	RAD MAT'L DISPOSAL FACILITY/DEMIL SITE	FRA	REMOVAL	2007
EAWW14-C	GAS MASK FACTORY/WWI CHLORINE PLANT	FRA	WASTE REMOVAL - SOILS	2007
EAWW21-E	WWI CHLORINE PLANT DUMP - CLUSTER 21	FRA	WASTE REMOVAL - SOILS	2007
EACC3F	BUILDING E35XX AREA- CLUSTER 3F	FRA	INSTITUTIONAL CONTROLS	2008
EALC09-F	SURFICIAL AQUIFER- CLUSTER 9	FRA	SOIL VAPOR EXTRACTION	2008
EALC09-F	SURFICIAL AQUIFER- CLUSTER 9	FRA	NATURAL ATTENUATION	2008
EAOE23	I-FIELD JAPANESE BUNKER AREA CLUSTER 23	IRA	REMOVAL	2008
EAWW02-D	MOUNDS-CLUSTER 2	FRA	CAPPING	2008
EAWW10-B	HOG POINT SITE-CLUSTER 10	FRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	2008
AAOA02	OTHER ABERDEEN AREAS- SURFACE DISPL AREAS	IRA	WASTE REMOVAL - SOILS	2009
EACC1A-B	G STREET SALVAGE YARD- CLUSTER 1A	FRA	WASTE REMOVAL - SOILS	2009
EAJF01	WHITE PHOSPHORUS BURNING PIT	FRA	INSTITUTIONAL CONTROLS	2009

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
AAOA01	OTHER ABERDEEN AREAS- LANDFILLS	FRA	WASTE REMOVAL - SOILS	2010
AAOA02	OTHER ABERDEEN AREAS- SURFACE DISPL AREAS	FRA	INSTITUTIONAL CONTROLS	2010
AAOA03	OTHER ABERDEEN AREAS- DRAINAGE DITCHS	FRA	INSTITUTIONAL CONTROLS	2011
AAOA03	OTHER ABERDEEN AREAS- DRAINAGE DITCHS	FRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	2011
AAOA03	OTHER ABERDEEN AREAS- DRAINAGE DITCHS	FRA	NATURAL ATTENUATION	2011
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	IRA	WASTE REMOVAL - SOILS	2011
EABR15-A	KINGS CRK CHEMICAL DISPOSAL SITE CLU 15	FRA	INSTITUTIONAL CONTROLS	2011
EABR15-B	30TH STREET LF-CLUSTER 15	FRA	INSTITUTIONAL CONTROLS	2011
PBC at APG	PBC sites	FRA	OTHER	2011
EABR11-C	22ND STREET LANDFILL- CLUSTER 11	IRA	CAPPING	2012
EACC1F-A	BUILDING E5604 AREA- CLUSTER 1F	FRA	INSTITUTIONAL CONTROLS	2012
EACC1F-B	BLDG 80 SERIES SMOKE LABS-CLUSTER 1F	FRA	INSTITUTIONAL CONTROLS	2012
EACC1G-A	BLDG E5185 WWII MTD FILLING PNT-CLU 1G	FRA	INSTITUTIONAL CONTROLS	2012
EACC1H-D	PHOSGENE PLANT AREA- CLUSTER 1H	FRA	INSTITUTIONAL CONTROLS	2012
EACC1I-B	BLDG 113 GAS INST CHAMBER-CLUSTER 1I	FRA	INSTITUTIONAL CONTROLS	2012
EACC3E	BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E	FRA	INSTITUTIONAL CONTROLS	2012
EACC3I	BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I	FRA	INSTITUTIONAL CONTROLS	2012
EACC3O	B-FIELD RANGE AREA- CLUSTER 3O	FRA	INSTITUTIONAL CONTROLS	2012
EACC3P	MOSQUITO TEST GRID AREA-CLUSTER 3P	FRA	INSTITUTIONAL CONTROLS	2012
EAOF04	NEW O-FIELD GW AND SOURCE AREA-OU4	FRA	CAPPING	2012
EAOF04	NEW O-FIELD GW AND SOURCE AREA-OU4	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2012
EABR11-A	26TH STREET DISPOSAL SITE (1)-CLUSTER 11	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	2013
EABR11-B	26TH STREET DISPOSAL SITE (2)-CLUSTER 11	FRA	WASTE REMOVAL - SOILS	2013
EAOE12	H-FIELD WASH RACK AND STORAGE AREA-CL 12	FRA	INSTITUTIONAL CONTROLS	2013
EAOE30	C-FIELD MUNITIONS BURIAL SITE CLUSTER 30	FRA	INSTITUTIONAL CONTROLS	2013
EAOE39	C-FIELD WASTEWATER SYSTEM CLUSTER 39	FRA	INSTITUTIONAL CONTROLS	2013
EAOE51	K-FIELD PISTOL RANGE CLUSTER 51	FRA	INSTITUTIONAL CONTROLS	2013

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
EABR11-C	22ND STREET LANDFILL- CLUSTER 11	FRA	INSTITUTIONAL CONTROLS	2014
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	FRA	INSTITUTIONAL CONTROLS	2014
EAOE19	FORT HOYLE TRAINING AREA-CLUSTER 19	IRA	WASTE REMOVAL - SOILS	2016
EAOE24	M-FLD SOUTHEAST TEST AND BURN AREA CL 24	IRA	WASTE REMOVAL - SOILS	2016
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	FRA	IN-SITU SOIL TREATMENT	2016
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2016
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	FRA	WASTE REMOVAL - SOILS	2016
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	FRA	INSTITUTIONAL CONTROLS	2016
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	FRA	EX SITU SOIL TREATMENT	2016

Duration of IRP

Date of IRP Inception: 197606

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 204611/205107

Date of IRP completion including Long Term Management (LTM): 205406

IRP Contamination Assessment

Contamination Assessment Overview

Past chemical warfare agent and hazardous material disposal practices and operations at APG yielded a number of SWMUs, from which hazardous waste or constituents have migrated, resulting in contamination, particularly groundwater, that require Army cleanup actions. These SWMUs include burn areas, salvage yards, dumps and surface disposal sites, landfills, contaminated buildings, industrial discharges, USTs, contaminated groundwater, and storage areas.

In July 1976, as part of the site assessment stage of the IRP, an initial records search study was conducted by USATHAMA (USATHAMA was the key APG IRP executing agency until 1983.) This study identified eight areas of contamination and recommended three areas for preliminary surveys and two for further monitoring. From 1976 to 1983 an additional installation assessment of the APG-AA and an environmental survey of the APG-EA were conducted by USAEC (formerly known as USATHAMA) to confirm the findings of the 1976 records research study. The studies verified contamination/potential contamination by chemical munitions, manufacturing wastes, and chemical warfare materiel (CWM) in the following:

- Westwood
- Canal Creek Drainage Area
- Gunpowder Neck Test Areas
- Carroll Island
- Graces Quarters
- Nike Site
- Lauderick Creek

The studies also verified the migration of chemical contamination into the waters surrounding APG-EA, Canal Creek Drainage Area, Old O-Field, and J-Field, and the potential for chemical contamination in the water surrounding APG-EA at Carroll Island, Graces Quarters, and the remaining Gunpowder Neck Fields.

From 1984 to 1990 regulatory oversight of the investigations and remedial work at APG was through RCRA. A RCRA CAP was issued to APG by USEPA, Region III in 1986 and the CAP was renewed in 1988. The RFAs of the APG-EA and APG-AA were completed in 1989 and 1990, respectively. These assessments identified over 300 SWMUs. With the signing of the FFA between USEPA and US Army in March 1990, these SWMUs were combined into 13 geographical AOCs (i.e., study areas) in which IRP efforts would be focused. The clusters, OUs, and subdivided areas within each of the study areas were assigned individual AEDB-R numbers. The APG IRP has a total of 253 sites entered into AEDB-R. 232 are in the APG- EA, 20 are in the APG-AA, one site addressed the installation shorelines prior to FY 97, and one site addressed performance-based acquisition (PBA) contracts awarded for APG. Potential chemicals of concern include the following:

- VOCs,
- SVOCs,
- pesticides and PCBs,
- metals,
- radiological constituents,
- explosives-related compounds, and
- CWM

Since March 1990, APG has initiated/finalized numerous studies, assessments, and investigations for each of the identified study areas as part of the remedial compliance process stipulated by the FFA and CERCLA. In conjunction with these environmental studies, the IRP efforts also focused on the initiation of remedial and removal actions at the study areas. To date, 163 RAs have been completed [not including the removal of 18 USTs using non-Defense Environmental Restoration Account (DERA) funds]. These actions include the removal and incineration of soil contaminated with PCBs and pesticides, excavation of disposal pits, installation of LUCs, and erosion controls, and the removal of contaminated surface material.

To reduce the potential for future risks, LUCs (to include signage to make authorized personnel in adjacent areas aware of the hazard and physical barriers to prevent access to the site) will be utilized. LUCs will also be put in place and maintained to prevent residential land use, digging, groundwater use, or other activities incompatible with remedy effectiveness. The site location will be notated in the post geographic information system (GIS). A wide variety of physical security countermeasures, to include barrier systems, sensors, and random patrols by law enforcement personnel, are in place to prevent unauthorized access.

IRP Contamination Assessment

Cleanup Exit Strategy

The focus will continue to be on completing numerous PBA contracts. The Canal Creek Study Area PBA is structured to complete the RI with supplemental data followed by an FS. The Bush River Study Area PBA is structured to complete the RI for the remaining soil sites and the FS for the groundwater sites to RC or RA(O). In addition, the RA(O) contractor will continue to evaluate RA(O) process to determine the best exit strategies to reduce operational costs. Specific cleanup strategies for each site are included in the site descriptions section of this IAP document.

IRP Previous Studies

1976	Title	Author	Date
	APG Overall Area Natural Resources Trustees		JAN-1976
	Installation Assessment of APG, Report No. 101, Vol. I, APG, MD		SEP-1976
	Installation Assessment of APG, Report No. 101, Vol. II, APG, MD		SEP-1976
1981			
	Installation Assessment of APG, Report # 301		FEB-1981
1983			
	Environmental Survey of Edgewood Area		JAN-1983
1986			
	APG Overall Area Public Participation		JAN-1986
	RCRA Hazardous Waste Management Permit, #MD 3-21-002-1355		OCT-1986
1987			
	Feasibility Study of Excavation and Clean-Up Options for the Old "O" Field Edgewood Area, Final Report and Appendices		DEC-1987
1988			
	RCRA Hazardous Waste Management Permit, #MD 3-21-002-1355, MOD I		SEP-1988
1989			
	RCRA Facility Assessment - Edgewood Area Report #39-26-0490-90		NOV-1989
	Toxicological Evaluation of Sediments from White Phosphorus Munitions Burial Area, Volume 3 of 3		NOV-1989
1990			
	APG Overall Miscellaneous Correspondence Vol. I		JAN-1990
	Federal Facility Agreement Between USEPA Region III and US Army		MAR-1990
	RCRA Hazardous Waste Management Permit, #MD 3-21-002-1355, MOD II		JUL-1990
	RCRA, Other Aberdeen Areas, Vol. I - Main Text, Parts I-VIII		SEP-1990
	RCRA, Other Aberdeen Areas, Vol. II, Parts IX - XV		SEP-1990
	RCRA, Other Aberdeen Areas, Vol. III, Parts XVI - XXV		SEP-1990
1991			
	Non-Releasable Baseline Risk Assessment of 8 Selected Study Areas, Vol. I		JAN-1991
	Non-Releasable Baseline Risk Assessment of 8 Selected Study Areas, Vol. II		JAN-1991
	Non-Releasable Baseline Risk Assessment of 8 Selected Study Areas, Vol. III		JAN-1991
	Non-Releasable Baseline Risk Assessment of 8 Selected Study Areas, Vol. IV		JAN-1991
	Investigation for the Remediation of Pesticide Contamination Near Building 5608		JAN-1991
	Index to Compendium Of CERCLA Response Selection		MAR-1991

IRP Previous Studies

1991	Title	Author	Date
	Guidance Documents		
	Site-Specific Safety & Health Plan, Geotechnical Investigations		APR-1991
	Annex A, Remedial Investigation/Feasibility Study Support Activities at Graces Quarters/Carroll Island		MAY-1991
	Detailed Work Plan for Regional Geotechnical Investigation, Edgewood Area		JUL-1991
	Treatability Study - Smoke Building 503		AUG-1991
1992			
	APG Overall Area Fact Sheets		JAN-1992
	Focused Feasibility Study for Michaelsville Landfill Cap & Cover System		JAN-1992
	Work Plan for CERCLA RI/FS Study - Final Generic RI/FS Work Plan for Bush River, Lauderick Creek and Other Edgewood Areas		JUN-1992
	Appendix J to the Work Plan for CERCLA RI/FS Study - Final Generic RI/FS Work Plan for Bush River, Lauderick Creek and Other Edgewood Areas		JUN-1992
	Geophysical Study of the Building 103 Dump		DEC-1992
1993			
	APG Installation Restoration Program Meeting Minutes, Vol. I		JAN-1993
	Risk and Biological Impact Assessment at APG: Technical Plan Vol. I: Text		MAR-1993
	Risk and Biological Impact Assessment at APG: Technical Plan Vol. II: Appendices A-R		MAR-1993
	Generic Health and Safety Plan for Field Sampling and Analysis for Bush River, Lauderick Creek & Other Edgewood Areas		MAR-1993
	Field Sampling & Analysis for Bush River, Lauderick Creek and Other Edgewood Areas, Generic Chemical Data Acquisition Plan, Edgewood Area		MAR-1993
	Site Health and Safety Plan APG, EA Drum Sampling		APR-1993
	APG Installation Restoration Program Quarterly Newsletters Vol. I		APR-1993
	Public Health Assessment for APG, Michaelsville		JUN-1993
	Public Health Assessment for AA/EA Aberdeen, Harford County, MD CERCLIS #MD2210020036		SEP-1993
	APG Deer Study Project #75-23-YS50-94 Work Plan		NOV-1993
	Environmental Services APG, MD Generic Work Plan Multiple Delivery Orders Vol. 1		NOV-1993
	Environmental Services APG, MD Generic Work Plan Multiple Delivery Orders Vol. 2		NOV-1993
	Generic Work Plan UXO Support for Interim Remediation Edgewood Area Multiple Delivery Orders		DEC-1993
1994			
	Focused Feasibility Study For Building 103 Dump Edgewood Area		FEB-1994
	Focused Feasibility Study for Soils Operable Unit,		FEB-1994

IRP Previous Studies

1994	Title	Author	Date
	Building E5265 (Bldg 503) Smoke Pilot Plant Burn Areas		
	Final Reports Phase I Soil Sampling Phase I Soil Gas Study Toxic Pits Pilot Remediation Study J-Field		APR-1994
	Environmental Assessment for the Proposed Removal Actions for the Edgewood Area		MAY-1994
	Western Boundary Hydropunch Investigation		JUN-1994
	Aberdeen Area, Sampling & Analysis Report for Groundwater Monitoring		JUL-1994
	Phase I Final Report Toxic Pits Pilot Remediation Study for J-Field		JUL-1994
	Detailed Remedial Investigation/Feasibility Study for Cluster 33		JUL-1994
	Remedial Investigation/Feasibility Study, Addendum I, Removal Opportunities Categorization		DEC-1994
1995			
	Interim Tech Report: Preliminary Ecological Stress Survey on the Gunpowder River		JAN-1995
	Terrestrial and Ecological Risk Assessment, Quality Assurance Project Plan, Vol. I		MAR-1995
	Terrestrial and Ecological Risk Assessment, Quality Assurance Project Plan, Vol. II		MAR-1995
	Analytical Results of Groundwater Samples Collected from Six Residents Who Live Along the Installation Boundary Vol. I		MAR-1995
	Analytical Results of Groundwater Samples Collected from Six Residents Who Live Along the Installation Boundary Vol. II		MAR-1995
	Bush River, Carroll Island, Graces Quarters and Lauderick Creek (including Cluster 1: Former Nike Site), Statement of Work for Engineering Programmatic Support to the Hazardous Waste Remedial Actions Programmed for Edgewood Area		MAR-1995
	Recommended Analytical Methods for Obtaining Adequate Quantitation Limits for use in Risk Assessments		MAR-1995
	Remedial Investigation and Feasibility Study, Cluster 1, Former Nike Site		MAR-1995
	Field Study #75-23-YS50-94 Health Risk Assessment of Consuming Deer from APG, Report & Appendices A-G		MAR-1995
	Non-Releasable QA/QC Plan for the Field Operations of Minicams as Agent Monitors for GB, GD, VX and HD (Contract #DACA31-94-D-0020)		APR-1995
	Reference Sampling & Analysis Program Field Operations Work Plan		APR-1995
	Removal Action Project Generic Work Plan, APG, MD Vol. 1		MAY-1995
	Removal Action Project Generic Work Plan, APG, MD Vol. 2		MAY-1995
	Boundary UXO Survey Report for the Edgewood Area of APG		MAY-1995
	Ecological and Human Health Risk Assessment for the Gunpowder River Study Area Quality Assurance Project		JUN-1995

IRP Previous Studies

1995	Title	Author	Date
	Plan, Edgewood Area		
	Remedial Investigation/Feasibility Study, Cluster 1		JUN-1995
	Final Beach Point Test Site Focused Feasibility Study Report, Volumes, 1 & 2		JUN-1995
	Reference Sampling and Analysis Program Quality Assurance Project Plan, Edgewood Area		JUL-1995
	Reference Sampling and Analysis Program Soil, Sediment & Surface Water Reference Data Report, Edgewood Area		JUL-1995
	Focused Feasibility Study for the Toxic Burning Pits Area at J-Field		JUL-1995
	Remedial Investigation Report for the O-Field Area, Vols. 1-3 & Appendices		AUG-1995
	Geophysical Investigation of Cluster 13, Lauderick Creek Study Area		SEP-1995
	Geophysical Investigation at School Field No. VIII Cluster 33, Lauderick Creek Study Area		SEP-1995
	Environmental Assessment for Future Removals at the Aberdeen & Edgewood Areas		DEC-1995
	Focused Feasibility Study for Operable Unit A, Carroll Island		DEC-1995
1996			
	Data Summary Report for the Aberdeen Area, Sampling in Support of the Risk and Biological Impact Assessment of APG		JAN-1996
	Preliminary Risk Assessment for Eight Selected Study Areas, Vol. I		MAR-1996
	Preliminary Risk Assessment for Eight Selected Study Areas, Vol. II		MAR-1996
	Reference Sampling and Analysis Program Benthic Macrofauna Survey Data Report		APR-1996
	Year I, Community Relations Support and Fish Pathology Studies in Support of the Environmental Installation Restoration Program, Directorate of Health, Safety and Environment Installation Restoration, & Natural Resources Branch		JUN-1996
	DOD: Relative Risk Site Evaluation Primer (Interim Edition)		JUN-1996
	Benthic Habitat Survey of Bush River		AUG-1996
	Canal Creek Area Focused Feasibility Study: Summary of Initial Test Results, Groundwater Treatability Study		OCT-1996
	Groundwater Tidal Influence Study for the Canal Creek Study Area Remedial Investigation/Feasibility Study		OCT-1996
	Canal Creek Study Area Natural Gamma Log Study for the Canal Creek Study Area Remedial Investigation/Feasibility Study		OCT-1996
	Hydrogeology of Cluster 13, Lauderick Creek Study Area, Remedial Investigation/Feasibility Study		OCT-1996
1997			
	Windrows Plots for Carroll Island, Graces Quarters and Nike Site		JAN-1997
	Installation Restoration Program Weekly Activities		JAN-1997

IRP Previous Studies

1997	Title	Author	Date
	Report Vol. I - VII		
	Analytical Results of the APG Potable Water Supply Well		JAN-1997
	Focused Feasibility Study for Watson Creek		JAN-1997
	Use of Continuous Marine-Seismic Reflection to Locate Buried Paleochannels near the Gunpowder Neck		FEB-1997
	Michaelsville Landfill Remedial Investigation Report		JUN-1997
	Base Environmental Support (Best) Contract General Quality Assurance Project Plan, EA, APG		JUL-1997
	Edgewood Research Development & Engineering Center Historical Document Review		JUL-1997
	Non-Releasable Water Quality Biological Study #24-00413-78 an Assessment of Surface Waters		JUL-1997
	Investigation in the Sediments in the Gunpowder River, EA, APG, MD		SEP-1997
	Conceptual Hydrogeologic Model of APG Area		SEP-1997
	Design Pre-design Fieldwork Investigation Report, Cluster 1		SEP-1997
	Habitat Characterization of Edgewood Area		NOV-1997
1998			
	Graces Quarters Remedial Investigation Report, Vols. 1-4		JAN-1998
	Potential Health Impacts from Range Fire at APG		MAR-1998
	Installation Restoration Community Relation Plan		MAY-1998
	Remedial Investigation Report for J-Field		JUN-1998
	Feasibility Study Cluster 3, Old Bush River Road Dump		JUL-1998
	Canal Creek Aquifer Feasibility Study with MDE Comments EA		JUL-1998
	Carroll Island/Graces Quarters Combined Feasibility Study Report		JUL-1998
1999			
	Remedial Investigation of the Western Boundary Study Area		JAN-1999
	Environmental Assessment for Prescribed Burns at Aberdeen & Edgewood Area Test Ranges for Air Monitoring of Range Fire Emissions		FEB-1999
	Phytoremediation Study Final Report and Appendices		APR-1999
	Western Boundary Study Area Focused Feasibility Study, Operable Unit 1		MAY-1999
	Base Environmental Support (BEST) Contract General Safety and Health Program	Roy F. Weston	JUL-1999
	Five-Year Review for the O-Field Study Area		JUL-1999
	Treatability Study Report, Primary Test Area		AUG-1999
	Feasibility Study for New O-Field, Operable Unit 4		SEP-1999
	Environmental Assessment for Ballistics Testing of Tent & Foam for Use in Removal Actions		OCT-1999

IRP Previous Studies

	Title	Author	Date
1999	Carroll Island/Graces Quarters Combined Feasibility Study Report (Addendum)		NOV-1999
	Other Lauderick Creek Clusters Remedial Investigation Report		NOV-1999
	Cluster 13, School Fields I and II, Remedial Investigation Report		NOV-1999
2000	Background Concentrations of Selected Radionuclides Summary Report		FEB-2000
	Lauderick Creek Concrete Slab Test Site (Cluster 5) Feasibility Study		MAR-2000
	Borehole Geophysical Investigation of the First Confined Aquifer at J-Field		MAR-2000
	Geochemical Evaluation of Arsenic and Lead Mobility Toxic Burning Pit Area		AUG-2000
	Annual Certification of Non-Violation of Land Use		OCT-2000
2001	Building 525 Site Remedial Investigation Report, Vol. 1		FEB-2001
	Phase II Remedial Investigation Report for IRP Sites 2, 6, and 46 in the Canal Creek Area, Vols. 1-4		MAR-2001
	Feasibility Study Report J-Field Surficial Aquifer		MAR-2001
	Natural Attenuation Study of Groundwater at the Toxic Burning Pits Area of Concern at J-Field		JUL-2001
2002	I-Field WWII Japanese Bunkers Complex Area Investigation Report		JAN-2002
	Focused Feasibility Study, Lead Contaminated Soil Area, Cluster 3		APR-2002
	Remedial Investigation Report for the O-Field Study Area, Vols. 1-5		SEP-2002
	Former Nike Site Southeast Area Phase III Monitored Natural Attenuation Study		DEC-2002
	Southern Bush River Remedial Investigation Report, Volumes I-II		DEC-2002
	Addendum to the Southern Bush River Remedial Investigation Report		DEC-2002
2003	Honey Bee Sentinel Monitoring Supplemental Report		MAY-2003
	Geophysical Investigation Report for H-Field and I-Field, Boone Creek Investigation Area		MAY-2003
	Cluster 3, Lead Contaminated Soil Area Focused Feasibility Study		JUN-2003
	Edgewood Area, Five-Year Review		SEP-2003
	APG Overall, Five-Year Review		SEP-2003
	Northern Bush River RI Report, Vol. I & II		NOV-2003
	Northern Bush River RI Report, Vol. I & II		NOV-2003
	Phase II Remedial Investigation Report, IRP Sites 2, 6, and 46, Vols. I-IV		DEC-2003

IRP Previous Studies

2004	Title	Author	Date
	Draft Feasibility Study IRP Site 2: Old Dump Swan Creek		JUN-2004
	Draft Feasibility Study IRP Site 30A: Pistol Range and Site 30B: Known Distance Range		JUN-2004
	Draft Feasibility Study IRP 25, Shell Washout Wastewater Ditch at Building 700B		JUN-2004
	Focused Feasibility Study Report for the Old O-Field Source Area		JUN-2004
	O-Field Study area New O-Field Groundwater Evaluation Assessment of CAH Natural Attenuation	APG	OCT-2004
	Hydrogeology of Cluster 4, Other Edgewood Areas, Remedial Investigation/Feasibility Study		OCT-2004
	Molasses & Vitamin B12 Treatment Study Report		DEC-2004
2005			
	Temporal Changes in Indicators of Natural Attenuation and Physical Controlling Factors for Freshwater Tidal Wetland Contamination with Chlorinated VOCs, West Branch Canal Creek (1995-2001)	APG	JAN-2005
	Phase II Remedial Investigation Report, Vol. 1 & 2		FEB-2005
	Remedial Investigation Report, Tower Road Site		MAR-2005
	Constructed Wetland Treatability Study Report 1,1,2,2-Tetrachloroethane Removal and Inoculation Procedure		MAR-2005
	Westwood Remedial Investigation Report		APR-2005
	Westwood Feasibility Study		APR-2005
	3 Sites in Canal Creek Study Area Feasibility Study		MAY-2005
	Feasibility Study of Five Sediment Sites: Site 8, 9, 12, 16, and 17		MAY-2005
	Feasibility Study for Site 16, DRMO Metal Scrap Yard; Site 23, Building 525; Site 28f, Building 3327 UST; Site 29, Tower Road; Site 32, Building 507 and Site 33, Building M600		MAY-2005
	Remedial Investigation/Feasibility Study Report for the Building 99 Site		JUN-2005
	J-Field White Phosphorus Burning Pits, Remedial Investigation Report, Volume I: Contamination Assessment and Ecological Risk Report		JUN-2005
2006			
	Remedial Investigation Report for Ten Potential No Further Action Sites		JAN-2006
	J-Field White Phosphorus Pits, Remedial Investigation Report, Volume II: Baseline Human Health Risk Assessment	APG	MAR-2006
	Feasibility Study Report for Cluster 9 Nike Control Area Surficial Aquifer	APG	MAY-2006
	Remedial Investigation/Feasibility Study Cluster 19 (Fort Hoyle Training Area) Groundwater	APG	JUL-2006
	Remedial Investigation Report for Thirty Five Remaining Soil Sites, Volume II: Southwest Region	APG	AUG-2006
	J-Field White Phosphorus Burning Pits, Remedial Investigation Report, Volume I: Contamination	APG	DEC-2006

IRP Previous Studies

2006	Title	Author	Date
	Assessment and Ecological Risk Report		
2007	Supplemental Investigation Results at Former Soil Boring SB46013 for G-Street Salvage Yard	APG	APR-2007
	Record of Decision Pistol Range, Known Distance Range and 23 Other Sites		AUG-2007
	Expanded Site Inspection 5400 Block Work Plan		AUG-2007
	White Phosphorus Pits, Focused Feasibility Study	APG	AUG-2007
	Feasibility Study for O-Field Operable Unit 4: New O-Field and Other O-Field Areas	APG	SEP-2007
	Remedial Investigation Report for 35 Remaining Soils Sites, Volume IV: Kings Creek Industrial Area	APG	OCT-2007
2008	Six Groundwater Sites Groundwater Sampling Results Report No. 1, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-Situ Bioremediation		JAN-2008
	Remedy-In-Place Report Six Groundwater Sites Other Aberdeen Areas		FEB-2008
	Six Groundwater Sites Groundwater Sampling Results Report No. 2, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-Situ Bioremediation	APG	MAR-2008
	Feasibility Study Old Dump on Swan Creek		MAR-2008
	Feasibility Study Old Dump on Woodrest Creek		MAR-2008
	Expanded Site Inspection 5400 Block Report		APR-2008
	O-Field Study Area, Old O-Field Groundwater Treatment Facility Discharge Monitoring Report, First Quarter 2008		APR-2008
	Remedial Design Pistol Range and Known Distance Range		MAY-2008
	Proposed Plan Old Dump on Woodrest Creek and Old Dump on Swan Creek		JUN-2008
	Six Groundwater Sites Groundwater Sampling Results Report No. 3, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-Situ Bioremediation		JUL-2008
	O-Field Study Area, Old O-Field Groundwater Treatment Facility Discharge Monitoring Report, Second Quarter 2008		JUL-2008
	Six Groundwater Sites Groundwater Sampling Results Report No. 4, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-Situ Bioremediation		AUG-2008
	Edgewood Area - Aberdeen Proving Ground Five-year Review Final		OCT-2008
	Field Study Area, Old O-Field Ground Water Treatment Facility Discharge Monitoring Report, Third Quarter 2008		OCT-2008
	Feasibility Study for O-Field Operable Unit (OU) 4: New O-Field and Other O-Field Areas,		OCT-2008
	Six Groundwater Sites Groundwater Sampling Results Report No. 5, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-Situ Bioremediation		NOV-2008

IRP Previous Studies

2009

Title	Author	Date
O-Field Study Area, Old O-Field Groundwater Treatment Facility Discharge Monitoring Report, Fourth Quarter 2008		JAN-2009
Record of Decision Old Dump on Woodrest Creek and Old Dump on Swan Creek		FEB-2009
Work Plan for Field Investigation in Support of the Remedial Design for Field Operable Unit 4		FEB-2009
O-Field Study Area, Long Term Monitoring Report 2008 Watson Creek (Operable Unit 3) Draft		MAR-2009
Five-year Review for the Aberdeen Area		APR-2009
Six Groundwater Sites Groundwater Sampling Results Report No. 6, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In-situ Bioremediation		APR-2009
O-Field Study Area, Old O-Field Groundwater Treatment Facility Discharge Monitoring Report, Fourth Quarter 2008		JUN-2009
O-Field Study Area, Old O-Field Groundwater Sampling - Annual Report January 2008 - June 2008 First Semi-Annual Period 2008		JUN-2009
Old O-Field Water Treatment Facility Annual Report		JUN-2009
Six Groundwater Sites Groundwater Sampling Results Report No. 7, Treatment of Chlorinated Hydrocarbons in Groundwater by Enhanced In situ Bioremediation		JUL-2009

ABERDEEN PROVING GROUND
Installation Restoration Program
Site Descriptions

Site Name: MICHAELSVILLE LANDFILL-OU1 (SOURCE)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

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

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	198712.....	199206
RD.....	199207.....	199209
IRA.....	199104.....	199106
RA(C).....	199304.....	200105
LTM.....	200105.....	204609

RIP Date: N/A

RC Date: 200105

SITE DESCRIPTION

Michaelsville Landfill - OU1 addresses the contamination source at the MLF. The MLF is located in the north-central portion of the APG-AA and is a 20-acre, unlined municipal-type landfill. Operations at the landfill began in 1969 and continued until its closure in 1980.

Previous studies of the landfill operations indicate that trench and fill methods were used for waste disposal. The majority of the materials reportedly disposed of in the MLF were domestic trash and trash from nonindustrial sources at APG. Other materials that may have been disposed of in limited quantities include solvents, waste motor oils, PCB transformer oils, wastewater treatment sludge, pesticides, insecticides, and rodenticides. The MLF was listed on the NPL in 1989.

In June 1992, a ROD was published for this OU which recommended installation of a landfill cap. In August 1994, the installation of the cap was completed. In 2002, the MLF closeout report was approved by the USEPA. The USEPA has reported that there is a delay in delisting this as an NPL site. Quarterly inspections of the landfill and groundwater monitoring are conducted at the site.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of inspections and maintenance of the landfill cap and gravel road surrounding the landfill, LUC monitoring and maintenance and groundwater sampling every five years to support the five-year review. Five-year review costs are captured under AEDB-R site EABR00. Costs for AEDB-R site AAML02 are included in this site.

Site Name: MICHAELSVILLE LANDFILL-OU2 (GW)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	199302.....	199709
RA(C).....	199210.....	199709
LTM.....	199709.....	204609

RIP Date: N/A

RC Date: 199709

SITE DESCRIPTION

Michaelsville Landfill - OU2 addresses sediment, surface water, and groundwater contamination at and near the MLF. MLF is a 20-acre, unlined municipal landfill located in the north-central portion of the APG-AA; it was capped in 1994.

In September 1997, a ROD was signed for OU2 that required LTM of the site, annual sampling, and the establishment of a one-quarter mile drinking water well restriction zone.

In FY99, the first round of sampling was completed. Generally, contaminant levels decreased since the RI, although concentrations of VOCs and elevated levels of iron, manganese, and ammonia were detected in the groundwater. Detections of contaminants in surface water generally decreased, although a few metal concentrations increased. While sediment sampling results showed decreases in SVOCs, some inorganic levels increased. In FY02 the third round of surface water, sediment and groundwater sampling was completed. A groundwater-only sampling was conducted in March 2005, which indicated the same trends as the previous LTM of groundwater.

In June 2004 the monitoring plan for MLF was revised to reduce the frequency and number of wells being sampled.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of groundwater sampling every five years to support the five-year review and LUC monitoring and maintenance. Costs for this site are covered under AEDB-R site AAML01 except for five-year review costs which are captured under AEDB-R site EABR00.

Site ID: AAOA01

Site Name: OTHER ABERDEEN AREAS-LANDFILLS

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	199010.....	200902
RD.....	200903.....	200910
IRA.....	199309.....	199609
RA(C).....	200409.....	201009
LTM.....	201009.....	204609

RIP Date: N/A

RC Date: 201009

SITE DESCRIPTION

Site AAOA01 consists of Site 1 (Old Dump on Woodrest Creek) and Site 2 (Old Dump on Swan Creek). These sites were grouped together due to their similarities.

Both sites are former dump areas with the primary concerns being potential waste in place and the potential for off-site migration. Metals (primarily lead) were also identified as risks to human health and/or the environment in the surface soils.

A 1996 interim removal action at Swan Creek consisted of surface debris removal and the installation of erosion controls on the northern swale.

The ROD for both sites was issued in February 2009.

The RA for the Old Dump on Swan Creek consisted of stabilizing the southern swale, removing an area of lead-impacted surface soil, monitoring, and LUCs. The RA for the Old Dump on Woodrest Creek consisted of a soil cover, shoreline stabilization, monitoring, and LUCs.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of site inspections, removal of invasive vegetation, and repairs to the soil cover and wetland area, and LUC monitoring and maintenance. The five-year review costs for this site are captured under AEDB-R site EABR00.

Site Name: OTHER ABERDEEN AREAS-SURFACE DISPL AREA

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RD, IRA, RA(C), LTM with corresponding dates. Includes RIP Date: N/A and RC Date: 201006.

SITE DESCRIPTION

The Other Aberdeen Areas-Surface Disposal Areas once consisted of the Sandblasting Area near Building 523, the Spesutie Island Burn Trench, the Metal Barricade at Building 1122, the Chemical Dump Ponds on Spesutie Island, the Building 705 Combat Systems Test Activity (CSTA) Fragmentation Pit, the Building 510 Barrels, and the Poverty Island Potential Mine Burial Site. The Other Aberdeen Areas-Surface Disposal Areas are also comprised of battery storage/disposal areas at Abbey Point and Spesutie Island. These sites have been grouped together due to similarities into one AEDB-R number. Removal of old batteries at Spesutie Island and Abbey Point has been conducted. One additional site, Defense Reutilization and Marketing Office (DRMO) Metal Scrap Yard sediment/soil media only - was added to site AAOA02 in FY04.

A soil removal was conducted at the Sandblasting Area near Building 523 and the Building 510 barrels. Phase I RI results for the discarded battery site at Spesutie Island indicated metal contamination in site sediments. Linear geophysical anomalies were revealed at the Spesutie Island Burn Trench and determined to be old unmapped utilities. High concentrations of manganese were detected in the groundwater near the Spesutie Island Chemical Dump Ponds.

Elevated concentrations of zinc and nickel were found in sediment samples obtained at the Old Chemical Dump on Spesutie Island.

A Phase II RI for Other Aberdeen Areas was completed in April 2003 and a number of sites were determined to require no additional work/ remediation.

In September 2004, Other Aberdeen Areas was contracted under a performance-based contract (PBC) site that covered RI/FS, RD, and RA(C). The costs were captured under site PBC at APG. Human Health and Baseline Ecological Risk Assessments were completed in 2005. Five sediment sites were targeted for remediation: Site 8, Discarded Batteries at Abbey Point Navigation Light; Site 9, Discarded Batteries at Spesutie Island Navigation Light; Site 12, Old Chemical Dump on Spesutie Island; Site 16, DRMO Metal Scrap Yard (sediments only) and Site 17, Silver Contaminated Ditch in Transonic Range Area. Some of the contaminants of concern (COC) include mercury, zinc, arsenic, cadmium, copper, lead, silver and methylmercury. An RA was performed in 2007 to implement the selected remedy (excavation and off-post disposal of COC-impacted sediment, and LUCs) as required by the ROD. The LUCs imposed restrict future industrial and construction activities to prevent exposure to contaminated soils at each site. A response action completion report (RACR) dated September 2009 certifies the completion of the objectives for the five sediment sites (8, 9, 12, 16, and 17).

A ROD for the Pistol & Known Distance (KD) Range, dated August 2007, noted the following sites as NFA: 13, 15, and 31. The following sites were noted as LUC sites: 11, 18, and 19. The Pistol & KD Range RACR dated June 2010 noted the following sites as NFA: 11, 18, and 19.

The following is a status of all sites listed:

Site ID: AAOA02

Site Name: OTHER ABERDEEN AREAS-SURFACE DISPL AREA

NFA RACR dated June 2010:

Site 11, Spesutie Island Burn Trench Site 18, Building 510 barrels

Site 19, Sandblasting Area near Building 523

LUCs RACR dated September 2009:

Site 8, Discarded batteries at Abbey Point Site 9, Discarded batteries at Spesutie Island

Site 12, Old Chemical Dump on Spesutie Island

Site 16, DRMO Metal Scrap Yard sediment and soil media Site 17, Silver contaminated ditch in transonic range area

NFA ROD dated August 2007:

Site 13, Chemical Dump Ponds on Spesutie Island Site 15, Metal Barricade at Building 1122

Site 31, Poverty Island Potential Mine Burial Site

Transferred to AAOA06: Building705 CSTA Fragmentation Pit

Transferred to AAOA012: open burn (OB)/open detonation (OD) areas at Old and New Bombing Fields and Abbey Point

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: OTHER ABERDEEN AREAS-DRAINAGE DITCHS

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Explosives
Media of Concern: Groundwater, Soil

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RD, RA(C), RA(O) with corresponding dates. Includes RIP Date: 201102 and RC Date: 204609.

SITE DESCRIPTION

Building 700B was built in the early-1950s. The shell washout facility was used to rinse munitions shells for nearly 40 years. The installation assessment reported that this facility discharged approximately 800 gallons of wastewater per year, which was filtered through sawdust to remove explosives residue. The wastewater then flowed to a ditch, a series of three dropout basins, and a dirt weir. The sawdust and solid materials were periodically removed and transported off-site for burning. Discharge operations were halted in 1989.

Phase I and II RIs were conducted at the site in 1998 and 2001, respectively. A subsequent human health risk assessment (HHRA) and baseline ecological risk assessment (ERA) were conducted in 2005. Additional post-RI groundwater and sediment sampling was performed in 2008 and 2009, resulting in a human health risk reevaluation that was performed in 2009. The results of the HHRA and the human health risk reevaluation, as well as the baseline ERA reports, were used to identify the media of concern (groundwater and sediment) and COCs for this site. A proposed plan (PP) for the Shell Washout Wastewater Ditch was finalized and a public meeting conducted in May 2010. The final ROD was signed October 2010. The completion report for the soil excavation was completed January 2011.

The explosive compound 2,4,6-trinitrotoluene (TNT) and the TNT degradation product 4-amino-2,6-dinitrotoluene were identified as COCs in groundwater. Explosives were also identified as COCs in sediment.

Groundwater is being monitored to evaluate effectiveness of the soil excavation and until groundwater remediation goals have been met.

CLEANUP/EXIT STRATEGY

RA(O) will continue. RA(O) consists of groundwater sampling and LUC monitoring and maintenance. The five-year review costs are captured under AEDB-R site EABR00.

Site Name: OTHER ABERDEEN AREAS- GW Sites

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198011.....	198909
SI.....	198909.....	199009
RI/FS.....	199910.....	200601
RD.....	200409.....	200605
IRA.....	199005.....	199408
RA(C).....	200409.....	200709
RA(O).....	200409.....	204609

RIP Date: 200709

RC Date: 204609

SITE DESCRIPTION

The Other Aberdeen Areas-Groundwater Sites (formerly the Other Aberdeen Areas-USTs) are comprised of hazardous waste USTs at Building 4726 and Tower Road and waste oil storage tanks at the following buildings: B402, B436, B456, B615, B2458, B3329, B3505, B4036, B5046, B2379, B4728.

These sites were grouped together due to similarities into one AEDB-R number. Building 525, M600, 507, and 3327 were added to AAOA08 in FY04.

In 2002, an in situ chemical oxidation pilot study was conducted at Building 525 on a 180 ft by 120 ft area, where chlorinated volatile organic compound (CVOC) levels were highest. The study reduced 9.2 pounds of CVOCs; however, trichloroethene (TCE) levels were still found up to 647 parts per billion (ppb).

An NFA determination was made for the UST sites associated with Buildings 4726, B402, 615, 4036, 5046, 2379, and 4728 in a December 2005 decision document (DD).

The RI for the remaining sites was completed in February 2005.

In a ROD issued in August 2007 and after additional RI sampling, an NFA determination was made for UST sites associated with Buildings 436 and 456. In addition, the UST sites associated with Buildings 2458, 3329, and 3505 were issued LUCs with no additional remediation.

The PBC site for the Other Aberdeen Areas was awarded in September 2004 for the RI/FS, RD and RA. Under the PBC, AAOA08 now includes: Site 16, DRMO Metal Scrap Yard (groundwater); Site 23, Building 525; Site 28f, Building 3327 UST Site; Site 29, Tower Road Site; Site 32, Building 507; and Site 33, Building M600.

In May 2005, an FS was prepared for six remaining sites (Buildings 525, M600, 507, 3327, DRMO, and Tower Road). The ROD was completed in January 2006. The PBC groundwater sites achieved RIP in September 2007. RA(O) has begun and declines in CVOC concentrations have been observed.

The selected remedy for all the groundwater sites was enhanced bioremediation-recirculation with the optional addition of passive biobarriers. These systems were installed and operated until 2009. Systems were restarted in 2011 and have been operating successfully since that time.

Site ID: AAOA08

Site Name: OTHER ABERDEEN AREAS- GW Sites

CLEANUP/EXIT STRATEGY

RA(O) will continue. Injection and monitoring will continue for four sites until interim goals are met followed by natural attenuation. The DRMO and M600 sites are moving toward early closure. The five-year review costs are captured under AEDB-R site EABR00.

Site Name: WESTERN BOUNDARY AREA GROUNDWATER-OU1

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	199309.....	200006
RD.....	200010.....	200111
IRA.....	199208.....	199306
RA(C).....	200204.....	200309
RA(O).....	200310.....	204608
RIP Date:	200310	
RC Date:	204608	

SITE DESCRIPTION

OU1 addresses contaminated groundwater in the southwestern portion of the Western Boundary study area, near the Harford county production wells.

Results of FY93 RI/FS activities confirmed TCE contamination of two Harford county drinking water wells in Perryman. In January 1993, the US Army, in coordination with the USEPA, the state of Maryland, and Harford county officials, began construction of a granular activated carbon (GAC) treatment system to remove the TCE from the two wells. The system began operation in June 1993. Because of the risk of off-post wells becoming contaminated, the preferred alternative from the PP is GAC treatment of all groundwater from the Perryman Well Field.

In July 2000, a ROD was signed requiring the construction of a new plant to treat all county production wells and groundwater monitoring. The new plant is located off-post and was completed in October 2003. All drinking water wells located in the Perryman Well Field are treated by the new plant; therefore, the relative risk for this site has been reduced from high to low. A memorandum of agreement with Harford county was established for the Army to treat TCE with a GAC System.

CLEANUP/EXIT STRATEGY

RA(O) will continue into the foreseeable future. RA(O) includes carbon replacement and vessel maintenance/supplementing operating costs for the GAC system and semiannual groundwater monitoring of the treatment plant wells and annual monitoring of the public water supply wells. Additional groundwater monitoring wells will continue to be monitored every five years in support of the required installation five-year review. Five-year review costs are included under AEDB-R site EABR00.

Site Name: PAAF LANDFILL/CITY OF ABERDEEN WELLS-OU2

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Perchlorate, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	199309.....	201903
RD.....	201903.....	202003
RA(C).....	202003.....	202103
LTM.....	202103.....	205103

RIP Date: N/A

RC Date: 202103

SITE DESCRIPTION

OU2 originally addressed the groundwater near Phillips Army Airfield (PAAF) Landfill and city of Aberdeen wells located north of the landfill. The PAAF Landfill, consisting of about 35 acres, has been used since the 1950s to dispose of construction debris, oils, solvents, and general refuse. Soil cover was placed over the landfill and it is currently closed. A French land mine training area is also part of this area.

In 1998, and again in 2001, the Aberdeen wells and nearby monitoring wells were sampled. The explosives compound, cyclotrimethylenetrinitramine (RDX) was detected in one of the Aberdeen wells (CAP7). Low solvent concentrations were detected. Additional geoprobes were subsequently installed in an attempt to identify the RDX. No RDX plume was found.

Geoprobes and monitoring wells sampled between 2001 and 2005 detected perchlorate in the groundwater and soil. Perchlorate was also detected in Aberdeen drinking water wells.

An interim drinking water health advisory of 15 micrograms per liter (ug/L), was established by the USEPA in 2009. The perchlorate levels in the city of Aberdeen wells at AAWB02 do not exceed 15 ug/L. The risk assessment concluded that there was no risk at this site for groundwater; therefore, sampling of the city wells was discontinued by the IRP in December 2006.

Costs for AEDB-R site AAWB04 are included with this site.

CLEANUP/EXIT STRATEGY

The feasibility study, PP, ROD and LTM will be completed. The presumptive remedy for the Phillips Army Airfield Landfill is a MDE compliant cap and for the groundwater is monitoring and LUCs. Sites AAWB02 and AAWB04 will be included in the same ROD. Five-year review costs are covered under AEDB-R site EABR00. Other phases will be added once the FS is completed.

Site ID: AAWB04

Site Name: OTHER MEDIA OU3(SW, SED, SOIL)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Pesticides

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198011.....	198909
SI.....	198011.....	199009
RI/FS.....	199801.....	201903

RIP Date: N/A

RC Date: 201903

SITE DESCRIPTION

OU3 addresses sediment, surface water, and soil within the Western Boundary Study Area. Environmental sampling within OU3 has been accomplished to support an HHRA for the Western Boundary Study Area (WBSA) and an ecological study for the entire AA. The collected data was screened and validated. The RI found that further work was needed at Aberdeen Fire Training Area (AFTA), the presumptive remedy was an appropriate action for the PAAF landfill, and additional investigation was unwarranted at the PAAF, Two Towers Area, TRAAV , and other areas of the WBSA.

Costs for this site are included with AEDB-R site AAWB02.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD and RA(C) will be completed. Sites AAWB02 and AAWB04 will be included in the same ROD. The anticipated remedy for AAWB04 is LUCs. LUCs will be conducted in-house at no cost. Additional phases will be opened when the FS is complete and the phases are underway.

Site ID: EABR00
Site Name: Bush River Area

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Metals, Munitions and explosives of concern (MEC), Pesticides, Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201009
LTM.....	201010.....	204609

RIP Date: N/A

RC Date: 201009

SITE DESCRIPTION

The Bush River Study Area lies in the northeast portion of APG's EA and encompasses approximately 500 acres on a peninsula bounded to the north by Lauderick Creek, to the east and south by Bush River, and to the southwest by Kings Creek. As early as 1918, the Southern Bush River Area was used for training, test activities, waste disposal and chemical storage.

All five-year review costs for Aerial Spray Grid (ASG) are captured under this site.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. This site captures the five-year review costs for both the AA and EA sites.

Site Name: OLD BUSH RIVER ROAD DUMP-CLUSTER 3

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	199906
RD.....	199906.....	199909
IRA.....	199011.....	199709
RA(C).....	199910.....	200011
LTM.....	200011.....	204609

RIP Date: N/A

RC Date: 200011

SITE DESCRIPTION

The Old Bush River Road Dump (OBRRD) is a 1.5-acre, World War I (WWI)-era landfill containing munitions, burnt gas masks, chemical laboratory glassware, and process equipment. Rain and erosion were causing metals in the soil to move from the surface soil into a nearby marsh and two munitions were recovered during previous environmental work performed at the site.

In June 1999, the final ROD for the construction of a soil cover over the OBRRD was signed. The soil cover is intended to reduce infiltration, prevent erosion and the subsequent migration of metal contamination into the nearby marsh, and provide a barrier against potential detonation of UXO. A clay confining layer exists under the landfill; therefore, groundwater contamination is not a concern. In October 1999, construction of the soil cover began and was completed in October 2000. In November 2000, the as-builts were submitted to regulators.

Sediment sampling every five years and LUC are required at this site.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of cap monitoring and maintenance, sediment sampling every five years and LUC monitoring and maintenance. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: TRANSFORMER STORAGE-CLUSTER 3

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	200507
RD.....	200507.....	200606
IRA.....	199604.....	200109
RA(C).....	200507.....	200801
LTM.....	200801.....	204609
RIP Date:	N/A	
RC Date:	200801	

SITE DESCRIPTION

Transformer Storage-Cluster 3 was a Directorate of Public Works (DPW) site that was used from 1964 to 1989 for utility storage, including the storage of transformers. It also housed a gasoline station. In 1977, the gas station was demolished. This site also housed a sump containing a pump for dispensing fuel and a 15,000-gallon UST. The UST and sump were removed in 1991.

Samples collected at multiple depths at this site indicate the presence of lead at 4,650 milligrams per kilogram (mg/kg). This concentration is in excess of the suggested USEPA cleanup level. The source for the lead contamination was the storage of lead acid batteries. The soil is believed to have been disturbed following contamination, as no correlation between lead concentration and depth was noted. An FS was completed defining the extent of contamination and assessing remedial alternatives. In July 2005, the ROD was signed.

Lead-contaminated soils were processed on-site where a binding agent was added to the soil. The treated soil is within compliance with regulations which require that none of the treated soil have a toxicity characteristic leaching procedure (TCLP) lead concentration higher than 5 mg/kg and the average leachable lead reduction be more than 90 percent. This action was completed in FY07. RACR was completed in January 2008. LTM is in effect in order to restrict future industrial activities such that exposure to lead contaminated soil does not occur and to control erosion and maintain the 2-foot clean soil cover over residual lead-contaminated soil.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EABR03-C

Site Name: SURFICIAL AQUIFER-CLUSTER 3

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	199902
LTM.....	201303.....	202006

RIP Date: N/A

RC Date: 199902

SITE DESCRIPTION

Site EABR03-C is located in the Bush River Study Area. The aquifer contains nickel, beryllium, iron, and manganese above RI comparison criteria; pesticides and VOCs are also present (Final Cluster 3 Remedial Investigation Report, July 1998). The site was closed by an NFA since the aquifer is not a potential drinking water source.

A data gap analysis is being conducted in the LTM phase to support the completion and USEPA approval of a no action PP/ROD.

CLEANUP/EXIT STRATEGY

The RI/FS, PP and ROD will be completed. No further action is anticipated for this site.

This site includes costs for sites EABR07-A, EABR07-B, EABR11-D, EABR11-E, EABR15-C, EABR18-A, EABR18-B, EABR18-C, EABR18-D, EABR35-A, EABR35-B, EABR36-A, EABR36-B.

Site ID: EABR07-A

Site Name: BOAT CLUB FILL SITE(4)-CLUSTER 7

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR07-A is located in the Bush River Study Area. The site contains total PAH concentrations of 10,660 ppb and TCPU concentrations of 1,200 ppb in the soil [data currently unvalidated - unpublished Northern Bush River focused feasibility study (FFS) Data Report]. No further action will take place at the site since it does not pose unacceptable industrial risk. (Northern Bush River Remedial Investigation Report, Draft, June 2002).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR07-B

Site Name: BIO-SENSOR FACILITY-CLUSTER 7

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A
RC Date: 202006

SITE DESCRIPTION

Site EABR07-B is located in the Bush River Study Area. It is NFA as the site does not pose unacceptable industrial risk (Northern Bush River Remedial Investigation Report, Draft, June 2002).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site Name: 26TH STREET DISPOSAL SITE (1)-CLUSTER 11

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals
Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201110
RD.....	200507.....	201209
RA(C).....	200507.....	201309
LTM.....	201309.....	204609
RIP Date:	N/A	
RC Date:	201309	

SITE DESCRIPTION

This site consists of a mask canister and charcoal burning area on the west side of 26th Street. Historical aerial photography from 1929 indicates activity in the mask canister burning area, which continued until the late-1960s or 1970s. This disposal operation involved burning off-spec and unserviceable gas mask containers within their wooden box packaging. The metal residuals were left in place and were gradually filled over by a thin cover of soil.

Test pit samples collected from this area during Phase I of the FFS contained metals above risk-based concentration (RBC) levels (e.g., lead at 1,240 mg/kg, chromium at 182 mg/kg, and zinc at 349,000 mg/kg).

The ROD was signed October 2011 to remove the gas mask containers. The RA work plan was completed in September 2012 and fieldwork began in October 2012. Fieldwork was completed in February 2013 and approximately 13,000 tons of soil was removed and sent to a regulated landfill.

LTM remains open in order to capture five-year reviews.

The five-year review costs are captured under AEDB-R site EABR00.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: 26TH STREET DISPOSAL SITE (2)-CLUSTER 11

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Pesticides, Radionuclides

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201110
RD.....	200507.....	201205
IRA.....	199311.....	199807
RA(C).....	200507.....	201309
LTM.....	201309.....	204609

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This open dump site located to the east of 26th Street is approximately 100 to 150 feet in diameter. The time period when dumping occurred is unknown; however, some dumping may have occurred as recently as the 1970s. The EA RFA field inspection of the site identified miscellaneous waste and medical/biological laboratory waste. In 1993 the removal of potentially contaminated surface and subsurface material began. In 1996 two drums containing cobalt-60 and cesium-137 were located. Removal of the waste and excavation of the soil continued; 1,000 tons of radioactive waste were removed.

In July 1998, the site was closed out, sloped, and seeded following release from the Nuclear Regulatory Commission (NRC) license. Pesticides were detected in sediments at concentrations above ecological risk levels [e.g., dichlorodiphenyl-trichloroethane and its residues (DDTr) at 9,370 mg/kg].

The ROD was signed in March 2012 as part of the action to excavate the west side of 26th disposal site. The RA work plan was completed in September 2012 and fieldwork began in October 2012. Fieldwork was completed in February 2013.

LTM remains open in order to capture five-year reviews.

The five-year review costs are captured under AEDB-R site EABR00.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: 22ND STREET LANDFILL-CLUSTER 11

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201309
RD.....	200507.....	201406
IRA.....	200507.....	201208
RA(C).....	200507.....	201409
LTM.....	201409.....	204609

RIP Date: N/A

RC Date: 201409

SITE DESCRIPTION

The 22nd Street Landfill comprises 8.3 acres of the Bush River study area and is the largest landfill on the Edgewood peninsula. The site was a marsh that was used for landfill operations from the 1960s through the early-1970s. The landfill contains hazardous waste, including a reported bromobenzylcyanide tank, sulfur sludge, laboratory glassware, and demolition debris. Efforts to dig test pits in the landfill were abandoned, as no area free of metallic anomalies could be located.

VOCs, methane, and carbon dioxide with Freon were detected in landfill gas samples. Soil in the stream to the south of the landfill contains pesticides at concentrations above ecological risk levels (e.g., DDT at 8,168 mg/kg). Surface water samples collected around the landfill contain chromium [32.4 mg/liter (L)], copper (65.2 mg/L), zinc (606 mg/L) and chlorinated solvents [51 ug/L total volatile organic compounds (TVOC) in surface water and 163 ug/L TVOCs in sediment].

A time critical removal action (TCRA) was conducted from April-August 2012. The shoreline was stabilized to prevent erosion and exposure of waste into the Bush River. Improvements to the existing soil cover were made in the upland portions (i.e., western and southern portions of the site). To the extent practicable, the existing soil cover was amended to increase cover thickness in areas where it was thin (i.e., areas with less than 24 inches of cover), thereby enhancing effectiveness of the containment. The existing soil cover in the large tidal wetland adjacent to Bush River (i.e., northeastern portion of the site) was left undisturbed. The surface of the landfill is vegetated with grass, except for the portion along the drainage swales and the easternmost portion where fragmites grow. Constituents in the landfill cover soil and adjacent surface water and sediment did not pose unacceptable risk to industrial workers. The landfill is not releasing constituents to groundwater or surface water at levels that pose risk to the environment. However, it is possible that hazardous materials in the landfill waste could pose risk if exposed in the future through inadvertent excavation into the landfill.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of LUC and cap monitoring and maintenance and groundwater monitoring. AEDB-R costs for sites EABR11-G, EABR11-H, and EABR11-I are included under this site. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: BLDG 45-A AMMO RENOVATION FCTY-CLU 11

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR11-D is located in the Bush River Study Area. The site contains (6,785 ppb PAH) and Aroclor 1260 (100 ppb) in the soils. An NFA with LUCs is planned based on industrial risk scenario. (Draft Southern Bush River RI Report, Draft July 1997).

Future costs for this site are included in site # EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR11-E

Site Name: CASY INCINERATOR-CLUSTER 11

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR11-E is located in the Bush River Study Area. Ash within incinerator contains 16,000 ppb PAH and 5,270 ppm lead (Draft Southern Bush River RI Report, July 1997). The incinerator was dismantled in 2001 for construction of a mustard neutralization facility.

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site Name: SURFICIAL AQUIFER-CLUSTER 11

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201712
RD.....	201705.....	201808
RA(C).....	201708.....	201905
RA(O).....	201905.....	204905
RIP Date:	201905	
RC Date:	204905	

SITE DESCRIPTION

The surficial aquifer in the Southern Bush River peninsula is a complex sequence of interfingered sands, clays, and silts. The aquifer at many locations is divided into an upper and lower section by laterally discontinuous silt and clay layers, which is very important to the hydraulic continuity of the surficial aquifer. A massive clay confining unit defines the base of the surficial aquifer. Groundwater sampling was performed within Cluster 11 during RI and FFS field activities. Cluster 11 contains a portion of the large VOC plume which underlies the Southern Bush River area. Six potential VOC source areas have been identified within Cluster 11. VOC contamination within the groundwater plume predominantly ranges from one to 99 ppb TVOCs; however, two hot spots in Cluster 11 contain concentrations of 83,810 ppb and 17,626 ppb TVOCs. Industrial scenarios for future cancer risks by groundwater ingestion from 1,1,2,2-tetrachloroethane and carbon tetrachloride were estimated as three in 1000 (3.0E-03). The non-cancer hazard index was greater than one (five) from VOCs.

The 2013 FFS recommended hot spot removal and treatment followed by bioremediation and monitored natural attention (MNA) to reduce the VOC concentrations in the aquifer.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and RA(O) will be completed. The anticipated remedy is ex situ treatment of hot spots in soils followed by bioremediation, MNA/monitoring and LUCs for groundwater. The costs for sites EABR18-E and EABR18-F are included under site EABR11-F.

Five-year review costs are covered under site EABR00.

Site ID: EABR11-G
Site Name: UNDERGROUND STORAGE TANK

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	199809
LTM.....	201303.....	204609

RIP Date: N/A

RC Date: 199809

SITE DESCRIPTION

This structure was associated with Building E2364 in the Bush River Radioactive Material Disposal Facility. Radioactive waste material was processed, packaged, and temporarily stored prior to disposal. The site was reopened in the LTM phase to receive site closeout documentation. The final ROD was signed in 2013 and requires LUCs to restrict residential use.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. Costs for this site are included under AEDB-R site EABR11-C. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EABR11-H

Site Name: ADAMSITE STORAGE PIT - CLUSTER 11

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Radionuclides

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	199809
IRA.....	199604.....	199709
LTM.....	201303.....	204609

RIP Date: N/A

RC Date: 199809

SITE DESCRIPTION

Site EABR11-H is located in the Bush River Study Area. The site contains low-level radiation and arsenic in the soil; however, a removal action conducted to fill the vault eliminated most site-associated risks (Draft Southern Bush River RI Report, July 1997).

LTM remains open in order to capture LUCs.

The final ROD was signed in 2013 and requires LUCs to restrict residential use.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. The costs for this site are included under AEDB-R site EABR11-C. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: RADIOACTIVE MATERIAL DISPOSAL FACILITY

STATUS

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

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

SITE DESCRIPTION

Site EABR11-I consists of the Bush River Radioactive Material Disposal Facility (BRRMDF), the Toxic Gas Yard (TGY) Ton-Container Steamout site, several associated buildings, and an open storage yard.

The Rad Yard is now largely open space. Building E2354 remains in the southern portion of the area. The Rad Yard removal action conducted from 2004 through 2008 was effective in remediating radionuclides, eliminating contaminated structures, and reducing radionuclide activity levels in soil to background levels.

LTM remains open for LUCs.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. Costs for this site are included under AEDB-R site EABR11-C. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: KINGS CRK CHEMICAL DISPOSAL SITE CLU 15

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201005
RD.....	200507.....	201101
IRA.....	199206.....	199709
RA(C).....	200507.....	201107
LTM.....	201107.....	204609

RIP Date: N/A

RC Date: 201107

SITE DESCRIPTION

The Kings Creek Chemical Disposal site was a chemical material disposal area. It lies adjacent to Kings Creek and outside the fenced portion of Southern Bush River. Visual inspections of the site indicate that open burning and drum storage were the primary methods of disposal. The types of material found at the site suggest activity occurred during the 1920s and 1930s.

The Army has recovered a large amount of UXO from this site, including Livens projectiles, Stokes mortar rounds, and badly corroded Stokes mortar fuses.

Additional scrap metal and drums were removed during a 1992 action to remove waste material from the shoreline. Thirty-five of the drums contained the tear gas chloroacetophenone (CN) and 12 contained an unknown, inorganic crystalline solid. Sampling identified metals contamination in the surface soil above RBCs (e.g., arsenic at 158 mg/kg). Small areas of buried material adjacent to the western boundary of the site were also identified.

In spring 2003, a pallet of glassware containing chemical warfare agents was removed and disposed. Temporary shoreline stabilization was also completed in spring 2003. In December 2006 a permanent shoreline stabilization structure was completed at this site.

The ROD was signed in May 2010 with LUCs and LTM being the remedy.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. The costs for this site are covered under AEDB-R site EABR15-B. Five-year review costs are covered under AEDB-R site EABR00.

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201005
RD.....	200507.....	201101
IRA.....	199604.....	199709
RA(C).....	200507.....	201107
LTM.....	201107.....	204609

RIP Date: N/A

RC Date: 201107

SITE DESCRIPTION

The 30th Street Landfill lies east of and adjacent to the Kings Creek Chemical Disposal site along the north shoreline of Kings Creek. Historical aerial photography indicates activity at the 2.3-acre landfill during the late-1960s or 1970s.

The 1992 removal action conducted at the Kings Creek Chemical Disposal site detected large quantities of buried metallic objects in saturated, organic marsh sediments along the western edge of the landfill. Visual inspections of the site revealed the presence of building demolition debris. The debris is mostly covered, but is exposed at some points along the edges of the fill site. Chloride contamination was identified downgradient of the site.

Small numbers of chemical munitions were discovered at the landfill's edge. In December 2006, shoreline protection measures were implemented to prevent waste material from eroding into Kings Creek.

The ROD was signed in May 2010 with LUCs and groundwater monitoring as the final remedy.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of LUC monitoring and maintenance and groundwater monitoring. AEDB-R site EABR15-A costs are included under this site. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EABR15-C

Site Name: TON CONTAINER STORAGE-CLUSTER 15

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR15-C is located in the Bush River Study Area. The site contains PAHs (270 ppb) in the soil (Draft Southern Bush River RI Report, July 1997).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR18-A

Site Name: TAPLER PT DREDGE MATERIAL SITE-CLU 18

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Pesticides

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR18-A is located in the Bush River Study Area. The site contains acetophenone at 2,600 ppb in the soils. (Draft Southern Bush River RI Report, July 1997).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR18-B

Site Name: CHEM MUNITION BURIAL SITE(4)-CLUSTER 18

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH
Contaminants of Concern: Metals
Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199908
RIP Date:	N/A	
RC Date:	202006	

SITE DESCRIPTION

Site EABR18-B is located in the Bush River Study Area. The site contained magnesium concentrations. Burial Site 3 contained mercury (406 ppm) in the soil which was removed (Draft Southern Bush River RI Report, July 1997).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR18-C

Site Name: IGLOO STORAGE AREAS-CLUSTER 18

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR18-C is located in the Bush River Study Area. The site contains acetophenone (93 ppb) in the soil (Draft Bush River RI Report, July 1997).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR18-D

Site Name: A-FIELD TEST SITE(2)-CLUSTER 18

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR18-D is located in the Bush River Study Area. The site contains acetophenone (83 ppb) in the soil (Draft Southern Bush River RI Report, July 1997).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site Name: BUSH RIVER DOCK(E2396)-CLUSTER 18

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201712
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 201712

SITE DESCRIPTION

During WWI, the Army shipped containers of bulk chemical agent and munitions by loading the items onto transport barges at the Bush River Dock. During WWII, captured foreign munitions were unloaded to flat cars on rails at the dock.

During the FFS several direct-push technology (DPT), porewater, and sediment samples were collected off the sides and end of the dock to delineate the extent of porewater and groundwater contamination. There are high TVOC contaminant concentrations off the end of the dock, possibly attributable to a large metallic object in the sediments, but they do not appear to be related to the on-shore VOC contaminants. VOC contamination has also been detected offshore within the organic silts. The highest concentration of VOCs (i.e., 15,674 ug/L) was measured off the end of the dock at a depth of 13 ft to 17 ft.

The RI completed in 2002 recommended that OU1 should complete recommended work to evaluate potential remedial alternatives for the contaminated surficial aquifer groundwater in the southern portion of the Southern Bush River Area (EABR15-D and EABR18-F), and the VOC source area in the offshore groundwater at the Bush River Dock.

CLEANUP/EXIT STRATEGY

The RI/FS, PP and ROD will be completed. No action is anticipated. Costs through ROD are covered under site EABR11-F.

Site ID: EABR18-F

Site Name: SURFICIAL AQUIFER - CLUSTER 18

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	201712
RIP Date:	N/A	
RC Date:	201712	

SITE DESCRIPTION

The surficial aquifer in the Southern Bush River peninsula is a complex sequence of interfingering sands, clays, and silts. The aquifer at many locations is divided into an upper and lower section by laterally discontinuous silt and clay layers, which is very important to the hydraulic continuity of the surficial aquifer. A massive clay confining unit defines the base of the surficial aquifer.

Groundwater sampling was performed within Cluster 18 during the RI, Phase I FFS, and Phase II FFS field activities. Cluster 18 contains a portion of the large VOC plume which underlies the Southern Bush River Area. Several potential VOC source areas have been identified within Clusters 15 and 18.

The RI completed in 2002 recommended work should be completed to evaluate potential remedial alternatives for OU1, including the contaminated surficial aquifer groundwater in the southern portion of the Southern Bush River Area (EABR15-D and EABR18-F), and the VOC source area in the offshore groundwater at the Bush River Dock.

The 2013 FFS recommended hot spot removal and treatment followed by bioremediation and MNA to reduce the VOC concentrations in the aquifer. Costs for the anticipated remedy are covered in AEDB-R site EABR11-F. Due to AEDB-R limitations, future phases will be opened as the phases are underway.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and RA(O) will be completed. The anticipated remedy is ex situ treatment of hot spots in soils followed by bioremediation, MNA/monitoring and LUCs for groundwater. The costs for sites EABR18-E and EABR18-F are included under site EABR11-F.

Five-year review costs are covered under site EABR00.

Site ID: EABR35-A

Site Name: MAINTENANCE YARD-CLUSTER 35

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR-35A is located in the Bush River Study Area. The site contains metals in groundwater above primary maximum contaminant levels (MCL) and mercury contamination in sediments and surface water above RBCs (Draft Northern Bush River RI Report).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00. Groundwater is being addressed under site EABR18-F.

Site ID: EABR35-B

Site Name: BLDG E2144/2148/2150-CLUSTER 35

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR35-B is located in the Bush River Study Area. The site contains Aroclor-1260 (170 ppb) in the soil (Draft Northern Bush River RI Report).

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR36-A

Site Name: WAREHOUSE STORAGE AREAS-CLUSTER 36

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR35-A is located in the Bush River Study Area.

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EABR36-B

Site Name: BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
IRA.....	199604.....	199709

RIP Date: N/A

RC Date: 202006

SITE DESCRIPTION

Site EABR36-B is located in the Bush River Study Area.

Future costs for this site are included in site EABR03-C. This site has been reopened in the RI/FS phase to complete the data gap analysis, receive site closeout documentation, and document LUCs. The LTM phase will be opened when site closeout documentation is received.

CLEANUP/EXIT STRATEGY

The data gap analysis, receive site closeout documentation, and document LUCs will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site ID: EACC1A-A
Site Name: RAILROAD YARD-CLUSTER 1A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200609
RA(C).....	200609.....	200609
LTM.....	200609.....	204609

RIP Date: N/A

RC Date: 200609

SITE DESCRIPTION

The Railroad Yard is located in the north-central portion of the APG-EA, west of the Hoadley Road gate. The Railroad Yard consists of multiple railroad sidings (areas used to store rail cars filled with raw materials, supplies and munitions), a locomotive storage and maintenance barn (Building E5762), and storage shed (Building E5760).

The site ecological and human health risk assessment sampling efforts were conducted in 1999. The final Phase II RI report was submitted in 2004. The final FS was submitted in May 2005.

The risks to ecological receptors identified in the ERA are limited due to insufficient habitat (i.e., heron are not expected to live in the areas with elevated pesticides, because there are no fish present in the drainage areas). Therefore, remediation of the site is no longer warranted.

LTM remains for LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: G STREET SALVAGE YARD-CLUSTER 1A

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals
Media of Concern: Soil

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RD, IRA, RA(C), LTM with corresponding dates. Includes RIP Date: N/A and RC Date: 200907.

SITE DESCRIPTION

The G-Street Salvage Yard is located in the Canal Creek Study Area (CCSA) at APG-EA. The site consists of Building E5068, a concrete loading dock, a former fire training area, and a salvage yard. The site is located adjacent to the WWII Railroad Yard, and west of the Hoadley Road gate. From WWI until WWII, the site was used as a railroad siding area, or as an area used to store rail cars filled with raw materials, supplies and munitions. From WWII to the mid-1960s, salvage yard operations were conducted at the site. From 1972 until 1978, a fire-training pit was located at the southeast corner of the salvage yard. Bulk construction materials were also stored at the site. Limited removal actions that focused on removing surface debris and debris found in mounds within the project area have been conducted here.

In 1996, a temporary soil cover was placed over a portion of the site as part of a CERCLA removal action. The Phase II RI report was submitted in 2004. In May 2005, the final FS for the site was submitted. There are risks at the site from soil and groundwater; however, the groundwater plume will be addressed as part of the West Canal Creek Area, Canal Creek Aquifer (CCA) site EACC4A-B. Soil risks to human health were primarily defined by lead hot spots at the former fire training area; some of the hot spots are as deep as 14 feet (at or near the water table). There are additional potential risks to human health and the environment at the Burn Residue Disposal Area (BRDA).

The final RAD risk assessment was incorporated into the RI for the final three sites. The risk for child residents at the G-Street Soils Site (surface and subsurface) exceeded the USEPA target risk range for Aroclor 1260, benzo(a)pyrene, 4,4'-DDE, dibenzo(a,h)anthracene, dioxin/furans, and arsenic. In September 2007 the ROD for this site was signed.

The selected remedy (implemented under an existing PBC site) included excavation within the contaminated soils area of the G-Street Salvage Yard (to an approximate depth of about 2 ft feet), excavation of the Burn Residue Disposal Area (BRDA) (to a total depth of nine feet), and off-site disposal. Due to the potential for UXO/CWM in the BRDA pit, the remedy was conducted under strict safety requirements. Site preparations and UXO clearance of support areas were completed. Full-scale excavation in the Salvage Yard began in September 2008 and was completed in spring 2009. An ESD document, describing the limited use of Level A personal protective equipment (PPE) and vapor containment system (versus a comprehensive use of these protections as described in the ROD) was finalized in June 2009. The RA completion report was finalized in July 2009. The LTM plan was completed in August 2009, and LTM, which focused primarily on SI, was conducted from March to December 2009.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: DM FILLING PLANT-CLUSTER 1D

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200609
RD.....	200601.....	200708
RA(C).....	200601.....	200709
LTM.....	200709.....	204609
RIP Date: N/A		
RC Date: 200709		

SITE DESCRIPTION

The Adamsite (DM) Filling Plant is located in the APG-EA, west of the Magnolia Road intersection with Alley Road. Existing buildings within the area include Buildings E5635, E5637, E5639, E5641, E5643, E5645, and E5648. The DM Filling Plant was used for DM candle filling and assembly during 1942 and 1943. Building E5648 was the primary production building and used sumps and/or tank pits for the DM manufacturing. Additional buildings were used for a variety of filling/loading purposes including smoke mixing and blending. Building E5641 was also used for loading button bombs with a pyrotechnic mixture of red phosphorus, potassium chlorite, and Freon. Two animal holding pens were located at the southern end of the DM Filling Plant Area.

The ecological and HHRAs for this site are complete. This site poses no unacceptable risks to human health under an industrial land-use scenario. Potential ecological risks drove cleanup of arsenic hot-spots at the site.

The ROD for the site was finalized in FY06. The selected RA included soil excavation and off-site disposals, completed with LUCs. This remedy was selected in order to mitigate the potential ecological risks and ensure no future risk of the site for residential and/or childcare purposes.

This site was selected for LUCs as specified in the 2013 Canal Creek 13 Sites RACR. LTM phase is open due to LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: BUILDING 87 COMPLEX-CLUSTER 1E

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Polychlorinated Biphenyls (PCB), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200909
RD.....	200710.....	200909
IRA.....	199507.....	199509
RA(C).....	200710.....	200909
LTM.....	200909.....	204609

RIP Date: N/A

RC Date: 200909

SITE DESCRIPTION

The Building 87 Complex (Pilot Plant Complex) is located at the northwest corner of the intersection of Fleming Road and Alley Road, in APG-EA. The site consisted of Buildings E5616, E5617, E5618, E5626, E5627, E5632, and E5633. The buildings were constructed around WWI and used for chemical manufacturing during the war. Various military compounds (including nerve agents, clothing impregnation compounds, and B-1 dye) were all produced at the Building 87 Complex. The area was also used for bulk storage and chemical transfer of agents for use in other research and development facilities. In 1986, activity as a process engineering facility at the 5-acre complex ceased. The buildings were abandoned at that point. In FY97, the Building 87 Complex demolition was funded under the Chemical Agent Demilitarization Disposal Defense (CADD). In 1999, all of the buildings at this site were demolished and in 1995 the E5625 and E5633 sumps were addressed.

The potential for environmental impact is largely due to the activities using chemicals such as chlorinated solvents and PCBs. Phase I and II RI sampling have been conducted at this site; all media have been sampled and analyzed. Surface soil sampling [including X-ray fluorescence (XRF) field screening] was also conducted for the risk assessment. The ERA, HHRA, and RI reports have been finalized, the PP was published, and the ROD was finalized in September 2009. The final RA is LUCs.

LTM remains open to cover LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00. Groundwater at this site is being evaluated under AEDB-R site EACC4A-B.

Site ID: EACC1F-A

Site Name: BUILDING E5604 AREA-CLUSTER 1F

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

The Building E5604 Area is located in the APG-EA on the north side of Fleming Road between Alley Road and 32nd Street. Building E5604 was constructed during WWII for chemical munitions filling. In the late-1960s, mask and filter manufacturing operations were located at Building E5604. Manufacturing activities have not been performed at Building E5604 in recent years; however, testing of individual and collective protection filters was conducted until 1988.

Explosives and agent degradation byproducts were not detected in surface or subsurface soil samples on-site. Phases I and II RI soil sampling were conducted at this site. In addition, XRF field-screening and surface soil sampling were conducted for risk assessment purposes in 2003. Arsenic levels (8.9 mg/kg) in the surface soil exceeded both industrial RBCs and background ranges.

No FS was performed as this is a NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

LTM remains open to cover LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00. Groundwater at this site is being evaluated under site EACC4A-B.

Site Name: BLDG 80 SERIES SMOKE LABS-CLUSTER 1F

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

The Building 80 Series Smoke Laboratories are located in the APG-EA on the north side of Fleming Road between Alley Road and 32nd Street (six acres). The Building 80 laboratories were constructed in 1918 and 1919 and were used as smoke laboratories through at least 1944. Activities at these laboratories would have been similar to latter day pyrotechnic research and development (R&D) work.

Arsenic concentrations (21.1 mg/kg) in site soils exceed industrial RBCs and background ranges. While no agent degradation byproducts were found in site soils, nitrobenzene (5.79 mg/kg) was detected in the surface soil in an area of stressed vegetation on-site.

A geophysical survey was conducted in FY04 as part of RI activities. Phase III RI subsurface soil sampling was conducted in 2004 to 2005.

No FS was performed as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

LTM remains open to cover LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00. Groundwater at this site is being addressed under site EACC4A-B.

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200104.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609
RIP Date:	N/A	
RC Date:	201203	

SITE DESCRIPTION

The Building E5185 WWII Mustard Filling Plant is located south of Magnolia Road between 34th Street and Hoadley Road. Building E5185 was originally constructed as a WWII Mustard Plant, but was used for a variety of purposes from 1945 until the mid-1960s, including supply handling and warehousing, production and packing of filters and masks and equipment cleaning and layaway. Until 1975, Building E5185 was also an active shop and fabrication facility. In recent years, the Ordnance School has used Building E5185 as a vehicle maintenance training facility.

Five sediment samples taken during the RI exceeded sediment screening levels and background ranges for pesticides (maximum detection 4,4'-DDE at 330 mg/kg). Two, 20,000-gallon tanks suspected beneath Building E5185 were no longer present and sand within the vault was deemed to be environmentally safe.

No FS was performed as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

LTM remains open to cover LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00. Groundwater at this site is addressed under site EACC4A-B.

Site ID: EACC1G-B

Site Name: BLDG E5188 WP FILLING PNT-CLUSTER 1G

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Pesticides

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	200509
IRA.....	199507.....	199508
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC1G-B is located in the Canal Creek Study Area. The site consists of Building E5188, the White Phosphorous Filling Plant, and the surrounding area. Wastewater from Building E5188 drained into the chemical sewer which discharged 500 feet southwest of the building into nearby wastewater ponds area. During the RI sampling, pesticides and metals were detected in sediment and surface water samples were at levels exceeding screening levels and background ranges. The RI and risk assessments did not identify unacceptable risk to human health (under an industrial land-use scenario) or for ecological receptors; thus, further investigation or remediation of this site is not warranted. An AST containing some sludge in Building E5190 also needs to be investigated. Groundwater at this site is currently being evaluated under site EACC4A-B.

No remedial action is required. This site has zero cost LUCs as part of Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: 1937 MUSTARD DISPOSAL PIT-CLUSTER 1H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008
RD.....	202006.....	202102
RA(C).....	202102.....	202202

RIP Date: N/A

RC Date: 202202

SITE DESCRIPTION

The 1937 Mustard Disposal Pit is located in the APG-EA, approximately 400 feet west southwest of Building E5440 in the Mustard Plant Area. In 1937, large-scale manufacturing of mustard was initiated. The Mustard Disposal Pit was used to receive 'wild run' batches of mustard. The site may have also been used to dispose of other chemical wastes.

During the Phase I RI sampling, both arsenic (5.7 mg/kg) and beryllium (1.6 mg/kg) were detected in surface soils at concentrations exceeding the USEPA Industrial RBCs and reference background levels. No mustard has been detected at this site. In FY04 a geophysical survey was conducted as part of Phase III RI activities. Around 2004 and 2005, soil borings for HHRA purposes were collected and test pits in and around the suspected disposal pit were conducted.

The draft final RI document for this site was completed in fall 2009. The FS is a draft. Risk assessments indicated unacceptable risks to human health under both residential and industrial scenarios, as well as unacceptable ecological risks. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

The costs for AEDB-R sites EACC1H-B, EACC1H-C, EACC1H-F, and EACC1H-A are included under this site. The RI/FS, PP, ROD, RD, RAC and LTM will be completed. The anticipated remedy is excavation and offsite disposal with LUCs. The LTM phase will be added once the RA(C) is complete. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site ID: EACC1H-B

Site Name: WWII CHLORINE PLANT-CLUSTER 1H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The WWII Chlorine Plant is located in the APG-EA, east of the West Branch Marsh along the west side of 35th Street. From 1942 to 1944 plant operations to produce chlorine and caustic soda were conducted here. After WWII and until 1968, the building was used as a hydrogen recovery unit and filling plant. In 1969 the Chlorine Plant facilities were demolished.

During Phase I RI surface soil sampling, PAHs, metals, and pesticides were detected in concentrations exceeding both the USEPA industrial RBCs and reference background levels. Mercury (4.3 mg/kg) was also detected in sediment samples at levels above the respective sediment screening values and reference background levels. During 1995 and 1996 a removal action was conducted at this site to remove potentially contaminated surface material. A toxicity test conducted for plants and worms failed for all end points. In FY05 Phase III RI sampling was conducted. In 2004 and 2005 additional RI soil borings were collected.

The draft final RI document for this site was completed in fall 2009. The FS is a draft. Risk assessments indicate no unacceptable risks under an industrial/military scenario, but risks to a potential future resident are unacceptable. There are no significant ecological risks. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

Costs for this site are included under AEDB-R site EACC1H-A. The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The RD, RA(C), and LTM phases will be added as database allows. Five-year review costs are covered under site EABR00. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: BLDG E5483 PROTECT CLOTH LDY-CLUSTER 1H

STATUS

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

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RIP Date, and RC Date.

SITE DESCRIPTION

The Building E5483 Protective Clothing Laundry site is located south of Williams Road and immediately north of the Mustard Disposal Pit area, in the APG-EA. Building E5483 was constructed in 1951 on the site of a former ton container steamout facility.

During the Phase I RI surface soil sampling, benzo(b)fluoranthene and arsenic were detected at concentrations exceeding the USEPA RBCs and reference background levels. Chrysene, several metals, and pesticides were detected in sediment samples at levels exceeding screening levels and reference background.

The draft final RI document for this site was completed in the fall of 2009. The FS is a draft. Risk assessments indicated unacceptable risks to human health under both residential and industrial scenarios.

CLEANUP/EXIT STRATEGY

The costs for this site are included under AEDB-R site EACC1H-A. The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The RD, RA(C), and LTM phases will be added as database allows. The anticipated remedy is excavation and offsite disposal with LUCs.

Site Name: PHOSGENE PLANT AREA-CLUSTER 1H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200112.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

The Phosgene Plant Area is located in the APG-EA between Hoadley Road and 35th Street. Prior to the start of WWII, phosgene manufacturing operations were limited to a small group of buildings located north of Hanlon Road in the Phosgene Plant Area. Most of the WWII phosgene plant buildings were demolished in the 1960s. Buildings E5317, E5327, and E5365 are the only remaining structures in the Phosgene Plant Area.

No analytes were detected at concentrations exceeding industrial RBCs or background ranges during RI sampling. Phase III RI sampling was conducted in FY05. These activities focused on collection of data to support the HHRA and determining the nature and extent of contamination near Buildings E5356 and E5360.

No FS was performed as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

LTM remains open to cover LUCs and five-year reviews.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained. Five-year review costs covered under AEDB-R site EABR00. Groundwater at this site are being evaluated under site EACC4A-B.

Site Name: BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	199509
RD.....	199401.....	199609
IRA.....	199201.....	199206
RA(C).....	199705.....	199910
LTM.....	200101.....	204609

RIP Date: N/A

RC Date: 199910

SITE DESCRIPTION

The Building 103 Area Chemical Plant/Dump site is located in the APG-EA at the northwest intersection of Hoadley Road and Williams Road. Building 103 was constructed in 1918 and was demolished in the 1960s. The Building 103 Dump was located on the south side of Williams Road, near the former US Army Technical Escort Unit Building E5422 which was demolished prior to cap construction. During WWI, the Building 103 Chemical Plant was used for the production of chloropicrin and for pilot plant production of clothing-impregnating materials and ethylene. The Building 103 Dump was listed on historical maps as a sandpit and was used as a dump site for debris, miscellaneous wastes, and possibly for chemicals.

In 1995, the Interim ROD for the Building 103 Area Chemical Plant/Dump site was signed. In 1997, the final RA completion report, dump site as built drawings, and the cap/cover maintenance manual were completed. In 2001, LTM and operations and maintenance (O&M) began. The FY06 LTM/O&M review and recommendations report was implemented to reduce the frequency of groundwater monitoring, water level measurement, and air monitoring.

To complete the CERCLA documentation requirements, a final ROD is being completed in the LTM phase to document current activities as the final remedy.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of biannual groundwater sampling/analysis and water level measurements, quarterly cap inspections and maintenance, biennial E5427 air monitoring, and biennial dump cap gas vent carbon filter sampling/analysis and change-out. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: EXPER CHEM PLANT AREA-CLUSTER 1H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	202008
IRA.....	199507.....	199512

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Experimental Chemical Plant area, located in the APG-EA, consists of pilot plants 622 (Building E5560), 642 (Building E5485), 643 (Buildings E5481, E5487, and E5489), 644 (E5476), E5380, and Building 648 (which has been demolished). Uses for these buildings included chemical agent production, clothing impregnation, DM air drying, and testing and laboratory activities.

During 1995 and 1996, a removal action was conducted to remove potential source material dumped along the banks of Canal Creek. In 2000, two flow-through sumps were removed. Phase I RI activities included surface soil and sediment sampling, as well as geophysical surveys.

In 2003, during risk assessment sampling, elevated levels of arsenic (maximum of 1,370 mg/kg) and mercury (maximum of 594 mg/kg) were detected in surface soils behind Building E5476, near a discharge pipe. These levels are the highest detected in APG-EA (based on the data sets used for ERAs). Phase III RI sampling, conducted in 2004 and 2005, included the collection of subsurface soil samples. Buildings at this site were demolished in FY07, under the Chemical Demilitarization Program. Most of the remaining slabs were demolished in 2012.

The draft final RI document for this site was completed in fall 2009. The FS is a draft. Risk assessments indicated unacceptable risks to human health under both residential and industrial scenarios, as well as unacceptable ecological risks. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

Costs for this site are included under AEDB-R site EACC1H-A. The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The RD, RA(C), and LTM phases will be added as database allows. The anticipated remedy is excavation and offsite disposal with LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: MUSTARD PLANT AREA-CLUSTER 1H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Metals, Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	202008
RD.....	202006.....	202102
RA(C).....	202102.....	202202

RIP Date: N/A

RC Date: 202202

SITE DESCRIPTION

The Mustard Plant Area occupies the entire south side of Williams Road including several outlying structures north of Williams Road, in the APG-EA. Mustard was produced by high temperature process reactors in Building E5540 of the Mustard Plant Area during WWI. After WWI, Building E5540 was dismantled and Building E5450 was constructed as a mustard manufacturing plant. During 1949 and 1959 this plant produced mustard; it was demolished in the early-1970s. One large flow-through sump was removed and a steam pit was abandoned in 2000; the remaining hazardous material facilities (HMF) in this area were identified as either active or requiring NFA.

Phase I RI activities included the collection/analysis of surface and subsurface soils and sediments. Geophysical surveys were also conducted at this time. High concentrations of arsenic (i.e., maximum detection of 255 mg/kg) have been detected in the soils, in addition to concentrations of mustard and nerve agent degradation products in the groundwater. In 2003, XRF field screening and soil sampling were conducted in support of the ERA. Phase III RI geophysical surveys were conducted in FY04. In 2004 and 2005, Phase III RI soil borings were collected.

As of February 2008, the HHRA for this site was final. The draft final RI for this site was completed in July 2009. The FS currently is a draft. Risk assessment indicated unacceptable human health risks to a hypothetical future lifetime resident based on arsenic and benzo(a)pyrene exposure. There are no unacceptable ecological risks; however, the RI identified an area of stressed vegetation which was confirmed in 2009. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The RD, RA(C), and LTM phases will be added as database allows. The anticipated remedy is excavation and offsite disposal with LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: BUILDING 106/107 AREA-CLUSTER 1I

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Building 106/107 Area is located in the APG-EA, west of Hoadley Road, between Fleming and Hanlon Roads. Buildings 106 and 107 were constructed near the end of WWI. The buildings were used as a booster station for pumping water from the Bush River into the plants area. Building 106 was also used for ship hull paint storage, hay storage, and rabbit holding. During the 1950s both buildings were demolished.

During Phase I RI sampling, elevated concentrations of SVOCs, PAHs, and arsenic were detected. The explosive compound pentaerythritol tetranitrate (PETN) was also detected. In the 2004/2005 time period, Phase III RI sampling was conducted.

The draft final RI document for this site was completed in fall 2009. The FS is a draft. Risk assessments indicate no unacceptable risks under an industrial/military scenario, but risks to a potential future resident are unacceptable. There are no significant ecological risks. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

Costs for this site are included under AEDB-R site EACC1H-A. The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. RD, RA(C), and LTM phases will be added as database allows. Five-year review costs are covered under site EABR00. Anticipated remedy is LUCs. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: BLDG 113 GAS INST CHAMBER-CLUSTER 1I

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

The Building 113 Gas Instruction Chamber is located in the APG-EA west of Hoadley Road, between Fleming and Hanlon Roads. Building 113 was constructed during WWI as a gas instruction school. The most commonly used training gases at the chamber were probably tear gas, including CN. It is possible that the gas instruction school used bromobenzylcyanide, radioactive chemicals, and small quantities of lethal agents such as mustard, phosgene, and chloropicrin. Use of the facility as a gas chamber continued until the mid-1930s. The facility was demolished in the early-1960s.

Elevated concentrations of PAHs and arsenic have been detected in site soils. Phase III RI sampling occurred at the site in the 2004/2005 time frame.

No FS was performed as this is a NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained. Five-year review costs being covered under AEDB-R site EABR00.

Site Name: LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	200909
RD.....	200710.....	200909
RA(C).....	200710.....	200909
LTM.....	200909.....	204609

RIP Date: N/A

RC Date: 200909

SITE DESCRIPTION

The Laboratory Toxic Waste Disposal Pits are located north of Fleming Road, between Hoadley Road and 32nd Street, in the APG-EA. The area is divided into three disposal pit operations associated with the laboratories at Building 30. Historical records suggest that disposal of laboratory wastes was conducted at the site from the WWI era at least through the 1940s.

During Phase I RI soil sampling, arsenic was detected at concentrations exceeding both the USEPA RBCs and reference background values. A geophysical survey was conducted in FY04. In FY05, Phase III RI soil borings were conducted to support the HHRA. In the winter of 2005 test pits were conducted.

Although historical records suggest laboratory disposal pits were associated with the former Building 30 laboratories, the geophysical surveys did not detect pits or subsurface metallic debris. Shallow test digs contained ash, slag, glass, concrete, and clay fragments; however, chemical concentrations in soil from the test digs did not exceed screening criteria.

The ERA, HHRA, and RI reports have been finalized, the PP was published, and the ROD was finalized in FY09. LUCs are completed in-house.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained. Five-year review costs being covered under AEDB-R site EABR00. Groundwater at this site is being evaluated as site EACC4A-B.

Site Name: CANAL CRK MARSH AND LANDFILL-CLUSTER 1K

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Herbicides, Pesticides, Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC), White Phosphorous

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200410.....	202008
RD.....	202008.....	202105
RA(C).....	202105.....	202107
RA(O).....	202107.....	205107
RIP Date:	202107	
RC Date:	205107	

SITE DESCRIPTION

The Canal Creek Marsh and Landfill is located throughout the APG-EA Canal Creek Area, but this AEDB-R site consists of the western portion of the Canal Creek Marsh and Landfill. The Canal Creek Marsh and Landfill was used as a receptor for liquid and solid wastes from 1917 until recent decades. Liquid waste was generally discharged from chemical sewer outfalls. Chemicals produced in the plants near the West Branch of Canal Creek include chlorine, CN, clothing-impregnating material, arsenicals, nerve agents, mustard, and organic solvents. Solid waste was generally disposed along the edges of the East Branch marshes and consisted largely of concrete and steel construction debris, discarded process equipment, and miscellaneous items.

During Phase I RI sampling, numerous analytes including VOCs, SVOCs, pesticides/herbicides, and PCBs were detected in sediment samples at concentrations that exceed background ranges and sediment screening levels. Two white phosphorous detections (0.298 mg/kg), which may be residual material from activities in the Phossy Water Ponds, were also detected in sediment samples from the site.

In FY04, geophysical surveys were conducted. In 2004 and 2005 additional Phase III RI sampling was conducted. In November 2006, the risk assessors collected additional sediment to satisfy ERA data gaps identified by the USEPA/Biological Technical Assistance Group. The ERA and HHRA were finalized; however, USEPA is requesting a data gap analysis. This site's evaluation and study will be addressed in conjunction with the adjacent Canal Creek Sediments site (EACC5A) as well as the West Canal Creek Aquifer (EACC4A-B) groundwater discharging into this environment. The RI report will integrate the groundwater, surface water, and sediment/marsh sites.

Costs for EACC5A are included with this site.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is excavation and offsite disposal, capping and LUCs. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. LTM phase will be opened at RC. Once formal documentation is received on the anticipated remedy, costs for phases after the RI/FS will be entered into AEDB-R. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer). Five year review costs are covered under site EABR00.

Site Name: BLDG 503 SMK MIX BURNING SITES-CLU 1L

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
IRA.....	199708.....	199907

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

Site EACC1L-A is located in the Canal Creek Study Area. The Building 503 Smoke Mixture Burning Areas consists of two ash-covered barren areas used for open-air testing and open burning of experimental smoke mixtures and smoke munitions. The north site with an approximate total surface area of 10,540 square feet (sq ft) was used as early as 1943, and the south site of approximately 2,160 sq ft was in use starting around 1951 until operations at both sites ceased in 1975.

The interim ROD for this site was signed in 1996. The selected remedy was excavation of the contaminated soil and ash in the Building 503 burn sites, followed by disposal at the Building 103 Dump to be used as part of the required sub-base under the capping and covering system for the Building 103 Dump. URS Corporation excavated approximately 804 cubic yards of soil/ash at Building 503 Burn Site in December 1997; no chemical warfare material was present. Approximately 460 yards of backfill material was placed and compacted in both burn sites in January and February 1998.

Even though an interim ROD is in place, this site is being assessed for closure purposes in the risk assessments and an RI.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. Costs for this site are covered under site EACC2H-B except for five-year review costs which are covered under site EABR00. The anticipated remedy is LUCs. LTM phase will be opened at RC. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: BUILDING 503 SMOKE POT PLANT-CLUSTER 1L

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Building 503 Smoke Pot Plant (Building E5265) is located in the APG-EA, northeast of the intersection of Hoadley and Noble Roads. Building E5265 was constructed during WWI to house a filling plant for large caliber shells. In the latter part of 1942, the plant was remodeled as a smoke filling plant. Since WWII, Building E5265 has been used as a research and development (R&D) facility for loading pyrotechnic smoke mixtures, including the pilot scale production of colored smoke.

In 1997, during a system upgrade, one 250-gallon vessel associated with Building E5265 was removed by the APG DPW. In 2000, four, 2,000-gallon underground vessels and connecting lines associated with Building E5282 were removed. Building E5282 has been demolished but the slab remains at the site.

Phase I RI activities included collection of subsurface soil and sediment samples. In 1998 and 1999, 34 surface soil samples were taken in support of the HHRA. In 2003 XRF field screening and soil samples were collected in support of the ERA.

Toxicity tests for worms showed survival and growth effects. From 2004 to 2005, Phase III RI sampling, including subsurface soil sampling, was conducted.

The draft RI for this site was completed in July 2009. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

IRP site EACC1L-B is associated with MMRP site APG-004-R-01.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The costs for this site are covered under site EACC2H-B except for five-year review costs which are covered under site EABR00. The anticipated remedy is LUCs following removal of contaminated soil which will be conducted as part of the MEC removal at co-located site APG-004-R-01. LUCs will be completed in-house at no cost. The LTM phase will be opened upon RC. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site ID: EACC2A

Site Name: OLD HOSP AND ADMIN AREA-CLUSTER 2A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200209.....	200509
RA(C).....	200509.....	200509
LTM.....	200510.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC2A is located in the Canal Creek Study Area. During RI sampling, pesticides and mercury were detected in sediments above screening levels and background ranges. Endrin and copper were detected in surface water at concentrations exceeding ambient water quality criteria and background ranges. Nerve agent byproducts were also detected in a surface water sample.

No remedial action was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCS are performed in-house at no cost. Five-year review costs covered under AEDB-R site EABR00.

Site ID: EACC2B

Site Name: BLDG E5023 WWI WP FILLING PNT-CLU 2B

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC2B is located in the Canal Creek Study Area. The filling plant was rendered inactive during the 1960s and demolished. During RI sampling, benzo(a)pyrene, arsenic, and beryllium were detected in surface soil at concentrations exceeding industrial RBCs and background ranges. Metals and pesticides were also detected in sediments at concentrations exceeding screening criteria and background ranges. White phosphorous was also detected in site sediments.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCs are performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EACC2C

Site Name: BLDG E5238 CLOTH IMPREG FCLY-CLU 2C

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC2C is located in Canal Creek Study Area. Building E5238 was constructed in 1941 and operated during 1942 impregnating clothing with chemical protectant (N,N'-dichloro-bis[2,4,6-trichlorophenyl] urea. Faulty plant design resulted in massive losses of solvent carrier solution. It's subsequent use is unknown. Elevated metal concentrations have been detected in site soils.

The ROD recommended NFA under an industrial land use scenario.

CLEANUP/EXIT STRATEGY

LUCs are performed in-house at no cost. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: LAB TOXIC WASTE DISPOSAL PITS-CLU 2D

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200909
RD.....	200710.....	200909
RA(C).....	200710.....	200909
LTM.....	200909.....	204609

RIP Date: N/A

RC Date: 200909

SITE DESCRIPTION

The Laboratory Toxic Waste Disposal Pits are associated with laboratories at Former Buildings 30 and E5183 in the APG-EA. The primary waste disposed in the pits would have included mustard, nitrogen mustards, lewisite, and chloropicrin. Contaminated items such as laboratory glassware, equipment, packaging materials, protective equipment, and laboratory benches may have also been disposed in the pits.

Phase I RI activities included subsurface soil and sediment sampling. In 2003 five surface soil samples were collected in support of the ERA. Elevated metal concentrations have been detected in the surface soil and CVOCs and SVOCs have been detected in subsurface soils. Pesticides and metals have been detected in site sediments at concentrations that exceeded screening levels.

In FY04, a geophysical survey was conducted. In 2004 and 2005, Phase III soil borings and test pits were conducted.

The ERA, HHRA, and RI reports have been finalized, the PP was published, and the ROD was finalized in FY09. The final RA is LUCs which will be completed in-house. The five-year review costs are captured under AEDB-R site EABR00.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained. Five-year review costs are covered under AEDB-R site EABR00. Groundwater at this site is being evaluated under site EACC4A-B.

Site Name: NOBLE ROAD INCINERATORS-CLUSTER 2E

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
RD.....	202006.....	202102
RA(C).....	202102.....	202202
LTM.....	202203.....	205203

RIP Date: N/A

RC Date: 202202

SITE DESCRIPTION

The Noble Road Incinerators were located in Buildings E5292 and E5294 on the south side of Noble Road, in the APG-EA. These buildings were demolished in 2010. Site EACC2E also includes the East Canal Creek Marsh and Landfill, which encompasses approximately 73 acres. The Building E5292 incinerator was constructed in 1918 and the Building E5294 incinerator was constructed in the early-1940s. Both incinerators were used to burn a variety of waste including animal carcasses, classified documents, mustard distillation residues, and general sanitary waste. Waste ashes from the facilities were deposited in a landfill along the East Branch immediately south of the site. Incineration operations were halted in the 1950s or 1960s. Landfilling operations commenced in the 1940's and continued until the 1970s.

Phase I RI activities included geophysical surveys and the collection and analysis of soil gas, sediment, surface water, surface soil, and incinerator ash samples. Arsenic detections in soil (26.9 mg/kg) and ash (32.5 mg/kg) samples exceeded the USEPA Industrial RBCs and reference background levels. Toxicity tests indicated no effects for plants, but growth effects for worms. In 2003, XRF screening and soil sampling were conducted in support of the ERA. In 2004 and 2005, Phase III RI subsurface soil samples were collected. There are no significant ecological risks.

The draft final RI, including risk assessments, for this site was completed in July 2009. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM. Costs for this site are covered under site EACC1H-A except for five-year review costs which are covered under site EABR00. The anticipated remedy is LUCs. The LTM phase will be opened at RC. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under site EACC4A-B (West Canal Creek aquifer).

Site Name: BLDG 99 (E5032) EXP FILLING PNT-CLU 2F

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199912.....	200609
RD.....	200505.....	200708
RA(C).....	200505.....	200709
LTM.....	200907.....	204609
RIP Date:	N/A	
RC Date:	200709	

SITE DESCRIPTION

The Building 99 (E5032) Experimental Filling Plant is located northwest of the intersection of Hoadley and Magnolia Roads. Building 99 was constructed during WWI for use as an incendiary bomb filling plant. During WWII, the building was used as a pilot plant for development of a dry white phosphorus (WP) filling process. Other filling operations conducted at the plant have involved mustard, triethyl aluminum, WP-mustard mixture filling, Tabin (GA) filling, and thickening of mustard with methylmethacrylate polymer. Filling operations at Building 99 were stopped in 1981 and the building was demolished in 1998. Historical records had indicated the potential presence of eight sumps, one tank/vault, and one possible UST at this site.

High concentrations of VOCs have been found in the Canal Creek Aquifer in and around the area of the former Building 99. The contaminated groundwater at this site currently is being evaluated as part of the West Canal Creek Area, CCA (EACC4A-B) RI/FS. Elevated levels of arsenic in soils are present north of the Building 99 foundation, and the completed ERA suggests potential risks to some ecological receptors at the site. The site HHRA and RI/FS are also complete. This site poses no unacceptable risks to human health under an industrial land use scenario; however, there is a potential for unacceptable risks to hypothetical future residents.

The ROD for the site was finalized in FY06. The selected RA included soil excavation and off-site disposals, completed with LUCs. This remedy was selected in order to mitigate the potential ecological risks and ensure no future risk of the site for residential and/or childcare purposes.

Excavation activities occurred in the last quarter of FY07.

Due to the presence of WP in the soils, the bulk soil was treated/disposed. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

The LUCS performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site ID: EACC2G

Site Name: BLDG E5103 PHOTO LAB-CLUSTER 2G

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC2G is located in the Canal Creek Study Area. Building E5103 was constructed in 1965 as a communication center and photographic laboratory. The photographic laboratory was constructed to replace the photo and duplicating facility in the Old Hospital and Administration Area. Wastewater from Building E5103 contained spent photographic chemicals that were discharged through the sanitary sewer to the on-post wastewater treatment facility. Silver generated during photograph developing was recovered and recycled.

Field screening confirmed that metals were not present onsite at elevated concentrations (with respect to reference background). Subsurface soil samples collected for the Human Health Risk Assessment construction worker scenario contained arsenic above its industrial soil RBC, but within reference background. The site had a non-carcinogenic Health Index below 1.0.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

The LUCS are performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site ID: EACC2H-A

Site Name: BLDG 501 FILLING PNT/E5100 LAB-CLU 2H

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC2H-A is located in the Canal Creek Study Area. The Building 501 Filling Plant and WP tanks were demolished in the 1960s. The Building E5100 Laboratory was constructed in the late-1960s at the 501 Filling Plant site and is used for the product assurance testing of chemical agents.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

The LUCS are performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site ID: EACC2H-B

Site Name: WWI SHELL DUMPS-CLUSTER 2H

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200110.....	202008
RD.....	202006.....	202102
RA(C).....	202102.....	202202

RIP Date: N/A

RC Date: 202202

SITE DESCRIPTION

The WWI Shell Dumps are located in the APG EA, in an area bounded by Hoadley Road, Blackhawk Road, 4th Street, and Webster Road. Buildings E5158, E5165 and E5179 were constructed in the WWI era as storage areas for empty and filled chemical shells. Occasional leak testing of filled materials was performed by placing rounds in a rack, turning the rounds upside down and observing for leakage. Shells and other materials such as paints and degreasing compounds were stored in these buildings during the 1920s and 1930s. During WWII, igniters, smoke pots, tear pots, CN and CN/DM grenades, and five-inch Navy shells were assembled, painted and packed in the shell dump buildings. Offices, warehouses, and small maintenance activities have occupied the buildings since WWII.

During Phase I RI sampling, numerous PAHs and arsenic were detected in site soils at concentrations exceeding the USEPA Industrial RBCs and reference background levels. Phase III RI subsurface soil sampling (i.e., soil borings) was conducted in 2004 and 2005. The draft final RI, including the risk assessments, for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil excavation, offsite disposal and LUCs. Costs for sites EACC1L-A, EACC1L-B, EACC2H-C are included under this site. LTM includes LUC inspections and maintenance. LUCs will be completed in-house at no cost. Five-year review costs are covered under site EABR00. Groundwater that underlies the site is being addressed under the existing Canal Creek pump and treat system ROD for site EACC4A.

Site Name: FILLING PLANTS NO 1&2-CLUSTER 2H

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Volatiles (VOC)
Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
RIP Date:	N/A	
RC Date:	202008	

SITE DESCRIPTION

The Filling Plants Numbers 1 and 2 are located east of Hoadley Road, from the WWI Shell Dumps (EACC2H-B) to Noble Road, in the APG-EA. Filling Plants Numbers 1 and 2 were used briefly during WWI for filling munitions with chemical agents. Wastewater from the filling plant operations was discharged through chemical sewer lines to the East Branch. Filling Plant No. 2 was demolished in the early-1930s; Filling Plant No. 1 was demolished between 1938 and 1941. Portions of foundations and ventilation shafts from the former filling plants and air scrubber towers can still be seen in the area.

Phase I RI activities included the collection/analysis of subsurface soil, groundwater, and sediment samples. Chlorinated VOCs were detected in subsurface soil (in the 0 to 5 ft soil interval). ER,A sampling revealed elevated levels of pesticides in surface soil; however, the levels were not high when compared to APG as a whole. In 2004 and 2005, Phase III RI activities included geophysical surveys and subsurface soil sampling.

As of February 2008, the HHRA for this site was final. The draft final RI for this site was completed in July 2009. However USEPA is currently requiring a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Costs are included under AEDB-R site EACC2H-B and five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost. Groundwater that underlies the site is being addressed under the existing Canal Creek pump and treat system ROD for site EACC4A.

Site Name: AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC21-A is located in the Canal Creek Study Area. The airfield, located east of Wise Road, has operated at its present location since shortly after WWI. Building 14 (E4040) was constructed as an aircraft hangar in 1926. During WWII another aircraft hangar, Building 25 (E4080), was constructed. During the early 1970s this hangar was demolished and another was built south of the original structure. The runway was regraded and repaved between 1938 and 1940. The airfield (encompassing approximately 159 acres) and newer support buildings are still in active use. Circa WWII, sewer systems serving the airfield had septic tanks, and discharged to the adjacent east branch of Canal Creek. These systems have since been connected to the installation sanitary sewer system.

Risk assessments found no unacceptable risks under industrial land-use scenario. Arsenic was detected above its industrial soil RBC in both surface and subsurface soil but was at or only slightly above reference background levels. Benzo(a)pyrene was detected above its industrial soil RBC in one surface soil sample. Several other metals, pesticides, and PAHs were detected above biological technical assistance group (BTAG) screening levels, but below industrial soil RBCs in surface and/or subsurface soil. No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCS are performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC21-B is located in the Canal Creek Study Area. This site is adjacent to Weide Airfield. The WWI era shop occupied the now demolished E5005. Recently, Building E5005 has been used for storage. Other facilities in this 12.6-acre site included a foundry, machine shop, a locomotive maintenance shop, a blacksmith shop, gasoline storage, service station, and dye shop, all of which were demolished during the late 1960s and 1970s.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCS are performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: LAB TOXIC WASTE DIS PIT-BLDG E3330-CL 3A

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Laboratory Toxic Waste Disposal Pits site consists of three pits located on the eastern side of Building E3330 north of Beach Point Road, in the APG-EA. Disposal of laboratory waste at the Building E3330 pits was performed from 1943 until the late-1940s. The primary waste disposed in the pits most likely included mustard, nitrogen mustards, lewisite and chloropicrin. Contaminated items such as laboratory glassware, equipment, packaging materials, protective equipment, and laboratory benches may have also been disposed of in the pits. The extent of chemical agent munitions disposal in these pits is unknown.

Phase I RI activities included a geophysical survey, soil borings and one groundwater sample. In 2003, four surface soil samples were collected in support of the ERA. Arochlor 1248, mercury, and arsenic were detected in site soils at concentrations exceeding the USEPA industrial RBCs and reference background levels. Low concentrations of chlorinated VOCs were also detected in the groundwater. In 2004 and 2005, Phase III RI sampling of numerous media was conducted. As of February 2008 the HHRA for this site was draft final. The draft final RI and risk assessments for this site were completed in July 2009. However USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site Name: BUILDING E2100 LABORATORY-CLUSTER 3B

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199910.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC3B is located in the Canal Creek Study Area. The Building E2100 Laboratory was constructed circa 1967 as a combined office and laboratory facility. This site encompasses approximately 11 acres, and includes existing support structures (E2101 through E2104) and several former structures (presumably unrelated to activities in Building E2100). RI sampling results did not indicate a significant contamination at the site.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCS performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The E32XX buildings are located along the east side of Ricketts Point Road, between the new United States Army Medical Research Institute of Chemical Defense campus and Building E3330, in APG-EA. These buildings were constructed during WWII over the former Fort Hoyle Training site. Building E3100 was built in the 1960s as a medical research laboratory and Building E3081 was constructed in 1979. In 1989 a 2,000-gallon steel holding tank (HMF91541) located on the east side of Building E3222 was abandoned-in-place and it was removed in 2000.

Phase I RI activities included geophysical surveys and surface soil, sediment and surface water sampling/analyses. RI sediment sampling results indicate potentially significant PAH, pesticides, and metals concentrations. In 2003, additional sediment and surface soil samples were taken in support of the ERA.

Phase III RI activities included soil borings and groundwater DPT samples. The draft final RI for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site Name: BUILDING E3160 COMPLEX-CLUSTER 3D

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008
RD.....	202006.....	202102
IRA.....	199202.....	199203
RA(C).....	202102.....	202202

RIP Date: N/A

RC Date: 202202

SITE DESCRIPTION

The Building E3160 Complex is located east of Building E3100 at the end of North Kings Creek Road. Structures in this complex were built during WWI. Building E3160 was originally used as a medical research physics laboratory primarily for wound assessment. The research performed in other complex facilities includes fuel mixing and toxic laboratory work, incendiary research, and animal studies. Current activity at the site is low; smaller structures are either abandoned or used for storage.

Pesticides and metals have been detected in site sediments at concentrations exceeding screening levels and background ranges. In 2004 and 2005, Phase III RI sampling for sediments, subsurface soils, and surface water was conducted. As of February 2008 the HHRA for this site was draft final.

The draft final RI for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil excavation, offsite disposal and LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site Name: BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

The Building E3300/E3330 Laboratory Complex is located along the east side of Ricketts Point Road north of Beach Point Road, in APG-EA. Original facilities at the site were constructed during 1941 and 1942. The last of the structures was built in the mid-1960s. Building E3300 was built in 1965 and was referred to as the "super toxic laboratory". The complex was built for R&D work related to chemical warfare. Activities at the complex have involved the use of toxic chemical agents, agent detection chemicals, decontamination chemicals, explosive compounds, pyrotechnic mixes and obscurant smokes.

1,1,1-trichloro-2,2-bis-(p-chlorophenyl) ethane (DDT) and its byproducts were detected at levels that exceeded sediment screening levels on-site during RI sampling. Chlorinated VOCs were also detected in surface water samples.

In 2000, the 285-gallon wastewater tank immediately adjacent to E3348 was removed.

Phase III RI sampling was conducted in 2004 and 2005. No FS was performed, as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009 and found no risk under current and likely future military/industrial land use scenarios. However, there was potential risk to hypothetical future residents. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

The 2012 RACR specified LUCs as there is potential risk to hypothetical future residents.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained.

Site Name: BUILDING E35XX AREA-CLUSTER 3F

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	200809
LTM.....	200810.....	204609

RIP Date: N/A

RC Date: 200809

SITE DESCRIPTION

This site is located southeast of the intersection of Ricketts Point Rd. and Beach Point Rd, in APG-EA. Many of the buildings in this area were constructed during WWII and used as small laboratories and test/surveillance chambers.

Phase I RI sampling indicated possible chlorinated VOC contamination in subsurface soils at the site (i.e., via soil gas surveys). In order to mitigate possible data gaps in this area, Phase III RI sampling of subsurface soils (soil borings) and groundwater via DPT was conducted in the 2004/2005 time frame.

No FS was performed as this is a NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009 and found no risk under current and likely future military/industrial land use scenarios. However, there was potential risk to hypothetical future residents. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

The 2012 RACR specified LUCs as there is potential risk to hypothetical future residents.

CLEANUP/EXIT STRATEGY

LUCS performed in-house at no cost. Five-year review costs being covered under AEDB-R site EABR00.

Site Name: BLDG E360X/E361X/E362X AREA-CLUSTER 3G

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Building E360X/E361X/E362X area is located along the north side of Beach Point Road, east of the Building E3330 Laboratory, in APG-EA. Structures in this area were built after WWII and have been used for offices, laboratories and material storage. There is insufficient information concerning the types of laboratory and R&D work conducted in this area; however, some of the reported laboratory work involved the use of pyrotechnic materials.

Phase I RI sampling revealed elevated arsenic concentrations in surface soils and elevated metals concentrations in site sediments and surface waters. In 2003, ERA sampling also detected metals contamination via XRF. During this sampling event, two deformed frogs were found at this site; it is unclear at this time whether one of the frogs was injured after birth or was genetically deformed.

A geophysical survey was conducted in FY04. In 2004 and 2005, Phase III RI surface soil, subsurface soil, and sediment sampling/analysis were conducted. The draft final RI for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site Name: E3560 TEST CHAMBER COMPLEX-CLUSTER 3H

STATUS

Regulatory Driver: CERCLA
RRSE: LOW

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200509
RA(C).....	200509.....	200509
LTM.....	200509.....	204609

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Site EACC3H is located in the Canal Creek Study Area. The Building 3560 Test Chamber Complex was constructed in 1955 and was rebuilt circa 1966. The facility has undergone modification and upgrades several times since 1966 with the most recent being in 1986. The 1.2-acre site also includes one other test chamber (Building E3566), a former caustic storage tank (E3563), and a former scrubber building (E3567). Chemicals tested within the chamber include decontaminants, agent simulants (including bis(2-ethylhexyl)phosphonate)), flamethrower fuel, G-series and V-series nerve agents, mustard, and lewisite. The RI soil sampling did not show contaminant concentrations above screening levels.

No RA was required. This site has zero-cost LUCs as stated in the Canal Creek 13 sites RACR 2013.

CLEANUP/EXIT STRATEGY

LUCS performed in-house at no cost. Five-year review costs being covered under AEDB-R site EABR00.

Site Name: BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609
RIP Date:	N/A	
RC Date:	201203	

SITE DESCRIPTION

The Building E3570 Assembly Plant is located along the south side of Beach Point Road, east of the Building E3560 Test Chamber Complex, in APG-EA. This facility was constructed in 1953 as a munitions assembly plant. It has been used for production of bomb clusters and for vehicle contamination testing. Building E3570 has also been used as a laboratory. Machining and assembly-type work has continued at the site into recent years. No information is available concerning the type of laboratory work performed at Building E3570 or the composition of material previously stored at the drum rack.

RI sampling did not indicate significant soil contamination at the site with the exception of the detections of methyl phosphonic acid (MPA) (1.71 mg/kg) and isopropyl methyl phosphonic acid (IMPA) (6.7 mg/kg) which are nerve agent degradation byproducts. Both MPA and IMPA are highly soluble and mobile.

Geophysical surveys were conducted in FY04. Additional Phase III RI sampling was conducted in FY05. No FS was performed as this is a NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009 and found no risk under current and likely future military/industrial land use scenarios. However, there was potential risk to hypothetical future residents. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

The 2012 RACR specified LUCs as there is potential risk to hypothetical future residents.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained.

Site Name: BLDG E3580 PYROTECH LDG FACILITY-CLU 3J

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Perchlorate, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
IRA.....	199009.....	199209

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Building E3580 Pyrotechnic Loading Facility is located southwest of the intersection of Beach Point Road and 57th Street, in APG-EA. Most of the site structures at this facility were built in 1951 and 1952. In 1952, the facility was placed into service and has been used continuously for R&D and evaluation of pyrotechnic mixtures, loading procedures, and munitions into which the pyrotechnic mixtures are loaded. Pyrotechnic mixtures loaded into munitions have included irritant and incapacitating chemical agents such as ortho-chlorobenzylidenemalonitrile (CS), CN, 3-quinuclidinyl benzilate (BZ) and DM. Small quantities of explosives including TNT, RDX, tetryl, and PETN have also been handled on-site. Other materials used on-site included pyrotechnic fuel materials, oxidizers, and dyes. Prior to 1986 decontamination and cubicle washout wastewater were discharged to the ground surrounding the building.

Phase I RI soil sampling did not suggest any significant contamination at this site. Two removal actions were conducted here previously. From 2004 to 2005 Phase III RI sampling (groundwater and subsurface soil) was conducted. Perchlorate was detected in the surficial aquifer at this site at concentrations exceeding the USEPA's guidance level of 24.5 ppb. The draft final RI for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. Anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five- year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site Name: BUILDING E37XX COMPLEX-CLUSTER 3K

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The Building E37XX Complex is located north of the intersection of Beach Point Road and 57th Street, in APG-EA. Principal structures within this complex include Buildings E3724, E3726, and E3728. These structures were constructed during 1942 and 1943 for use as new pilot plant facilities. Support structures, including a pilot filling tower, a pilot mixing building, and storage magazines were constructed in 1945. Building E37XX Complex facilities were used for experimental filling rather than process work. It is possible that pilot scale manufacturing of nitrogen mustard was also performed in these facilities. Experimental filling of plasticized WP was performed at the complex during WWII. The 500-gallon underground wastewater tank located inside Building E3728 has been filled with flowable fill by Edgewood Research, Development and Engineering Center.

Phase I RI activities included geophysical surveys and surface soil and sediment sampling/analysis. Elevated concentrations of arsenic (14.5 mg/kg) and benzo(a)pyrene (2.8 mg/kg) have been detected in site soils.

Elevated pesticide and metal concentrations were also detected in the sediments. Surface soil samples were collected in support of the ERA in 2003. Phase III RI sampling was conducted in 2004 and 2005. Soil borings, groundwater sampling, and an additional geophysical survey were conducted. The draft final RI for this site was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five- year review costs are covered under site EABR00. LUCs will be completed in-house at no cost.

Site ID: EACC3K-B

Site Name: B-FIELD KINGS CREEK DUMP CLUSTER 3K

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

The B-Field Kings Creek Dump is located in the APG-EA southwest of Kings Creek and north of Building E3700, in APG-EA. Demolition debris, chemical material, and miscellaneous junk were placed at the 8.3-acre site. The only hazardous chemical material found at the site was CS, which was contained in bags. These bags of CS were removed from the site by US Technical Escort Unit personnel. No visible CS residue was left at the site.

In 2004 and 2005, Phase III RI sampling was conducted.

Ash and debris (e.g., brick, concrete, and metal fragments/drums/pipe) were observed to a depth of at least 5 ft; however, surface soil and subsurface soil samples collected in the vicinity of the waste did not contain any significant chemical contamination.

The draft final RI for this site, including risk assessments, was completed in July 2009. However, USEPA is currently requesting a data gap analysis.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five- year review costs are covered under site EABR00. LUCs will be completed in-house at no cost. The LTM phase will be opened upon RC.

Site Name: BLDG E3640 PROCESS LAB-CLUSTER 3L

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Perchlorate, Pesticides, Polychlorinated Biphenyls (PCB), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008
RD.....	202006.....	202106
RA(C).....	202106.....	202212

RIP Date: N/A

RC Date: 202212

SITE DESCRIPTION

The Building E3640 Process Laboratory is located in the APG-EA on the north side of Beach Point Road, northeast of Building E3570. The facility was constructed in 1951 and 1952. From 1952 until 1978, the building was used as a process laboratory. Most of the work at the site involved preparation of materials or evaluation of production processes. Research involving the disposal of chemical agents was also performed at Building E3640. The site is currently abandoned and all buildings were demolished by 2008. Chemicals used at the site most likely included essentially all of the standard US military chemical agents and post-WWII experimental agents. Other miscellaneous chemicals (such as B-1 dye), manufacturing raw materials, and the intermediates of those materials, were used or stored on-site.

In 1995, the sumps were abandoned and a vitrified clay pipeline and 310 tons of PCB-contaminated soil were removed. Phase I RI activities included sampling and analysis of groundwater, surface water, surface soils and subsurface soils. Diisopropyl methylphosphonate (DIMP), a chemical agent degradation product and simulant, has been detected in the subsurface soil and the surficial aquifer groundwater at the site. In 1999, DIMP toxicity and screening-level risk assessment reports were distributed for review. These reports indicated that DIMP contamination at this site poses a negligible risk to plants and animals at the site, including aquatic resources in the tidal estuarine waters of Kings Creek. In 2003, surface soil sampling was conducted in support of the ERA. Additional RI sampling conducted in 2004 and 2005 included surface soil, subsurface soil, and groundwater sampling.

The draft final RI for this site, including soils risk assessments, was completed in July 2009. Data gaps will likely need to be filled before the RI and risk assessments can be completed.

A TCRA was initiated in the fall 2009 in order to remediate the site for mission-critical usage. The TCRA's COC were mercury (Hg) and PCBs. Sampling was conducted under the TCRA, revealing extremely high concentrations of PCBs (in excess of 3,000 ppm; Toxic Substance Control Act (TSCA) is an applicable or relevant and appropriate requirements at this site. These concentrations persisted post excavation, especially in the vicinity of one particular concrete pad near a drainage pathway. The USEPA Region III notified the Army to cease all activity at the site since it presented a principal threat to public health and the environment; they also stated that the site will require a focused RI and an FS. TCRA activities were suspended in August 2010. Further soil, subsurface soil, sediment and groundwater sampling/analysis and risk assessment are needed at this site.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil excavation, offsite disposal and LUCs. LTM includes LUC inspections, maintenance and groundwater monitoring. Five-year review costs are covered under site EABR00.

Site Name: WASTEWATER TREATMENT AREA-CLUSTER 3M

STATUS

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

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS with corresponding dates. RIP Date: N/A, RC Date: 202008.

SITE DESCRIPTION

The Edgewood Wastewater Treatment Area-Cluster 3M is located in the Canal Creek Study Area. Soil contaminants have been identified that are not related to the water treatment plant; therefore, the site was reopened per the strategy meeting with USAEC on February 2011.

The wastewater treatment plant was constructed in 1941/1942, upgraded twice in the 1960s and 1980s, and is still in operation. Some chemical plant wastewater systems were connected to the treatment plant during WWII, with the most significant of these being from the Bldg. E5238. Clothing Impregnating Facility (EACC2C) (high concentrations of 1,1,2,2-tetrachloroethane in that wastewater). Wastewater characterization and biotoxicity study work during the 1980s indicated that there was no significant discharge of hazardous constituents from the treatment plant.

During the Phase I RI sampling, arsenic was detected in both the surface (5.1 mg/kg) and subsurface soils (10.2 mg/kg) at concentrations exceeding the USEPA Industrial RBCs. The subsurface detection exceeded the reference background. Phase III activity, conducted in 2004/2005, and included a geophysical survey (no anomalies detected) and additional subsurface soil samples (soil borings). Arsenic detections in some locations again exceeded the USEPA Industrial RBC and at times the reference background. Only dieldrin is a COC for ecological receptors; but it does not present a significant risk. Groundwater was sampled at CCJ-155A, with only metals detected and exceeding MCLs for arsenic, aluminum, manganese and iron.

The draft final RI, including risk assessment, for this site was completed in fall 2009. However, USEPA is currently requesting a data gap analysis. The wastewater treatment plant underwent significant construction and upgrade with soils removed and managed in a stock-pile on post.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LTM includes LUC inspections and maintenance. Five- year review costs are covered under site EABR00. LUCs monitoring is conducted in-house and are no cost.

Site Name: BEACH POINT TEST SITE-CLUSTER 3N

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Polychlorinated Biphenyls (PCB), Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
RD.....	199709.....	202102
IRA.....	199301.....	199301
RA(C).....	199712.....	202108
LTM.....	202108.....	205108

RIP Date: N/A

RC Date: 202108

SITE DESCRIPTION

The Beach Point Test site is located in APG-EA, on a small peninsula at the mouth of Kings Creek where the creek flows into Bush River. The Beach Point Test site includes the peninsula, areas south of Beach Point, and areas northeast of the APG-EA Wastewater Treatment Plant (EACC3M-A). The test site has been used for a variety of military testing work, including firing tests of 4.2-inch mortar rounds in the 1940s, performance tests for pyrotechnic devices and smoke generators between 1945 and 1970, and WWII-era field testing of semi-permanent and mobile clothing impregnation process plants. Many of the wastes generated from these tests were discharged directly into the Bush River. VOCs contamination of the peninsula's surficial aquifer has also spread into the Bush River offshore regions of the aquifer.

The Groundwater ROD for the Beach Point peninsula, which was signed in September 1997, included a technical impracticability waiver and long-term monitoring. In 1999, surface water, sediment, and groundwater sampling began on an annual basis through 2011 when the frequency was reduced to every five years. Results from the first 10 years of monitoring do not indicate the development of unacceptable risks to ecological and human receptors.

The risk assessments and RI for the soils portion of the site (south of the peninsula) is being updated to include the results of the data gap analysis conducted in 2015. The monitoring and LUCs requirements of the groundwater ROD are being conducted while the soils RI/FS is being completed.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD and RA(C) for the soil media (final ROD for groundwater was completed in 1997) will be completed. The anticipated remedy for soil is LUCs. The groundwater remedial actions which include groundwater, surface water, sediment and LUC monitoring will be conducted under the RA(C) phase until the LTM phase opens. The LTM phase costs will include costs for both the soil and groundwater remedies. Five-year review costs are covered under AEDB-R site EEER00.

Site Name: B-FIELD RANGE AREA-CLUSTER 30

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

This site is located along a trail southeast of Building E3580 and Beach Point Rd, in APG-EA. This site was an impact area for mortar and artillery testing from A-Field during the 1920s. It may have also been the site of sarin storage during the late-1940s.

No sampling was conducted at this site during the Phase I RI CCSA activities; however, four surface soil samples were collected for the ERA in 2003. The Phase III RI sampling (subsurface soil and groundwater) was conducted at this site in the 2004/2005 time frame, as well as two geophysical surveys. No FS was performed, as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009 and found no risk under current and likely future military/industrial land use scenarios. However, there was potential risk to hypothetical future residents. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

The 2012 RACR specified LUCs as there is potential risk to hypothetical future residents.

CLEANUP/EXIT STRATEGY

LTM activities are conducted in-house at no cost. The LTM activities are to verify LUCs are maintained. Groundwater at this site is being addressed under AEDB-R sites EACC3L and/or EACC3J.

Site Name: MOSQUITO TEST GRID AREA-CLUSTER 3P

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	200809
RD.....	200709.....	200809
RA(C).....	200709.....	201203
LTM.....	201203.....	204609
RIP Date: N/A		
RC Date: 201203		

SITE DESCRIPTION

The Mosquito Test Grid Area is located in the APG-EA, southwest of Building E2100. The site was used in the late-1960s by US Army Environmental Hygiene Agency (USAEHA) to develop pesticides for mosquito control. Mosquitoes were raised in ponds on-site and pesticides were applied to determine lethality to mosquito larvae. The ponds were constructed with black polyethylene. Eighty-two ponds were constructed; each was about 4 feet by 5 feet by 1.5 feet. Four insecticides were evaluated at the site including temephos, chloropyrifos, fenthion and naled.

Phase III RI sampling conducted in 2004 and 2005 included surface soil, subsurface soil and sediments sampling/analysis. No FS was performed, as this is an NFA site. The ROD for this site was finalized in September 2008. The RI report covering this site was completed in fall 2009 and found no risk under current and likely future military/industrial land use scenarios. However, there was potential risk to hypothetical future residents. The RI was finalized after the ROD because the report covered numerous non-NFA sites as well.

The 2012 RACR specified LUCs as there is potential risk to hypothetical future residents.

CLEANUP/EXIT STRATEGY

The LTM activities are to verify LUCs are maintained. LTM activities conducted in-house at no cost.

Site Name: EAST AREA CC AQUIFER-CLUSTER 4A-A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200007
RD.....	199905.....	200208
RA(C).....	200202.....	200304
RA(O).....	200304.....	204609

RIP Date: 200304

RC Date: 204609

SITE DESCRIPTION

The CCA, located in APG-EA, is being addressed as two separate VOC plumes: East Canal Creek Area (ECCA) and West Canal Creek Area (WCCA). During development of the ROD for the CCA, the community requested that additional investigation be conducted for the WCCA plume. As a result, a separate AEDB-R site was established for the WCCA plume (i.e., EACC4A-B) and the focus for site EACC4A was shifted exclusively to the ECCA plume.

A ROD, signed in July 2000, addressed the VOC contamination within the ECCA plume and described the initial treatment plant discharge to the surface water. APG is now using the treatment plant effluent as make-up water for the boiler. The groundwater treatment plant (GWTP) began operation in April 2003.

In 2008, the plant was shut down and major upgrades were performed including new absorptive resin and carbon polishing. The plant was restarted in January 2010.

CLEANUP/EXIT STRATEGY

RA(O) will continue. Long-term operation and maintenance of the treatment system to address the plume of contaminated groundwater will continue into the foreseeable future. The five-year review costs are captured under AEDB-R site EABR00.

Site Name: WEST AREA CC AQUIFER-CLUSTER4A-B

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202008
RD.....	202006.....	202106
RA(C).....	202106.....	202406
LTM.....	202406.....	205406
RIP Date:	N/A	
RC Date:	202406	

SITE DESCRIPTION

Several VOC source areas are suspected within the West Canal Creek Aquifer of APG-EA. These source areas include but not limited to: (1) Building 99 site in the upland portion of the WCCA; and, (2) near the former WWI Chlorine Plant in the West Branch Canal Creek wetland. A US Geological Survey (USGS) wetland natural attenuation study was conducted at the latter location. Based on total VOC concentrations greater than 1,000 ppb, additional locations were identified as secondary potential source areas. There is insufficient evidence to indicate whether these secondary potential source areas are attenuating in the upland portion of the WCCA. The USGS has demonstrated that VOCs are attenuating in the wetland sediment prior to discharge, except at isolated seep locations. The USGS has also demonstrated a successful reactive biomat at one seep location.

A remedial investigation document has been prepared, and the HHRA has been finalized. However, USEPA is currently requesting a data gap analysis. This site continues to be studied in conjunction with the Canal Creek Marsh and Landfill-West (EACC1K) and the Canal Creek and associated sediments (EACC5A). The final RI will integrate these sites.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C), and RA(O) will be completed. The anticipated remedy is in situ and ex situ soil treatment, phytoremediation, biomats, natural attenuation and LUCs. LUCs are completed in-house at no cost. Five-year review costs are covered under site EABR00.

Site Name: CANAL CREEK BED SED.SOURCE AREA CLUST 5A

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Pesticides, Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

Canal Creek is located in APG-EA. Numerous surface water and sediment samples were taken along both the East Branch and West Branch of Canal Creek, which is about six miles long, in support of RI and risk assessment activities. Fifty organic chemicals have been detected in sediment samples; 34 have been identified as contaminants of potential concern (COPC). Pesticides and Arochlor concentrations consistently exceed toxicity reference values (TRV). PAH concentrations indicate the potential for impact to benthic organisms. Mercury hot spots are a potential concern to human health and ecological receptors. The USEPA emergency response team (ERT) recommended focusing remediation efforts in the stream reach from the West Branch Canal Creek at Hanlon Road to half the distance downstream toward the confluence of the East Branch/West Branch.

This site evaluation and study will be addressed in conjunction with the adjacent Canal Creek Marsh West site (EACC1K) and the West Canal Creek Aquifer (EACC4A-B). However, USEPA is currently requesting a data gap analysis. Planned additional RI activities at this site include vertical depth profiling of the sediments, as well as sampling/analysis of both sediments and surface water.

Costs for this site are included under site EACC1K.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C), and RA(O) will be completed. The anticipated remedy is sediment excavation, off-site disposal and LUCs. Costs for RD, RA(C) and RA(O) are being covered under site EACC1K.

Site Name: KINGS CREEK SEDIMENT PESTICIDE SOURCE AR

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Pesticides
Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200310.....	202008
RD.....	202006.....	202102
RA(C).....	202102.....	202202
LTM.....	202202.....	205202
RIP Date:	N/A	
RC Date:	202202	

SITE DESCRIPTION

Site EACC5B (Kings Creek) is located in the APG-EA. The pesticide source area is located along the western arm of Kings Creek. In 1994, sediment samples were taken throughout Kings Creek. Detections of 4,4'-DDT and DDT_r in the sediment indicated the possible presence of a pesticide source in the creek bed. Silver and mercury concentrations consistently exceed available TRVs. In October 2005, additional sampling in support of an ERA was conducted by the USEPA ERT. Moreover, additional site sampling occurred in 2006 in order to define the boundary of the DDT_r exceedances and the most likely area for site remediation.

The risk assessments, RI and FS for this site are in draft final stage. The draft FS was sent to regulators in November 2009. The regulators and Biological Technical Assistance Group (BTAG) provided comments on the RI, FS, and risk assessments in spring 2010. However, USEPA is currently requesting a data gap analysis, due to ongoing regulatory concerns about potential upland sources.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is capping and LUCs. LTM includes LUC inspections and maintenance. Five-year review costs are being covered under site EABR00.

Site ID: EACI00

Site Name: CARROLL ISLAND STUDY AREA

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC)

Media of Concern: Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199108.....	199609
RD.....	200010.....	200206
IRA.....	199308.....	199408
RA(C).....	200206.....	200409
LTM.....	200510.....	204609

RIP Date: N/A

RC Date: 200409

SITE DESCRIPTION

The Carroll Island Study Area (CISA) is a land mass of approximately 855 acres located southwest of the Edgewood Peninsula across the Gunpowder River (a tributary of the Chesapeake Bay). In 1918, Carroll Island was acquired by the APG, but there is no evidence indicating that testing or training operations were conducted at the study area until 1944. From 1944 to 1972 Carroll Island was used as the primary open air chemical agent test site for the APG-EA. Chemical agent testing operations there included contamination and decontamination, dispersion and persistence studies, and chemical munitions tests. Prior to 1964 materials such as mustard, chlorobenzene, sarin (GB), o-ethyl s-[2-(diisopropylamino)ethyl] methylphosphonothiolate (VX), WP, and explosives were tested. Between 1961 and 1971 testing of lethal chemical agents, incapacitating agents, and smoke and incendiary materials was conducted. Waste from testing activities was discarded via dumping or burial on the island. The CISA contains areas of CWM/UXO, which could result in a potential release of constituents to the surrounding environment and the Chesapeake Bay due to the shallow water table, flooding, and shoreline erosion.

In May 2001, a ROD was signed which called for LUCs and shoreline stabilization. The action was completed in FY07.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of LUCs, shoreline stabilization inspections and maintenance and UXO shoreline surveys. Five-year review costs are captured under AEDB-R site EABR00.

Site ID: EAGQ00

Site Name: GRACES QUARTERS STUDY AREA

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Metals, Munitions and explosives of concern (MEC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199108.....	199908
RD.....	200110.....	200206
IRA.....	199308.....	199404
RA(C).....	200206.....	200209
LTM.....	200209.....	204609

RIP Date: N/A

RC Date: 200209

SITE DESCRIPTION

The Graces Quarters Study Area (GQSA) consists of 476 acres situated on a peninsula on the west side of APG. From 1944 to 1971 chemical agent and biological simulant testing were performed here. From July 1964 through December 1971. VX, Tevlar, GB, soman (GD), EA3990, mustard, BZ, DM, CN, WP, FS, triethylaluminum (TEA), CS, and decontaminating agents were released during testing activities. Solid waste was buried in pits at disposal areas. Specific sites pose a potential human health risk due to the presence of lead in the soils and VOCs in the groundwater. Specific sites pose a potential ecological risk due to the presence of mercury in the soils. The GQSA contains areas of CWM/UXO which may result in a potential release of constituents to the surrounding environment and the Chesapeake Bay due to the shallow water table, flooding, and shoreline erosion.

In May 2001, a ROD was signed for LUCs and shoreline stabilization. The action was completed in FY07.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of LUCs, shoreline stabilization inspections and maintenance and UXO shoreline surveys. Five-year review costs are captured under AEDB-R site EABR00.

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199108.....	200409
RD.....	200407.....	200510
RA(C).....	200407.....	200510
RA(O).....	200407.....	204609

RIP Date: 200510

RC Date: 204609

SITE DESCRIPTION

The surficial aquifer beneath GQSA consists of fine-to-medium sand, with small amounts of fine-to-medium gravel and layers of silt and silty clay. This aquifer overlies a confining layer of silty clay. In some areas, the confining layer is absent. As a result, the surficial aquifer is connected to the underlying aquifer. The surficial aquifer contains a contaminant plume consisting primarily of VOCs up to 8,400 mg/L. The plume is migrating to the south-southwest and exceeds the USEPA target risk range of 1E-06 (one in a million) to 1E-04 (4E-03) and the hazard index criterion of 1.0 (3) for the reasonable worst-case future land use scenario (future military and natural resource management area use).

A ROD was completed in September 2004. In situ groundwater remediation system is in place.

CLEANUP/EXIT STRATEGY

RA(O) activities will continue. An ESD to change to a more effective remedy to meet the interim remediation goals so that MNA can be effective will be completed. The five-year review costs are captured under AEDB-R site EABR00.

Site ID: EAJF00

Site Name: J-FIELD STUDY AREA

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200103
RD.....	200104.....	200109
IRA.....	199205.....	199912
RA(C).....	200110.....	200404
LTM.....	200404.....	204609

RIP Date: N/A

RC Date: 200404

SITE DESCRIPTION

J-Field, located in the APG-EA, approximately 460 acres, was used for military purposes as early as 1917; however, the use of the site became more active between WWII and the late-1970s. The use of the site included testing of high explosives and chemical munitions, testing of conventional munitions on structures and buildings, thermal (open burning) and chemical decontamination of chemical munitions, open detonation, and disposal. Chemicals disposed of at J-Field included nerve agents, blister agents, riot control agents, WP, chlorinated solvents, and drummed chemical wastes generated by research laboratories, process laboratories, pilot plants, and machine and maintenance shops.

The ROD for this site was signed in September 2001. The remedy was a technical impracticability (TI) waiver, soil removal, phytoremediation, and free phase dense non-aqueous phase liquid (DNAPL) recovery and required LUCs and groundwater monitoring, and tree/soil cover maintenance.

CLEANUP/EXIT STRATEGY

LTM activities will continue into the foreseeable future. LTM includes LUCs, monitoring and maintenance of the phytoremediation and soil cover, groundwater monitoring and free phase DNAPL recovery as needed. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: SURFICIAL AQUIFER-CLUSTER 9

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Volatiles (VOC)
Media of Concern: Groundwater

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

SITE DESCRIPTION

Groundwater sampling results have identified TCE (60 ug/L), 1,1-dichloroethene (11 ug/L), and nickel (194 mg/L) in the surficial aquifer of the Cluster 9 Nike Missile Battery Control Area at concentrations exceeding applicable or relevant and appropriate requirements (i.e., MCLs).

The risk assessment conducted in FY01 concluded that there is an acceptable risk from potential future industrial use.

In early 2002, the USEPA requested that additional samples be taken since the contamination levels are above MCLs. In FY03, additional geoprobe sampling showed the total VOCs up to about 500 ppb. In 2006, an FS was completed.

In 2007, the PP for this site was written. In September 2007, the ROD was signed to address VOCs. Soil vapor extraction, LTM, and LUCs were chosen for the Nike Control Area groundwater site.

Soil vapor extraction was implemented. The interim remedial goals were achieved and an interim response action completion report was completed in September 2008. Groundwater monitoring occurs every five years to insure concentrations are decreasing and will meet MCLs in the future.

CLEANUP/EXIT STRATEGY

RA(O) will continue into the foreseeable future. RA(O) includes natural attenuation, groundwater monitoring every five years and LUCs. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: SURFICIAL AQUIFER-CLUSTER 13

STATUS

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199105.....	202006
RD.....	202006.....	202012
RA(C).....	202012.....	202106
RA(O).....	202106.....	205106
RIP Date:	202106	
RC Date:	205106	

SITE DESCRIPTION

Cluster 13 was the site of extensive decontamination training. It contains chlorinated solvent contamination in a plume of about 25 acres and up to 96,000 ug/L total VOCs in the surficial aquifer. The baseline risk assessment for Cluster 13 calculated the total excess lifetime cancer risk associated with ingestion of the groundwater by site workers from the Cluster 13 surficial aquifer, as 4E-3 (4 in 1000) with a hazard index of 2. The Cluster 13 RI report recommended plume delineation and implementation of an FFS to evaluate potential VOC-contaminated groundwater remedial alternatives. In October 1998 several FFS field activities were completed, including the collection of groundwater, surface water, and sediment pore water samples; installation of drive points; DPT sampling; sampling for natural attenuation parameters; and collection of groundwater elevation data.

The field activities indicate that natural attenuation processes are very active in this area, destroying much of the contamination as the groundwater discharges into the neighboring marsh areas. Several alternatives are applicable to address the solvent contamination in the groundwater; however, remediation will most likely combine source control and/or active remediation with natural attenuation.

Electrical resistance heating (ERH) was conducted in 2011-2012 as a pilot study to reduce VOC in the vadose zone. The treatment failed to reach initial RA pilot study objectives and VOC levels returned to pre-treatment levels.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and RA(O) will continue. The anticipated remedy is slurry walls, long-term monitoring and LUCs. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EANS01-A

Site Name: UNCONFINED GROUNDWATER

STATUS

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

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RD, RA(C), RA(O), LTM with corresponding start and end dates.

SITE DESCRIPTION

There is a surficial aquifer of hydraulically unconfined groundwater in the upper 40 ft of stratigraphy at the Nike site. Groundwater sampling performed during the RI identified a plume of TCE in the surficial aquifer at concentrations up to 299 ug/L.

In September 1996, a ROD was signed for the installation of extraction wells and construction of a groundwater remediation system to treat the TCE. In October 1998 an ESD was issued to change the treatment technology from reductive dehalogenation to liquid-phase carbon adsorption.

In July 2013, an ex situ soil treatment was implemented for recalcitrant contamination at well 19A under the RA(O) phase. Currently, efficacy observations are underway with potential in situ chemical (sodium percarbonate) treatment as results dictate.

CLEANUP/EXIT STRATEGY

RC in FY18 is anticipated and then sampling every five years in support of the five-year review.

Site ID: EANS01-D

Site Name: SOUTHWEST LAUNCH LANDFILL.

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH
Contaminants of Concern: Asbestos
Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199201.....	199609
RD.....	199606.....	199806
IRA.....	199412.....	199505
RA(C).....	199709.....	199810
LTM.....	199810.....	204609
RIP Date:	N/A	
RC Date:	199810	

SITE DESCRIPTION

The 1.1-acre Southwest Launch Landfill primarily contains construction debris and some asbestos materials. Several 55-gallon drums, labeled hydraulic fluid, were found at the site lying empty on their sides. This suggests waste may have been disposed at the site.

In September 1996, a ROD was signed for this site that called for an impermeable cap consisting of the following layers:

- the waste materials,
- a cover soil layer,
- layers of geotextile, including a gas collection layer,
- an impermeable clay (bentonite) layer,
- an impermeable, low-density polyethylene layer,
- a water conveyance layer,
- a fill material layer,
- a topsoil layer, and
- a layer of vegetation over the top.

In June 1998, construction of the former Nike site Launch Southwest Landfill cap was completed. A RACR was completed in February 1996.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of inspections and maintenance of the Southwest Launch Landfill cap, LUCs and groundwater monitoring. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: D-FIELD AERIAL SPRAY GRID-CLUSTER 4

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199006.....	204608
IRA.....	200201.....	200609

RIP Date: N/A

RC Date: 204608

SITE DESCRIPTION

Cluster 4 [D-Field Aerial Spray Grid (ASG)] is located within the Coopers Creek investigation area, although some drainage goes into Bush River to the east and Target Track Creek to the south. Test sites that date back to WWI surround the ASG in one of the most active test areas (D-Field) of the Other E-Trench warfare sites, disposal trenches, test bunkers, and an impact area all share part of the designated Cluster 4 area. Surface and aerial magnetometer survey anomalies (disposal sites, etc.) attest to the extent of test activities. The ASG site was primarily established to test aircraft-mounted aerial spray tanks for dispersion of chemical agents and probably agent simulants. Because of the nature and extent of test activities, groundwater, soil, surface water and sediments have been extensively sampled. Metals above ecological risk screening criteria have been detected in the soil (e.g., lead at 209 parts per million (ppm) and zinc at 2,060 ppm) and in the sediment (e.g., barium at 196 ppm and zinc at 13,600 ppm). RDX and low level VOCs have been detected in groundwater samples.

A shoreline disposal site was located north of Sandy Point. An emergency removal action was completed at the site, resulting in the removal of over 350 rounds. In FY06, shoreline stabilization of the D-Field Shoreline was completed to address the potential of waste continuing to erode into the Bush River during shoreline buff erosion. In 2007, revegetation efforts within portions of the stabilized shoreline were completed. In 2008, site characterization work was conducted to evaluate potential disposal sites. Further groundwater investigation and soil and sediment characterization were conducted in 2009.

In 2014, the RI and risk assessments were finalized. The RI found that there were no human health concerns for exposure to surface soil under current and likely future land use scenarios. However, there are potential non-carcinogenic concerns and total lifetime carcinogenic risks for future residents primarily due to metals and perchlorates in groundwater and PAH in surface soil. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will continue. The anticipated remedy is LUCs. LTM phase will be opened at RC. The LUCs will be completed in-house at no cost. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: G-FIELD WASTEWATER TREATMENT AREA-CLU 8

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199606.....	201105
RD.....	201108.....	201201
IRA.....	199206.....	199211
RA(C).....	201202.....	201210
LTM.....	201210.....	204602

RIP Date: N/A

RC Date: 201210

SITE DESCRIPTION

Cluster 8 (G-Field Wastewater Treatment Area) is located within the Wright Creek investigation area. The G-Field wastewater treatment system for the weapons assembly plant and support buildings consists of a 750-gallon capacity septic tank system. The shower, sink, toilet, and floor drain wastewaters form a support building. Floor drain waters from the assembly plant were not disposed of via the wastewater treatment system.

Munitions impact activities have occurred in Cluster 8. Bunkers (concrete, earthen, and composite), a bomb casing dump site, and drum storage/disposal facilities (over 90 drums) were also found there. Munitions disposal occurred in the northern portion of the cluster. Troop training also occurred north and west of the plant. RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling have been completed. In FY04, groundwater and media sampling were completed. Elevated metals concentrations were found in soil and sediments at the site. During clearance activities for previous field sampling, a high confidence mustard-filled Livens projector round was discovered. In 2007, site characterization of the G-Field Weapons Assembly Plant and of the waste material within the G-Field Bunkers and Bomb Casing Dump site was completed. The HHRA and ERA are both final.

The final ROD was completed in 2011 followed by RACR in October 2012. The selected remedy was LUCs to prevent future residential land use.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: H-FIELD WASH RACK AND STORAGE AREA-CL 12

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199006.....	201108
RD.....	201108.....	201110
RA(C).....	201202.....	201210
LTM.....	201211.....	204511

RIP Date: N/A

RC Date: 201210

SITE DESCRIPTION

Cluster 12 (H-Field Washrack and Storage Area) is located within the Western Shore investigation area. Vehicle testing in the H-Field area is primarily conducted using tanks. Tanks both in a firing and no firing mode traverse combined serpentine and linear-paved roadway courses. The track extends from the support buildings (office, maintenance, storage, and data collection) in an east-northeast direction across former artillery impact areas. On the south side of the track area, sets of concrete targets extend parallel or subparallel to the tank courses for over 3,000 ft. In the support area, vehicles are maintained, configured, and cleaned.

The washrack, vehicle yard, and fuel/oil storage facility serve the test vehicles. There are numerous sediment retention ponds and low-profile mounds to the south and west of the area. In FY06, test digs and soil sampling were conducted within the mound area west of Ricketts Point Road identified the presence of buried and exposed potentially contaminated material. The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. Additional groundwater sampling does not exceed RCRA characteristics and there is no free-product of benzene, toluene, ethylbenzene, and xylene (BTEX). Soil samples for total petroleum hydrocarbons (TPH) do not exceed the state criteria. In 2007, site characterization of the waste material within the mounds west of Ricketts Point Road was completed. Both the HHRA and ERA are final.

A final ROD was completed in 2011 followed by RACR in 2012. The selected remedy was LUCs to prevent future residential land use.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Volatiles (VOC)
Media of Concern: Soil, Surface Water

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, IRA with corresponding dates. Includes RIP Date: N/A and RC Date: 204608.

SITE DESCRIPTION

Cluster 16 (M-Field Mine Field/Prototype Building Storage Area) is located within the Swaderick-Watson Creek investigation area. The WWII prototype building has been used as a bomb target in training exercises and as a temporary storage facility.

During a 1995 removal action, limited sampling of the area did not reveal evidence of burning; however, the visibly scarred area may not have been sampled. During sampling efforts in 2000, concentrations of magnetic debris were detected using a magnetometer in several locations.

In 2009, additional groundwater sampling was conducted at the prototype building and additional soil, sediment, and XRF sampling was completed.

The RI risk assessment determined that groundwater is not a media of concern. However, metals in soils did pose ecological risk and require a cleanup action.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house and are no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: FORT HOYLE TRAINING AREA-CLUSTER 19

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199606.....	201809
RD.....	201007.....	201902
IRA.....	199311.....	201608
RA(C).....	201007.....	201904
RA(O).....	201012.....	204509

RIP Date: 201904

RC Date: 204509

SITE DESCRIPTION

Cluster 19 (Fort Hoyle Training Area) is located within the Gun Club Creek investigation area. The Fort Hoyle Training Area is located south of the EA barracks. Although little is known about the training conducted in this area from WWI to WWII, the training is known to have included the use of chemical warfare materiel. Chemical odors observed in the 1980s during the construction of the wheeled vehicle facility in the Fort Hoyle Area prompted sampling and analysis of the site. Other potential sources of contamination in the area are the Douglas Road munitions disposal site and nine drum and junk dump sites.

Surface water, sediment, surface and subsurface soil, bioassay, and DPT groundwater sampling efforts have been conducted in support of the RI. Metals, PAHs, and pesticides have been detected in soil in Cluster 19 above ecological risk levels. Thiodiglycol was detected at 9,370 ppb. Sustained lead concentrations in surface water ranging up to 63 ppb above ecological risk levels have been detected. Geophysical XRF and soil gas surveys have defined the extent of waste disposal areas. In FY04, further characterization of the thiodiglycol site and excavation were performed to remove waste and contaminated soil at the nine drum and junk sites.

DPT sampling further indicates the presence of solvents (total VOCs ranging up to 46,161 g/L) in the groundwater north of the wheeled vehicle facility. Additional groundwater characterization conducted in 2002 involved the installation of prepack wells to determine the extent of the VOC plume distribution, groundwater flow directions, hydraulic gradients, and groundwater quality for a natural attenuation evaluation. Additional monitoring wells were then installed within the VOC plume to supplement the data for the Gun Club Creek risk assessment. Subsurface soil samples collected from the vadose zone contained VOCs exceeding screening criteria.

The ROD addressing the Cluster 19 groundwater was signed in September 2007. The selected RA was LUCs and monitoring.

The ROD addressing the soil portion of Cluster 19 is expected to be signed in FY16.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD and RA(C) for the soil portion of the site will be completed. Final remedy for the soils is expected to be excavation, offsite disposal and LUCs. RA(O) for the groundwater and soil will be conducted into the foreseeable future and is anticipated to be groundwater and LUC monitoring and maintenance. Five-year review costs are included in AEDB-R site EABR00.

Site Name: L-FLD DEMO AND PROPELL DISP SITE-CLU 22

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Munitions and explosives of concern (MEC), Perchlorate, Pesticides, Volatiles (VOC)

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204608

RIP Date: N/A

RC Date: 204608

SITE DESCRIPTION

Cluster 22 (L-Field Demolition and Propellant Disposal Site) is located within the Coopers Creek Investigation Area. The L-Field Demolition and propellant Disposal Site is at the end of and adjacent to the road extending southeastward beyond the target area of the Ballistic Track. Aerial photographs from the 1960s and 1970s indicate that the area was first cleared and used during the 1960s. Portions of the area are still bare of vegetation and the surface soils contain few fragments of munitions by visual inspection. It is possible that some of the waste material at the site is from the dumping of the waste material from operations at the test track. Geophysical surveys (electromagnetic/magnetic) were conducted in five suspect disposal areas, followed by site reconnaissance, test digs, and soil sampling. The disposal areas have been grouped into three main areas:

- 1) Rocket disposal sites (located at the end of the Ballistic Target Track);
- 2) Disposal mounds and piles (located in the woods south of the Ballistic Target Track); and
- 3) Marsh dump sites (multiple small-scale disposal sites within the marsh areas surrounding tributaries of Coopers Creek.)

Surface water, sediment, and surface soil, and DPT groundwater sampling has been conducted in the area in support of the RI. RI soil and sediment sampling at the disposal areas identified metals contamination. Low-level VOCs were detected in the groundwater at four DPT locations. Perchlorate was detected in six DPT locations near the east end of the rocket sled. As of April 2009, additional groundwater sampling at eight direct-push locations was underway to characterize groundwater perchlorate contamination within the L-Field Area. In addition to DPTs there are four groundwater wells in the L-Field Area.

In 2014, the RI and risk assessments were finalized. The 2014 RI found residual perchlorate contamination in groundwater in L-Field, but only a few locations had samples above MCLs. There are no human health concerns for exposure to surface soil collected directly in the CCIA under current and likely future land use scenarios. However, there are potential non-carcinogenic concerns and total lifetime carcinogenic risks for future residents primarily due to metals and perchlorates in groundwater and PAH in surface soil. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. LTM phase will be opened when RC has been achieved. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: I-FIELD JAPANESE BUNKER AREA CLUSTER 23

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199606.....	204603
IRA.....	200304.....	200710

RIP Date: N/A

RC Date: 204603

SITE DESCRIPTION

Cluster 23 (I-Field Japanese Bunker Area) is located within the Boone Creek investigation area, in the southern portion of I-Field. The bunkers are steel-reinforced concrete with walls approximately 4 feet thick. The bunkers have been subjected to static and drop device blasts sufficient to rupture and penetrate the concrete walls and roofs. Although the bunkers contain test-related materials (equipment, munitions, and test equipment), there is no indication that chemical agents were used in the tests. South of the bunkers, at the edge of the wetland, is the munitions disposal site, a 25-foot diameter crater with shallow flooding. Near the disposal site crater are several other similar land-based, water-filled craters that may contain disposed material. Chemical material burn pans are located between two of the bunkers. The pans were used in an MDE-approved detonation to destroy laboratory unknowns. RI strategic plan media (groundwater, surface water, sediment, and surface soil) sampling has been completed. Additional media samples have been collected from the interior of the bunkers. In 2004, an IRA was completed for the removal of contents from Bunkers A and F. Additional media sampling has been conducted in 2009 at the site. In 2007, site characterization of additional waste material and soil around the bunkers was completed. A TCRA was conducted in 2008-2012 at the munitions dump; 6,500 rounds were recovered [two high explosive (HE), 25 WP, and 35 illumination rounds].

Poole's Island is located on the Chesapeake Bay just south of I-Field. Past sampling events and surveys on Poole's Island was conducted under this AEDB-R site.

In 2014, the PP for this site was finalized. Residential LUCs were the preferred alternative.

CLEANUP/EXIT STRATEGY

ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. LTM phase will be opened when RC has been achieved. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: M-FLD SOUTHEAST TEST AND BURN AREA CL 24

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204611
IRA.....	199502.....	201608

RIP Date: N/A

RC Date: 204611

SITE DESCRIPTION

Cluster 24 (M-Field southeast Test and Burn Area) is located within the Swaderick-Watson Creek investigation area. The southern portion of M-Field and the adjacent fields have been used for a variety of testing activities. A minefield, frame-silhouette targets, and a bombproof trench and burn trench are located in the southern portion of M-Field. Rockets fired at targets in this area were from as far away as G-Field. Although most of the debris burned in the trenches is believed to have originated from M-Field activities, materials may have originated from surrounding area tests. Test digs conducted at the site in FY06 identified two waste disposal trenches. Based on field measurements and test digs, the size of trench No. 1 is 15 ft by 35 ft. Trench No. 2 is 4 ft by 10.5 ft. Both trenches contain waste 6 to 12 inches below ground surface. The waste identified in the trenches includes 66-millimeter (mm) TEA rocket fragments, sand bag cloth, linoleum tiles, and metallic debris. RI sampling detected metals (cadmium, copper, iron, lead and zinc) within soil at the trenches. An XRF survey was conducted in 2009 at the SE Burn Trenches.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the Human Health Risk Assessment. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: M-FLD TUNNELS AND TEST SLAB AREA CLU 26

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
Sl.....	197606.....	198912
RI/FS.....	200010.....	204611

RIP Date: N/A

RC Date: 204611

SITE DESCRIPTION

Cluster 26 (M-Field Tunnels and Test Slab Areas) is located within the Swaderick-Watson Creek investigation area. The M-Field Concrete Slab was constructed in 1942 and measures 300 feet long by 300 feet wide. A vertical concrete target wall (structure E7244) was constructed after the original slab. The height of the original vertical target wall was 25 feet and extended 75 feet across the southern side of the slab. In 1949, an additional 15 feet were added to the original wall to increase the height to 40 feet. Throughout WWII and continuing into the present, APG has used the slab as a test site. Most of the testing has been with chemical ordnance, primarily incendiary, smoke, and simulant-filled items. Testing operations resulted in solid waste disposal along the perimeter of the slab, primarily the south and southeast sides. The majority of the solid waste is comprised of the remains of incendiary munitions (e.g., 6- and 10-pound illumination and incendiary rounds) and miscellaneous waste (e.g., metal scrap, empty drums, pipes).

Materials designed to deny enemy troop entry into tunnels were tested at three tunnel complexes in M-Field. The northernmost and largest complex consisted of four parallel zigzag tunnels. Two parallel zigzag tunnels were located near the M-Field bunker and another tunnel complex was located northwest of the prototype building. Most of the tunnels were either buried or have collapsed. Soil gas sampling has been conducted at the tunnel complexes. This site also includes a 1930 chemical lab, DM dispersal buildings, and other buildings.

Test digs conducted in FY05 indicate waste disposal activities at the test slab and surrounding area. In addition, groundwater has been sampled by DPT method for explosives, perchlorates and VOCs.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: M-FIELD PRE-WWII AGENT TEST SITE CLU 27

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204611

RIP Date: N/A

RC Date: 204611

SITE DESCRIPTION

Cluster 27 (M-Field Pre-WWII Agent Test Site) is located within the Swaderick-Watson Creek investigation area. As early as the 1920s field testing of lethal chemical agents was conducted at the APG-EA. These tests were conducted primarily in five test areas of M-Field. The test sites were located southeast of the M-Field bunker where the open grassland terrain slopes gradually to the south and southeast to a fringe wetland of Watson Creek. Containers of agent were explosively burst during static tests. Inspections during construction of the permeable infiltration unit (PIU) gravel staging area located just north of Old O-Field identified a waste disposal site along the southern edge of the staging area.

As of February 2007, RI groundwater, surface water, sediment, and soil sampling had been completed at the site. Test digs and soil sampling conducted in FY05 indicate waste disposal at Test Sites A and D. Items identified in the sampling results include Stokes mortar pieces, 4.2-inch mortar pieces, buried drums, and munitions dispensers. The combined volume of Test Sites A and D is less than one acre. In 2007 site characterization of the waste material and soil from Test Sites A and D was completed.

Additional site characterization (geophysics, test digs, and soil sampling) of the Old O-Field PIU gravel staging area was completed in fall 2008. No munitions disposal was identified.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: H-FIELD CONCRETE TARGET AREA CLUSTER 28

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Munitions and explosives of concern (MEC), Perchlorate, Semi-volatiles (SVOC)

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204603

RIP Date: N/A

RC Date: 204603

SITE DESCRIPTION

Cluster 28 (H-Field Concrete Target Area) is located within the Boone Creek investigation area. The H-Field Target Area and surrounding areas of Cluster 28 have been used for a variety of testing activities including chemical agent firing. The Pre-WWII Artillery Target Area II is also located in H-Field. Simulated tank turrets, a tank, several large craters, burn scars, bombed/blasted out concrete buildings, a large aboveground storage tank (AST), munitions disposal site, and approximately 10 drums are present in the area. Steel-reinforced concrete target slabs (3,000-foot long array of two parallel lines of vertical slab sections) served as targets or target backstops. At the eastern end of the cluster is a disposal area with munitions fragments, empty containers (such as hydraulic fluid cans), and miscellaneous, potentially contaminated, test material. At the western end of the parallel concrete targets, there is a large pile of sand and gravel between the two slabs. Examination of this sand and gravel pile revealed fragments of rocket motors, smokeless powder grains, and fragments of rocket propellant, indicating that the pile was probably also used as a target.

Contamination above criteria was not detected in the soil samples from the sand and gravel pile and munitions disposal sites. The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. Additional groundwater and media sampling is underway to determine the impact from past testing and disposal activities around the 5-acre munitions disposal site. A comprehensive site reconnaissance and limited geophysical surveys completed in 2006 identified numerous areas of magnetic anomalies within the site. Test digs at the locations of the anomalies conducted in late 2006 identified scrap metal, munitions components, empty drums, and the like. Further characterization of the waste material and soil at the munitions disposal site was completed in fall 2008. Additional RI sampling was completed in 2009 including an XRF survey at the munitions disposal site. All rounds have been removed from the site and await demilitarization and proper disposal.

In 2014, the PP for this site was finalized. Residential LUCs were the preferred alternative.

CLEANUP/EXIT STRATEGY

The ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. The LTM phase will be opened when RC has been achieved. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: MAXWELL POINT TEST SITE CLUSTER 29

STATUS

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

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

SITE DESCRIPTION

Cluster 29 comprises the Maxwell Point investigation area. Testing on the point has included smoke generator testing, munitions firing to the Graces Quarters impact area, drop/slide testing of cargo containers, grenade testing (drop tower with a large water pit), and a variety of testing that required bomb proofs.

Offshore geophysical surveys were performed on the north and south shore zones of Maxwell Point to identify any large-scale disposal sites. No large areas of potential disposal were identified. In April 2001, additional land-based geophysical surveys were conducted in suspect cleared areas.

Available data has identified a VOC groundwater plume from past releases of chlorinated solvents and hydrocarbons at the former Building E7365/E7368 Test Site. The highest total VOC concentrations (up to 3,887 ug/L) in surficial aquifer groundwater are 39 ft below grade or 20 ft below mean sea level.

A final ROD for soil removal, in situ and ex situ soil treatment, bioremediation of groundwater and LUCs was signed in September 2014.

CLEANUP/EXIT STRATEGY

Hot spot areas at Building E7340/E7350 Test Site and Smoke Generator Debris Site will require waste and soil excavation and off-site disposal. Groundwater at the Building E7365/E7368 Test Site will require RA(O) to include groundwater sampling and LUCs.

Site Name: C-FIELD MUNITIONS BURIAL SITE CLUSTER 30

STATUS

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

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RA(C), and LTM with corresponding dates.

RIP Date: N/A
RC Date: 201210

SITE DESCRIPTION

Cluster 30 (C-Field Munitions Burial Site) is located within the Doves Cove investigation area. The Building E1412 Munitions Burial Site is located within the northwestern portion of C-Field, east of Ricketts Point Road.

Buildings E1407 and E1415 are within the northwestern portion of C-Field, east of the juncture of Gantz and Ricketts Point Roads. These buildings were built during WWI and were used for storage and maintenance in support of miscellaneous C-Field test activities.

In 1995, a RCRA removal action was completed at the Buildings E1407/E1415 septic tank by removing impacted soil from the vicinity of the tank and the septic tank's contents.

The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. The explosive-related compound RDX and 1,1-dichloroethene were detected during the Phase I strategic plan DPT groundwater sampling.

Further groundwater sampling has shown that significant risk is not posed by groundwater contamination. Additional groundwater and media sampling was completed in FY04.

The final ROD was completed in 2011 followed by an RACR in 2012. The Selected Remedy was residential LUCs.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LUCs are being performed in-house at no cost. Five-year review costs are being covered under AEDB-R site EABR00.

Site Name: H-FIELD TANK TEST RANGE CLUSTER 31

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204603

RIP Date: N/A

RC Date: 204603

SITE DESCRIPTION

Cluster 31 (H-Field Tank Test Range) is included in the Boone Creek Investigation Area. The Tank Test Range in H-Field extends from a support building area eastward across the Gunpowder Neck, ending at a triangular moving target track in southern D-Field. Cluster 31 consists of the southwestern two-thirds of the track. The tank track consists of straight roadways and a serpentine test track. Testing involves firing while maneuvering along the track and over alternating track speed bumps. The test range includes firing points, a vehicle track, a track-mounted moving target, and buildings that support the test operations (vehicle maintenance, development, and lubrication). The track also traverses two areas previously used as artillery impact areas. Support buildings have storerooms for petroleum lubricants, offices, and restroom facilities. During the 1920s and 1930s, open air and static air testing of chemical agents and ordnance was conducted in H-Field. The Pre-WWII Artillery Target Area III is also located in Cluster 31. H-Field was used as a range for mustard-, phosgene-, and other agent-filled munitions. The results of RI media sampling conducted in the fall of 2001 indicated that no further groundwater investigation is needed. Additional soil samples were conducted in 2009.

In 2014, the PP for this site was finalized. Residential LUCs were the preferred alternative.

CLEANUP/EXIT STRATEGY

The ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. LTM phase will be opened when RC has been achieved. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: D-FLD CHEMICAL AGENT TEST GRID CLU 37

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199006.....	204608

RIP Date: N/A

RC Date: 204608

SITE DESCRIPTION

Cluster 37 (D-Field Chemical Agent Test Grid) is included in the Coopers Creek investigation area. A prominent tower still stands at the northern edge of the Chemical Agent Test Grid area. Testing in the area involved firing munitions from the tower into two circular test grids with monitoring equipment or staked animals. Chemical agents and chemical agent munitions were tested in the grid areas; some of the tests could have involved static testing. The tests often used highly volatile G-agents [i.e., GA, GB and GD]. Mounds and abandoned rusted drums are located downgradient of the test area in a drainage swale. Further downgradient, drums of decontamination materials were unearthed during construction of a roadway extension into H-Field. Metals (e.g., copper at 69.9 ppm) have been detected in soils above ecological risk levels. Thiodiglycol was detected in surface water and sediment samples ranging up to 61,300 ppb. Additional samples were collected in a grid around the two original locations and analyzed for thiodiglycol and organosulfur compounds. No detections of thiodiglycol or organosulfur compounds were reported within these samples. Test digs were also conducted within the thiodiglycol area to further characterize any potential waste; there was no evidence of drums. Also, DPT groundwater samples collected in the vicinity of the thiodiglycol surface water and sediment detections did not detect the compound. In 2007, site characterization of the potentially contaminated material throughout the Cluster 37 area was completed. Additional soil samples were conducted in 2009.

In 2014, the RI and risk assessments were finalized. There were no human health concerns for exposure to surface soil collected directly in the CCIA under current and likely future land use scenarios. However, there are potential non-carcinogenic concerns and total lifetime carcinogenic risks for future residents primarily due to metals and perchlorates in groundwater and PAH in surface soil. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. LTM phase will be opened when RC has been achieved. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: K-FIELD DEMOLITION FIELD CLUSTER 38

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Volatiles (VOC)
Media of Concern: Sediment, Soil, Surface Water

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, RIP Date, and RC Date.

SITE DESCRIPTION

The K-Field Demolition Ground is located within the Gun Club Creek investigation area, between Wright Creek to the south and Gun Club Creek to the north. The creeks and associated wetlands surround the site. The site is accessible only via a dirt road placed across a broad wetland to the west of the site. The area was used for demolition of small munitions (limited to the proximity of cantonment area) and for training activities of the 149th Ordnance Detachment. In the late-1970s or early-1980s demolition activities were curtailed. Spent and practice munitions are scattered in the southeast edge of the area and there are small explosion craters in the southern portion of the site clearing. Surrounding the small craters, bare soil (ground scar) is prevalent with only sparse vegetation. Spent rifle cartridges are scattered in the soil around the pits. There are large trenches (containing water) in the woods to the east of the clearing. One large pond is located about 100 yards south of the clearing. There are training materials and junk automobiles and significant other waste disposal in the adjacent woods. RI sediment, surface water, soil, and groundwater samples have been recently collected from Cluster 38. Groundwater contamination at 3 ft below the ground surface indicates VOCs, however, the risk assessment showed no unacceptable risk. Therefore, no remedy is required for groundwater. Characterization of demolition craters and perimeter of the site was completed in FY04. The soils FS is underway.

The RI was completed in 2015. Based on results of the RI and conclusions of the risk assessments and supplemental risk evaluations, no unacceptable human health or ecological risk was identified in surface soil within Cluster 38. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The RI/FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LUCs are conducted in-house at no cost. The LTM phase will be opened upon RC. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: C-FIELD WASTEWATER SYSTEM CLUSTER 39

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	201108
RD.....	200010.....	201207
RA(C).....	200010.....	201210
LTM.....	201210.....	204310

RIP Date: N/A

RC Date: 201210

SITE DESCRIPTION

The Cluster 39 (C-Field Wastewater System) is located within the Doves Cove investigation area. C-Field is an open grassland area adjacent to Range Control in the northern portion of the Other EA range. Buildings E1400 and E1401 lie within the northwestern portion of C-Field, east of Ricketts Point Road and slightly northwest of Wilson Point Cove. The two buildings were constructed during WWI for use as maintenance facilities. As the largest structure in C-Field, in recent years Building E1401 has been used for storage.

The wastewater treatment system for Buildings E1400 and E1401 consists of a 500-gallon septic tank and two leachate/drainfields. The septic tank is located about 100 ft northwest of the northern corner of Building E1401. The two leachate/drainfields are located immediately northwest and north-northeast of the septic tank.

A UST was discovered west of Building E1401; it will not be handled under the IRP. Small quantities of hydraulic fluid and equipment cleaning solvents in support of testing operations were also handled at this site.

In 1995, a RCRA removal action was completed at the Buildings E1400 and E1401 septic tank by removing impacted soil from the vicinity of the tank and the septic tank's contents. Two, 5-feet by 5-feet areas were excavated to a depth of 2 feet.

The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. In 2007, site characterization of the waste material within the munitions remnants disposal area was completed.

The RI was completed in 2011. No human health risks were noted. No further environmental investigations for the entire Doves Cove Investigation Area were warranted based on projected future land use (industrial). If land use changes occur in the future, additional investigations may be required.

The final ROD was completed in 2011 followed by an RACR in 2012. The Selected Remedy was residential LUCs.

CLEANUP/EXIT STRATEGY

This is a zero cost site. LUCs are performed in-house. Five-year reviews are captured under AEDB-R site EABR00.

Site Name: G-FIELD TUNNEL COMPLEX CLUSTER 41

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199910.....	204611

RIP Date: N/A

RC Date: 204611

SITE DESCRIPTION

Cluster 41 (G-Field Tunnel Complex) is located within the Swaderick-Watson Creek investigation area. The G-Field Tunnel Complex consists of three zigzag tunnels in a general east-west configuration. The tunnels are approximately 100 yards northwest of the intersection of Ricketts Point and Maxwell Point Roads. The location of the tunnels is marked by shallow depressions that retain water after heavy rains. The model tunnels (similar to enemy tunnels) were used to test agents and chemicals to deny enemy troop entry into the tunnels. The tunnels were probably 5-feet high by 3-feet wide. The G-Field tunnels, like others in M-Field, were constructed with combinations of wood, sheet metal, and concrete. Lineaments observed in aerial photographs indicate the possibility of additional trenches or tunnels north of the tunnel complex, across Maxwell Point Road. The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. DPT groundwater samples contained the VOCs cis-1,2-dichloroethene at 92 ppb, trichloroethene at 63 ppb, 1,1-dichloroethene at 8 ppb, and vinyl chloride at low levels; however, these constituents are sporadic and confined to a very small area. Results indicate no further groundwater investigation is needed. Additional site characterization samples were collected in 2009.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: M-FIELD CLOTHING SHACK AREA CLUSTER 42

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199912.....	204611

RIP Date: N/A

RC Date: 204611

SITE DESCRIPTION

Cluster 42 (M-Field Clothing Shack Area) is located within the Swaderick-Watson Creek investigation area. A group of several small buildings and fuel-type tanks at the intersection of Maxwell Point and Watson Creek Roads comprise the Clothing Shack Area. These small buildings were constructed during the 1940s; it is believed that they were used primarily for storage and as a clothing change house. One (or two) additional building (since removed) existed across Maxwell Point Road during the time of training activities. The buildings were used for support and storage of materials related to clothing contamination and decontamination training exercises. A trailer-mounted clothing impregnation unit may have been used at this location in conjunction with training activities. North of the building area (about 75 yards), several mounds (6- to 8-feet high and 10- to 20-foot long) of pushout material exist at the edge of a Swaderick Creek wetland. The mounds may contain materials disposed as a result of training exercises. A disposal site of WP bursting grenades was identified in this area. A geophysical survey was conducted over the area to determine the size and extent of the grenades and soil from the area was sampled. Additional groundwater activities were completed in FY05 and did not detect any contaminants or contributing sources. Groundwater is not considered a media of concern. Site characterization of the waste material and soil from the Grenade Dump site was completed in 2007.

Pesticides and metals were also detected in the RI soil samples associated with the Clothing Shack area. Site characterization sampling was conducted in 2009.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: M-FIELD BOMLET PROJECTOR CLUSTER 44

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204611
RIP Date:	N/A	
RC Date:	204611	

SITE DESCRIPTION

Cluster 44 (M-Field Bomblet Projector) is located within the Swaderick-Watson Creek investigation area. The M-Field Bomblet Projector (Twin Towers) was located southwest of the intersection of Maxwell Point and Watson Creek Roads. The towers complex was built between 1957 and 1958. The towers were to be used as a launching platform for bomblets fired down a cable which stretched from the towers to a concrete-based metal anchor point north of Maxwell Point Road. The cable was tightened with a hand winch 30 ft from the anchor point. It appears that modified drop tests would be performed by sliding bomblets and/or propelling rockets down the cable; however, the facility may have never been used as intended. Cable fragments are located near the anchor point, but there's no obvious evidence of actual bomblet/rocket tests. Meteorological and radio antennas are currently located on the towers. Possible disposal mounds are located northwest and northeast of the towers. As of February 2007, RI media (surface water, sediment and surface soil) sampling at the site has been completed and did not indicate contamination. Site reconnaissance and test digs conducted at the site did not indicate disposal activities.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: E-FIELD DREDGE SPOIL AREA CLUSTER 46

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	200010.....	204608

RIP Date: N/A

RC Date: 204608

SITE DESCRIPTION

Cluster 46 (E-Field Dredge Spoil Area) is located within the Coopers Creek investigation area. The Dredge Spoil Area of approximately 7 acres is located adjacent to the Legos Point Impact Area and may contain munitions fragments and material from rounds falling outside the Legos target area bulls-eye. Items associated with the impact area were buried in the subsurface dredging activities between 1957 and 1960. The channel in the Bush River to the Boone Creek landing was dredged at least once during the period since WWII and this adjacent area most likely was the source of dredge spoil. The spoil area is west-southwest of the impact area, and east-southeast of an area of possible testing activities, as observed on aerial photographs (construction debris and/or test debris in pushout areas). The RI DPT groundwater samples collected within the site contained low levels of metals and chloroform. Additional RI media (surface water, sediment and surface soil) sampling showed no contamination within the site. Additional site characterization samples were completed in 2009.

In 2014, the RI and risk assessments were finalized. There were no human health concerns for exposure to surface soil collected directly in the CCIA under current and likely future land use scenarios. However, there are potential non-carcinogenic concerns and total lifetime carcinogenic risks for future residents primarily due to metals and perchlorates in groundwater and PAH in surface soil. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. LTM phase will be opened when RC has been achieved. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. Five-year reviews will be covered under AEDB-R site EABR00.

Site Name: G-FIELD TRAINING AREA CLUSTER 50

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals, Pesticides
Media of Concern: Sediment, Soil, Surface Water

Table with 3 columns: Phases, Start, End. Rows include PA, SI, RI/FS, IRA with corresponding dates. RIP Date: N/A, RC Date: 204611

SITE DESCRIPTION

Cluster 50 (G-Field Training area) is located within the Swaderick-Watson Creek investigation area. The G-Field Training area was an impact area for a large portion of the Other EA's history. Materials fired into the area would have originated from training activities conducted in the Fort Hoyle Area, just south of the cantonment area. During the early history of the EA, this area was under the control of Fort Hoyle. Munitions fired into the area primarily would have been HE, smoke, riot control, and incendiary-type munitions; however, lethal agent-filled munitions may have been fired into the area during the 1920s and 1930s. A few drums and a water-filled pit were found in the area. In one area, tire stopper blocks were associated with empty drums. The drums appeared to be of 1960s to 1980s vintage and contained fuel for smoke generators related to training activities. As of February 2007, RI surface water, sediment, soil, DPT and groundwater sampling had been completed at the site and no contaminants or contributing sources had been detected.

The RI was completed in 2014. The HHRA identified potential concerns for future resident exposure to media in Area 2, primarily due to exposure to groundwater as a tap water source. This was driven by perchlorate in cluster 26 groundwater. One hot spot of PAHs in sediment at the Rifle Range was also identified as driving risk to residents and trespassers; however, no PAHs were detected in a sediment sample collected from the same location during a subsequent sampling event. No other concerns were identified in the HHRA. Because the data quality objectives were developed based on future military/industrial land usage, the number and spatial distribution of environmental samples, while appropriate for that land use, are not sufficient to conclude that there are no unidentified areas of elevated constituents that could pose risk to hypothetical future residents. If land use changes are contemplated in the future, additional investigations may be required.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is soil removal and LUCs. LTM consists of LUCs to be conducted in-house at no cost. The LTM phase will be opened when RC is achieved. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: K-FIELD PISTOL RANGE CLUSTER 51

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199912.....	201107
RD.....	199912.....	201109
RA(C).....	199912.....	201210
LTM.....	201210.....	204310

RIP Date: N/A

RC Date: 201210

SITE DESCRIPTION

Cluster 51 (K-Field Pistol Range) is located within the Wright Creek investigation area. The range is bordered by the Gunpowder River shoreline and Hoadley Road, at the intersection of Hoadley and Gansz Roads. The range was established during WWII for training and recreational purposes and was probably used until the 1960s or early-1970s. The firing at the range was toward the Gunpowder River, with the designated danger zone extending more than a mile over the river. Operations at the range would not have generated waste other than general refuse by the persons using the range. Expended rounds would have impacted in the Gunpowder River and in the soil on the range. Small quantities of gun cleaning materials with solvents would have been handled at the site.

The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. The solvent tetrachloroethylene (PCE) was detected at a concentration of 3 ppb, and the chemical agent degradation product MPA was detected at 24,000 ppb at the south end of the site, during Phase I DPT groundwater sampling activities. The PCE detections were repeated during Phase II sampling. Additional groundwater sampling conducted in the fall 2003 indicates that areas of contamination are isolated and previously detected levels are at the maximum concentrations.

The RI surface soil samples indicated elevated metals, SVOCs, and pesticides in the northern area of Cluster 51. Additional groundwater and media sampling was completed in FY04. Sediment samples collected offshore of the site did not indicate metals contamination.

The RI was completed in 2011. No human health risks were noted. No further environmental investigations for the entire Wright Creek Investigation Area was warranted based on projected future land use (industrial). If land use changes occur in the future, additional investigations may be required.

The final ROD was completed in 2011 followed by RACR in October 2012. The selected remedy was LUCs to prevent future residential land use.

CLEANUP/EXIT STRATEGY

LUCs will be completed in-house at no cost. Five-year review costs are captured under AEDB-R site EABR00.

Site Name: I-FIELD IMPACT AREA CLUSTER 53

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199912.....	204603

RIP Date: N/A

RC Date: 204603

SITE DESCRIPTION

Cluster 53 (east of I-Field Impact area) is located within the Boone Creek investigation area. The I-Field Impact area is an active area of approximately 200 acres of graded bare soil, sloping southeast to the Chesapeake Bay. There is a disposal area near the shoreline southeast of the impact area. In the past, some on-site test materials (spent munitions, munitions fragments, and miscellaneous fluid containers) may have been placed in the disposal area. There is a riparian zone between the bare soil impact area and the Chesapeake Bay shoreline. Part of the disposal site is being exposed by shoreline erosion. The RI strategic plan media (surface water, sediment, and surface soil) and groundwater sampling has been completed. RDX was detected in Phase I and II strategic plan DPT groundwater samples. Test dig activities conducted along the shoreline confirmed moderate waste disposal and delineated the extent of the disposal. As of February 2008, groundwater sample results did not detect RDX. Site characterization of the waste material along the I-Field shoreline was completed in 2007. Site characterization sampling was conducted in 2009.

In 2014, the PP for this site was finalized. Residential LUCs were the preferred alternative.

CLEANUP/EXIT STRATEGY

The ROD, RD, RA(C) and LTM will be completed. The anticipated remedy is LUCs. LUCs will be completed in-house at no cost. LTM phase will be opened when RC has been achieved. Five-year reviews will be covered under AEDB-R site EABR00.

Site ID: EAOF01

Site Name: OLD O-FIELD GWTS-OU1

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Explosives, Metals, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	201712
RD.....	199109.....	201712
IRA.....	199206.....	201712
RA(C).....	199206.....	201712
RA(O).....	199504.....	204606

RIP Date: 201712

RC Date: 204606

SITE DESCRIPTION

There is a plume of contaminated groundwater extending from the source area (EAOF02) to Watson Creek (EAOF03) in a shallow water table and a shallow confined aquifer, beneath Old O-Field, located in the APG-EA. The source of contamination is an area of about 4.5 acres which was used during the 1940s and 1950s to dispose of chemical warfare agents, munitions, contaminated equipment, and miscellaneous wastes. Groundwater contaminants include chemical warfare agent degradation products, various metals, chlorinated aliphatic hydrocarbons, and aromatic and nitro-aromatic compounds.

In September 1991, an interim ROD was signed to address this contamination. The prescribed remedy was the installation of downgradient extraction wells to contain affected groundwater and the construction of an on-site groundwater treatment facility (GWTF). The treatment train in the GWTF includes chemical precipitation for metals removal and ultraviolet oxidation, followed by liquid phase carbon absorption for treatment of VOCs. The treated groundwater is discharged to the Gunpowder River. An ESD was signed by the USEPA in March 2005. The ESD addresses non-pumping of the upper confined aquifer and details the modified organics treatment system, modifications to the frequency of toxicity testing and effluent sample collection, and the "batch" treatment of liquid investigation-derived material from other areas of APG. Additional remedial technologies were evaluated in FY08.

A treatment plant polymer system upgrade was completed in FY11. A bio-reactor treatment technology study was also conducted in FY11-FY12.

CLEANUP/EXIT STRATEGY

The RI/FS, IRA, PP, ROD, RD, RA(C) and RA(O) will be completed. It is anticipated that the interim remedy will become the final remedy - the O&M of GWTF to contain and treat contaminated groundwater. The five-year review costs for this site are captured under AEDB-R site EABR00.

Site Name: OLD O-FIELD SOURCE AREA-OU2

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Metals, Munitions and explosives of concern (MEC), Volatiles (VOC)

Media of Concern: Other (Air), Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198912.....	201709
IRA.....	199506.....	201709
LTM.....	201709.....	204712

RIP Date: N/A

RC Date: 201709

SITE DESCRIPTION

The Old O-Field Source area is a 4.5-acre disposal site located adjacent to Watson Creek (EAOF03) in the APG-EA. The area was first used in the early-1940s for periodic disposal of waste materials from US Army operations. From 1942 to 1953, unlined and uncovered pits and trenches were dug and used to dispose of bulk chemical agents, munitions, contaminated equipment, and miscellaneous hazardous waste. Disposed materials included lethal chemical agents, incapacitating agents, smoke incendiary materials, and explosive compounds.

In September 1994, an interim ROD was signed to address the potential for an accidental release of chemicals into the air. The components of the selected remedy included the construction of a permeable sand cover over the landfill, designed to mitigate potential explosions and air releases of chemical agents. In September 1998, construction of the cover was completed. Studies to integrate the permeable cover (EAOF02) and the GWTF (EAOF01) into one final remedy for the site have been completed. On Sept. 14, 2005, an ESD for the interim action for EAOF02 was signed by the USEPA. The ESD addresses no utilization of the subsurface air monitoring system, no utilization of the surface sprinklers for a treatability study, and addition of a subsurface trickling system. Additional remedial technologies were evaluated in FY08, but none were implemented. The cap continues to be maintained while the final PP and ROD are being completed.

CLEANUP/EXIT STRATEGY

The final PP and ROD will be completed followed by LTM (no RD or RA(C) phases needed because the remedy has already been designed and installed as an interim remedy). Actions include the maintenance of the permeable cap and continuation of the GWTF. It is anticipated that the interim remedy will become the final remedy. The five-year review costs for this site are captured under AEDB-R site EABR00.

Site Name: WATSON CREEK SEDIMENT & SW-OU3

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Other (UXO), Pesticides

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	199709
RD.....	199707.....	199709
RA(C).....	199709.....	199810
LTM.....	199810.....	204609

RIP Date: N/A

RC Date: 199810

SITE DESCRIPTION

Watson Creek is a 60-acre estuarine water body located adjacent to the Old O-Field Source area (EAOF02) in the APG-EA. Watson Creek receives surface water runoff and groundwater discharge from O-Field (EAOF01, EAOF02 and EAOF04) and other adjacent range areas. Watson Creek discharges to the Gunpowder River, which in turn drains into the Chesapeake Bay.

Sampling performed during the RI detected metals and pesticides in the Watson Creek sediments at concentrations that posed potential adverse effects to benthic communities. There is an additional potential risk to human health from the possible presence of ordnance in Watson Creek.

In September 1997, the final ROD for Watson Creek was signed. Limited action was selected as the most appropriate remedy. This involves the implementation of institutional controls, public education programs, LTM of site conditions, and five-year reviews. Monitoring activities included sediment sampling for chemical and bioassay analysis, fish tissue bioaccumulation studies, and storm monitoring. In 1999 a bathymetry study was completed. The sampling frequency has been reduced to every five years.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. LTM consists of sediment sampling every five years and LUC monitoring and maintenance. Five-year review costs are covered under AEDB-R site EABR00.

Site Name: NEW O-FIELD GW AND SOURCE AREA-OU4

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Dioxins/Dibenzofurans, Metals, Munitions and explosives of concern (MEC), Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	200909
RD.....	200803.....	200909
IRA.....	200110.....	200504
RA(C).....	200809.....	201204
RA(O).....	200912.....	204609
RIP Date:	201204	
RC Date:	204609	

SITE DESCRIPTION

New O-Field, located in the APG-EA, was used from 1950 to the late-1970s as a destruction, disposal and training area. Disposed materials reportedly included explosives, acids, research samples, mustard and WP-filled shells, other CWM. Burning in trenches was the primary disposal method. There are 10 covered former disposal/burn trenches at the site and two open burn trenches remain. In April 1997, a brush fire exposed previously unknown disposed materials including construction waste, UXO, burn pit pushout, and potential CWM. The newly exposed materials more than doubled the size of the disposal area previously defined as New O-Field, from approximately five acres to upwards of 20 acres.

Contaminants identified during the RI include metals, solvents, PAHs, pesticides, dioxins/furans, CWM degradation products, and explosives in the soil, surface water, sediment and groundwater. To mitigate the risk in the marsh and to reduce further degradation of the site groundwater, non-TCRA were initiated in 2001 within the pushout area of the marsh. In 2005 the removal actions were completed. Supplemental sampling from 2001 through 2004 was conducted in support of the groundwater natural attenuation assessment and ERA. According to historical records, limited disposal may have occurred in the 1940s in an area west of Watson Creek Road (referred to as Other O-field areas). A field investigation, including geophysical surveys, DPT groundwater sampling, and surface soil/sediment sampling was completed in FY04. The RI Addendum for Other O-Field areas was completed in November 2006. Arsenic was the only inorganic detected above its industrial soil screening level (at a maximum concentration of 5.6 mg/kg), but it was within the range of reference background levels.

The ROD was signed in July 2009. The RAs included capping trench areas, implementing institutional controls, continuing groundwater monitoring, installation of fence/warning sign, and construction of a wetlands, sediment cover, and groundwater bioenhancement barrier.

CLEANUP/EXIT STRATEGY

RA(O) will continue into the foreseeable future. RA(O) includes groundwater and wetland monitoring, maintenance of the landfill cover, groundwater bio-enhancement barrier and LUCs. Five-year review costs are covered under AEDB-R site EABR00.

Site ID: EAWW00

Site Name: WESTWOOD AREA

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Other (Inorganic compounds), Radionuclides, Volatiles (VOC)

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

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	199001.....	200709
LTM.....	200807.....	204609

RIP Date: N/A

RC Date: 200709

SITE DESCRIPTION

The WSA was used from 1918 to the 1970s for a variety of testing and training activities, material storage, manufacturing and munitions assembly operations, and waste disposal activities. During the WWII era, a portion of the WSA west of Reardon Inlet was an impact area for incendiary bomb testing and for the static testing of bombs and grenades. Additional work west of Reardon Inlet included mustard contamination/decontamination, demilitarization, sealed source radiological testing and training activities, and radiological waste processing operations. East of Reardon Inlet contained chlorine and gas mask manufacturing facilities, laboratories, radiological vulnerability test sites, and storage areas. COC within the WSA include VOCs, inorganic compounds, and radiological compounds.

Mercury was discovered in Building E5695 in 2011. An inspection was conducted under the LTM phase to determine if there was a release. No release was identified during the inspection.

All Westwood AEDB-R sites were closed and incorporated into site EAWW00.

CLEANUP/EXIT STRATEGY

LTM will continue into the foreseeable future. WSA LTM activities include soil cover maintenance in one area, groundwater monitoring as needed and shoreline stabilization inspections. Five-year review costs are covered under AEDB-R site EABR00.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
AAOA04	OTHER ABERDEEN AREAS-SPILL SITE AREAS	200512	DD Jan 2006, No Further Action Required
AAOA05	INFECTIOUS WASTE INCINERATOR	200512	DD January 2006, Not Eligible for ER,A/Base Realignment and Closure (BRAC) Funding
AAOA06	GERMAN AMMUNITION TRAIN EXPLOSION AREA	200708	Final ROD August 2007, Study Completed, No Cleanup Required.
AAOA07	OTHER ABERDEEN AREAS-STORAGE AREAS	200512	DD January 2006, All required cleanups completed.
AAOA10	OTHER ABERDEEN AREAS-WASHRACKS	200512	Final DD January 2006, No action
AAOA11	OTHER ABERDEEN AREAS-WASTE TREATMENT PLT	200512	DD January 2006, Not Eligible for ER,A/ Base Realignment and Closure (BRAC) Funding
AAOA12	OTHER ABERDEEN AREAS-FIRING RANGES	201006	
AAOA13	CSTA BURIED DRUM SITE - BLDG 896	200512	DD January 2006, Not Eligible for ER,A/BRAC Funding
AAOA14	WP MUNITIONS LAND BURIAL AREA	200708	Not Eligible for ER,A/BRAC Funding
AAWB03	FIRE TRAINING AREA	199506	Not Eligible for ER,A/BRAC Funding
AAWP01	WP UNDERWATER MUNITIONS BURIAL	199109	Final ROD 1 Mar 1997, Study Completed, No Cleanup Required
APGSC00	SHORELINE CLEAN-UP	199709	No Further Action Required
EABR15-D	SURFICIAL AQUIFER - CLUSTER 15	201102	
EACC3M-B	B-FIELD DECON-DETOX INCINERATOR-CL 3M	200009	Not Eligible for ER,A/BRAC Funding
EACC6	HMF/UST REMOVAL/CLOSURE	200212	DD April 2000, All Required Cleanups Completed
EACC7	UNEXPLODED ORDNANCE/CWM	198912	Not Eligible for ER,A/BRAC Funding
EACI01-A	BENGIES POINT RD. DUMP-CLUSTER 1	199912	ROD CI (OUA) SEPT 96. All Required Cleanups Completed
EACI01-B	BENGIES POINT ROAD FARM HOUSE-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI01-C	OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1	199912	ROD CI (OUA) SEPT 96. All Required Cleanups Completed.
EACI01-D	AOC ASSOCIATED WITH SITE 10-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI02-A	SERVICE AREA-CLUSTER 2	199912	ROD CI (OUA) SEPT 96. No Further Action Required.
EACI02-B	DREDGE SPOIL SITE-CLUSTER 2	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI02-C	WOODS W OF SERV AREA-AOC ASSO W. SITE 13	199912	ROD CI (OUA) SEPT 96. All Required Cleanups Completed.
EACI03	EPG DUMP-CLUSTER 3	199912	ROD CI (OUA) SEPT 96. No Further Action Required.
EACI04-A	AERIAL SPRAY GRID-CLUSTER 4	199709	ROD CI (OUA) SEPT 97. No Further Action Required.
EACI04-B	DECONTAMINATION PITS-CLUSTER 4	199912	ROD CI (OUA) SEPT 98. All Required Cleanups Completed.
EACI04-C	WOODS WEST OF AERIAL SPRAY GRID	199912	ROD CI & GQ (OUB) May 2001. All Required Cleanups Completed.
EACI04-D	BZ TEST BURN PITS-CLUSTER 4	199912	ROD CI (OUA) SEPT 96. All Required Cleanups Completed
EACI05-A	TEST GRID 1-CLUSTER 5	199709	ROD CI (OUA) SEPT 96. No Further Action Required.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
EACI05-B	MAGAZINE AREA-CLUSTER 5	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI05-C	ANIMAL SHELTER-CLUSTER 5	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI05-D	A-SHELTER WDS EAST OF TEST GRID 1-CLU 5	199912	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI05-E	PUSH-B MNDS N & E OF TEST GRID 1-CLU 5	199912	ROD CI (OUA) SEPT 96. No Further Action Required.
EACI06-A	WIND TUNNEL-CLUSTER 6	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI06-B	WOODS SOUTH OF WIND TUNNEL ROAD	199912	ROD CI (OUA) SEPT 96. No Further Action Required.
EACI06-C	UST AT WIND TUNNEL-CLUSTER 6	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI06-D	CS TEST AREA-CLUSTER 6	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI06-E	CS TST AREA MDS-AOC ASSO W. SITE 12-CL 6	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI07-A	VX TEST AREA-CLUSTER 7	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI07-B	TEST GRID 2-CLUSTER 7	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI07-C	HD TEST AREA & AREAS EAST-CLUSTER 7	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EACI08	DISPOSAL SITE-CLUSTER 8	200006	ROD CI (OUA) SEPT 96. No Further Action Required.
EAGQ01-A	DISPOSAL AREA-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-B	GRACES QUARTERS DUMP-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-C	BUNKERS SITE-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-D	FEMA SERVICE AREA-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-E	FEMA BUNKER-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-F	AOC ASSOCIATED WITH SITE 4	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-G	HD TEST ANNULI-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-H	TEST HUTS-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ01-I	SECONDARY TEST AREA-CLUSTER 1	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ02-A	NORTHERN PERIMETER DUMP-CLUSTER 2	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ02-B	S & SW PERIMETER DUMP-CLUSTER 2	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ02-C	PRIMARY TEST AREA-CLUSTER 2	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ03-A	SERVICE AREA-CLUSTER 3	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ03-B	DUGAWAY PROVING GROUND TEST SITE-CL 3	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ03-C	AOC ASSOCIATED WITH SITE 8-CLUSTER 3	199709	ROD CI & GQ (OUB) May 2001. No

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Further Action Required.
EAGQ03-D	DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAGQ03-E	USTS AT SERVICE AREAS-CLUSTER 3	199709	ROD CI & GQ (OUB) May 2001. No Further Action Required.
EAJF01	WHITE PHOSPHORUS BURNING PIT	200909	
EAJF02	PROTOTYPE BUILDING	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF03	CS/CN AREA (RIOT CONTROL BURNING PITS)	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF04	ROBINS POINT DEMO. GROUND	200209	Active RCRA Unit
EAJF05	TOXIC BURNING PIT	200112	
EAJF05-A	TBP-SOUTHERN MAIN PITS OVERALL	200111	Final ROD Sept 1996, No Further Funding Required
EAJF05-B	TBP-SURFICIAL AQUIFER	200211	Final ROD Dec 2001, No Further Funding Required
EAJF06	SOUTH BEACH DEMOLITION GROUND	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF07	SOUTH BEACH TRENCH	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF08	X1 RUINS SITE SW OF INTERSECTION	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF09	DRAINAGE GRID-AREA A	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF10	FORD'S POINT FIRING RANGE-AREA B	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF11	RUINS SITE NE OF INTERSECTION-AREA C	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF12	RUINS SITE ACROSS RD FROM WPP (RNS SITE)	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF13	SWAMP 400' E OF RUINS SITE-AREA D	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EAJF14	ROBINS POINT TOWER SITE	200103	Final ROD Dec 2001, Study Completed, No Cleanup Required
EALC00	LAUDERICK CREEK	200405	DD January 1998, All Required Cleanups Completed
EALC05-A	NIKE EAST WOODS SITE 6-CLUSTER 5	199911	ROD OLCC Aug 04. Study Completed, No Cleanup Required.
EALC05-B	CONCRETE SLAB TEST AREA-CLUSTER 5	199911	ROD OLCC Aug 04. No Further Action Required.
EALC05-C	CONCRETE SLAB DUMP AREA 1-CLUSTER 5	201209	
EALC05-D	CONCRETE SLAB DUMP AREA 2-CLUSTER 5	200009	Final ROD August 2004, No Further Action Required
EALC09-A	NIKE CONTROL DRY WELLS(4)-CLUSTER 9	199911	Final ROD August 2004, Study Completed, No Cleanup Required
EALC09-B	NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9	200011	Final ROD August 2004, No Further Action Required
EALC09-C	NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9	199911	DD March 1993, Study Completed, No Cleanup Required
EALC09-D	NIKE EAST WOODS SITE 1-CLUSTER 9	199911	Final ROD August 2004, Study Completed, No Cleanup Required
EALC13-A	SCHOOL FLD NO I TEST AREAS(2)-CLU 13	199909	DD January 1994, All Required Cleanups Completed

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
EALC13-B	SCHOOL FIELD NO II DUMPS-CLUSTER 13	199909	DD January 1994, All Required Cleanups Completed
EALC13-C	UNDERGROUND STORAGE TANKS-CLUSTER 13	199909	DD March 1993, All Required Cleanups Completed
EALC17-A	EAST WOODS DISPOSAL AREA-CLUSTER 17	199911	Final ROD August 2004, Study Completed, No Cleanup Required
EALC20	SCHOOL FIELD NO III TEST AREA-CLUSTER 20	199911	Final ROD August 2004, Study Completed, No Cleanup Required
EALC32	GUM POINT DREDGE SPOILS-CLUSTER 32	199911	Final ROD August 2004, No Further Action Required
EALC33	MONKS CREEK FARM SITE-CLUSTER 33	199911	Final ROD August 2004, Study Completed, No Cleanup Required
EANS01-B	CONFINED GROUNDWATER	199609	Final RI Report March 1995, Study Completed, No Cleanup Required
EANS01-C	LAUNCH AREA SEPTIC SYSTEM	199711	Final ROD September 1996, All Required Cleanups Completed
EANS01-F	UNDERGROUND FUEL TANK (E6871)	199609	Final ROD September 1996, Study Completed, No Cleanup Required
EANS01-G	UNDERGROUND FUEL TANKS BARRACKS AREA	199609	DD March 1993, Study Completed, No Cleanup Required
EANS01-H	NIKE BARRACKS SEPTIC SYSTEM	199609	DD January 1994, Study Completed, No Cleanup Required
EANS01-I	LAUNCH SURFACE DRAINAGE SYSTEM	199609	Final RI Report March 1995, Study Completed, No Cleanup Required
EANS01-J	BERMS & DISTURBED SOIL AREAS	199609	Final RI Report March 1995, Study Completed, No Cleanup Required
EANS01-K	SCHOOL FIELD IV	199609	DD January 1994, All Required Cleanups Completed
EAOE43	M-FIELD GRENADE RANGE CLUSTER 43	201009	
EAOE45	E-FLD LEGO POINT IMPACT AREA CLUSTER 45	201009	
EAOE49	L-FIELD OLD BUSH RIVER DOCK CLUSTER 49	201009	
EAOE52	MAXWELL POINT RIFLE RANGE CLUSTER 52	201009	
EAOE54	I-FIELD SMOKE POT BURIAL SITE CLUSTER 54	201503	
EAPP00	BUILDING E5625-PILOT PLANT	199610	Not Eligible for ER,A/BRAC Funding
EAWW02-A	MATERIAL STORAGE/RAD TEST SITE	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW02-B	GROUND SCAR AREA-CLUSTER 2	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW02-C	OPEN GRAVEL DEPRESSION-CLUSTER 2	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW02-D	MOUNDS-CLUSTER 2	200807	Final ROD July 2007
EAWW02-E	DISPOSAL/BURN PITS	200709	Final ROD, 26 Sep 2006.
EAWW06	RAD MAT'L DISPOSAL FACILITY/DEMIL SITE	200709	Final ROD, 26 Sep 2006.
EAWW10-A	ROADS END DISPOSAL SITE-CLUSTER 10	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW10-B	HOG POINT SITE-CLUSTER 10	200809	Final ROD, July 2007
EAWW10-C	PINEY POINT SITE-CLUSTER 10	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW10-D	LINEAR FEATURES SITE-CLUSTER 10	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
EAWW10-E	IMPOUNDMENT SITE-CLUSTER 10	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW10-F	WETLAND SITE-CLUSTER 10	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW14-A	BLDG E-5770 AREA/MAGNOLIA RD RAD. TEST	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW14-B	BLDG E-5695 AREA-CLUSTER 14	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW14-C	GAS MASK FACTORY/WWI CHLORINE PLANT	200709	Final ROD, 26 Sep 2006.
EAWW21-A	SAN DOMINGO ORD. BURIAL PIT-CLUSTER 21	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW21-B	SAN DOMINGO MUNITIONS PLANT-CLUSTER 21	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW21-C	BUILDING E5664-CLUSTER 21	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW21-D	BUILDING E5830 LANDFILL-CLUSTER 21	200509	ROD (Dec 2005) for site closure approved by USEPA on 17 Jan 2006.
EAWW21-E	WWI CHLORINE PLANT DUMP - CLUSTER 21	200709	Final ROD, 26 Sep 2006.
PBC at APG	PBC sites	201603	

IRP Schedule

Date of IRP Inception: 197606

Past Phase Completion Milestones

1989

SI (AAOA04 - OTHER ABERDEEN AREAS-SPILL SITE AREAS, AAWB03 - FIRE TRAINING AREA)
PA (AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE), AAML02 - MICHAELSVILLE LANDFILL-OU2 (GW), AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS, AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS, AAOA03 - OTHER ABERDEEN AREAS-DRAINAGE DITCHS, AAOA04 - OTHER ABERDEEN AREAS-SPILL SITE AREAS, AAOA05 - INFECTIOUS WASTE INCINERATOR, AAOA06 - GERMAN AMMUNITION TRAIN EXPLOSION AREA, AAOA07 - OTHER ABERDEEN AREAS-STORAGE AREAS, AAOA08 - OTHER ABERDEEN AREAS- GW Sites, AAOA10 - OTHER ABERDEEN AREAS-WASHRACKS, AAOA11 - OTHER ABERDEEN AREAS-WASTE TREATMENT PLT, AAOA12 - OTHER ABERDEEN AREAS-FIRING RANGES, AAOA13 - CSTA BURIED DRUM SITE - BLDG 896, AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, AAWB02 - PAAF LANDFILL/CITY OF ABERDEEN WELLS-OU2, AAWB03 - FIRE TRAINING AREA, AAWB04 - OTHER MEDIA OU3(SW, SED, SOIL), AAWP01 - WP UNDERWATER MUNITIONS BURIAL)

1990

IRA (AAOA13 - CSTA BURIED DRUM SITE - BLDG 896)
PA (APGSC00 - SHORELINE CLEAN-UP, EABR00 - Bush River Area, EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EABR03-B - TRANSFORMER STORAGE-CLUSTER 3, EABR03-C - SURFICIAL AQUIFER-CLUSTER 3, EABR07-A - BOAT CLUB FILL SITE(4)-CLUSTER 7, EABR07-B - BIO-SENSOR FACILITY-CLUSTER 7, EABR11-A - 26TH STREET DISPOSAL SITE (1)-CLUSTER 11, EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11, EABR11-C - 22ND STREET LANDFILL-CLUSTER 11, EABR11-D - BLDG 45-A AMMO RENOVATION FCTY-CLU 11, EABR11-E - CASY INCINERATOR-CLUSTER 11, EABR11-F - SURFICIAL AQUIFER-CLUSTER 11, EABR11-G - UNDERGROUND STORAGE TANK, EABR11-H - ADAMSITE STORAGE PIT - CLUSTER 11, EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, EABR15-C - TON CONTAINER STORAGE-CLUSTER 15, EABR15-D - SURFICIAL AQUIFER - CLUSTER 15, EABR18-A - TAPLER PT DREDGE MATERIAL SITE-CLU 18, EABR18-B - CHEM MUNITION BURIAL SITE(4)-CLUSTER 18, EABR18-C - IGLOO STORAGE AREAS-CLUSTER 18, EABR18-D - A-FIELD TEST SITE(2)-CLUSTER 18, EABR18-E - BUSH RIVER DOCK(E2396)-CLUSTER 18, EABR18-F - SURFICIAL AQUIFER - CLUSTER 18, EABR35-A - MAINTENANCE YARD-CLUSTER 35, EABR35-B - BLDG E2144/2148/2150-CLUSTER 35, EABR36-A - WAREHOUSE STORAGE AREAS-CLUSTER 36, EABR36-B - BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36, EACC1A-A - RAILROAD YARD-CLUSTER 1A, EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EACC1D - DM FILLING PLANT-CLUSTER 1D, EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1F-A - BUILDING E5604 AREA-CLUSTER 1F, EACC1F-B - BLDG 80 SERIES SMOKE LABS-CLUSTER 1F, EACC1G-A - BLDG E5185 WWII MTD FILLING PNT-CLU 1G, EACC1G-B - BLDG E5188 WP FILLING PNT-CLUSTER 1G, EACC1H-A - 1937 MUSTARD DISPOSAL PIT-CLUSTER 1H, EACC1H-B - WWII CHLORINE PLANT-CLUSTER 1H, EACC1H-C - BLDG E5483 PROTECT CLOTH LDY-CLUSTER 1H, EACC1H-D - PHOSGENE PLANT AREA-CLUSTER 1H, EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H, EACC1H-F - EXPR CHEM PLANT AREA-CLUSTER 1H, EACC1H-G - MUSTARD PLANT AREA-CLUSTER 1H, EACC1I-A - BUILDING 106/107 AREA-CLUSTER 1I, EACC1I-B - BLDG 113 GAS INST CHAMBER-CLUSTER 1I, EACC1J - LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1, EACC1K - CANAL CRK MARSH AND LANDFILL-CLUSTER 1K, EACC1L-A - BLDG 503 SMK MIX BURNING SITES-CLU 1L, EACC1L-B - BUILDING 503 SMOKE POT PLANT-CLUSTER 1L, EACC2A - OLD HOSP AND ADMIN AREA-CLUSTER 2A, EACC2B - BLDG E5023 WWI WP FILLING PNT-CLU 2B, EACC2C - BLDG E5238 CLOTH IMPREG FCLY-CLU 2C, EACC2D - LAB TOXIC WASTE DISPOSAL PITS-CLU 2D, EACC2E - NOBLE ROAD INCINERATORS-CLUSTER 2E, EACC2F - BLDG 99 (E5032) EXP FILLING PNT-CLU 2F, EACC2G - BLDG E5103 PHOTO LAB-CLUSTER 2G, EACC2H-A - BLDG 501 FILLING PNT/E5100 LAB-CLU 2H, EACC2H-B - WWI SHELL DUMPS-CLUSTER 2H, EACC2H-C - FILLING PLANTS NO 1&2-CLUSTER 2H, EACC2I-A - AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I, EACC2I-B - OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I, EACC3A - LAB TOXIC WASTE DIS PIT-BLDG E3330-CL 3A, EACC3B - BUILDING E2100 LABORATORY-CLUSTER 3B, EACC3C - BLD E32XX/E3100/3081 MED RESH LABS-CL 3C, EACC3D - BUILDING E3160 COMPLEX-CLUSTER 3D, EACC3E - BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E, EACC3F - BUILDING E35XX AREA-CLUSTER 3F, EACC3G - BLDG E360X/E361X/E362X AREA-CLUSTER 3G, EACC3H - E3560 TEST

CHAMBER COMPLEX-CLUSTER 3H, EACC3I - BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I, EACC3J - BLDG E3580 PYROTECH LDG FACILITY-CLU 3J, EACC3K-A - BUILDING E37XX COMPLEX-CLUSTER 3K, EACC3K-B - B-FIELD KINGS CREEK DUMP CLUSTER 3K, EACC3L - BLDG E3640 PROCESS LAB-CLUSTER 3L, EACC3M-A - WASTEWATER TREATMENT AREA-CLUSTER 3M, EACC3M-B - B-FIELD DECON-DETOX INCINERATOR-CL 3M, EACC3N - BEACH POINT TEST SITE-CLUSTER 3N, EACC3O - B-FIELD RANGE AREA-CLUSTER 3O, EACC3P - MOSQUITO TEST GRID AREA-CLUSTER 3P, EACC4A - EAST AREA CC AQUIFER-CLUSTER 4A-A, EACC4A-B - WEST AREA CC AQUIFER-CLUSTER 4A-B, EACC5A - CANAL CREEK BED SED.SOURCE AREA CLUST 5A, EACC5B - KINGS CREEK SEDIMENT PESTICIDE SOURCE AR, EACC6 - HMF/UST REMOVAL/CLOSURE, EACC7 - UNEXPLODED ORDNANCE/CWM, EACI00 - CARROLL ISLAND STUDY AREA, EACI01-A - BENGIES POINT RD. DUMP-CLUSTER 1, EACI01-B - BENGIES POINT ROAD FARM HOUSE-CLUSTER 1, EACI01-C - OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1, EACI01-D - AOC ASSOCIATED WITH SITE 10-CLUSTER 1, EACI02-A - SERVICE AREA-CLUSTER 2, EACI02-B - DREDGE SPOIL SITE-CLUSTER 2, EACI02-C - WOODS W OF SERV AREA-AOC ASSO W. SITE 13, EACI03 - EPG DUMP-CLUSTER 3, EACI04-A - AERIAL SPRAY GRID-CLUSTER 4, EACI04-B - DECONTAMINATION PITS-CLUSTER 4, EACI04-C - WOODS WEST OF AERIAL SPRAY GRID, EACI04-D - BZ TEST BURN PITS-CLUSTER 4, EACI05-A - TEST GRID 1-CLUSTER 5, EACI05-B - MAGAZINE AREA-CLUSTER 5, EACI05-C - ANIMAL SHELTER-CLUSTER 5, EACI05-D - A-SHELTER WDS EAST OF TEST GRID 1-CLU 5, EACI05-E - PUSH-B MNDS N & E OF TEST GRID 1-CLU 5, EACI06-A - WIND TUNNEL-CLUSTER 6, EACI06-B - WOODS SOUTH OF WIND TUNNEL ROAD, EACI06-C - UST AT WIND TUNNEL-CLUSTER 6, EACI06-D - CS TEST AREA-CLUSTER 6, EACI06-E - CS TST AREA MDS-AOC ASSO W. SITE 12-CL 6, EACI07-A - VX TEST AREA-CLUSTER 7, EACI07-B - TEST GRID 2-CLUSTER 7, EACI07-C - HD TEST AREA & AREAS EAST-CLUSTER 7, EACI08 - DISPOSAL SITE-CLUSTER 8, EAGQ00 - GRACES QUARTERS STUDY AREA, EAGQ01-A - DISPOSAL AREA-CLUSTER 1, EAGQ01-B - GRACES QUARTERS DUMP-CLUSTER 1, EAGQ01-C - BUNKERS SITE-CLUSTER 1, EAGQ01-D - FEMA SERVICE AREA-CLUSTER 1, EAGQ01-E - FEMA BUNKER-CLUSTER 1, EAGQ01-F - AOC ASSOCIATED WITH SITE 4, EAGQ01-G - HD TEST ANNULI-CLUSTER 1, EAGQ01-H - TEST HUTS-CLUSTER 1, EAGQ01-I - SECONDARY TEST AREA-CLUSTER 1, EAGQ02-A - NORTHERN PERIMETER DUMP-CLUSTER 2, EAGQ02-B - S & SW PERIMETER DUMP-CLUSTER 2, EAGQ02-C - PRIMARY TEST AREA-CLUSTER 2, EAGQ02-D - SURFICIAL AQUIFER-CLUSTER 2, EAGQ03-A - SERVICE AREA-CLUSTER 3, EAGQ03-B - DUGAWAY PROVING GROUND TEST SITE-CL 3, EAGQ03-C - AOC ASSOCIATED WITH SITE 8-CLUSTER 3, EAGQ03-D - DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3, EAGQ03-E - USTS AT SERVICE AREAS-CLUSTER 3, EAJF00 - J-FIELD STUDY AREA, EAJF01 - WHITE PHOSPHORUS BURNING PIT, EAJF02 - PROTOTYPE BUILDING, EAJF03 - CS/CN AREA (RIOT CONTROL BURNING PITS), EAJF04 - ROBINS POINT DEMO. GROUND, EAJF05 - TOXIC BURNING PIT, EAJF05-A - TBP-SOUTHERN MAIN PITS OVERALL, EAJF05-B - TBP-SURFICIAL AQUIFER, EAJF06 - SOUTH BEACH DEMOLITION GROUND, EAJF07 - SOUTH BEACH TRENCH, EAJF08 - X1 RUINS SITE SW OF INTERSECTION, EAJF09 - DRAINAGE GRID-AREA A, EAJF10 - FORD'S POINT FIRING RANGE-AREA B, EAJF11 - RUINS SITE NE OF INTERSECTION-AREA C, EAJF12 - RUINS SITE ACROSS RD FROM WPP (RNS SITE), EAJF13 - SWAMP 400' E OF RUINS SITE-AREA D, EAJF14 - ROBINS POINT TOWER SITE, EALC00 - LAUDERICK CREEK, EALC05-A - NIKE EAST WOODS SITE 6-CLUSTER 5, EALC05-B - CONCRETE SLAB TEST AREA-CLUSTER 5, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5, EALC05-D - CONCRETE SLAB DUMP AREA 2-CLUSTER 5, EALC09-A - NIKE CONTROL DRY WELLS(4)-CLUSTER 9, EALC09-B - NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9, EALC09-C - NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9, EALC09-D - NIKE EAST WOODS SITE 1-CLUSTER 9, EALC09-F - SURFICIAL AQUIFER-CLUSTER 9, EALC13-A - SCHOOL FLD NO I TEST AREAS(2)-CLU 13, EALC13-B - SCHOOL FIELD NO II DUMPS-CLUSTER 13, EALC13-C - UNDERGROUND STORAGE TANKS-CLUSTER 13, EALC13-D - SURFICIAL AQUIFER-CLUSTER 13, EALC17-A - EAST WOODS DISPOSAL AREA-CLUSTER 17, EALC20 - SCHOOL FIELD NO III TEST AREA-CLUSTER 20, EALC32 - GUM POINT DREDGE SPOILS-CLUSTER 32, EALC33 - MONKS CREEK FARM SITE-CLUSTER 33, EANS01-A - UNCONFINED GROUNDWATER, EANS01-B - CONFINED GROUNDWATER, EANS01-C - LAUNCH AREA SEPTIC SYSTEM, EANS01-D - SOUTHWEST LAUNCH LANDFILL., EANS01-F - UNDERGROUND FUEL TANK (E6871), EANS01-G - UNDERGROUND FUEL TANKS BARRACKS AREA, EANS01-H - NIKE BARRACKS SEPTIC SYSTEM, EANS01-I - LAUNCH SURFACE DRAINAGE SYSTEM, EANS01-J - BERMS &

DISTURBED SOIL AREAS, EANS01-K - SCHOOL FIELD IV, EAOE04 - D-FIELD AERIAL SPRAY GRID-CLUSTER 4, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8, EAOE12 - H-FIELD WASH RACK AND STORAGE AREA-CL 12, EAOE16 - M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16, EAOE19 - FORT HOYLE TRAINING AREA-CLUSTER 19, EAOE22 - L-FLD DEMO AND PROPELL DISP SITE-CLU 22, EAOE23 - I-FIELD JAPANESE BUNKER AREA CLUSTER 23, EAOE24 - M-FLD SOUTHEAST TEST AND BURN AREA CL 24, EAOE26 - M-FLD TUNNELS AND TEST SLAB AREA CLU 26, EAOE27 - M-FIELD PRE-WWII AGENT TEST SITE CLU 27, EAOE28 - H-FIELD CONCRETE TARGET AREA CLUSTER 28, EAOE29 - MAXWELL POINT TEST SITE CLUSTER 29, EAOE30 - C-FIELD MUNITIONS BURIAL SITE CLUSTER 30, EAOE31 - H-FIELD TANK TEST RANGE CLUSTER 31, EAOE37 - D-FLD CHEMICAL AGENT TEST GRID CLU 37, EAOE38 - K-FIELD DEMOLITION FIELD CLUSTER 38, EAOE39 - C-FIELD WASTEWATER SYSTEM CLUSTER 39, EAOE41 - G-FIELD TUNNEL COMPLEX CLUSTER 41, EAOE42 - M-FIELD CLOTHING SHACK AREA CLUSTER 42, EAOE43 - M-FIELD GRENADE RANGE CLUSTER 43, EAOE44 - M-FIELD BOMLET PROJECTOR CLUSTER 44, EAOE45 - E-FLD LEGO POINT IMPACT AREA CLUSTER 45, EAOE46 - E-FIELD DREDGE SPOIL AREA CLUSTER 46, EAOE49 - L-FIELD OLD BUSH RIVER DOCK CLUSTER 49, EAOE50 - G-FIELD TRAINING AREA CLUSTER 50, EAOE51 - K-FIELD PISTOL RANGE CLUSTER 51, EAOE52 - MAXWELL POINT RIFLE RANGE CLUSTER 52, EAOE53 - I-FIELD IMPACT AREA CLUSTER 53, EAOE54 - I-FIELD SMOKE POT BURIAL SITE CLUSTER 54, EAOF01 - OLD O-FIELD GWTS-OU1, EAOF02 - OLD O-FIELD SOURCE AREA-OU2, EAOF03 - WATSON CREEK SEDIMENT & SW-OU3, EAOF04 - NEW O-FIELD GW AND SOURCE AREA-OU4, EAPP00 - BUILDING E5625-PILOT PLANT, EAWW00 - WESTWOOD AREA, EAWW02-A - MATERIAL STORAGE/RAD TEST SITE , EAWW02-B - GROUND SCAR AREA-CLUSTER 2, EAWW02-C - OPEN GRAVEL DEPRESSION-CLUSTER 2, EAWW02-D - MOUNDS-CLUSTER 2, EAWW02-E - DISPOSAL/BURN PITS, EAWW06 - RAD MAT'L DISPOSAL FACILITY/DEMIL SITE , EAWW10-A - ROADS END DISPOSAL SITE-CLUSTER 10, EAWW10-B - HOG POINT SITE-CLUSTER 10, EAWW10-C - PINEY POINT SITE-CLUSTER 10, EAWW10-D - LINEAR FEATURES SITE-CLUSTER 10, EAWW10-E - IMPOUNDMENT SITE-CLUSTER 10, EAWW10-F - WETLAND SITE-CLUSTER 10, EAWW14-A - BLDG E-5770 AREA/MAGNOLIA RD RAD. TEST , EAWW14-B - BLDG E-5695 AREA-CLUSTER 14, EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-A - SAN DOMINGO ORD. BURIAL PIT-CLUSTER 21, EAWW21-B - SAN DOMINGO MUNITIONS PLANT-CLUSTER 21, EAWW21-C - BUILDING E5664-CLUSTER 21, EAWW21-D - BUILDING E5830 LANDFILL-CLUSTER 21, EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21)

(AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE), AAML02 - MICHAELSVILLE LANDFILL-OU2 (GW), AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS, AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS, AAOA03 - OTHER ABERDEEN AREAS-DRAINAGE DITCHS, AAOA05 - INFECTIOUS WASTE INCINERATOR, AAOA06 - GERMAN AMMUNITION TRAIN EXPLOSION AREA, AAOA07 - OTHER ABERDEEN AREAS-STORAGE AREAS, AAOA08 - OTHER ABERDEEN AREAS- GW Sites, AAOA10 - OTHER ABERDEEN AREAS-WASHRACKS, AAOA11 - OTHER ABERDEEN AREAS-WASTE TREATMENT PLT, AAOA12 - OTHER ABERDEEN AREAS-FIRING RANGES, AAOA13 - CSTA BURIED DRUM SITE - BLDG 896, AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, AAWB02 - PAAF LANDFILL/CITY OF ABERDEEN WELLS-OU2, AAWB04 - OTHER MEDIA OU3(SW, SED, SOIL), AAWP01 - WP UNDERWATER MUNITIONS BURIAL, APGSC00 - SHORELINE CLEAN-UP, EABR00 - Bush River Area, EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EABR03-B - TRANSFORMER STORAGE-CLUSTER 3, EABR03-C - SURFICIAL AQUIFER-CLUSTER 3, EABR07-A - BOAT CLUB FILL SITE(4)-CLUSTER 7, EABR07-B - BIO-SENSOR FACILITY-CLUSTER 7, EABR11-A - 26TH STREET DISPOSAL SITE (1)-CLUSTER 11, EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11, EABR11-C - 22ND STREET LANDFILL-CLUSTER 11, EABR11-D - BLDG 45-A AMMO RENOVATION FCTY-CLU 11, EABR11-E - CASY INCINERATOR-CLUSTER 11, EABR11-F - SURFICIAL AQUIFER-CLUSTER 11, EABR11-G - UNDERGROUND STORAGE TANK, EABR11-H - ADAMSITE STORAGE PIT - CLUSTER 11, EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, EABR15-C - TON CONTAINER STORAGE-CLUSTER 15, EABR15-D - SURFICIAL AQUIFER - CLUSTER 15, EABR18-A - TAPLER PT DREDGE MATERIAL SITE-CLU 18, EABR18-B - CHEM MUNITION BURIAL SITE(4)-CLUSTER 18, EABR18-C - IGLOO STORAGE AREAS-CLUSTER 18, EABR18-D - A-FIELD TEST SITE(2)-CLUSTER 18, EABR18-E - BUSH RIVER DOCK(E2396)-CLUSTER 18, EABR18-F - SURFICIAL AQUIFER - CLUSTER 18, EABR35-A -

SI

MAINTENANCE YARD-CLUSTER 35, EABR35-B - BLDG E2144/2148/2150-CLUSTER 35, EABR36-A - WAREHOUSE STORAGE AREAS-CLUSTER 36, EABR36-B - BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36, EACC1A-A - RAILROAD YARD-CLUSTER 1A, EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EACC1D - DM FILLING PLANT-CLUSTER 1D, EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1F-A - BUILDING E5604 AREA-CLUSTER 1F, EACC1F-B - BLDG 80 SERIES SMOKE LABS-CLUSTER 1F, EACC1G-A - BLDG E5185 WWII MTD FILLING PNT-CLU 1G, EACC1G-B - BLDG E5188 WP FILLING PNT-CLUSTER 1G, EACC1H-A - 1937 MUSTARD DISPOSAL PIT-CLUSTER 1H, EACC1H-B - WWII CHLORINE PLANT-CLUSTER 1H, EACC1H-C - BLDG E5483 PROTECT CLOTH LDY-CLUSTER 1H, EACC1H-D - PHOSGENE PLANT AREA-CLUSTER 1H, EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H, EACC1H-F - EXPR CHEM PLANT AREA-CLUSTER 1H, EACC1H-G - MUSTARD PLANT AREA-CLUSTER 1H, EACC1I-A - BUILDING 106/107 AREA-CLUSTER 1I, EACC1I-B - BLDG 113 GAS INST CHAMBER-CLUSTER 1I, EACC1J - LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1, EACC1K - CANAL CRK MARSH AND LANDFILL-CLUSTER 1K, EACC1L-A - BLDG 503 SMK MIX BURNING SITES-CLU 1L, EACC1L-B - BUILDING 503 SMOKE POT PLANT-CLUSTER 1L, EACC2A - OLD HOSP AND ADMIN AREA-CLUSTER 2A, EACC2B - BLDG E5023 WWI WP FILLING PNT-CLU 2B, EACC2C - BLDG E5238 CLOTH IMPREG FCLY-CLU 2C, EACC2D - LAB TOXIC WASTE DISPOSAL PITS-CLU 2D, EACC2E - NOBLE ROAD INCINERATORS-CLUSTER 2E, EACC2F - BLDG 99 (E5032) EXP FILLING PNT-CLU 2F, EACC2G - BLDG E5103 PHOTO LAB-CLUSTER 2G, EACC2H-A - BLDG 501 FILLING PNT/E5100 LAB-CLU 2H, EACC2H-B - WWI SHELL DUMPS-CLUSTER 2H, EACC2H-C - FILLING PLANTS NO 1&2-CLUSTER 2H, EACC2I-A - AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I, EACC2I-B - OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I, EACC3A - LAB TOXIC WASTE DIS PIT-BLDG E3330-CL 3A, EACC3B - BUILDING E2100 LABORATORY-CLUSTER 3B, EACC3C - BLD E32XX/E3100/3081 MED RESH LABS-CL 3C, EACC3D - BUILDING E3160 COMPLEX-CLUSTER 3D, EACC3E - BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E, EACC3F - BUILDING E35XX AREA-CLUSTER 3F, EACC3G - BLDG E360X/E361X/E362X AREA-CLUSTER 3G, EACC3H - E3560 TEST CHAMBER COMPLEX-CLUSTER 3H, EACC3I - BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I, EACC3J - BLDG E3580 PYROTECH LDG FACILITY-CLU 3J, EACC3K-A - BUILDING E37XX COMPLEX-CLUSTER 3K, EACC3K-B - B-FIELD KINGS CREEK DUMP CLUSTER 3K, EACC3L - BLDG E3640 PROCESS LAB-CLUSTER 3L, EACC3M-A - WASTEWATER TREATMENT AREA-CLUSTER 3M, EACC3M-B - B-FIELD DECON-DETOX INCINERATOR-CL 3M, EACC3N - BEACH POINT TEST SITE-CLUSTER 3N, EACC3O - B-FIELD RANGE AREA-CLUSTER 3O, EACC3P - MOSQUITO TEST GRID AREA-CLUSTER 3P, EACC4A - EAST AREA CC AQUIFER-CLUSTER 4A-A, EACC4A-B - WEST AREA CC AQUIFER-CLUSTER 4A-B, EACC5A - CANAL CREEK BED SED.SOURCE AREA CLUST 5A, EACC5B - KINGS CREEK SEDIMENT PESTICIDE SOURCE AR, EACC6 - HMF/UST REMOVAL/CLOSURE, EACC7 - UNEXPLODED ORDNANCE/CWM, EACI00 - CARROLL ISLAND STUDY AREA, EACI01-A - BENGIES POINT RD. DUMP-CLUSTER 1, EACI01-B - BENGIES POINT ROAD FARM HOUSE-CLUSTER 1, EACI01-C - OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1, EACI01-D - AOC ASSOCIATED WITH SITE 10-CLUSTER 1, EACI02-A - SERVICE AREA-CLUSTER 2, EACI02-B - DREDGE SPOIL SITE-CLUSTER 2, EACI02-C - WOODS W OF SERV AREA-AOC ASSO W. SITE 13, EACI03 - EPG DUMP-CLUSTER 3, EACI04-A - AERIAL SPRAY GRID-CLUSTER 4, EACI04-B - DECONTAMINATION PITS-CLUSTER 4, EACI04-C - WOODS WEST OF AERIAL SPRAY GRID, EACI04-D - BZ TEST BURN PITS-CLUSTER 4, EACI05-A - TEST GRID 1-CLUSTER 5, EACI05-B - MAGAZINE AREA-CLUSTER 5, EACI05-C - ANIMAL SHELTER-CLUSTER 5, EACI05-D - A-SHELTER WDS EAST OF TEST GRID 1-CLU 5, EACI05-E - PUSH-B MNDS N & E OF TEST GRID 1-CLU 5, EACI06-A - WIND TUNNEL-CLUSTER 6, EACI06-B - WOODS SOUTH OF WIND TUNNEL ROAD, EACI06-C - UST AT WIND TUNNEL-CLUSTER 6, EACI06-D - CS TEST AREA-CLUSTER 6, EACI06-E - CS TST AREA MDS-AOC ASSO W. SITE 12-CL 6, EACI07-A - VX TEST AREA-CLUSTER 7, EACI07-B - TEST GRID 2-CLUSTER 7, EACI07-C - HD TEST AREA & AREAS EAST-CLUSTER 7, EACI08 - DISPOSAL SITE-CLUSTER 8, EAGQ00 - GRACES QUARTERS STUDY AREA, EAGQ01-A - DISPOSAL AREA-CLUSTER 1, EAGQ01-B - GRACES QUARTERS DUMP-CLUSTER 1, EAGQ01-C - BUNKERS SITE-CLUSTER 1, EAGQ01-D - FEMA SERVICE AREA-CLUSTER 1, EAGQ01-E - FEMA BUNKER-CLUSTER 1, EAGQ01-F - AOC ASSOCIATED WITH SITE 4, EAGQ01-G - HD TEST ANNULI-CLUSTER 1, EAGQ01-H - TEST HUTS-CLUSTER 1, EAGQ01-I - SECONDARY TEST AREA-CLUSTER 1, EAGQ02-A - NORTHERN PERIMETER DUMP-CLUSTER 2, EAGQ02-B - S & SW PERIMETER DUMP-CLUSTER 2, EAGQ02-C - PRIMARY TEST AREA-CLUSTER 2, EAGQ02-D - SURFICIAL AQUIFER-

CLUSTER 2, EAGQ03-A - SERVICE AREA-CLUSTER 3, EAGQ03-B - DUGAWAY PROVING GROUND TEST SITE-CL 3, EAGQ03-C - AOC ASSOCIATED WITH SITE 8-CLUSTER 3, EAGQ03-D - DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3, EAGQ03-E - USTS AT SERVICE AREAS-CLUSTER 3, EAJF00 - J-FIELD STUDY AREA, EAJF01 - WHITE PHOSPHORUS BURNING PIT, EAJF02 - PROTOTYPE BUILDING, EAJF03 - CS/CN AREA (RIOT CONTROL BURNING PITS), EAJF04 - ROBINS POINT DEMO. GROUND, EAJF05 - TOXIC BURNING PIT, EAJF05-A - TBP-SOUTHERN MAIN PITS OVERALL, EAJF05-B - TBP-SURFICIAL AQUIFER, EAJF06 - SOUTH BEACH DEMOLITION GROUND, EAJF07 - SOUTH BEACH TRENCH, EAJF08 - X1 RUINS SITE SW OF INTERSECTION, EAJF09 - DRAINAGE GRID-AREA A, EAJF10 - FORD'S POINT FIRING RANGE-AREA B, EAJF11 - RUINS SITE NE OF INTERSECTION-AREA C, EAJF12 - RUINS SITE ACROSS RD FROM WPP (RNS SITE), EAJF13 - SWAMP 400' E OF RUINS SITE-AREA D, EAJF14 - ROBINS POINT TOWER SITE, EALC00 - LAUDERICK CREEK, EALC05-A - NIKE EAST WOODS SITE 6-CLUSTER 5, EALC05-B - CONCRETE SLAB TEST AREA-CLUSTER 5, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5, EALC05-D - CONCRETE SLAB DUMP AREA 2-CLUSTER 5, EALC09-A - NIKE CONTROL DRY WELLS(4)-CLUSTER 9, EALC09-B - NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9, EALC09-C - NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9, EALC09-D - NIKE EAST WOODS SITE 1-CLUSTER 9, EALC09-F - SURFICIAL AQUIFER-CLUSTER 9, EALC13-A - SCHOOL FLD NO I TEST AREAS(2)-CLU 13, EALC13-B - SCHOOL FIELD NO II DUMPS-CLUSTER 13, EALC13-C - UNDERGROUND STORAGE TANKS-CLUSTER 13, EALC13-D - SURFICIAL AQUIFER-CLUSTER 13, EALC17-A - EAST WOODS DISPOSAL AREA-CLUSTER 17, EALC20 - SCHOOL FIELD NO III TEST AREA-CLUSTER 20, EALC32 - GUM POINT DREDGE SPOILS-CLUSTER 32, EALC33 - MONKS CREEK FARM SITE-CLUSTER 33, EANS01-A - UNCONFINED GROUNDWATER, EANS01-B - CONFINED GROUNDWATER, EANS01-C - LAUNCH AREA SEPTIC SYSTEM, EANS01-D - SOUTHWEST LAUNCH LANDFILL., EANS01-F - UNDERGROUND FUEL TANK (E6871), EANS01-G - UNDERGROUND FUEL TANKS BARRACKS AREA, EANS01-H - NIKE BARRACKS SEPTIC SYSTEM, EANS01-I - LAUNCH SURFACE DRAINAGE SYSTEM, EANS01-J - BERMS & DISTURBED SOIL AREAS, EANS01-K - SCHOOL FIELD IV, EAOE04 - D-FIELD AERIAL SPRAY GRID-CLUSTER 4, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8, EAOE12 - H-FIELD WASH RACK AND STORAGE AREA-CL 12, EAOE16 - M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16, EAOE19 - FORT HOYLE TRAINING AREA-CLUSTER 19, EAOE22 - L-FLD DEMO AND PROPELL DISP SITE-CLU 22, EAOE23 - I-FIELD JAPANESE BUNKER AREA CLUSTER 23, EAOE24 - M-FLD SOUTHEAST TEST AND BURN AREA CL 24, EAOE26 - M-FLD TUNNELS AND TEST SLAB AREA CLU 26, EAOE27 - M-FIELD PRE-WWII AGENT TEST SITE CLU 27, EAOE28 - H-FIELD CONCRETE TARGET AREA CLUSTER 28, EAOE29 - MAXWELL POINT TEST SITE CLUSTER 29, EAOE30 - C-FIELD MUNITIONS BURIAL SITE CLUSTER 30, EAOE31 - H-FIELD TANK TEST RANGE CLUSTER 31, EAOE37 - D-FLD CHEMICAL AGENT TEST GRID CLU 37, EAOE38 - K-FIELD DEMOLITION FIELD CLUSTER 38, EAOE39 - C-FIELD WASTEWATER SYSTEM CLUSTER 39, EAOE41 - G-FIELD TUNNEL COMPLEX CLUSTER 41, EAOE42 - M-FIELD CLOTHING SHACK AREA CLUSTER 42, EAOE43 - M-FIELD GRENADE RANGE CLUSTER 43, EAOE44 - M-FIELD BOMLET PROJECTOR CLUSTER 44, EAOE45 - E-FLD LEGO POINT IMPACT AREA CLUSTER 45, EAOE46 - E-FIELD DREDGE SPOIL AREA CLUSTER 46, EAOE49 - L-FIELD OLD BUSH RIVER DOCK CLUSTER 49, EAOE50 - G-FIELD TRAINING AREA CLUSTER 50, EAOE51 - K-FIELD PISTOL RANGE CLUSTER 51, EAOE52 - MAXWELL POINT RIFLE RANGE CLUSTER 52, EAOE53 - I-FIELD IMPACT AREA CLUSTER 53, EAOF01 - OLD O-FIELD GWTS-OU1, EAOF02 - OLD O-FIELD SOURCE AREA-OU2, EAOF03 - WATSON CREEK SEDIMENT & SW-OU3, EAOF04 - NEW O-FIELD GW AND SOURCE AREA-OU4, EAPP00 - BUILDING E5625-PILOT PLANT, EAWW00 - WESTWOOD AREA, EAWW02-A - MATERIAL STORAGE/RAD TEST SITE , EAWW02-B - GROUND SCAR AREA-CLUSTER 2, EAWW02-C - OPEN GRAVEL DEPRESSION-CLUSTER 2, EAWW02-D - MOUNDS-CLUSTER 2, EAWW02-E - DISPOSAL/BURN PITS, EAWW06 - RAD MAT'L DISPOSAL FACILITY/DEMIL SITE , EAWW10-A - ROADS END DISPOSAL SITE-CLUSTER 10, EAWW10-B - HOG POINT SITE-CLUSTER 10, EAWW10-C - PINEY POINT SITE-CLUSTER 10, EAWW10-D - LINEAR FEATURES SITE-CLUSTER 10, EAWW10-E - IMPOUNDMENT SITE-CLUSTER 10, EAWW10-F - WETLAND SITE-CLUSTER 10, EAWW14-A - BLDG E-5770 AREA/MAGNOLIA RD RAD. TEST , EAWW14-B - BLDG E-5695 AREA-CLUSTER 14, EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-A - SAN DOMINGO ORD. BURIAL PIT-CLUSTER 21, EAWW21-B - SAN DOMINGO MUNITIONS PLANT-CLUSTER 21, EAWW21-C - BUILDING E5664-CLUSTER 21, EAWW21-D - BUILDING E5830

IRP Schedule

	LANDFILL-CLUSTER 21, EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21)
1991	
IRA	(AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE), EANS01-F - UNDERGROUND FUEL TANK (E6871))
RI/FS	(AAWP01 - WP UNDERWATER MUNITIONS BURIAL)
1992	
RD	(AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE))
RI/FS	(AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE))
IRA	(EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H, EACC3D - BUILDING E3160 COMPLEX-CLUSTER 3D, EACC3J - BLDG E3580 PYROTECH LDG FACILITY-CLU 3J)
1993	
IRA	(AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, EACC3N - BEACH POINT TEST SITE-CLUSTER 3N, EACI06-A - WIND TUNNEL-CLUSTER 6, EACI08 - DISPOSAL SITE-CLUSTER 8, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8)
1994	
IRA	(AAOA08 - OTHER ABERDEEN AREAS- GW Sites, AAWB03 - FIRE TRAINING AREA, EACI00 - CARROLL ISLAND STUDY AREA, EAGQ00 - GRACES QUARTERS STUDY AREA, EAGQ01-A - DISPOSAL AREA-CLUSTER 1, EALC09-C - NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9, EANS01-G - UNDERGROUND FUEL TANKS BARRACKS AREA)
1995	
IRA	(AAOA07 - OTHER ABERDEEN AREAS-STORAGE AREAS, APGSC00 - SHORELINE CLEAN-UP, EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1G-B - BLDG E5188 WP FILLING PNT-CLUSTER 1G, EACI06-C - UST AT WIND TUNNEL-CLUSTER 6, EAGQ01-H - TEST HUTS-CLUSTER 1, EAGQ01-I - SECONDARY TEST AREA-CLUSTER 1, EAGQ02-A - NORTHERN PERIMETER DUMP-CLUSTER 2, EAGQ02-B - S & SW PERIMETER DUMP-CLUSTER 2, EAGQ02-C - PRIMARY TEST AREA-CLUSTER 2, EAGQ03-A - SERVICE AREA-CLUSTER 3, EAGQ03-B - DUGAWAY PROVING GROUND TEST SITE-CL 3, EAGQ03-D - DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3, EAGQ03-E - USTS AT SERVICE AREAS-CLUSTER 3, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5, EALC13-A - SCHOOL FLD NO I TEST AREAS(2)-CLU 13, EALC13-B - SCHOOL FIELD NO II DUMPS-CLUSTER 13, EALC20 - SCHOOL FIELD NO III TEST AREA-CLUSTER 20, EANS01-D - SOUTHWEST LAUNCH LANDFILL., EANS01-H - NIKE BARRACKS SEPTIC SYSTEM, EANS01-K - SCHOOL FIELD IV, EAOE50 - G-FIELD TRAINING AREA CLUSTER 50)
SI	(AAOA14 - WP MUNITIONS LAND BURIAL AREA)
PA	(AAOA14 - WP MUNITIONS LAND BURIAL AREA)
RI/FS	(AAWB03 - FIRE TRAINING AREA, EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H)
1996	
RI/FS	(EACI00 - CARROLL ISLAND STUDY AREA, EACI01-A - BENGIES POINT RD. DUMP-CLUSTER 1, EACI01-C - OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1, EACI02-A - SERVICE AREA-CLUSTER 2, EACI02-C - WOODS W OF SERV AREA-AOC ASSO W. SITE 13, EACI03 - EPG DUMP-CLUSTER 3, EACI04-B - DECONTAMINATION PITS-CLUSTER 4, EACI04-C - WOODS WEST OF AERIAL SPRAY GRID, EACI04-D - BZ TEST BURN PITS-CLUSTER 4, EACI05-D - A-SHELTER WDS EAST OF TEST GRID 1-CLU 5, EACI05-E - PUSH-B MNDS N & E OF TEST GRID 1-CLU 5, EACI06-B - WOODS SOUTH OF WIND TUNNEL ROAD, EACI08 - DISPOSAL SITE-CLUSTER 8, EAJF05 - TOXIC BURNING PIT, EAJF05-A - TBP-SOUTHERN MAIN PITS OVERALL, EANS01-A - UNCONFINED GROUNDWATER, EANS01-B - CONFINED GROUNDWATER, EANS01-C - LAUNCH AREA SEPTIC SYSTEM, EANS01-D - SOUTHWEST LAUNCH LANDFILL., EANS01-F - UNDERGROUND FUEL TANK (E6871), EANS01-G - UNDERGROUND FUEL TANKS BARRACKS AREA, EANS01-H - NIKE BARRACKS SEPTIC SYSTEM, EANS01-I - LAUNCH SURFACE DRAINAGE SYSTEM, EANS01-J - BERMS & DISTURBED SOIL AREAS, EANS01-K - SCHOOL FIELD IV)
RD	(EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H)

IRP Schedule

IRA	(AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS, AAOA04 - OTHER ABERDEEN AREAS-SPILL SITE AREAS, EACC1H-F - EXPER CHEM PLANT AREA-CLUSTER 1H, EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21)
1997	
RD	(EACI01-A - BENGIES POINT RD. DUMP-CLUSTER 1, EACI01-C - OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1, EACI02-A - SERVICE AREA-CLUSTER 2, EACI02-C - WOODS W OF SERV AREA-AOC ASSO W. SITE 13, EACI03 - EPG DUMP-CLUSTER 3, EACI04-B - DECONTAMINATION PITS-CLUSTER 4, EACI04-C - WOODS WEST OF AERIAL SPRAY GRID, EACI04-D - BZ TEST BURN PITS-CLUSTER 4, EACI05-D - A-SHELTER WDS EAST OF TEST GRID 1-CLU 5, EACI05-E - PUSH-B MNDS N & E OF TEST GRID 1-CLU 5, EACI06-B - WOODS SOUTH OF WIND TUNNEL ROAD, EACI08 - DISPOSAL SITE-CLUSTER 8, EANS01-C - LAUNCH AREA SEPTIC SYSTEM, EAOF03 - WATSON CREEK SEDIMENT & SW-OU3)
RA(C) IRA	(AAML02 - MICHAELSVILLE LANDFILL-OU2 (GW), APGSC00 - SHORELINE CLEAN-UP) (EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EABR07-A - BOAT CLUB FILL SITE(4)-CLUSTER 7, EABR07-B - BIO-SENSOR FACILITY-CLUSTER 7, EABR11-H - ADAMSITE STORAGE PIT - CLUSTER 11, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, EABR15-C - TON CONTAINER STORAGE-CLUSTER 15, EABR18-A - TAPLER PT DREDGE MATERIAL SITE-CLU 18, EABR18-C - IGLOO STORAGE AREAS-CLUSTER 18, EABR18-D - A-FIELD TEST SITE(2)-CLUSTER 18, EABR18-E - BUSH RIVER DOCK(E2396)-CLUSTER 18, EABR35-A - MAINTENANCE YARD-CLUSTER 35, EABR35-B - BLDG E2144/2148/2150-CLUSTER 35, EABR36-A - WAREHOUSE STORAGE AREAS-CLUSTER 36, EABR36-B - BLDG 846 WASTE DISPOSAL SITE-CLUSTER 36, EALC05-A - NIKE EAST WOODS SITE 6-CLUSTER 5, EALC13-C - UNDERGROUND STORAGE TANKS-CLUSTER 13)
RI/FS	(AAML02 - MICHAELSVILLE LANDFILL-OU2 (GW), EACI01-B - BENGIES POINT ROAD FARM HOUSE-CLUSTER 1, EACI01-D - AOC ASSOCIATED WITH SITE 10-CLUSTER 1, EACI02-B - DREDGE SPOIL SITE-CLUSTER 2, EACI04-A - AERIAL SPRAY GRID-CLUSTER 4, EACI05-A - TEST GRID 1-CLUSTER 5, EACI05-B - MAGAZINE AREA-CLUSTER 5, EACI05-C - ANIMAL SHELTER-CLUSTER 5, EACI06-A - WIND TUNNEL-CLUSTER 6, EACI06-C - UST AT WIND TUNNEL-CLUSTER 6, EACI06-D - CS TEST AREA-CLUSTER 6, EACI06-E - CS TST AREA MDS-AOC ASSO W. SITE 12-CL 6, EACI07-A - VX TEST AREA-CLUSTER 7, EACI07-B - TEST GRID 2-CLUSTER 7, EACI07-C - HD TEST AREA & AREAS EAST-CLUSTER 7, EAGQ01-A - DISPOSAL AREA-CLUSTER 1, EAGQ01-B - GRACES QUARTERS DUMP-CLUSTER 1, EAGQ01-C - BUNKERS SITE-CLUSTER 1, EAGQ01-D - FEMA SERVICE AREA-CLUSTER 1, EAGQ01-E - FEMA BUNKER-CLUSTER 1, EAGQ01-F - AOC ASSOCIATED WITH SITE 4, EAGQ01-G - HD TEST ANNULI-CLUSTER 1, EAGQ01-H - TEST HUTS-CLUSTER 1, EAGQ01-I - SECONDARY TEST AREA-CLUSTER 1, EAGQ02-A - NORTHERN PERIMETER DUMP-CLUSTER 2, EAGQ02-B - S & SW PERIMETER DUMP-CLUSTER 2, EAGQ02-C - PRIMARY TEST AREA-CLUSTER 2, EAGQ03-A - SERVICE AREA-CLUSTER 3, EAGQ03-B - DUGAWAY PROVING GROUND TEST SITE-CL 3, EAGQ03-C - AOC ASSOCIATED WITH SITE 8-CLUSTER 3, EAGQ03-D - DISPOSAL MOUNDS AT DUGWAY SITE-CLUSTER 3, EAGQ03-E - USTS AT SERVICE AREAS-CLUSTER 3, EALC00 - LAUDERICK CREEK, EAOF03 - WATSON CREEK SEDIMENT & SW-OU3, EAPP00 - BUILDING E5625-PILOT PLANT)
1998	
RD	(EANS01-D - SOUTHWEST LAUNCH LANDFILL.)
RA(C)	(EANS01-C - LAUNCH AREA SEPTIC SYSTEM)
IRA	(EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11, EAWW06 - RAD MAT'L DISPOSAL FACILITY/DEMIL SITE)
RI/FS	(EABR11-G - UNDERGROUND STORAGE TANK, EABR11-H - ADAMSITE STORAGE PIT - CLUSTER 11)
1999	
IRA	(EABR18-B - CHEM MUNITION BURIAL SITE(4)-CLUSTER 18, EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EACC1L-A - BLDG 503 SMK MIX BURNING SITES-CLU 1L, EACI02-A - SERVICE AREA-CLUSTER 2)
RA(C)	(EANS01-D - SOUTHWEST LAUNCH LANDFILL., EAOF03 - WATSON CREEK SEDIMENT & SW-OU3)

IRP Schedule

RI/FS	(EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EABR03-C - SURFICIAL AQUIFER-CLUSTER 3, EACC6 - HMF/UST REMOVAL/CLOSURE, EAGQ00 - GRACES QUARTERS STUDY AREA, EALC13-A - SCHOOL FLD NO I TEST AREAS(2)-CLU 13, EALC13-B - SCHOOL FIELD NO II DUMPS-CLUSTER 13, EALC13-C - UNDERGROUND STORAGE TANKS-CLUSTER 13)
RD	(EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EANS01-A - UNCONFINED GROUNDWATER)
2000	
IRA	(EAJF00 - J-FIELD STUDY AREA)
RA(C)	(EACC1H-E - BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H, EACI01-A - BENGIES POINT RD. DUMP-CLUSTER 1, EACI01-C - OLD CARROLL ISLAND ROAD DUMP-CLUSTER 1, EACI02-A - SERVICE AREA-CLUSTER 2, EACI02-C - WOODS W OF SERV AREA-AOC ASSO W. SITE 13, EACI03 - EPG DUMP-CLUSTER 3, EACI04-B - DECONTAMINATION PITS-CLUSTER 4, EACI04-C - WOODS WEST OF AERIAL SPRAY GRID, EACI04-D - BZ TEST BURN PITS-CLUSTER 4, EACI05-D - A-SHELTER WDS EAST OF TEST GRID 1-CLU 5, EACI05-E - PUSH-B MNDS N & E OF TEST GRID 1-CLU 5, EACI06-B - WOODS SOUTH OF WIND TUNNEL ROAD, EACI08 - DISPOSAL SITE-CLUSTER 8, EANS01-A - UNCONFINED GROUNDWATER)
RI/FS	(AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, EACC4A - EAST AREA CC AQUIFER-CLUSTER 4A-A, EALC05-A - NIKE EAST WOODS SITE 6-CLUSTER 5, EALC05-B - CONCRETE SLAB TEST AREA-CLUSTER 5, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5, EALC05-D - CONCRETE SLAB DUMP AREA 2-CLUSTER 5, EALC09-A - NIKE CONTROL DRY WELLS(4)-CLUSTER 9, EALC09-B - NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9, EALC09-C - NIKE CNTL UNGD FUEL TANK(EXCA)-CLUSTER 9, EALC09-D - NIKE EAST WOODS SITE 1-CLUSTER 9, EALC17-A - EAST WOODS DISPOSAL AREA-CLUSTER 17, EALC20 - SCHOOL FIELD NO III TEST AREA-CLUSTER 20, EALC32 - GUM POINT DREDGE SPOILS-CLUSTER 32, EALC33 - MONKS CREEK FARM SITE-CLUSTER 33)
2001	
PA	(PBC at APG - PBC sites)
RI/FS	(EAJF00 - J-FIELD STUDY AREA, EAJF02 - PROTOTYPE BUILDING, EAJF03 - CS/CN AREA (RIOT CONTROL BURNING PITS), EAJF05-B - TBP-SURFICIAL AQUIFER, EAJF06 - SOUTH BEACH DEMOLITION GROUND, EAJF07 - SOUTH BEACH TRENCH, EAJF08 - X1 RUINS SITE SW OF INTERSECTION, EAJF09 - DRAINAGE GRID-AREA A, EAJF10 - FORD'S POINT FIRING RANGE-AREA B, EAJF11 - RUINS SITE NE OF INTERSECTION-AREA C, EAJF12 - RUINS SITE ACROSS RD FROM WPP (RNS SITE), EAJF13 - SWAMP 400' E OF RUINS SITE-AREA D, EAJF14 - ROBINS POINT TOWER SITE)
RD	(EAJF00 - J-FIELD STUDY AREA, EAJF05 - TOXIC BURNING PIT, EAJF05-A - TBP-SOUTHERN MAIN PITS OVERALL, EAJF05-B - TBP-SURFICIAL AQUIFER)
IRA	(EABR03-B - TRANSFORMER STORAGE-CLUSTER 3)
RA(C)	(AAML01 - MICHAELSVILLE LANDFILL-OU1 (SOURCE), EABR03-A - OLD BUSH RIVER ROAD DUMP-CLUSTER 3, EALC09-B - NIKE CNTL SEPTIC TANK/SAND FILTER-CLU 9)
2002	
LTM	(EAJF05 - TOXIC BURNING PIT)
RI/FS	(EAJF04 - ROBINS POINT DEMO. GROUND)
RD	(AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, EACC4A - EAST AREA CC AQUIFER-CLUSTER 4A-A, EACI00 - CARROLL ISLAND STUDY AREA, EAGQ00 - GRACES QUARTERS STUDY AREA, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5)
SI	(PBC at APG - PBC sites)
IRA	(EAWW02-E - DISPOSAL/BURN PITS)
RA(C)	(EAGQ00 - GRACES QUARTERS STUDY AREA, EAJF05 - TOXIC BURNING PIT, EAJF05-A - TBP-SOUTHERN MAIN PITS OVERALL)
2003	
RA(C)	(AAWB01 - WESTERN BOUNDARY AREA GROUNDWATER-OU1, EACC4A - EAST AREA CC AQUIFER-CLUSTER 4A-A, EACC6 - HMF/UST REMOVAL/CLOSURE, EAJF05-B - TBP-SURFICIAL AQUIFER)

IRP Schedule

IRA	(EACC6 - HMF/UST REMOVAL/CLOSURE)
2004	
RA(C)	(EACI00 - CARROLL ISLAND STUDY AREA, EAJF00 - J-FIELD STUDY AREA, EALC00 - LAUDERICK CREEK, EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5)
RI/FS	(EAGQ02-D - SURFICIAL AQUIFER-CLUSTER 2)
IRA	(EALC00 - LAUDERICK CREEK)
2005	
RA(C)	(EACC1G-B - BLDG E5188 WP FILLING PNT-CLUSTER 1G, EACC2A - OLD HOSP AND ADMIN AREA-CLUSTER 2A, EACC2B - BLDG E5023 WWI WP FILLING PNT-CLU 2B, EACC2C - BLDG E5238 CLOTH IMPREG FCLY-CLU 2C, EACC2G - BLDG E5103 PHOTO LAB-CLUSTER 2G, EACC2H-A - BLDG 501 FILLING PNT/E5100 LAB-CLU 2H, EACC2I-A - AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I, EACC2I-B - OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I, EACC3B - BUILDING E2100 LABORATORY-CLUSTER 3B, EACC3H - E3560 TEST CHAMBER COMPLEX-CLUSTER 3H)
RI/FS	(EABR03-B - TRANSFORMER STORAGE-CLUSTER 3, EACC1G-B - BLDG E5188 WP FILLING PNT-CLUSTER 1G, EACC2A - OLD HOSP AND ADMIN AREA-CLUSTER 2A, EACC2B - BLDG E5023 WWI WP FILLING PNT-CLU 2B, EACC2C - BLDG E5238 CLOTH IMPREG FCLY-CLU 2C, EACC2G - BLDG E5103 PHOTO LAB-CLUSTER 2G, EACC2H-A - BLDG 501 FILLING PNT/E5100 LAB-CLU 2H, EACC2I-A - AIRFIELD AREA (WIEDE FIELD)-CLUSTER 2I, EACC2I-B - OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I, EACC3B - BUILDING E2100 LABORATORY-CLUSTER 3B, EACC3H - E3560 TEST CHAMBER COMPLEX-CLUSTER 3H, EAWW02-A - MATERIAL STORAGE/RAD TEST SITE , EAWW02-B - GROUND SCAR AREA-CLUSTER 2, EAWW02-C - OPEN GRAVEL DEPRESSION-CLUSTER 2, EAWW02-E - DISPOSAL/BURN PITS, EAWW10-A - ROADS END DISPOSAL SITE-CLUSTER 10, EAWW10-C - PINEY POINT SITE-CLUSTER 10, EAWW10-D - LINEAR FEATURES SITE-CLUSTER 10, EAWW10-E - IMPOUNDMENT SITE-CLUSTER 10, EAWW10-F - WETLAND SITE-CLUSTER 10, EAWW14-A - BLDG E-5770 AREA/MAGNOLIA RD RAD. TEST , EAWW14-B - BLDG E-5695 AREA-CLUSTER 14, EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-A - SAN DOMINGO ORD. BURIAL PIT-CLUSTER 21, EAWW21-B - SAN DOMINGO MUNITIONS PLANT-CLUSTER 21, EAWW21-C - BUILDING E5664-CLUSTER 21, EAWW21-D - BUILDING E5830 LANDFILL-CLUSTER 21, EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21)
IRA	(EAOFO4 - NEW O-FIELD GW AND SOURCE AREA-OU4)
2006	
RD	(AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS, AAOA08 - OTHER ABERDEEN AREAS-GW Sites, EABR03-B - TRANSFORMER STORAGE-CLUSTER 3, EAGQ02-D - SURFICIAL AQUIFER-CLUSTER 2, EAWW02-E - DISPOSAL/BURN PITS, EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21)
RI/FS	(AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS, AAOA04 - OTHER ABERDEEN AREAS-Spill Site Areas, AAOA05 - INFECTIOUS WASTE INCINERATOR, AAOA07 - OTHER ABERDEEN AREAS-STORAGE AREAS, AAOA08 - OTHER ABERDEEN AREAS- GW Sites, AAOA10 - OTHER ABERDEEN AREAS-WASHRACKS, AAOA11 - OTHER ABERDEEN AREAS-WASTE TREATMENT PLT, AAOA13 - CSTA BURIED DRUM SITE - BLDG 896, EACC1A-A - RAILROAD YARD-CLUSTER 1A, EACC1D - DM FILLING PLANT-CLUSTER 1D, EACC2F - BLDG 99 (E5032) EXP FILLING PNT-CLU 2F)
IRA	(EAOE04 - D-FIELD AERIAL SPRAY GRID-CLUSTER 4, EAWW10-B - HOG POINT SITE-CLUSTER 10)
RA(C)	(EACC1A-A - RAILROAD YARD-CLUSTER 1A, EAGQ02-D - SURFICIAL AQUIFER-CLUSTER 2)
2007	
RI/FS	(AAOA06 - GERMAN AMMUNITION TRAIN EXPLOSION AREA, AAOA12 - OTHER ABERDEEN AREAS-FIRING RANGES, AAOA14 - WP MUNITIONS LAND BURIAL AREA, EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EAJF01 - WHITE PHOSPHORUS BURNING PIT, EALC09-F - SURFICIAL AQUIFER-CLUSTER 9, EAWW00 - WESTWOOD AREA, EAWW02-D - MOUNDS-CLUSTER 2, EAWW06 - RAD MAT'L DISPOSAL FACILITY/DEMIL SITE , EAWW10-B - HOG POINT SITE-CLUSTER 10)
RA(C)	(AAOA08 - OTHER ABERDEEN AREAS- GW Sites, EACC1D - DM FILLING PLANT-CLUSTER 1D, EACC2F - BLDG 99 (E5032) EXP FILLING PNT-CLU 2F, EAWW02-E - DISPOSAL/BURN PITS, EAWW06 - RAD

IRP Schedule

RD	MAT'L DISPOSAL FACILITY/DEMIL SITE , EAWW14-C - GAS MASK FACTORY/WWI CHLORINE PLANT , EAWW21-E - WWI CHLORINE PLANT DUMP - CLUSTER 21) (AAOA12 - OTHER ABERDEEN AREAS-FIRING RANGES, EACC1D - DM FILLING PLANT-CLUSTER 1D, EACC2F - BLDG 99 (E5032) EXP FILLING PNT-CLU 2F, EAJF01 - WHITE PHOSPHORUS BURNING PIT, EALC09-F - SURFICIAL AQUIFER-CLUSTER 9, EAWW06 - RAD MAT'L DISPOSAL FACILITY/DEMIL SITE)
2008	
RD	(EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EACC1F-A - BUILDING E5604 AREA-CLUSTER 1F, EACC1F-B - BLDG 80 SERIES SMOKE LABS-CLUSTER 1F, EACC1G-A - BLDG E5185 WWII MTD FILLING PNT-CLU 1G, EACC1H-D - PHOSGENE PLANT AREA-CLUSTER 1H, EACC1I-B - BLDG 113 GAS INST CHAMBER-CLUSTER 1I, EACC3E - BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E, EACC3F - BUILDING E35XX AREA-CLUSTER 3F, EACC3I - BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I, EACC3O - B-FIELD RANGE AREA-CLUSTER 3O, EACC3P - MOSQUITO TEST GRID AREA-CLUSTER 3P, EAWW02-D - MOUNDS-CLUSTER 2, EAWW10-B - HOG POINT SITE-CLUSTER 10)
RA(C)	(EABR03-B - TRANSFORMER STORAGE-CLUSTER 3, EACC3F - BUILDING E35XX AREA-CLUSTER 3F, EALC09-F - SURFICIAL AQUIFER-CLUSTER 9, EAWW02-D - MOUNDS-CLUSTER 2, EAWW10-B - HOG POINT SITE-CLUSTER 10)
IRA	(EAOE23 - I-FIELD JAPANESE BUNKER AREA CLUSTER 23)
RI/FS	(EACC1F-A - BUILDING E5604 AREA-CLUSTER 1F, EACC1F-B - BLDG 80 SERIES SMOKE LABS-CLUSTER 1F, EACC1G-A - BLDG E5185 WWII MTD FILLING PNT-CLU 1G, EACC1H-D - PHOSGENE PLANT AREA-CLUSTER 1H, EACC1I-B - BLDG 113 GAS INST CHAMBER-CLUSTER 1I, EACC3E - BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E, EACC3F - BUILDING E35XX AREA-CLUSTER 3F, EACC3I - BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I, EACC3O - B-FIELD RANGE AREA-CLUSTER 3O, EACC3P - MOSQUITO TEST GRID AREA-CLUSTER 3P)
2009	
RI/FS	(AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS, EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1J - LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1, EACC2D - LAB TOXIC WASTE DISPOSAL PITS-CLU 2D, EAOF04 - NEW O-FIELD GW AND SOURCE AREA-OU4)
RA(C)	(EACC1A-B - G STREET SALVAGE YARD-CLUSTER 1A, EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1J - LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1, EACC2D - LAB TOXIC WASTE DISPOSAL PITS-CLU 2D, EAJF01 - WHITE PHOSPHORUS BURNING PIT)
IRA	(AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS)
RD	(EACC1E - BUILDING 87 COMPLEX-CLUSTER 1E, EACC1J - LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1, EACC2D - LAB TOXIC WASTE DISPOSAL PITS-CLU 2D, EAOF04 - NEW O-FIELD GW AND SOURCE AREA-OU4)
2010	
RI/FS	(EABR00 - Bush River Area, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, EAOE43 - M-FIELD GRENADE RANGE CLUSTER 43, EAOE45 - E-FLD LEGO POINT IMPACT AREA CLUSTER 45, EAOE49 - L-FIELD OLD BUSH RIVER DOCK CLUSTER 49, EAOE52 - MAXWELL POINT RIFLE RANGE CLUSTER 52)
RA(C)	(AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS, AAOA02 - OTHER ABERDEEN AREAS-SURFACE DISPL AREAS, AAOA12 - OTHER ABERDEEN AREAS-FIRING RANGES)
RD	(AAOA01 - OTHER ABERDEEN AREAS-LANDFILLS)
2011	
IRA	(EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY)
RA(C)	(AAOA03 - OTHER ABERDEEN AREAS-DRAINAGE DITCHS, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, PBC at APG - PBC sites)
RD	(AAOA03 - OTHER ABERDEEN AREAS-DRAINAGE DITCHS, EABR15-A - KINGS CRK CHEMICAL DISPOSAL SITE CLU 15, EABR15-B - 30TH STREET LF-CLUSTER 15, EAOE51 - K-FIELD PISTOL RANGE CLUSTER 51, PBC at APG - PBC sites)
RI/FS	(AAOA03 - OTHER ABERDEEN AREAS-DRAINAGE DITCHS, EABR15-D - SURFICIAL AQUIFER - CLUSTER 15, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8, EAOE12 - H-FIELD WASH

IRP Schedule

RACK AND STORAGE AREA-CL 12, EAOE30 - C-FIELD MUNITIONS BURIAL SITE CLUSTER 30, EAOE39 - C-FIELD WASTEWATER SYSTEM CLUSTER 39, EAOE51 - K-FIELD PISTOL RANGE CLUSTER 51, PBC at APG - PBC sites)

2012

LTM (EALC05-C - CONCRETE SLAB DUMP AREA 1-CLUSTER 5)
 RD (EABR11-A - 26TH STREET DISPOSAL SITE (1)-CLUSTER 11, EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8, EAOE12 - H-FIELD WASH RACK AND STORAGE AREA-CL 12, EAOE39 - C-FIELD WASTEWATER SYSTEM CLUSTER 39)
 IRA (EABR11-C - 22ND STREET LANDFILL-CLUSTER 11)
 RI/FS (EABR11-A - 26TH STREET DISPOSAL SITE (1)-CLUSTER 11, EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11)
 RA(C) (EACC1F-A - BUILDING E5604 AREA-CLUSTER 1F, EACC1F-B - BLDG 80 SERIES SMOKE LABS-CLUSTER 1F, EACC1G-A - BLDG E5185 WWII MTD FILLING PNT-CLU 1G, EACC1H-D - PHOSGENE PLANT AREA-CLUSTER 1H, EACC1I-B - BLDG 113 GAS INST CHAMBER-CLUSTER 1I, EACC3E - BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E, EACC3I - BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I, EACC3O - B-FIELD RANGE AREA-CLUSTER 3O, EACC3P - MOSQUITO TEST GRID AREA-CLUSTER 3P, EAOE04 - NEW O-FIELD GW AND SOURCE AREA-OU4)

2013

RA(C) (EABR11-A - 26TH STREET DISPOSAL SITE (1)-CLUSTER 11, EABR11-B - 26TH STREET DISPOSAL SITE (2)-CLUSTER 11, EAOE08 - G-FIELD WASTEWATER TREATMENT AREA-CLU 8, EAOE12 - H-FIELD WASH RACK AND STORAGE AREA-CL 12, EAOE30 - C-FIELD MUNITIONS BURIAL SITE CLUSTER 30, EAOE39 - C-FIELD WASTEWATER SYSTEM CLUSTER 39, EAOE51 - K-FIELD PISTOL RANGE CLUSTER 51)
 RI/FS (EABR11-C - 22ND STREET LANDFILL-CLUSTER 11, EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY)

2014

RI/FS (EAOE29 - MAXWELL POINT TEST SITE CLUSTER 29)
 RA(C) (EABR11-C - 22ND STREET LANDFILL-CLUSTER 11, EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY)
 RD (EABR11-C - 22ND STREET LANDFILL-CLUSTER 11, EABR11-I - RADIOACTIVE MATERIAL DISPOSAL FACILITY)

2015

RD (EAOE29 - MAXWELL POINT TEST SITE CLUSTER 29)
 SI (EAOE54 - I-FIELD SMOKE POT BURIAL SITE CLUSTER 54)

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
---------	-----------	--------------	-------------

Final RA(C) Completion Date: 202406

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of IRP at Installation (including LTM phase): 205406

ABERDEEN PROVING GROUND IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
AAML01	MICHAELSVILLE LANDFILL-OU1 (SOURCE)	LTM						
AAML02	MICHAELSVILLE LANDFILL-OU2 (GW)	LTM						
AAOA01	OTHER ABERDEEN AREAS-LANDFILLS	LTM						
AAOA02	OTHER ABERDEEN AREAS-SURFACE DISPL AREAS	LTM						
AAOA03	OTHER ABERDEEN AREAS-DRAINAGE DITCHS	RA(O)						
AAOA08	OTHER ABERDEEN AREAS- GW Sites	RA(O)						
AAWB01	WESTERN BOUNDARY AREA GROUNDWATER-OU1	RA(O)						
AAWB02	PAAF LANDFILL/CITY OF ABERDEEN WELLS-OU2	RI/FS						
		RD						
		RA(C)						
		LTM						
AAWB04	OTHER MEDIA OU3(SW, SED, SOIL)	RI/FS						
EABR00	Bush River Area	LTM						
EABR03-A	OLD BUSH RIVER ROAD DUMP-CLUSTER 3	LTM						
EABR03-B	TRANSFORMER STORAGE-CLUSTER 3	LTM						
EABR03-C	SURFICIAL AQUIFER-CLUSTER 3	LTM						
EABR07-A	BOAT CLUB FILL SITE(4)-CLUSTER 7	RI/FS						
EABR07-B	BIO-SENSOR FACILITY-CLUSTER 7	RI/FS						
EABR11-A	26TH STREET DISPOSAL SITE (1)-CLUSTER 11	LTM						
EABR11-B	26TH STREET DISPOSAL SITE (2)-CLUSTER 11	LTM						
EABR11-C	22ND STREET LANDFILL-CLUSTER 11	LTM						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-D	BLDG 45-A AMMO RENOVATION FCTY-CLU 11	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-E	CASY INCINERATOR-CLUSTER 11	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-F	SURFICIAL AQUIFER-CLUSTER 11	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-G	UNDERGROUND STORAGE TANK	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-H	ADAMSITE STORAGE PIT - CLUSTER 11	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR11-I	RADIOACTIVE MATERIAL DISPOSAL FACILITY	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR15-A	KINGS CRK CHEMICAL DISPOSAL SITE CLU 15	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR15-B	30TH STREET LF-CLUSTER 15	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR15-C	TON CONTAINER STORAGE- CLUSTER 15	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-A	TAPLER PT DREDGE MATERIAL SITE-CLU 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-B	CHEM MUNITION BURIAL SITE(4)- CLUSTER 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-C	IGLOO STORAGE AREAS-CLUSTER 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-D	A-FIELD TEST SITE(2)-CLUSTER 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-E	BUSH RIVER DOCK(E2396)- CLUSTER 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR18-F	SURFICIAL AQUIFER - CLUSTER 18	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR35-A	MAINTENANCE YARD-CLUSTER 35	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR35-B	BLDG E2144/2148/2150-CLUSTER 35	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR36-A	WAREHOUSE STORAGE AREAS- CLUSTER 36	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EABR36-B	BLDG 846 WASTE DISPOSAL SITE- CLUSTER 36	RI/FS						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1A-A	RAILROAD YARD-CLUSTER 1A	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1A-B	G STREET SALVAGE YARD-CLUSTER 1A	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1D	DM FILLING PLANT-CLUSTER 1D	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1E	BUILDING 87 COMPLEX-CLUSTER 1E	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1F-A	BUILDING E5604 AREA-CLUSTER 1F	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1F-B	BLDG 80 SERIES SMOKE LABS-CLUSTER 1F	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1G-A	BLDG E5185 WWII MTD FILLING PNT-CLU 1G	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1G-B	BLDG E5188 WP FILLING PNT-CLUSTER 1G	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-A	1937 MUSTARD DISPOSAL PIT-CLUSTER 1H	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-B	WWII CHLORINE PLANT-CLUSTER 1H	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-C	BLDG E5483 PROTECT CLOTH LDY-CLUSTER 1H	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-D	PHOSGENE PLANT AREA-CLUSTER 1H	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-E	BLDG 103 AREA CHEM PNT/DUMP SITE-CLU 1H	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-F	EXPER CHEM PLANT AREA-CLUSTER 1H	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1H-G	MUSTARD PLANT AREA-CLUSTER 1H	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1I-A	BUILDING 106/107 AREA-CLUSTER 1I	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1I-B	BLDG 113 GAS INST CHAMBER-CLUSTER 1I	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1J	LAB TOXIC WASTE DISP PIT-BLDG 30-CL 1	LTM						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1K	CANAL CRK MARSH AND LANDFILL- CLUSTER 1K	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1L-A	BLDG 503 SMK MIX BURNING SITES-CLU 1L	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC1L-B	BUILDING 503 SMOKE POT PLANT- CLUSTER 1L	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2A	OLD HOSP AND ADMIN AREA- CLUSTER 2A	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2B	BLDG E5023 WWI WP FILLING PNT- CLU 2B	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2C	BLDG E5238 CLOTH IMPREG FCLY- CLU 2C	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2D	LAB TOXIC WASTE DISPOSAL PITS- CLU 2D	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2E	NOBLE ROAD INCINERATORS- CLUSTER 2E	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2F	BLDG 99 (E5032) EXP FILLING PNT- CLU 2F	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2G	BLDG E5103 PHOTO LAB-CLUSTER 2G	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2H-A	BLDG 501 FILLING PNT/E5100 LAB- CLU 2H	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2H-B	WWI SHELL DUMPS-CLUSTER 2H	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2H-C	FILLING PLANTS NO 1&2-CLUSTER 2H	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2I-A	AIRFIELD AREA (WIEDE FIELD)- CLUSTER 2I	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC2I-B	OLD SHOP AND MOTORPOOL AREA-CLUSTER 2I	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3A	LAB TOXIC WASTE DIS PIT-BLDG E3330-CL 3A	RI/FS						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3B	BUILDING E2100 LABORATORY-CLUSTER 3B	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3C	BLD E32XX/E3100/3081 MED RESH LABS-CL 3C	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3D	BUILDING E3160 COMPLEX-CLUSTER 3D	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3E	BLDG E3300/E3330 LAB COMPLEX-CLUSTER 3E	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3F	BUILDING E35XX AREA-CLUSTER 3F	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3G	BLDG E360X/E361X/E362X AREA-CLUSTER 3G	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3H	E3560 TEST CHAMBER COMPLEX-CLUSTER 3H	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3I	BLDG E3570 ASSEMBLY PLANT-CLUSTER 3I	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3J	BLDG E3580 PYROTECH LDG FACILITY-CLU 3J	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3K-A	BUILDING E37XX COMPLEX-CLUSTER 3K	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3K-B	B-FIELD KINGS CREEK DUMP CLUSTER 3K	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3L	BLDG E3640 PROCESS LAB-CLUSTER 3L	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3M-A	WASTEWATER TREATMENT AREA-CLUSTER 3M	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3N	BEACH POINT TEST SITE-CLUSTER 3N	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3O	B-FIELD RANGE AREA-CLUSTER 3O	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC3P	MOSQUITO TEST GRID AREA-CLUSTER 3P	LTM						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC4A	EAST AREA CC AQUIFER-CLUSTER 4A-A	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC4A-B	WEST AREA CC AQUIFER-CLUSTER4A-B	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC5A	CANAL CREEK BED SED.SOURCE AREA CLUST 5A	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACC5B	KINGS CREEK SEDIMENT PESTICIDE SOURCE AR	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EACI00	CARROLL ISLAND STUDY AREA	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAGQ00	GRACES QUARTERS STUDY AREA	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAGQ02-D	SURFICIAL AQUIFER-CLUSTER 2	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAJF00	J-FIELD STUDY AREA	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EALC09-F	SURFICIAL AQUIFER-CLUSTER 9	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EALC13-D	SURFICIAL AQUIFER-CLUSTER 13	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EANS01-A	UNCONFINED GROUNDWATER	RA(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EANS01-D	SOUTHWEST LAUNCH LANDFILL.	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE04	D-FIELD AERIAL SPRAY GRID-CLUSTER 4	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE08	G-FIELD WASTEWATER TREATMENT AREA-CLU 8	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE12	H-FIELD WASH RACK AND STORAGE AREA-CL 12	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE16	M-FLD MINE-FLD/P-TYPE BLDG. STO AREA C16	RI/FS						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE19	FORT HOYLE TRAINING AREA- CLUSTER 19	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE22	L-FLD DEMO AND PROPELL DISP SITE-CLU 22	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE23	I-FIELD JAPANESE BUNKER AREA CLUSTER 23	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE24	M-FLD SOUTHEAST TEST AND BURN AREA CL 24	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE26	M-FLD TUNNELS AND TEST SLAB AREA CLU 26	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE27	M-FIELD PRE-WWII AGENT TEST SITE CLU 27	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE28	H-FIELD CONCRETE TARGET AREA CLUSTER 28	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE29	MAXWELL POINT TEST SITE CLUSTER 29	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE30	C-FIELD MUNITIONS BURIAL SITE CLUSTER 30	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE31	H-FIELD TANK TEST RANGE CLUSTER 31	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE37	D-FLD CHEMICAL AGENT TEST GRID CLU 37	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE38	K-FIELD DEMOLITION FIELD CLUSTER 38	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE39	C-FIELD WASTEWATER SYSTEM CLUSTER 39	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE41	G-FIELD TUNNEL COMPLEX CLUSTER 41	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE42	M-FIELD CLOTHING SHACK AREA CLUSTER 42	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE44	M-FIELD BOMLET PROJECTOR CLUSTER 44	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE46	E-FIELD DREDGE SPOIL AREA CLUSTER 46	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE50	G-FIELD TRAINING AREA CLUSTER 50	RI/FS						

ABERDEEN PROVING GROUND IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE51	K-FIELD PISTOL RANGE CLUSTER 51	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOE53	I-FIELD IMPACT AREA CLUSTER 53	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOF01	OLD O-FIELD GWTS-OU1	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOF02	OLD O-FIELD SOURCE AREA-OU2	RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOF03	WATSON CREEK SEDIMENT & SW- OU3	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAOF04	NEW O-FIELD GW AND SOURCE AREA-OU4	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
EAWW00	WESTWOOD AREA	LTM						

ABERDEEN PROVING GROUND
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 30/14

Installation Site Types with Future and/or Underway Phases

- 1 Chemical Disposal
(APG-003-R-04)
- 2 Explosive Ordnance Disposal Area
(APG-001-R-02, APG-004-R-02)
- 2 Firing Range
(APG-004-R-04, APG-011-R-02)
- 1 Open Burn
(APG-003-R-06)
- 1 Open Burning/Open Detonation (OB/OD)
(APG-001-R-04)
- 9 Unexploded Munitions/Ordnance
(APG-001-R-05, APG-003-R-01, APG-003-R-05, APG-004-R-01, APG-004-R-03, APG-006-R-01, APG-011-R-01, APG-011-R-03, APG-14-R-01)

Most Widespread Contaminants of Concern

Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern

Groundwater, Soil

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

Site ID	Site Name	Action	Remedy	FY
PBA@MR APG	PBA@MR APG	IRA	UXO CLEARANCE	2011
APG-001- R-05	Multi-Purpose Range	IRA	REMOVAL	2012

Duration of MMRP

Date of MMRP Inception 200210

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202112/202112

Date of MMRP completion including Long Term Management (LTM): 202112

MMRP Contamination Assessment

Contamination Assessment Overview

Eighteen MMRP sites have been identified at APG. RIs are ongoing; however, four sites have been found to be still operational and not eligible for the MMRP. In 2009, the MMRP started the Aberdeen and Edgewood Area RIs based on the SI report. The RI report was completed in 2014. One site, APG-011-R-03 Hog's Point Bomb Target, was recommended to be closed out. The remaining sites will move on to the FS phase.

Cleanup Exit Strategy

The RI is completed and the final remedy will most likely be LUCs except for two small areas that could potentially require remediation. These sites are located in the Westwood and Canal Creek Munitions Response Area (MRA). Potentially new munitions response sites (MRS) will be created to handle these sites. The RI was delayed to allow development of the enhanced use leasing area but in 2016 the investigative work will begin. The MMRP PBA is structured to complete the FS to final remedy for the current MMRP sites.

MMRP Previous Studies

	Title	Author	Date
2002	CTT Range Inventory	Malcolm Pirnie, Inc.	JUL-2002
2005	Final Site Characterization Report for the Munitions and Explosives of Concern Site Investigation Maryland Boulevard Enhanced Use Lease, APG, Maryland	URS Group, Inc.	APR-2005
2006	Final Historical Records Review (HRR), APG, Maryland	URS Group, Inc.	JUL-2006
2007	Final Work Plan, APG, Maryland	URS Group, Inc.	FEB-2007
	Final Site Inspection Report, APG, Maryland	URS Group, Inc.	AUG-2007

ABERDEEN PROVING GROUND
Military Munitions Response Program
Site Descriptions

Site ID: APG-001-R-02
Site Name: Former Demolition Area - Ruggles GC

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200706.....	200802
SI.....	200803.....	201001
RI/FS.....	200910.....	201806
RD.....	201807.....	201812
RA(C).....	201812.....	201906

RIP Date: N/A

RC Date: 201906

SITE DESCRIPTION

The Former Demolition Area at Ruggles Golf Course is located east of the 11th fairway of Ruggles Golf Course and west of Bush River Road in the AA of APG. The site is a suspected demolition area that was used from the 1940s to the 1950s. This is supported by aerial photos in 1947 and 1952 showing a disturbed area and of recent discoveries of evidence of MEC. The area was once under the control of the Ordnance School and there is evidence of demolition training exercises within the 5400 block.

On Jan. 24, 2008 ordnance items were found during construction of an irrigation pond at the golf course. The items were all at an estimated depth of about 6 feet. The following were found:

- one 75mm AP projectile,
- eight 75mm HE projectiles,
- seven 20mm HE projectiles,
- one 75mm HE projectile broken in half,
- one projectile booster,
- one fuze, and
- one British 25-pound HE projectile.

All items were found during civilian UXO sweeps at the Ruggles Golf Course on APG North. A team responded to the incident location and verified the ordnance as follows:

- one 75mm AP projectile,
- 16 Japanese 75mm HE projectiles,
- one 25-pound HE British projectile,
- seven 20mm HE projectiles, and
- two fuzes.

The RI was completed in 2014. Costs for sites APG-001-R-04 and APG-001-R-05 are included with this site.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, and LTM will be completed. The LTM phase will be opened once the RA(C) is completed. The LTM will be conducted in-house at no cost. The anticipated remedy is continuation of the installation's best management practices (LUCs completed in-house) and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00.

Site ID: APG-001-R-04

Site Name: Gas Identification/Detonation Area

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent

Media of Concern: Soil

Phases	Start	End
PA.....	200706.....	200802
SI.....	200803.....	201001
RI/FS.....	200910.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

The Gas Identification/Detonation (I&D) Area was identified during the SI that was used to train Soldiers to be proficient in detecting and identifying various gas through odor and other sensory reactions. Because of the potential of the gas kits, it was moved to the RI phase.

The RI was completed in 2014. The HHRA and screening-level ecological risk assessment (SLERA) found that there are no human health risks associated with potential human contact with subsurface soil, surface water, or sediments; minimal health risks posed with groundwater contact; and limited potential for site-related ecological risks. No additional detailed baseline ecological risk assessment is warranted for the Gas I&D MRS. The costs for this site are included with AEDB-R site APG-001-R-02.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-001-R-05
Site Name: Multi-Purpose Range

STATUS

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

Phases	Start	End
PA.....	200801.....	201001
SI.....	200801.....	201001
RI/FS.....	201005.....	201806
IRA.....	201003.....	201203

RIP Date: N/A
RC Date: 201806

SITE DESCRIPTION

The Multi-Purpose Range was initially identified on a 1951 Ordnance Replacement Training Center map. Based on analysis of historical aerial photographs, the area was utilized for range activities from the mid-1940s to the mid-1950s for training with mines and booby traps, rifle grenades, hand grenades, and rocket launchers. Based on the size of the range area and the proximity to adjacent buildings, hand grenades could be expected to have been HE configured; however, the remaining items may have also contained energetics in the form of spotting charges or propellants. The total acreage for the Multi-Purpose Range is 92 acres.

One 3.5-inch rocket was found at the northern boundary of the Multi-Purpose Range on May 2, 2008 during construction activities associated with the 715 Gate. The item was found to have no fill or energetics. No fieldwork was conducted at the Multi-Purpose Range for this SI report; however, based on the verified historical use of the site and identification of munitions debris (MD) within the limits of the area, an RI/FS for MEC and MC is recommended for the Multi-Purpose Range.

An IRA was conducted to support construction activities and completed in March 2013. The RI was completed in 2014. The HHRA and SLERA found that there are no human health risks associated with potential human contact with subsurface soil, surface water, or sediments; minimal health risks posed with groundwater contact; and limited potential for site-related ecological risks. No additional detailed baseline ecological risk assessment is warranted for the MPR MRS. The costs for this site are included with AEDB-R site APG-001-R-02.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-003-R-01
Site Name: BUSH RIVER AREA

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 02
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RD.....	201807.....	201812
RA(C).....	201901.....	201906

RIP Date: N/A
RC Date: 201906

SITE DESCRIPTION

The Bush River Discarded Military Munitions (DMM) site is located on a peninsula in the northeastern portion of APG-EA. Past activities have included artillery testing, decontamination of ton-containers containing chemical warfare agents, landfill creation in marshes, waste disposal in unlined pits, ammunition renovation, and radioactive material processing and packaging. Portions of the Bush River area were also used to dispose of chemical warfare agents, munitions, dredge spoil, radioactive materials, and construction/demolition waste by burning, dumping, or burial.

The RI was completed in 2014. The costs for AEDB-R sites APG-003-R-04, APG-003-R-05, APG-003-R-06, APG-004-R-01, APG-004-R-03, APG-004-R-02, APG-004-R-04, APG-006-R-01, APG-011-R-01, APG-011-R-02, and APG-011-R-03 are included in the costs for this site.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-003-R-04
Site Name: Chemical Munitions Burial Site

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200212.....	200305
SI.....	200506.....	200710
RI/FS.....	200810.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

Historical aerial photographs from 1929 and the 1940s show ground scars at this site. It may have been used to bury deteriorated or partially functioning chemical munitions.

The RI was completed in 2014. The RI recommended that the site proceed to the FS phase for MEC and that no further action be taken for MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-003-R-05
Site Name: A-Field

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 02
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RIP Date:	N/A	
RC Date:	201806	

SITE DESCRIPTION

The 47.3-acre A-Field is an MR site located in the Bush River MRA. A-Field was a firing point on the north shore of Kings Creek in the Bush River Area. Generic historic maps including the range availability chart label the firing point as "A" and the impact areas as "B" through "E". Although this site was combined with the B-Field in the closed, transferred, or transferring (CTT) range inventory, it is identified as a separate site in the HRR to align with IRP study area designations. On the historic maps from 1923 and 1948, the A- and B-Field range is labeled as an artillery component testing range. The 1923 Range Availability Chart lists this as a 75mm range. The HRR identifies the period of use for A-Field as from 1918 to the 1940s. Currently, the A-Field area is in the cantonment area at the EA, including office buildings, R&D, open water, industry, and storage. The RFA identified A-Field as a site for testing chemical munitions; it is this history that led to investigative sampling and other activities in the area. Several SWMUs are identified in the A-Field area under the IRP. There was likely little or no testing with lethal agent-filled munitions, as there is no record of such testing in A-Field. The IRP identifies two separate A-Field Test areas: 28A (Drop Bomb Tower) and 28B (Surveillance Bins). During the 1930s the Army used 28A and 28B to test munitions as part of the A-Field Test area. There is no visual evidence of contamination at either location and the RI recommends NFA at these sites.

The types of munitions tested at the Drop Bomb Tower were not documented, but the testing probably involved primarily incendiary and smoke munitions. Expected munitions types at A-Field include large caliber (smoke, HE, and practice), small arms, mortars (smoke, HE, and practice), and toxic chemical munitions. The IRP designation associated with the A-Field is EABR18-D [A-Field Test sites (2) -Cluster 18]. EABR18-D is considered RC; however, the IRP did not specifically address UXO, DMM, and associated MC.

This site was previously identified as APG-002-R-01.

The RI was completed in 2014. The RI recommended that the site proceed to the FS phase for MEC and that no further action be taken for MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-003-R-06

Site Name: Kings Creek Chemical Disposal Site

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200305
SI.....	200506.....	200710
RI/FS.....	200810.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

This MRS is the three-acre portion of the Bush River area MRA where CWM has been discovered. The types of material found at the site suggest that activity occurred during the 1920s and 1930s. The site is a former chemical materiel disposal area where primary methods of disposal were OB and drum storage. Large amounts of UXO have been recovered from the site, including Livens projectiles, Stokes mortar rounds, and badly corroded Stokes mortar fuses. Several ordnance removal actions occurred in the early-1990s. In 2003 there was a TCRA of 56 laboratory vials/bottles and ordnance fragments. Six of the vials contained mustard agent and/or the arsenical agent Lewisite. An RI/FS, proposed plan and ROD were completed for the IRP constituents at the site under the AEDB-R site EABR15-A. The preferred alternative was LUCs and shoreline stabilization. This was previously identified as site APG-002-R-03. The RI for the MMRP constituents was completed in 2014. The RI recommended that the site proceed to the FS phase for MEC and that no further action be taken for MC.

Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R Site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-004-R-01
Site Name: CANAL CREEK AREA

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RD.....	201807.....	201904
RA(C).....	201905.....	202105

RIP Date: N/A

RC Date: 202105

SITE DESCRIPTION

The Canal Creek DMM site is located in the central portion of the cantonment area of APG-EA. The Army has used the Canal Creek area site to develop, test, and manufacture military-related chemicals since WWI. Other activities included filling chemical munitions, disposing of domestic and production waste, and using degreasing solvents on equipment. Currently, the Canal Creek area is the main cantonment area at the EA, including office buildings, recreation facilities, and storage.

The RI was completed in 2014. The FS is underway.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-004-R-02
Site Name: B-Field Kings Creek Dump

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 02
 Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RIP Date:	N/A	
RC Date:	201806	

SITE DESCRIPTION

The B-Field Kings Creek dump site is an MRS within the Canal Creek MRA. This site of approximately 56 acres is located southwest of Kings Creek and north of Building E3700. It is north of the intersection of Beach Point Road and 57th Street. In the 1940s, the E3700 complex of buildings was used for pilot plant facilities. These buildings were used for experimental filling rather than process work. Pilot scale manufacturing of nitrogen mustard may have been performed in these facilities.

This approximately 12-acre area is a disposal site where demolition debris, chemical materiel, and miscellaneous junk were placed at the dump site. Some junk has been observed near a marsh area on the site (including some smoke pots), a few old drums scattered throughout the site and cesium (tear gas bags). One groundwater sample collected in this area exhibited a dimethyl methylphosphonate detection of 99 ppb. Five geophysical studies have been conducted at the site, along with a few soil and sediment samples. Two of the surveys identified USTs and the other three have not been analyzed. An additional RI is planned and soil removal is expected. This site was previously identified as APG-002-R-02.

The RI was completed in 2014. The RI recommended that the site be considered NFA for both MEC and MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-004-R-03
Site Name: B-Field

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

The 67.3-acre B-Field is an MRS located in the Canal Creek MRA. The location of this site is along the south side of Beach Point Road between the wastewater treatment plant and the Building E3580 pyrotechnic loading facility. It extends approximately 1,000 ft south toward Bush River; the information from the 1923 Range Availability Chart and the IRP designated locations of B-Field (3O) and B-Field Kings Creek Dump (3K-B) has been combined. This site is one of the impact areas for A-Field. The 1923 Range Availability Chart lists this site as a 75mm range. The RFA reports that B-Field may have been the site of GA agent storage sometime in the late-1940s.

The RFA inspection identified two debris dumping sites. These sites were located southeast of Building E3580 and along a trail leading south/southeast from Beach Point Road between Building E3580 and the wastewater treatment plant. Debris observed at these sites includes empty drums, concrete blocks, an engine cylinder head, and other miscellaneous materials. It is not known if agent-filled containers or other hazardous materials were buried at these locations. Currently, the B-Field is part of the main cantonment area at the EA, including office buildings, R&D, open water, industry, and storage. Expected munitions types at A- and B- Fields include large caliber (smoke, HE, and practice), small arms, mortars (smoke, HE, and practice), and toxic chemical munitions. IRP (Phase III RI) studies have not explicitly addressed UXO, DMM, or MC.

This site was previously identified as Site APG-002-R-01. The RI was completed in 2014. The RI recommended that the B-Field MRS proceed to the FS phase of the CERCLA process to determine appropriate action for managing a potential explosive hazard. It also recommended NFA for MC. The costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-004-R-04
Site Name: F-Field

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

The 67.3-acre B-Field is an MRS located in the Canal Creek MRA. The location of this site is along the south side of Beach Point Road between the wastewater treatment plant and the Building E3580 pyrotechnic loading facility. It extends approximately 1,000 ft south toward Bush River; the information from the 1923 Range Availability Chart and the IRP designated locations of B-Field (3O) and B-Field Kings Creek Dump (3K-B) has been combined. This site is one of the impact areas for A-Field. The 1923 Range Availability Chart lists this site as a 75mm range. The RFA reports that B-Field may have been the site of GA agent storage sometime in the late-1940s.

The RFA inspection identified two debris dumping sites. These sites were located southeast of Building E3580 and along a trail leading south/southeast from Beach Point Road between Building E3580 and the wastewater treatment plant. Debris observed at these sites includes empty drums, concrete blocks, an engine cylinder head, and other miscellaneous materials. It is not known if agent-filled containers or other hazardous materials were buried at these locations. Currently, the B-Field is part of the main cantonment area at the EA, including office buildings, R&D, open water, industry, and storage. Expected munitions types at A- and B- Fields include large caliber (smoke, HE, and practice), small arms, mortars (smoke, HE, and practice), and toxic chemical munitions. IRP (Phase III RI) studies have not explicitly addressed UXO, DMM, or MC. This was previously identified as site APG-002-R-01.

The RI was completed in 2014. The RI recommended that this MRS proceed to the FS phase of the CERCLA process with the expected remedy being a land use control consisting of APG's installation-wide safety excavation permit program. The RI also recommended NFA for MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-006-R-01
Site Name: FORT HOYLE

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806

RIP Date: N/A

RC Date: 201806

SITE DESCRIPTION

The Fort Hoyle DMM site is within the Other EA IRP study area. Fort Hoyle was first used during WWI and its use continued into the 1950s and early-1960s. Throughout the early period of use, high explosive rounds, as well as chemical munitions, are likely to have been buried as a means of disposal. Possible firing and use of chemical weapons may have occurred, but the area was not designated as an impact area. Some training exercises included firing mustard-filled artillery and mortar and other exercises may have included the use of gas ID kits.

The RI was completed in 2014. The RI recommended that the site proceed to the FS phase for MEC and that no further action be taken for MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-011-R-01
Site Name: WESTWOOD AREA

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 02

Contaminants of Concern: Chemical weapon munitions (CWM)/Chemical agent, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RD.....	201807.....	201904
RA(C).....	201905.....	202105

RIP Date: N/A

RC Date: 202105

SITE DESCRIPTION

The Westwood Area was used from 1918 to the 1970s for a variety of testing and training activities, material storage, manufacturing and munitions assembly operations, and waste disposal activities. The materials the Army tested included napalm, pyrotechnics, blister agents, and WP. The US Army Chemical School used the Westwood area for training during the post-WWII period, principally for radiological defense testing and training.

The RI was completed in 2014. The RI recommended that the site proceed to the FS phase for MEC and that no further action be taken for MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-011-R-02
Site Name: West Range

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 06
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RIP Date:	N/A	
RC Date:	201806	

SITE DESCRIPTION

This 6.3-acre MRS is located within the Westwood MRA. The estimated period of use was from 1920 to the 1940s. The 1923 Range Availability Chart identifies the site as a 37mm (water) and 75mm (land) range. Both water and land targets are within the operational area. The chart also identifies a 0.45-caliber pistol range that appears to be collocated with the West Range firing point. This site was previously identified as site APG-010-R-01.

The RI was completed in 2014. The RI recommended that the site be considered NFA for both MEC and MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-011-R-03
Site Name: Hog's Point Bomb Target

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 04
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200305.....	200312
SI.....	200506.....	200710
RI/FS.....	200810.....	201806
RIP Date:	N/A	
RC Date:	201806	

SITE DESCRIPTION

The Hog's Point Bomb Target (previously identified as site APG-008-R-01) is an MRS within the Westwood MRA. This site of approximately 152 acres is located off the shore of the Westwood Area. It is lying entirely in the Gunpowder River. A 1943 map titled "Range Layout between Piney and Hog Points" shows that there were potentially two bomb targets in the water. The farthest target was 1,895 feet from the APG shoreline. The map showing the bomb targets does not show any firing points on either Hog's or Piney Points; it shows only staked reference points aiding in the survey of the "bomb targets." As reviewed during the HRR, aerial photographs from the WWII era do not depict fixed firing point structures anywhere along the shoreline. In fact, installation records show that during WWII this area was used as the gas mask obstacle course. While the presence of an obstacle course does not preclude any firing, it reduces the likelihood that firing occurred from fixed points in this area as they would be visible on the site maps or aerial photographs.

The Westwood Area (i.e., the nearby land area) was used as an impact area for incendiary bombs. The APG historian, indicated that there were water impact studies done at Edgewood in 1938. The area east of the Reardon Inlet was under Fort Hoyle command at the time of those studies, so it is unlikely that the water impact studies were done in this area. The water impact studies were most likely conducted near Maxwell Point. The 6th Field Artillery used the area east of the Reardon Inlet (the San Domingo Area) while it was under Fort Hoyle command. The 6th Field Artillery only would have used 75mm Pack Howitzers. The APG historian confirmed that 4.2-inch mortars were fired off of Maxwell Point (the operational range to the south). Water impact studies most likely included only WP, HE, and smoke.

A magnetic survey in the Gunpowder River around the targets showed numerous scattered anomalies across the site with higher concentrations near shore and around the Hog's and Piney Points. The anomalies were interpreted as most likely being foreign objects rather than large targets or disposal areas. The two offshore firing targets contained only faint magnetic signatures and there were no significant anomalies suggesting buried munitions or MD. Based on the geophysical survey detections and the National Oceanic and Atmospheric Administration's Nautical Chart 12273, the approximate depth ranges from 4 to 11 feet below the water surface. The site was given NFA status under the IRP; however, because no attempt was made to confirm the absence of MEC and MECs are suspected in the open water, further investigation is recommended for this site.

The RI was completed in 2014. No MEC was found. The RI recommended NFA for both MEC and MC. Costs for this site are included with AEDB-R site APG-003-R-01.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD and LTM will be completed. The anticipated remedy is continuation of the installation's best management practices and five-year reviews to verify that the best management practices exist. Five-year review costs are captured under AEDB-R site EABR00. The LTM phase will be opened upon RC.

Site ID: APG-14-R-01
Site Name: Aberdeen Area EUL Site

STATUS

Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern (MEC), Perchlorate
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200706.....	200802
SI.....	200803.....	201001
RI/FS.....	200910.....	202010
RD.....	201003.....	202102
IRA.....	201003.....	201808
RA(C).....	202103.....	202112
RIP Date:	N/A	
RC Date:	202112	

SITE DESCRIPTION

In January 2010, during site construction several DMM items and pits were found at the Enhanced Use Leasing (EUL) site located east of Maryland Boulevard and south of Gadsden Road in the cantonment area in the northern portion of the Aberdeen Area. Maryland Boulevard EUL parcel is 422 acres. Groundwater data from the Western Boundary Study Area (IRP site) monitoring wells indicate low levels of explosive compounds; however the source could never be identified. The Army opened the IRA phase in AEDB-R to provide construction support during construction of the EUL. Planning for the remedial investigation is underway.

CLEANUP/EXIT STRATEGY

The FS, PP, ROD, and LTM will be completed. The LTM will be opened once the RA(C) is completed. The anticipated remedy is continuation of the installation's best management practices (LUCs) and five-year reviews to verify that the best management practices exist. LTM will be completed in-house at no cost. Continued UXO construction support will be provided for EUL. Five-year review costs are captured under AEDB-R site EABR00.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
APG-001-R-01	5400 BLOCK	200805	Expanded SI, January 2008.
APG-002-R-01	A AND B-FIELDS	200806	The results of the final SI report dated August 2007 requires that this site be split into two separate sites: APG-003-R-05 (A-Field) and APG-004-R-03 (B-Field) and that this site be made RC.
APG-002-R-02	B-Field Kings Creek Dump-Cluster 3B	200710	The results of the final SI report dated August 2007 requires that this site be given a revised site ID number: APG-004-R-02.
APG-002-R-03	Kings Creek Chemical Disposal Site	200710	The results of the final SI report dated August 2007 requires that this site be given a revised site ID number: APG-003-R-06.
APG-003-R-02	30th Street Landfill	200710	This site is being remediated under the IRP and is no longer eligible for the MMRP.
APG-003-R-03	BUSH RIVER DOCK	200705	Range is in operational range area; not MMRP eligible.
APG-005-R-01	F-FIELD	200710	The results of the final SI report dated August 2007 requires that this site be given a revised site ID number: APG-004-R-04.
APG-007-R-01	FRENCH MINE FIELD	200710	The final SI report dated August 2007 determined that neither MEC nor MC are present at the site and, therefore, no further cleanup is necessary.
APG-008-R-01	HOG'S POINT BOMB TARGET	200710	The results of the final SI report dated August 2007 requires that this site be given a revised site ID number: APG-011-R-03.
APG-009-R-01	RANGE NO. 3	200705	Range is in operational range area; not MMRP eligible.
APG-010-R-01	WEST RANGE	200710	The results of the final SI report dated August 2007 requires that this site be given a revised site ID number: APG-011-R-02.
APG-012-R-01	SCHOOL FIELD II	200705	Range is in operational range area; not MMRP eligible.
APG-013-R-01	SCHOOL FIELD VI	200705	Range is in operational range area; not MMRP eligible.
PBA@MR APG	PBA@MR APG	201101	All CLINs were awarded.

MMRP Schedule

Date of MMRP Inception 200210

Past Phase Completion Milestones

2003

PA (APG-003-R-04 - Chemical Munitions Burial Site, APG-003-R-06 - Kings Creek Chemical Disposal Site)

2004

PA (APG-001-R-01 - 5400 BLOCK, APG-002-R-01 - A AND B-FIELDS, APG-002-R-02 - B-Field Kings Creek Dump-Cluster 3B, APG-002-R-03 - Kings Creek Chemical Disposal Site , APG-003-R-01 - BUSH RIVER AREA, APG-003-R-02 - 30th Street Landfill, APG-003-R-03 - BUSH RIVER DOCK, APG-003-R-05 - A-Field, APG-004-R-01 - CANAL CREEK AREA, APG-004-R-02 - B-Field Kings Creek Dump, APG-004-R-03 - B-Field, APG-004-R-04 - F-Field, APG-005-R-01 - F-FIELD, APG-006-R-01 - FORT HOYLE, APG-007-R-01 - FRENCH MINE FIELD, APG-008-R-01 - HOG'S POINT BOMB TARGET, APG-009-R-01 - RANGE NO. 3, APG-010-R-01 - WEST RANGE, APG-011-R-01 - WESTWOOD AREA, APG-011-R-02 - West Range, APG-011-R-03 - Hog's Point Bomb Target, APG-012-R-01 - SCHOOL FIELD II, APG-013-R-01 - SCHOOL FIELD VI, PBA@MR APG - PBA@MR APG)

2008

PA (APG-001-R-02 - Former Demolition Area - Ruggles GC, APG-001-R-04 - Gas Identification/Detonation Area, APG-14-R-01 - Aberdeen Area EUL Site)

SI (APG-001-R-01 - 5400 BLOCK, APG-002-R-01 - A AND B-FIELDS, APG-002-R-02 - B-Field Kings Creek Dump-Cluster 3B, APG-002-R-03 - Kings Creek Chemical Disposal Site , APG-003-R-01 - BUSH RIVER AREA, APG-003-R-02 - 30th Street Landfill, APG-003-R-04 - Chemical Munitions Burial Site, APG-003-R-05 - A-Field, APG-003-R-06 - Kings Creek Chemical Disposal Site, APG-004-R-01 - CANAL CREEK AREA, APG-004-R-02 - B-Field Kings Creek Dump, APG-004-R-03 - B-Field, APG-004-R-04 - F-Field, APG-005-R-01 - F-FIELD, APG-006-R-01 - FORT HOYLE, APG-007-R-01 - FRENCH MINE FIELD, APG-008-R-01 - HOG'S POINT BOMB TARGET, APG-010-R-01 - WEST RANGE, APG-011-R-01 - WESTWOOD AREA, APG-011-R-02 - West Range, APG-011-R-03 - Hog's Point Bomb Target, PBA@MR APG - PBA@MR APG)

2010

SI (APG-001-R-02 - Former Demolition Area - Ruggles GC, APG-001-R-04 - Gas Identification/Detonation Area, APG-001-R-05 - Multi-Purpose Range, APG-14-R-01 - Aberdeen Area EUL Site)

PA (APG-001-R-05 - Multi-Purpose Range)

2011

IRA (PBA@MR APG - PBA@MR APG)

RI/FS (PBA@MR APG - PBA@MR APG)

2012

IRA (APG-001-R-05 - Multi-Purpose Range)

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: 202112

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of MMRP at Installation (including LTM phase): 202112

ABERDEEN PROVING GROUND MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-001-R-02	Former Demolition Area - Ruggles GC	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-001-R-04	Gas Identification/Detonation Area	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-001-R-05	Multi-Purpose Range	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-003-R-01	BUSH RIVER AREA	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-003-R-04	Chemical Munitions Burial Site	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-003-R-05	A-Field	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-003-R-06	Kings Creek Chemical Disposal Site	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-004-R-01	CANAL CREEK AREA	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-004-R-02	B-Field Kings Creek Dump	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-004-R-03	B-Field	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-004-R-04	F-Field	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-006-R-01	FORT HOYLE	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-011-R-01	WESTWOOD AREA	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-011-R-02	West Range	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-011-R-03	Hog's Point Bomb Target	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
APG-14-R-01	Aberdeen Area EUL Site	RI/FS						
		RD						
		IRA						
		RA(C)						

ABERDEEN PROVING GROUND
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 17/12

Installation Site Types with Future and/or Underway Phases

- 2 Contaminated Buildings
(CCAPGAAVI, CCAPGEAVI)
- 1 Disposal Pit/Dry Well
(CCEACCX1)
- 1 POL (Petroleum/Lubricants) Lines
(CCAPG00345)
- 1 Soil Contamination After Tank Removal
(CCAPG04031)

Most Widespread Contaminants of Concern

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

Media of Concern

Groundwater, Other (vapor), Soil

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

Site ID	Site Name	Action	Remedy	FY
CCAPG0504	Building 5042	IRA	FREE PRODUCT RECOVERY	1993
2				
CCAPG0402	BUILDING 4025	IRA	GROUND WATER TREATMENT	1998
5				
CCAPG0034	BUILDING 345	IRA	FREE PRODUCT RECOVERY	2000
5				
CCAPG0034	BUILDING 345	FRA	BIOREMEDIATION - IN SITU	2002
5				
CCAPG0403	BUILDING 4031	FRA	SOIL VAPOR EXTRACTION	2003
1				
CCAPG0403	BUILDING 4031	FRA	FREE PRODUCT RECOVERY	2003
1				
CCAPG0402	BUILDING 4025	FRA	OTHER	2004
5				
CCAPG0033	Building 339	IRA	FREE PRODUCT RECOVERY	2007
9				
CCAPG1010	Building 10104 Chapel Hill	FRA	FREE PRODUCT RECOVERY	2009
4				
CCAPG0504	Building 5042	FRA	FREE PRODUCT RECOVERY	2010
2				
CCAPG0402	Building 4020	IRA	FREE PRODUCT RECOVERY	2011
0				
CCAPG0442	BUILDING E-4225 correct #	IRA	FREE PRODUCT RECOVERY	2011
5				
CCAPG0700	Building 700A Contamination	IRA	REMOVAL	2011
A				
CCAPG0542	BUILDING 5426	FRA	FREE PRODUCT RECOVERY	2012
6				
CCAPG0403	BUILDING 4031	FRA	REMOVAL	2016
1				

Duration of CR

Date of CR Inception: 197606

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202011/202011

Date of CR completion including Long Term Management (LTM): 205205

CR Contamination Assessment

Contamination Assessment Overview

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

There are currently four sites under CR: three sites (CCAPGAAVI, CCAPGEAVI, CCAPGCCX1) are IR related; and the fourth site (CCAPG04031) is a carryover from compliance cleanup. The three IR sites are currently in the RI phase. A removal action is currently being conducted at the remaining site.

Cleanup Exit Strategy

The focus will continue to be on completing numerous PBA contracts. The vapor intrusion PBA is structured to complete the RI followed by a draft FS. Site CCAPGCCX1 is currently under the SI phase. A soil remediation action is being completed at site CCAPG04031 in 2015. Site closure is expected after confirmation sampling.

CR Previous Studies

Title

Author

Date

There are no Previous Studies

ABERDEEN PROVING GROUND

Compliance Restoration

Site Descriptions

Site ID: CCAPG00345
Site Name: BUILDING 345

STATUS

Regulatory Driver: RCRA

Phases	Start	End
ISC.....	199401.....	199401
INV.....	199401.....	199401
CAP.....	199401.....	199409
DES.....	199409.....	199412
IRA.....	199507.....	200009
IMP(C).....	200009.....	200111
IMP(O).....	200111.....	200901
LTM.....	200901.....	202001

RIP Date: 200111

RC Date: 200901

SITE DESCRIPTION

Building 345 is located in the APG area off Collieran Road. In March 1993, a 1,000 gallon heating oil underground storage tank was removed and a monitoring well was installed. A soil sample collected from the tank excavation was below regulatory levels for petroleum constituents. Sampling of the monitoring well in 1993 detected benzene at 7.4 ppb. In 1994, a 70,000 gallon AST malfunctioned and released approximately 10,000 gallons of fuel oil onto the ground surface at the site.

Remedial activities included the use of sorbent pads, boom in nearby Dipper Creek, exploratory trenches, shallow augered holes, and a geoprobe subsurface investigation documenting liquid petroleum hydrocarbons (LPH) in several borings. Subsequently, four 6-inch recovery wells were installed. Product recovery, via hand bailing, of the recovery wells began immediately with an additional 17 monitoring and recovery wells installed by the end of 1994. Between 1994 and 1998, three additional monitoring wells were installed on-site, for a total of 25 monitoring/recovery wells. A groundwater pump-and-treat system with bioventing was installed and began operation in 1998. In 2002, the extractive bioventing system was discontinued. In 2006, pilot testing for nitrogen injection was not a viable remediation option for this site. Monitoring wells, which had historically exhibited LPH, were redeveloped in September 2007, followed by a groundwater sampling event in October 2007. The sampling event detected total petroleum hydrocarbons/diesel- range organics (TPH/DRO) at 280,000 parts per million (ppm) and gasoline-range organics (TPH/GRO) at 930 ppm. The monitoring wells continued to exhibit LPH at 0.05 feet. thick. Due to the continued presence of LPH and the lack of consistent time series groundwater data for this site, the MDE has requested quarterly gauging and sampling of all wells within the network not containing LPH.

CLEANUP/EXIT STRATEGY

LTM will continue.

Site ID: CCAPG04031
Site Name: BUILDING 4031

STATUS

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

Phases	Start	End
ISC.....	199303.....	199303
INV.....	199506.....	199708
CAP.....	199708.....	200102
DES.....	200102.....	200206
IMP(C).....	200206.....	201608
IMP(O).....	200304.....	201712
RIP Date:	201608	
RC Date:	201712	

SITE DESCRIPTION

Building 4031 was used as an administrative office for the equipment division at APG. In March 1993, a leaking 3,000-gallon heating oil UST was removed. Following a geoprobe subsurface investigation in August 1997, six groundwater monitoring wells were subsequently installed. Due to the continued presence of LPH in four of the monitoring wells, a remediation system comprising product recovery and soil vapor extraction (SVE) was installed in April 2003. The free-product recovery system consists of six vacuum-enhanced recovery wells and eight monitoring wells. One of the monitoring wells has a passive bailer and is used for free-product recovery. As of 2009, based on the low thickness levels in the recovery wells, only the SVE portion of the recovery system is being utilized. Since the free-product does not recover readily in the wells, the free-product pump(s) effectiveness has been reduced. As of June 2009, no free-product was observed in any of the recovery wells. Currently, hand bailing of the free-product (when observed) is being performed as well as SVE to enhance the degradation of petroleum in the vadose zone and the removal of free-product in groundwater.

CLEANUP/EXIT STRATEGY

The IMP(C) and IMP(O) will be completed. The remedy includes excavation with off-site disposal and groundwater monitoring.

Site ID: CCAPGAAVI
Site Name: Aberdeen Area Vapor Intrusion

STATUS

Regulatory Driver: CERCLA

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

Media of Concern: Other (vapor)

Phases	Start	End
PA.....	198011.....	198909
SI.....	198909.....	199009
RI/FS.....	199910.....	202011
IRA.....	201603.....	202010
LTM.....	202012.....	205205

RIP Date: N/A

RC Date: 202011

SITE DESCRIPTION

This AEDB-R site CCAPGAAVI covers all of the Aberdeen Area plumes. The identified plumes are DRMO Metal Scrap Yard (groundwater); Site 23: Building 525; Site 28f: Building 3327 UST site; Site 29: Tower Road Site; Site 32: Building 507; Site 33: Building M600 and the Western Boundary Plumes. The RI/FS will evaluate the buildings that are being impacted by groundwater plumes and determine if vapors are entering the buildings and, if so, at what levels.

CLEANUP/EXIT STRATEGY

The RI/FS, PP and ROD will be completed. The anticipated remedy is no action.

Site ID: CCAPGEAVI
Site Name: Edgewood Area Vapor Intrusion

STATUS

Regulatory Driver: CERCLA

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

Media of Concern: Other (vapor)

Phases	Start	End
PA.....	197606.....	198912
SI.....	197606.....	198912
RI/FS.....	198510.....	202011

RIP Date: N/A

RC Date: 202011

SITE DESCRIPTION

This AEDB-R site CCAPGEAVI covers all of the Edgewood Areas. The RI/FS will evaluate what buildings are being impacted by groundwater plumes and determine if vapors are entering the buildings, and if so, at what levels.

CLEANUP/EXIT STRATEGY

The RI/FS, PP and ROD will be completed. Remediation of VI is anticipated in at least one building.

Site ID: CCEACCX1
Site Name: CCSA Glassware Site

STATUS

Regulatory Driver: CERCLA

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

Media of Concern: Soil

Phases	Start	End
PA.....	197606.....	198912
SI.....	201403.....	201602
RI/FS.....	201602.....	202008

RIP Date: N/A

RC Date: 202008

SITE DESCRIPTION

Miscellaneous glassware was uncovered during utility maintenance near the intersections of Magnolia and Wise Roads, and Wise and Blackhawk Roads and north of Bond Road. The origin of this glassware is currently unknown; however, most of it appears to be medical in nature. The found glassware included medical glassware and debris, at both sites. The Bond Road site is located in very close proximity to a WWI-era infirmary.

CLEANUP/EXIT STRATEGY

The SI and RI will be completed. It is anticipated a no action ROD.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CCAPG00339	Building 339	201009	
CCAPG00520	Building 520	201003	
CCAPG00745	Building 745	201103	
CCAPG04020	Building 4020	201109	
CCAPG04025	BUILDING 4025	201409	MDE Case Closure Letter, Sept 17, 2014.
CCAPG04425	BUILDING E-4225 correct #	201109	
CCAPG05042	Building 5042	201308	
CCAPG05426	BUILDING 5426	201308	
CCAPG0700A	Building 700A Contamination	201109	
CCAPG09-03	Soil and Debris Piles/Landfills	200911	
CCAPG10104	Building 10104 Chapel Hill	201009	
CCEACCGST	G Street RAD Site	201307	

CR Schedule

Date of CR Inception: 197606

Past Phase Completion Milestones

1989

PA (CCAPGAAVI - Aberdeen Area Vapor Intrusion)

1990

SI (CCAPGAAVI - Aberdeen Area Vapor Intrusion , CCAPGEAVI - Edgewood Area Vapor Intrusion, CCEACCGST - G Street RAD Site)

PA (CCAPGEAVI - Edgewood Area Vapor Intrusion, CCEACCGST - G Street RAD Site, CCEACCX1 - CCSA Glassware Site)

ISC (CCAPG04020 - Building 4020)

1991

ISC (CCAPG00520 - Building 520, CCAPG04025 - BUILDING 4025, CCAPG05042 - Building 5042)

INV (CCAPG04020 - Building 4020)

1992

INV (CCAPG04025 - BUILDING 4025)

ISC (CCAPG00339 - Building 339)

1993

CAP (CCAPG04025 - BUILDING 4025)

IRA (CCAPG05042 - Building 5042)

ISC (CCAPG04031 - BUILDING 4031, CCAPG04425 - BUILDING E-4225 correct #, CCAPG05426 - BUILDING 5426)

1994

ISC (CCAPG00345 - BUILDING 345)

INV (CCAPG00345 - BUILDING 345 , CCAPG05042 - Building 5042)

DES (CCAPG04025 - BUILDING 4025)

CAP (CCAPG00345 - BUILDING 345)

1995

DES (CCAPG00345 - BUILDING 345)

ISC (CCAPG10104 - Building 10104 Chapel Hill)

1997

INV (CCAPG04031 - BUILDING 4031)

1998

IRA (CCAPG04025 - BUILDING 4025)

1999

INV (CCAPG00339 - Building 339, CCAPG10104 - Building 10104 Chapel Hill)

2000

IRA (CCAPG00345 - BUILDING 345)

2001

CAP (CCAPG04031 - BUILDING 4031)

2002

DES (CCAPG04031 - BUILDING 4031)

IMP(C) (CCAPG00345 - BUILDING 345)

2004

IMP(C) (CCAPG04025 - BUILDING 4025)

2007

IRA (CCAPG00339 - Building 339)

2008

INV (CCAPG04425 - BUILDING E-4225 correct #, CCAPG05426 - BUILDING 5426)

2009

- CAP (CCAPG00339 - Building 339)
- IMP(O) (CCAPG00345 - BUILDING 345)
- RFA (CCAPG09-03 - Soil and Debris Piles/Landfills)
- IMP(C) (CCAPG10104 - Building 10104 Chapel Hill)

2010

- CS (CCAPG09-03 - Soil and Debris Piles/Landfills)
- INV (CCAPG00520 - Building 520)
- LTM (CCAPG00339 - Building 339, CCAPG10104 - Building 10104 Chapel Hill)
- ISC (CCAPG00745 - Building 745)
- CAP (CCAPG05042 - Building 5042)
- IMP(C) (CCAPG05042 - Building 5042)

2011

- IRA (CCAPG04020 - Building 4020, CCAPG04425 - BUILDING E-4225 correct #, CCAPG0700A - Building 700A Contamination)
- CAP (CCAPG04020 - Building 4020, CCAPG04425 - BUILDING E-4225 correct #)
- PA (CCAPG0700A - Building 700A Contamination)
- IMP(O) (CCAPG05042 - Building 5042)
- SI (CCAPG0700A - Building 700A Contamination)
- INV (CCAPG00745 - Building 745)

2012

- IMP(O) (CCAPG04025 - BUILDING 4025)
- IMP(C) (CCAPG05426 - BUILDING 5426)
- CAP (CCAPG05426 - BUILDING 5426)

2013

- RI/FS (CCEACCGST - G Street RAD Site)
- LTM (CCAPG05042 - Building 5042, CCAPG05426 - BUILDING 5426)

2014

- LTM (CCAPG04025 - BUILDING 4025)

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
---------	-----------	--------------	-------------

Final RA(C) Completion Date: 201608

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of CR at Installation (including LTM phase): 205205

ABERDEEN PROVING GROUND CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCAPG00345	BUILDING 345	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCAPG04031	BUILDING 4031	IMP(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCAPGAAVI	Aberdeen Area Vapor Intrusion	RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCAPGEAVI	Edgewood Area Vapor Intrusion	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CCEACCX1	CCSA Glassware Site	RI/FS						

Community Involvement

Technical Review Committee (TRC): 199010

Community Involvement Plan (Date Published): 201106

Restoration Advisory Board (RAB): RAB established 199501

RAB Adjournment Date: N/A

RAB Adjournment Reason: None

Additional Community Involvement Information

Each year APG shares the current FY obligation plan and information contained in the IAP document with representatives of the RAB, MDE, and USEPA. Upon final approval of the APG IRP IAP, the document is provided to the RAB members. The IAP distribution is consistent with APG's ongoing interactive and proactive relationship with local stakeholders, including citizens, regulators, and elected officials, to promote involvement in the IRP. Through various aspects of a mature community relations program, APG continues to reinforce the desire and need for stakeholder participation early in the IRP process. APG's program involves community members in initial project meetings and they continue through the formal public comment periods. APG's RAB continues to meet on a regular basis with a subcommittee or in topical interim meetings as needed. Tours are held once a year to allow RAB members to see close up progress and issues at the restoration sites. APG also continues to disseminate information to the general public through a variety of methods including direct mail, news releases, an information line, a website, fact sheets, information repositories, public notices, and displays at community events.

Administrative Record is located at

Aberdeen Proving Ground
Bldg E6882
APG/EA, MD 21010

Information Repository is located at

Harford County Library
2205 Hanson Rd
Edgewood MD 21040

HCL
21 Franklin Str
Aberdeen MD 21001

Kent Co. Miller Library
Washington College
Chestertown MD 21620

Current Technical Assistance for Public Participation (TAPP):200507

TAPP Title: APG TAPP

Potential TAPP: N/A

