

FY2012

HUNTER ARMY AIRFIELD
Army Defense Environmental Restoration Program
Installation Action Plan

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Statement of Purpose

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

In an effort to coordinate planning information between the restoration manager, US Army Environmental Command (USAEC), Hunter Army Airfield (HAAF), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and 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

AAF	Army Air Field
AAFES	Army, Air Force Exchange Services
ABC	Anaerobic Biochem
ACL	Alternate Cleanup Level
AEDB-R	Army Environmental Database- Restoration
AEHA	Army Environmental Hygiene Agency
AOC	Area of Concern
AST	Aboveground Storage Tank
ASTMP	Aboveground Storage Tank Management Program
ATL	Alternate Threshold Levels
AVGAS	Aviation Gas
BFF	Bulk Fuel Farm
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CAP	Corrective Action Plan
CPT	Cone-Penetrometer-Technology
CSR	Compliance Status Report
DAACG	Departure/Arrival Airfield Control Group
DCA	Department of Community Affairs
DCE	Dichloroethene
dhc	dehalocaccoides
DPT	Direct-Push Technology
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
EFR	Emergency First Response
EGDT	Emergency Generator Diesel Tank
EM	Environmental Management
EPD	Environmental Protection Division
ER,A	Environmental Restoration, Army
ERD	Enhanced Reductive Dechlorination
ERM	Environmental Restoration Manager
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet (foot)
FTA	Fire Training Area
FY	Fiscal Year
GAEPD	Georgia Environmental Protection Division
gal	gallon
HAA	AEDB-R site designation for Hunter Army Airfield
HAAF	Hunter Army Airfield
HSI	Hazardous Site Inventory
HSRA	Hazardous Site Remediation Act
IAP	Installation Action Plan
ID	Identification
IMCOM	Installation Management Command
IMP (C)	Implementation (Construction)

Acronyms

IMP (O)	Implementation (Operation)
INV	Investigation
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
IWQS	In-Stream Water Quality Standards
JP	Jet Propellant
k	thousand
LTM	Long-Term Management
MCA	Military Construction, Army
MCL	Maximum Contaminant Level
mg/L	Milligram per liter
MIP	Membrane Interface Probe
MNA	Monitored Natural Attenuation
MO	Month
MOGAS	Motor Gasoline
MW	Monitoring Well
NFA	No Further Action
NPL	National Priorities List
ORC	Oxygen Releasing Compound
OWS	Oil/Water Separator
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PBA	Performance-Based Acquisition
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PDO	Property Disposal Office
POL	Petroleum Oils and Lubricants
RA	Remedial Action
RA (C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RIP	Remedy-in-Place
RRS	Risk Reduction Standard
RRSE	Relative Risk Site Evaluation
SAIC	Science Applications International Corporation
SI	Site Inspection
SPH	Six Phase Heating
STP	Sewage Treatment Plant
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation

Acronyms

TBD	To Be Determined
TCE	Trichloroethylene
TRC	Technical Review Committee
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAF	US Air Force
USATHAMA	United States Army Toxic and Hazardous Materials Agency
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
USTMP	Underground Storage Tank Management Program
VE	Vacuum Extraction

Acronym Translation Table

CERCLA

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

RCRA

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

CERCLA

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

RCRA Underground Storage Tank (UST) Site Phase Terms

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

Installation Information

Installation Locale

Installation Size (Acreage): 5400

City: Savannah

County: Chatham

State: Georgia

Other Locale Information

HAAF is located on 5,400 acres of land in Chatham County, Georgia, in the southwestern part of Savannah. The airfield is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River/Forest River.

Installation Mission

The mission of the Fort Stewart/HAAF complex is to sustain a quality of life and installation support at the level necessary for division, non-divisional, tenant, and reserve component units to accomplish their training mission.

Lead Organization

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE), Savannah District

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region IV
State	Georgia Environmental Protection Division (GAEPD) Georgia Department of Natural Resources

National Priorities List (NPL) Status

HUNTER ARMY AIRFIELD is not on the NPL

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

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

Installation Program Summaries

IRP

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

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

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201005	201109	2011

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
DD for FRA (as) at bldg 133 (HAA-3B)	HAA-03B
DD for FRA (gw) at PDO Yard (HAA-12)	HAA-12
DD for FRA at Bldg 728 (soil & gw)	HAA-03
DD for FRA at MCA Barracks (HAA-15)	HAA-15
DD for FRA at Pumphouse #1 (HAA-13)	HAA-13
DD for HAA-03 (additional injectors)	HAA-03
DD for IRA (soil) at Bldg 133 (HAA-3B)	HAA-03B
DD for IRA (soil) at PDO Yard (HAA-12)	HAA-12
DD for IRA (soil) at the FTA (HAA-01)	HAA-01
DD for IRA at Pumphouse #2 (HAA-13)	HAA-13
DD for IRA at Pumphouses #1, #2, & #6	HAA-13
DD for soil removal at Bldg 728 (HAA-03)	HAA-03
Free product delineation at HAA-09	HAA-09
IRA for FTA	HAA-01
Performance monitoring for HAA-01	HAA-01

Results The remedies are functioning as intended.

Actions Issue identified was that affected soils were used as backfill for the UST sites.

Plans Ensure USTs are in BMP GIS database so that possible issues can be identified during site screening.

Recommendations and Implementation Plans:

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Cleanup Program Summary

Installation Historic Activity

Fort Stewart became a flight training center in 1966 and HAAF was acquired from the US Air Force (USAF) in 1967 to support the increased need for helicopter pilot training during the Vietnam Conflict. From 1970 to 1972 advanced helicopter training for Vietnamese Air Force flight students was conducted at HAAF. Aviation training was phased out in 1973, when all aviation training was consolidated at Fort Rucker, Alabama. The 1st Battalion, 75th Infantry was activated on Jan. 31, 1974, and Fort Stewart became a training and maneuver area providing tank, field artillery, helicopter gunnery, and small arms training for regular Army and National Guard units.

HAAF currently provides support facilities, conducts training opportunities, and assists in the mobilization and deployment of the 3d Infantry Division (Mechanized). The 24th Infantry Division (Mechanized) was formerly stationed at Fort Stewart in 1975 and was active during the Persian Gulf War in 1991. It was re-flagged as the 3d Infantry Division in May 1996.

In July 1980 Fort Stewart filed a Resource Conservation and Recovery Act (RCRA) notification form with the USEPA for Fort Stewart and HAAF. A RCRA Part A permit application for interim status as a generator and storage facility was filed in November 1980. Subsequently, HAAF obtained a Part A permit and was under interim status as a hazardous waste generation and storage facility. In 1983, the USEPA directed HAAF to file a RCRA Part B permit application and conducted a compliance inspection of HAAF. Following the compliance inspection, the USEPA advised the Directorate of Public Works (DPW) personnel to withdraw the Part B permit application for HAAF, because hazardous wastes generated at HAAF are transferred to the Defense Reutilization and Marketing Office (DRMO) storage yard at Fort Stewart. Due to this fact, the USEPA ruled that HAAF did not require a Part A or B permit. The Part B permit for Fort Stewart was revised to include quantities of waste generated at HAAF, which is currently classified as a small quantity generator.

Installation Program Cleanup Progress

IRP

- Prior Year Progress:** A compliance status report (CSR) was submitted to GAEPD for HAA-01. A pilot-scale recovery system was installed to address observed free-product at HAA-09 release No. 2. Performance monitoring of the calcium peroxide injections will continue to help boost attenuation rates at HAA-13 Pumphouse #1 release No.2. Monitoring well abandonment occurred upon receipt of no further action report (NFAR) at HAA-13 Pumphouse #2. A revised CSR was submitted for HAA-17.
- Future Plan of Action:** An approved corrective action plan (CAP) for HAA-01, HAA-15, and HAA-17 will be submitted to GAEPD. The goal is to achieve remedy-in-place (RIP) for HAA-01 and HAA-15; any necessary long-term management (LTM) will be performed at these sites.

HUNTER ARMY AIRFIELD
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 21/15

Installation Site Types with Future and/or Underway Phases

1	Above Ground Storage Tank (HAA-09)
3	Contaminated Ground Water (HAA-15, HAA-17, PBA@HAAF)
1	Fire/Crash Training Area (HAA-01)
1	Underground Storage Tank (HAA-13)

Most Widespread Contaminants of Concern

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

Media of Concern

Groundwater, Sediment, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
HAA-03	FORMER USTS AT BLDG 728	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
HAA-03B	FORMER USTS AT BLDG 133	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
HAA-03B	FORMER USTS AT BLDG 133	IRA	GROUND WATER TREATMENT	1995
HAA-13	PUMP HOUSES #1, #2, AND #6	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995
HAA-03C	FORMER USTS AT BLDG 710	IRA	WASTE REMOVAL - SOILS	1996
HAA-14	FORMER AIRFIELD AREA UST SITES	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
HAA-01	FIRE TRAINING SITE	IRA	REMOVAL	1998
HAA-12	FORMER PDO FACILITY	IRA	CONTAINMENT	1998
HAA-12	FORMER PDO FACILITY	IRA	REMOVAL	1998
HAA-13	PUMP HOUSES #1, #2, AND #6	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1998
HAA-03B	FORMER USTS AT BLDG 133	IRA	WASTE REMOVAL - SOILS	2001
HAA-03	FORMER USTS AT BLDG 728	IRA	WASTE REMOVAL - LIQUIDS	2002
HAA-03	FORMER USTS AT BLDG 728	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2002
HAA-03	FORMER USTS AT BLDG 728	IRA	WASTE REMOVAL - SOILS	2002
HAA-09	BULK FUEL FACILITY	FRA	NATURAL ATTENUATION	2002
HAA-12	FORMER PDO FACILITY	FRA	CHEMICAL REDUCTION/OXIDATION	2002
HAA-12	FORMER PDO FACILITY	FRA	NATURAL ATTENUATION	2002
HAA-13	PUMP HOUSES #1, #2, AND #6	FRA	THERMAL DESORPTION	2002
HAA-01	FIRE TRAINING SITE	IRA	REMOVAL	2003
HAA-13	PUMP HOUSES #1, #2, AND #6	FRA	NATURAL ATTENUATION	2003
HAA-13	PUMP HOUSES #1, #2, AND #6	IRA	FREE PRODUCT RECOVERY	2003
HAA-03	FORMER USTS AT BLDG 728	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2004
HAA-03B	FORMER USTS AT BLDG 133	FRA	AIR SPARGING	2004
HAA-01	FIRE TRAINING SITE	IRA	WASTE REMOVAL - SOILS	2005

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
HAA-15	MCA BARRACKS SITE	IRA	REMOVAL	2007
HAA-15	MCA BARRACKS SITE	IRA	CHEMICAL REDUCTION/OXIDATION	2008
PBA@HAAF	Funding for PBA @ HAAF	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2008
HAA-13	PUMP HOUSES #1, #2, AND #6	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2010
HAA-01	FIRE TRAINING SITE	IRA	IN-SITU SOIL TREATMENT	2011
HAA-09	BULK FUEL FACILITY	FRA	FREE PRODUCT RECOVERY	2011
HAA-09	BULK FUEL FACILITY	FRA	SOIL VAPOR EXTRACTION	2011

Duration of IRP

Date of IRP Inception: 198301

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201311/203009

Date of IRP completion including Long Term Management (LTM): 203009

IRP Contamination Assessment

Contamination Assessment Overview

The Environmental Restoration, Army (ER,A) program at HAAF focuses on investigation and remediation of eligible sites, where contamination occurred due to past practices and activities conducted at the airfield. Currently, the installation has identified 16 of the 18 AEDB-R sites as eligible for ER,A funding. Of the 16 sites, 10 are RC and six are active ER,A sites. The active ER,A sites include the Fire Training Site (HAA-01), the Bulk Fuel Facility (HAA-09), Pump Houses #1 releases No. 1 and 2 (HAA-13), the Military Construction, Army (MCA) Barracks site (HAA-15), and trichloroethylene (TCE) groundwater contamination site (HAA-17). The RC sites are HAA-02, HAA-03 (includes -03B and -03C), HAA-06, HAA-07, HAA-08, HAA-10, HAA-11, HAA-12, HAA-13 (releases no. 2 and 6), HAA-14, and HAA-18. The RAs associated with HAA-16 were merged with HAA-01. The non-ER,A eligible sites are HAA-04 and HAA-05.

The majority of these sites (i.e., HAA-01, HAA-03, HAA-03B, HAA-9, HAA-12, HAA-13, and HAA-14) were primarily contaminated with petroleum hydrocarbons due to operations of the extensive fueling systems (i.e., storage, product delivery lines, and other components) that were required to support a Strategic Air Command facility (pre-1960s) and an Army airfield (post-1960s). These fueling systems were part of bulk tank farms, motor pool service stations, Army Air Force Exchange Services (AAFES) service stations, and miscellaneous support activities. The primary contaminants of concern at these sites are benzene, toluene, ethylbenzene, xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAH), but many sites (i.e., HAA-01, HAA-03, HAA-03B, and HAA-13) also contain free phase product (i.e., light nonaqueous phase liquid).

In the mid-1970s, oil/water separators (OWS) were installed at the vehicle washracks on HAAF. Prior to that time, washrack wastewater was discharged untreated to the storm water drainage system. When the separators were installed, the separator effluent lines were directed to the storm drainage system. In 1986, the OWS discharge lines were connected to the sanitary sewer system.

In the early-1980s, HAAF began implementing numerous measures to ensure current activities do not result in releases to the environment. The primary industrial wastes generated at HAAF are those associated with vehicle and aircraft maintenance. The waste stream includes used lubricating oil, hydraulic fluid, degreasing solvent, scrap metal, wire, and waste asbestos. Other wastes that were generated on the post include waste acid, lead-based paint, waste paint, paint sludge, polychlorinated biphenyls (PCBs) in transformer oil, plastics, pesticides, herbicides, sanitary waste, and construction debris. Underground storage tanks (USTs), which are located at a limited number of motor pools, are currently used for storage of used oil, used hydraulic fluid, used antifreeze, motor gasoline (MOGAS), and jet propellant (JP)-8. At most motor pools, above ground storage tanks (ASTs) are used in lieu of USTs and are being used for the same purposes. If the UST/AST is being used to store a waste product, then a contractor disposes the UST/AST contents on a regular basis. If these wastes meet the Fort Stewart permit requirements, they are transported to Fort Stewart and burned as a fuel source at the central energy plant solid waste management unit (SWMU) 21.

In addition, extensive chlorinated solvent contamination has been identified at HAAF since 1998. These sites (HAA-01, HAA-15, and HAA-17) will require extensive investigation to determine the extent of subsurface impact and remediation to maximum contaminant levels (MCLs).

Wastewater that was formerly treated at three smaller sewage treatment plants (STP) on the installation is now diverted to the main STP. In the past, dewatered sludge was disposed of in the base sanitary landfill, which was closed in 1980. The sludge is currently disposed of in a Subtitle D permitted landfill off base that is owned and operated by Waste Management, Inc. In 1991, effluent from the STP was routed to allow discharge in the Savannah River via the city of Savannah's Wilshire Street STP.

There are two landfills on HAAF; one is closed. The original post landfill was open from 1941 through 1980 and was used to dispose of nonhazardous scrap metals that had no salvage value. Since 1980, all of the non-salvageable scrap metal has been transported to the city of Savannah Sanitary Landfill. A second landfill is currently in operation and is used only for inert construction debris.

In 1998, the bulk fuel facility began a complete rehab and upgrade to meet 21st century standards, and to ensure the facility's operating life will continue for another 50 years. The rehabilitated facility has numerous checks and balances to ensure that failures are immediately recognized and corrected to prevent future impact to the environment. In addition, HAAF will continue to implement measures in the 21st century throughout the installation to ensure our military missions are conducted to ensure stewardship of the environment.

IRP Contamination Assessment

Cleanup Exit Strategy

HAAF IRP Exit Strategies

HAA-01: Upon approval of the CSR, preparation of the CAP will be initiated. The CAP will be prepared to identify the selected corrective action to be implemented in order to address residual compounds in groundwater and soil that exceed the Type 1 RRS.

HAA-09: Upon achievement of remedial objectives at Release No. 2 & No. 3, a request for no further action (NFA) will be sent to GAEPD and upon approval, all associated groundwater monitoring wells will be abandoned and a site closeout report will be submitted.

HAA-13: Pump House #1 Release No. 1: Continued semiannual sampling will be conducted to monitor the natural attenuation of the residual BTEX.

Pump House #1 Release No. 2

Design and installation of a Biosparge system will be implemented to address the BTEX contamination. Semiannual monitoring of groundwater monitoring wells near the canal and of the canal surface water will be performed to monitor potential impacts.

HAA-15: Upon approval of the CSR, a CAP will be developed to address chlorinated VOC impacts in groundwater and lead impacts in surface soil. The remedy will include injection into each distinct depth zone (shallow, intermediate, and deep). Monitored Natural Attenuation (MNA) will be conducted until site reaches approved remedial levels. After the site reaches approved remedial levels and an NFA is approved, all wells and systems will be abandoned and documented in a site closure report to the GAEPD.

HAA-17: Upon approval of the CSR, a CAP will be submitted proposing the implementation of an enhanced reduction dechlorination system to reduce TCE. MNA will be conducted until site reaches approved remedial levels. After the site reaches approved remedial levels and an NFA is approved, all wells and systems will be abandoned and documented in a site closure report to the GAEPD.

IRP Previous Studies

Year	Title	Author	Date
1982	Solid Waste Disposal Study of HAAF, Savannah, Georgia, Contract No. DACA-21-80-C-0111	Gulf Tex Engineers, Inc	MAR-1982
1983	Installation Assessment of HQ, 24th Infantry Division and Fort Stewart, Georgia, Report No. 334	ESE, Inc	OCT-1983
1987	Hazardous Waste Study, No. 37-26-0127-88, Fort Stewart, Georgia	Army Environmental Hygiene Agency (AEHA)	MAR-1987
1988	Property Report	USATHAMA	JAN-1988
	AEHA Environmental Program Review, No. 31-24-7038-89	Army Toxic and Hazardous Materials Agency (USATHAMA)	AUG-1988
1990	Tracer Leak Test for Five Underground Storage Tanks, HAAF	Tracer Research Corporation	MAR-1990
	Tracer Tight Leak Test of Four Underground Storage Tanks, HAAF	Tracer Research Corporation	MAR-1990
	Shallow Soil Gas Investigation, HAAF, Buildings 133 and 710, Savannah, Georgia	Tracer Research Corporation	JUL-1990
	Tracer Tight Leak Test of Two Underground Storage Tanks, HAAF	Tracer Research Corporation	JUL-1990
	Synthetic Organic Chemicals Survey	HSHB-ME-WR	AUG-1990
	Contamination Evaluation/Closure Plan, Ft Stewart Fire Training Areas	Hunter/ESE	OCT-1990
1991	Phase II Site Investigation, Tactical Equipment Shop Refueling Station, Building 1343 Draft	Army-COE, Savannah District	APR-1991
	Design Recommendation Report, Subsurface Remediation at the HAAF Base Gas Station	RMT, Inc.	JUN-1991
	Corrective Action Plan, HAAF Building 710, Contract No. DACA-21-91-D-001	Atlanta Testing and Engineering	OCT-1991
1994	Field Report, Delivery Order No. 33 for Removal of USTs at Bldg 728 and emergency generator tank at 117th Air National Guard	Anderson Columbia Environmental, Inc.	OCT-1994
1995	Engineering Remediation Report for Underground Storage Tank Removal, Building 710	Phoenix Construction Services, Inc.	JAN-1995
	Field Report, Delivery Order #76 for Removal of USTs at Pump Houses #1 and #2	Anderson Columbia Environmental, Inc.	APR-1995
	Field Report, Delivery Order #76 for Removal of USTs at Pump Houses #1 and #2	Anderson Columbia Environmental, Inc.	APR-1995
	Underground Storage Tank Closure Report, Building 133	Aneptek Corporation	MAY-1995
	Engineering Remediation Report, Underground Storage Tank Removal and Phase II Interim Remediation (Building 133), Hunter Army Airfield	Aneptek Corporation	JUN-1995
1996	Closure Report for Tanks 21 and 22, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996

IRP Previous Studies

1996	Title	Author	Date
	Closure Report for Tanks 23 and 24, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tanks 27 and 28, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 98, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 104, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 108, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 110, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 111, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 112, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 115, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 116, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	Closure Report for Tank 117, Hunter Army Airfield, Georgia	Anderson Columbia Environmental, Inc.	JAN-1996
	100 Percent Submittal Construction Specifications for Source Removal Action, Hunter Army Airfield-Fire Training Area, Savannah, Georgia	LAW Engineering	MAR-1996
	Final Completion Report, Former Building 133, EPD Facility No. 9025029	Metcalf and Eddy	JUN-1996
	Final Completion Report, Former Building 710, EPD Facility No. 9025029	Metcalf and Eddy	JUN-1996
	Final Corrective Action Plan-Part A, Phase I Site Investigation of the Airport Hydrant System (Building 728), Facility ID. No. 9025035 and 9025049	Metcalf and Eddy	AUG-1996
	Final Corrective Action Plan Part B, DAACG Facility Area, EPD Facility No. 9025085	Metcalf and Eddy	SEP-1996
1997	Final Corrective Action Plan-Part A, Pumphouse #6, EPD Facility No. 9025090	Metcalf and Eddy	APR-1997
	Final Corrective Action Plan-Part A, Pumphouse #1, EPD Facility No. 9025085	Metcalf and Eddy	APR-1997
	Final Corrective Action Plan-Part A, Pumphouse #2, EPD Facility No. 9025086	Metcalf and Eddy	APR-1997
	Final Compliance Status Report, Old Property Disposal (PDO) Yard, Hunter Army Airfield	Metcalf and Eddy	MAY-1997
	Final Corrective Action Plan-Part B, Building 1310, EPD Facility No. 9025073	Metcalf and Eddy	SEP-1997
	Tank # 401 AMMO YARD Bldg 1009 Field Report	Anderson Columbia Environmental, Inc.	NOV-1997
	TANK # 402 bldg 914 Field Report	Anderson Columbia Environmental, Inc.	NOV-1997
	TANK #403 BLDG 8631 Field Report	Anderson Columbia Environmental, Inc.	NOV-1997
	Final Corrective Action Plan-Part B, Former Building 728, EPD Facility No. 9025035 and 9025049	Metcalf and Eddy	DEC-1997
1998			

IRP Previous Studies

1998	Title	Author	Date
	Final Corrective Action Plan-Part B, Pumphouse #6, EPD Facility No. 9025090	Metcalf and Eddy	JAN-1998
	Corrective Action Plan-Part A for former HOT at Building 8593-1, HAAF, GA	Science Applications International Corporation (SAIC)	SEP-1998
	Closure Report for USTs 30, 31, and 50 (PumpHouse #1), HAAF, GA	HAZWRAP/EarthTech	OCT-1998
	PDO Yard ASTs Removal Report	HAZWRAP/EarthTech:	NOV-1998
	Closure Report for USTs #40-#41 (PumpHouse #2), HAAF, GA	HAZWRAP/EarthTech	DEC-1998
	Closure Report for USTs #82-#92 (PumpHouse #6), HAAF, GA	HAZWRAP/EarthTech	DEC-1998
1999	Corrective Action Plan-Part A for Heating Oil Tank (HOT) at Bldg 725, HAAF, GA	SAIC	JAN-1999
	Corrective Action Plan-Part A for UST #109, HAAF, GA	SAIC	FEB-1999
	Corrective Action Plan-Part A for UST #112, HAAF, GA	SAIC	FEB-1999
	Corrective Action Plan-Part A for UST #116, HAAF, GA	SAIC	FEB-1999
	Corrective Action Plan-Part A for Heating Oil Tanks (HOTS) at Bldg 850 , HAAF, GA	SAIC	FEB-1999
	Corrective Action Plan-Part A for USTs #21 and #22, HAAF, GA	SAIC	MAR-1999
	Corrective Action Plan-Part A for USTs #27 and #28, HAAF, GA	SAIC	MAR-1999
	Corrective Action Plan-Part A for USTs #25 and #26, HAAF, GA	HAZWRAP/EarthTech	MAR-1999
	Corrective Action Plan-Part A for UST #108, HAAF, GA	SAIC	MAR-1999
	Addendum #2 to Sampling and Analysis Plan for CAP Part A and B Investigation for Former USTs	SAIC	APR-1999
	Addendum #3 to Sampling and Analysis Plan for CAP Part A and B Investigation for Former USTs	SAIC	APR-1999
	Addendum #1 to Site and Safety Health Plan for CAP Part A and B Investigations for Former USTs	SAIC	MAY-1999
	Third Annual Monitoring Only Report for former USTs #17-#20, HAAF, GA	Metcalf and Eddy	MAY-1999
	Third Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA	Metcalf and Eddy	MAY-1999
	UST #113 Closure Report (EGDT) Emergency Generator Diesel Tank	Hussey, Gay, Bell, & Deyoung	JUN-1999
	UST #114 Closure Report (EGDT) Emergency Generator Diesel Tank	Hussey, Gay, Bell & DeYoung	JUN-1999
	UST #93 Closure Report (EGDT) (Emergency Generator Diesel Tank)	Hussey, Gay, Bell & Deyoung	JUN-1999
	UST #99 Closure Report Bldg 1323 (EGDT) Emergency Generator Diesel Tank	Hussey, Gay, Bell, DeYoung	JUN-1999
	UST #110 Closure Report Used Oil Tank Bldg 1333	Hussey, Gay, Bell & Deyoung	JUN-1999
	UST #29 Closure Report (EGDT) Bldg 8571	Fort Stewart Directorate of Public Works, Environmental Branch	JUN-1999
	Closure Report for UST #129, HAAF, GA	HAZWRAP/EarthTech	JUL-1999

IRP Previous Studies

1999

Title	Author	Date
Closure Report for UST #130, HAAF, GA	HAZWRAP/EarthTech:	JUL-1999
Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09), HAAF	SAIC	SEP-1999
Revised Final RFI Report for the Old PDO Yard	Metcalf and Eddy	SEP-1999
Corrective Action Plan-Part B for UST #108, HAAF, GA	SAIC	SEP-1999
Closure Report for UST #29, HAAF, GA	Fort Stewart DPW, Environmental Branch	SEP-1999
Closure Report for UST #104, HAAF, GA	Fort Stewart DPW, Environmental Branch	SEP-1999
Closure Report for UST #110, HAAF, GA	Fort Stewart DPW, Environmental Branch	SEP-1999
Closure Report for UST #111, HAAF, GA	Fort Stewart DPW, Environmental Branch	SEP-1999
HAA-12 PDO YARD Revised Final RCRA Facility Investigations Report	Metcalf & Eddy	SEP-1999
First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA	Metcalf and Eddy	OCT-1999
Corrective Action Plan-Part B for USTs #21 and #22, HAAF, GA	SAIC	OCT-1999
Closure Report for UST #117, HAAF, GA	Fort Stewart DPW, Environmental Branch	OCT-1999
UST #108 CAP Part B Bldg 1346	SAIC	OCT-1999
First Annual Monitoring Only Report for Bldg 728 (USTs #1-#16), HAAF, GA	Metcalf and Eddy	NOV-1999
First Annual Monitoring Only Report for the Fire Training Area (HAA-01), HAAF, GA	Metcalf and Eddy	NOV-1999
UST #131 NON-REGULATED UST Final Closure Report Bulk Fuel Facility	EARTH TECH	DEC-1999
UST 111 Closure Report Used Oil Tank	Fort Stewart DPW Environmental Branch	DEC-1999
SWMU #1 Post South Central Landfill Corrective Action Plan	SAIC	DEC-1999

2000

Corrective Action Plan-Part B for USTs #25 and #26, HAAF, GA	SAIC	FEB-2000
Final Compliance Status Report, Fire Training Area, Hunter Army Airfield, Georgia	LAW Engineering	MAR-2000
UST 120 Final Closure Report Bldg 7901	Earth Tech, Inc.	MAR-2000
UST 100 BLDG 1450 Closure Report EGDT	Hussey, Gay, Bell, Deyoung	MAR-2000
UST 121 Bldg 7902 Final Closure Report	Earth Tech	APR-2000
Corrective Action Plan for the Old Property Disposal (PDO) Yard, HAAF, GA	SAIC	APR-2000
MCA Barracks Site Data Package for Preliminary Assessment	SAIC	APR-2000
Pumphouse #2 Corrective Action Plan Part B Former Bldg 8065	SAIC	MAY-2000
Bulk Fuel Facility Final Monitoring Only Well Installation Report	SAIC	MAY-2000
Fourth Annual Monitoring Only Report for former USTs #17-#20, HAAF	SAIC	MAY-2000

IRP Previous Studies

2000

Title	Author	Date
Fourth Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA	SAIC	MAY-2000
HAA-14 BLDG 1327 First Semiannual MO Report for USTs 21-22	SAIC	MAY-2000
Corrective Action Plan-Part A for the Bulk Fuel Facility Former UST 117, HAAF, GA	SAIC	JUN-2000
Addendum #1 to the First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24)	SAIC	JUN-2000
CAP-Part B for HAAF Bulk Fuel Facility	SAIC	JUN-2000
CAP-Part B Addendum for USTs 25 and 26, HAAF	SAIC	JUN-2000
Addendum #1 to the Bldg 728 CAP-Part B Report, HAAF, GA	SAIC	JUL-2000
UST 23-24 Bldg 1310 First Annual MO Report Addendum #1	SAIC	JUL-2000
HAA-03 Former Bldg 728 Corrective Action Plan Part B Addendum #1 and First Annual Pilot Study Progress Report	SAIC	AUG-2000
Corrective Action Plan-Part B for PumpHouse #1, HAAF, GA	SAIC	AUG-2000
Second Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA	SAIC	OCT-2000
UST 118-123X Former Bldg 133 Semiannual MO Report for the 17th Monitoring Event	SAIC	NOV-2000
UST 25 & 26 Data Package for Sept 2000 Sampling Event	SAIC	NOV-2000
UST 25 & 26 1st Semiannual MO Report	SAIC	NOV-2000
HAA-14 BLDG 1327 First Annual Monitoring Only Report USTs 21-22	SAIC	DEC-2000

2001

PDO YARD Site Safety and Health Plan for the Corrective	SAIC	JAN-2001
PDO YARD Field Sampling Plan for Corrective Action	SAIC	JAN-2001
Fifth Semiannual Monitoring Only Report for Bldg 131	SAIC	MAR-2001
Fifth Annual Monitoring Only Report for Bldg 133, UST 118X-123X	SAIC	MAY-2001
UST 23-24 Final Interim Removal Action Report	EARTH TECH, INC.	MAY-2001
UST 25-26 BLDG 1343, Corrective Action Plan Part B Addendum #1	SAIC	JUN-2001
First Annual Monitoring Only Report for USTs 25 and 26, HAAF	SAIC	JUN-2001
First Progress Report for the Corrective Action at the PDO Yard	SAIC	JUN-2001
HAA-09 Bulk Fuel Facility Corrective Action Plan Part B Former UST 117	SAIC	JUL-2001
UST 25-26 BLDG 1343 First Annual MO Report	SAIC	JUL-2001
IRA Former USTs #118X-123X, Former Bldg 133	EarthTech	AUG-2001
Second Annual Progress Report for Bldg 728 Pilot Study	SAIC	AUG-2001
CAP B Addendum PH #1	SAIC	SEP-2001

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2001

Title	Author	Date
CAP-Part B Addendum for Pumphouse #2, HAAF	SAIC	SEP-2001
HAA-01 Former Fire Training Area Final Work Plan for Modification No.4 to the Revised Final Compliance Status Report Investigation	Law Engineering & Environmental Services	OCT-2001
Sanitary Sewer Investigation Bldg 1275, 1276, 1277 (EM Barracks)	EarthTech	OCT-2001
Sanitary Sewer Investigation Gannam Height & Wilson Acres	EarthTech	OCT-2001
Sanitary Sewer Investigation Gannam Height & Wilson Acres	EarthTech	OCT-2001
Sanitary Sewer Investigation Bldg 1275, 1276, 1277 (EM Barracks)	EarthTech	OCT-2001
Pumphouse #1 Site Safety and Health Plan for Corrective Action	SAIC	NOV-2001
HAA-13 PUMPHOUSE #2 Field Sampling Plan for Corrective Action @ Former PH #2	SAIC	NOV-2001
PDO YARD- Second CAP Report for Corrective Actions	SAIC	DEC-2001
UST 118X-123X Semiannual MO Report for the 19th Monitoring Event	SAIC	DEC-2001
UST 25-26 BLDG 1343 Third Annual MO Report	SAIC	DEC-2001
3rd Semiannual MO TANK 25-26	SAIC	DEC-2001
First Annual Monitoring Only Report for USTs 21 and 22, HAAF, GA	SAIC	DEC-2001
3rd Semiannual MO TANK 25-26	STEP	DEC-2001

2002

1st Semiannual MO PH #1	SAIC	FEB-2002
FTA-Revised Final Compliance Status Report Vol I of II	LAW GIBB GROUP	FEB-2002
6th Annual MO Bldg 133	STEP, INC	MAY-2002
Revised Final Compliance FTA VOL II of II	LAW GIBB GROUP	MAY-2002
1st Pilot Study report for Pumphouse 2	SAIC	JUN-2002
Pumphouse #1 Bldg 8060 Revised Final Corrective Action Plan part B Addendum #1	SAIC	JUL-2002
2nd Annual MO Tank 25-26	STEP, INC.	JUL-2002
2nd Progress Report PDO Yard	SAIC	JUL-2002
6th Annual Monitoring Only Report for USTs 118x-123x	SAIC	JUL-2002
3rd Corrective Action Progress Report for the Corrective Actions at the Old PDO Yard HAAF	SAIC	JUL-2002
2nd Annual Monitoring Only report for UST 25 and 26	SAIC	JUL-2002
3rd Semiannual Monitoring Only report for UST 25 and 26	SAIC	JUL-2002
5th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard	SAIC	JUL-2002
1st Annual Monitoring Only Report for Pumphouse #1	SAIC	AUG-2002
3rd Annual Progress Report for Former Building 728	SAIC	AUG-2002

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2002	Title	Author	Date
	HAA-09 Bulk Fuel Facility First Semiannual MO Report for former UST 117 Bldg 7002	SAIC	OCT-2002
	Semiannual Monitoring Only Report for the 21st Monitoring Event for Former UST 118x-123x	SAIC	OCT-2002
	1st Annual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage	SAIC	OCT-2002
	UST 255-256 Third Annual MO Report Bldg 1612	SAIC	NOV-2002
	UST 25-26 Bldg 1343 Fifth Semiannual MO Report	SAIC	NOV-2002
	MCA Barracks Site Data Package #2 for Preliminary Assessment	SAIC	DEC-2002
2003			
	PDO YARD 4TH CAP Report for Corrective Actions	SAIC	JAN-2003
	UST 25-26 BLDG 1343, CAP PART B Addendum #2	SAIC	APR-2003
	3rd Semi Annual Monitoring Only Report for Pumphouse 1	SAIC	APR-2003
	4th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard	SAIC	APR-2003
	UST 118X-123X BLDG 133, 7TH Annual MO Report	SAIC	MAY-2003
	Corrective Action Work Plan for Former USTs 118x-123x	STEP	MAY-2003
	Bulk Fuel Facility, First Annual MO Report UST 117	SAIC	JUL-2003
	3rd Annual MO Report UST 25 & 26	SAIC	JUL-2003
	2nd Pilot Study report for Pumphouse 2	SAIC	JUL-2003
	2nd Pilot Study report for Pumphouse 2	SAIC	JUL-2003
	1st Semiannual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage	SAIC	AUG-2003
	PDO Yard 5th CAP Report for Corrective Actions	SAIC	AUG-2003
	UST 122-123 BLDG 1360 Closure Report for Monitoring Well Abandonment	US Army Corps of Engineers	SEP-2003
	UST118, 119, 119B Final Closure Report for Permanent Closure	STEP	SEP-2003
	HAA-01 Final Work Plan Addendum to the Revised Final Compliance Status Report Investigation for IRA	STEP, INC.	SEP-2003
	HAA-03 BLDG 728 4TH Annual Pilot Study Progress Report	SAIC	SEP-2003
	UST 2 5 & 26 7TH Semiannual MO Report	SAIC	OCT-2003
	5th Semiannual Monitoring Only Report for UST 25 and 26	SAIC	NOV-2003
2004			
	Data Summary Report for the 2003 Free-product CPT Investigation Former Pumphouse #1	SAIC	JAN-2004
	6th Corrective Action Plan Progress Report at the Old PDO Yard	SAIC	JAN-2004
	3rd Semiannual Progress Report Former Pumphouse #2	SAIC	FEB-2004
	Report of Findings for MCA Barracks HAA-15	HGL	JUL-2004

IRP Previous Studies

2004	Title	Author	Date
	HAA-01 Former Fire Training Area Final Report for Interim Removal Activities	STEP	AUG-2004
	7th Corrective Action Plan Progress Report for the Old PDO Yard	SAIC	AUG-2004
	4th Semiannual Progress Report Former Pumphouse #2	SAIC	AUG-2004
	HAA-09 Bulk Fuel Facility 3rd Semiannual MO Report for UST 117	SAIC	NOV-2004
	HAA-03B BLDG 133 Final Semiannual Status Report for Remedial Action	STEP	DEC-2004
2005	Addendum Compliance Status Former Fire Training Area HAA-01	SAIC	APR-2005
	5th Semiannual Progress Report for Former Pumphouse #2	SAIC	MAY-2005
	HAA-09 Bulk Fuel Facility Second Annual MO Report	SAIC	JUN-2005
	3rd Annual Monitoring Only Report for Former Pumphouse #1	SAIC	JUN-2005
	Correction Action Completion Report for the Old PDO Yard	SAIC	AUG-2005
	Monitoring Only Report Jan. 05 Sampling Event Former Fire Training Area	SAIC	AUG-2005
	7th Semiannual Monitoring Only Report for Former Pumphouse #1	SAIC	AUG-2005
	PDO Yard Corrective Action Plan for Corrective Action at the PDO Yard	SAIC	SEP-2005
	MCA Barracks Site HAA-15, Final Site Investigations Work Plan	SAIC	SEP-2005
	UST 25-26 11TH Semiannual MO Report	SAIC	OCT-2005
	Bulk Fuel Facility HAA-09 Final Second Annual MO Report	SAIC	NOV-2005
	6th Semiannual Progress Report for Former Pumphouse #2	SAIC	NOV-2005
	2nd Annual Monitoring and Free Product Removal Report for the Bulk Fuel Facility	SAIC	DEC-2005
	2nd Groundwater Sampling Letter Report for the Former Building 133 Remedial Action	STEP	DEC-2005
2006	HAA-13 Pumphouse #1 2004-2005 Free-product Removal Report Former Pumphouse #1 Release #1	SAIC	APR-2006
	HAA-01 Former Fire Training Area Monitoring Only Report for CY 2005	SAIC	APR-2006
	UST 25 and 26 Sixth Annual Monitoring Only Report Bldg 1343	SAIC	JUL-2006
	Bulk Fuel Facility HAA-09 Completion Report Former UST #117 Bldg 7002	SAIC	JUL-2006
	HAA-13 PH #1 CAP PART B Addendum #2 Ph #1 Release #1	SAIC	JUL-2006
	UST 25 and 26 Final Closure Report Former 260th QTR Motor Pool 3rd AVN BDE	CAPE	AUG-2006
	Bulk Fuel Facility HAA-09 Final Closure Report Bulk Fuel Tank Farm UST 117 Bldg 7002	CAPE	AUG-2006

IRP Previous Studies

2006	Title	Author	Date
	HAA-13 PH #1 4th Annual MO Report PH #1 Release #2 Bldg 8060	SAIC	NOV-2006
	UST 122-123 Closure Report for Monitoring Well Abandonment Bldg 1360	US Army Corps of Engineers	DEC-2006
2007			
	UST 25 & 26 Thirteenth Semiannual Monitoring Only Report Bldg 1343	STEP, INC.	JAN-2007
	HAA-13 PH #2 Eighth Semiannual Progress Report Bldg 8065	SAIC	JUL-2007
	UST 25 & 26 Final Completion Report for Interim Remedial Action at the 260th QTRMaster Motor Pool Bldg 1345	SAIC	AUG-2007
	HAA-12 PDO YARD Letter Report for the Surface Soil Sampling	SAIC	SEP-2007
	UST 117 Third Annual MO and Free Product Removal Report	SAIC	SEP-2007
	HAA-09 Bulk Fuel Facility Final 3rd Annual Monitoring & Free Product Report Former UST 117 Bldg 7009	SAIC	SEP-2007
	HAA-01 Former Fire Training Area Monitoring Only Report for CY 2006	SAIC	OCT-2007
	HAA-13 PH #1 11TH Semiannual Monitoring Only Report Former PH #1 Release #2	SAIC	DEC-2007
	HAA-13 PH #1 5TH Annual Monitoring Only Report for Former PH #1 Release #2	SAIC	DEC-2007
	HAA-13 PH #2 9TH Semiannual Progress Report Former PH #2	SAIC	DEC-2007
2008			
	July 2007 Sampling Event Monitoring Only Report, Former Building 728, Facility ID 9-025049, Hunter Army Airfield, GA	SAIC	JAN-2008
	Work Plan for Soil Remediation and FY08 Groundwater Monitoring at Former Pumphouse #2, Hunter Army Airfield, GA	SES	FEB-2008
	2007 Freeproduct Removal and Monitoring Only Report, Former Pumphouse #1, Release #1, Facility ID 9-025085*1, Former Building 8060, Hunter Army Airfield, GA	SAIC	MAY-2008
	Letter Report for the Surface Soil Sampling (2008) at the Old Property Disposal (PDO) Yard, Hunter Army Airfield, GA	SAIC	MAY-2008
	Revised Final Corrective Action Completion Report for the Corrective Actions at the Old Property Disposal (PDO) Yard, Hunter Army Airfield, GA	SAIC	MAY-2008
	Sixth Annual Monitoring Only Report, Former Building 728, Facility ID 9-025049, Hunter Army Airfield, GA	SAIC	JUN-2008
	Tenth Semiannual Progress Report, Former Pumphouse #2, Facility ID 9-025086, Former Building 8065, Hunter Army Airfield, GA	SAIC	JUN-2008
	Monitoring Only Report for CY 2007, Former Fire Training Area (HAA-01), HSI 10395, Hunter Army Airfield, GA	SAIC	JUN-2008
	Eleventh Semiannual Progress Report Former Pumphouse #2, Facility ID 9-025086, Former Building 8065, Hunter Army Airfield, GA	SAIC	AUG-2008

IRP Previous Studies

2008	Title	Author	Date
	Monitoring Only Report for the January 2008 Sampling Event, Former Fire Training Area (HAA-01), HSI 10395, Hunter Army Airfield, GA	SAIC	AUG-2008
	2008 Supplemental Site Investigation Data Package, Former Pumphouse #1, Release #1, Facility ID 9-025085*1, Former Building 8060, Hunter Army Airfield, GA	SAIC	AUG-2008
	Eleventh Semiannual Progress Report, Former Pumphouse #2, Facility ID 9-025086, Former Building 8065, Hunter Army Airfield, GA	SAIC	AUG-2008
	Completion Report, Former Building 728, Facility ID 9-025049, Hunter Army Airfield, GA	SAIC	SEP-2008
	Fourth Annual Monitoring and Free Product Removal Report, Former UST 117, Building 7009, Bulk Fuel Facility (HAA-09), Facility ID 9-025113*2, Hunter Army Airfield, GA	SAIC	SEP-2008
	Sixth Annual Monitoring Only Report, Former Pumphouse #1, Release #2, Facility ID 9-025085*2, Former Building 8060, Hunter Army Airfield, GA	SAIC	SEP-2008
	Data Summary Report for TCE Plume at Bldg 1290, Hunter Army Airfield, GA	SAIC	DEC-2008
2009	HAA-13 Pumphouse #1 Release #2 Final 12th Semi-Annual Progress Report	SAIC	JAN-2009
	HAA-13 Pumphouse #2 CAP-Part B Addendum #1	SES	JAN-2009
	HAA-12 Well Abandonment Report Old Property Disposal (PDO) Yard	SAIC	FEB-2009
	HAA-09 CAP-Part B, Bulk Fuel Facility Former AST 7001 and 7003	Arcadis	MAR-2009
	HAA-15 Final Work Plan for Investigation for MCA Barracks	Arcadis	APR-2009
	HAA-17 Hazardous Sites Response Program Notification	Arcadis	APR-2009
	HAA-18 Final Site Investigation Summary Report Boundary Investigation	Arcadis	APR-2009
	HAA-01 Compliance Status Report Work Plan	Arcadis	JUN-2009
	HAA-13 Pumphouse #1 Release #1 Revised CAP-Part B w/2008 Annual Monitoring Report	Arcadis	JUN-2009
	HAA-17 Site Investigation Work Plan	Arcadis	JUN-2009
	HAA-13 Pumphouse #1 Release #2 Final Revised CAP-Part B w/2008 Annual Monitoring Report	Arcadis	JUL-2009
	HAA-13 Pumphouse #1 Release #1 Revised CAP-Part B Addendum #1 Report Former	Arcadis	SEP-2009
	HAA-18 Final Site Investigation Work Plan Boundary Investigation	Arcadis	SEP-2009
	HAA-09 CAP-Part B Addendum #1 for the Bulk Fuel Facility	Arcadis	OCT-2009
	HAA-13 Pumphouse #1 Release #1 Revised CAP-Part B, Addendum #1	Arcadis	OCT-2009
	HAA-13 Pumphouse #1 Release #2 Final 15th Semi-Annual Monitoring Only Report w/Addendum #1 for Revised CAP-Part B	Arcadis	OCT-2009

IRP Previous Studies

	Title	Author	Date
2009	HAA-13 Pumphouse #1 Release #2 Final 14th Semi-Annual Progress Report	SAIC	DEC-2009
2010	HAA-13 Pumphouse #1 Release #2: 2nd Semi-Annual Monitoring Only Report for 2009	Arcadis	APR-2010
	HAA-13 Pumphouse #2: 15th Semi-Annual Progress Report	Arcadis	APR-2010
	HAA-13 Pumphouse #1 Release #1: 2009 Annual Monitoring Report	Arcadis	MAY-2010
	HAA-09: 2009 Free Product Removal Report	SAIC	MAY-2010
	HAA-09: Corrective Action Implementation Report	Arcadis	MAY-2010
	HAA-13 Pumphouse #1 Release #1: Final Corrective Action Implementation Report	Arcadis	JUL-2010
	HAA-13 Pumphouse #1 Release #2: Remedial Action Implementation and Monitoring Report	Arcadis	JUL-2010
	HAA-18 Final 2010 Site Investigation Report	Arcadis	JUL-2010
	HAA-09: Final 2nd Post Remedial Action Performance Monitoring Report	Arcadis	JUL-2010
	HAA-13 Pumphouse #1 Release #1: Final 1st Quarterly Performance Monitoring Report	Arcadis	OCT-2010
	HAA-13 Pumphouse #1 Release #2: 1st Quarterly Performance Monitoring Report (June 2010)	Arcadis	OCT-2010
	HAA-15 MCA Barracks Site: Final Compliance Status Report	Arcadis	OCT-2010
	HAA-09: Final 3rd Post Remedial Action Performance Monitoring Report	Arcadis	OCT-2010
	HAA-13 Pumphouse #1 Release #1: Final 2nd Quarterly Performance Monitoring Report	Arcadis	DEC-2010
	HAA-13 Pumphouse #1 Release #2: Final 2nd Quarterly Performance Monitoring Report (September 2010)	Arcadis	DEC-2010
	Final 4th Post Remedial Action Performance Monitoring Report	Arcadis	DEC-2010
2011	HAA-09 Final Corrective Action Plan Part B Addendum #1	SAIC	APR-2011
	HAA-17 Final Compliance Status Report	ARCADIS	APR-2011
	HAA-09 Addendum #28 to the Work Plan	SAIC	MAY-2011
	HAA-13 PH#1 R#1 Final 3rd Quarterly Performance Monitoring Report	ARCADIS	JUL-2011
	HAA-13 PH#1 R#1 Final 4th Quarterly Monitoring Report (March 2011)	ARCADIS	JUL-2011
	HAA-13 PH#1 R#2 Final 2nd Injection Summary & 1st Quarterly Performance Monitoring Report (March 2011)	ARCADIS	SEP-2011
	HAA-01 Compliance Status Report	ARCADIS	OCT-2011
	HAA-15 Revised Final Compliance Status Report	ARCADIS	NOV-2011
2012	HAA-09 Final Pilot Study Interim Progress Report	SAIC	JAN-2012

IRP Previous Studies

2012

Title	Author	Date
HAA-13 PH#1 R#2 2nd Quarterly Performance Monitoring Report	ARCADIS	JAN-2012
HAA-09 Annual Post Remedial Action Report	SAIC	FEB-2012

HUNTER ARMY AIRFIELD
Installation Restoration Program
Site Descriptions

Site ID: HAA-01

Site Name: FIRE TRAINING SITE

STATUS

Regulatory Driver: OTHER

RRSE: HIGH

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

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
PA.....	198301.....	198310
SI.....	198301.....	198310
RI/FS.....	199401.....	201303
IRA.....	199712.....	201108
RA(C).....	200804.....	201310
RA(O).....	200806.....	201610

RIP Date: 201310

RC Date: 201610

SITE DESCRIPTION

The regulatory statute for this site is the Hazardous Site Remediation Act (HSRA) regulated by GAEPD under Hazardous Site Inventory (HSI) number 10395. HAA-01 is located on the northwest portion of HAAF and was used until 1991 to train firefighters in a live fire scenario. Training sessions took place about eight times per year and used 300 to 500 gallons (gal) of waste oil, solvents, and waste fuels [aviation gas (AVGAS) and JP-4] per training session. The fire training site area consisted of a 5,000 square foot concrete pad, bermed on all sides, with an OWS and a salvaged AST in the center which was only used to simulate an aircraft. The bermed area contained POL contaminated soil, and the soil on the south side of the bermed area was visibly stained from overflow. The berm was observed to be cracked in multiple locations.

In March 1987, a preliminary contamination assessment was conducted around the fire training pad. Metals, PAHs, and phthalates were detected in the surrounding soil. From 1990 to 1992 additional contamination assessments indicated the surface soil and drainage ditch sediments were impacted by VOCs and SVOCs, and the groundwater was impacted by VOCs. In the first quarter of 1995, samples were collected as a part of the source removal investigation. In 1997, free-product was discovered in groundwater monitoring well HMW-07. During the first and second quarter of fiscal year (FY)98, an IRA was conducted at the former fire training area (FTA). Soil remediation activities included the removal of all structures (i.e., simulated aircraft structure, a 20,000 gal AST, underground fuel transmission line, concrete pad/berm, OWS, and 5,000 cubic yards (cy) of contaminated soil. Groundwater monitoring was initiated in FY98 and a belt skimmer (thin layer free-product recovery system) was installed at HMW-07 in the second-quarter FY99. Investigations continue in 1999 and 2000 to further delineate the extent of soil and groundwater contamination to background levels per the GAEPD requirements to support preparation of the CSR. Investigations showed VOCs, SVOCs, PAHs, and pesticides present in the soil. Chlorinated solvents [cis-1,2 dichloroethene (DCE) and trans-1,2-DCE] were detected in a groundwater sample collected from monitoring well HMW-14R located in the north portion of the FTA, this area was designated as the departure/arrival airfield control group (DAACG) chlorinated solvents area. Additional VOCs, SVOCs and metals were also detected during this groundwater investigation. The detection of the chlorinated solvents identified another source area which was originally placed in AEDB-R as HAA-016. This information was summarized in the second version of the CSR that was submitted to the GAEPD in March 2000. Review comments were received in January 2001 from the GAEPD, requiring additional site delineation in the northeast section of the site and to the south of the site.

In March 2001, the GAEPD approved a background soil statistical study and also requested further investigation be conducted of the soil and groundwater to complete the delineation of contamination present. In the first quarter of FY02, additional investigation of the soil and groundwater was conducted to complete the delineation for the third revision of the CSR. The extent of previous contaminants in the surface, subsurface soil, and groundwater were delineated. To further delineate the extent of the chlorinated solvents at the DAACG chlorinated solvents area, the USACE installed 17 vertical-profile borings in 2002. In 2003, a second IRA was conducted to address the free-product present in monitoring well HMW-07. The belt skimmer was removed prior to excavating of approximately 67 cy of soil. In June 2003, eight one-inch diameter monitoring wells were installed throughout the DAACG chlorinated solvent area.

In July 2004, groundwater samples were collected from 10 monitoring wells in the DAACG chlorinated solvent area. These field

Site ID: HAA-01
Site Name: FIRE TRAINING SITE

activities were summarized in a revised CSR Addendum. The CSR addendum established that four VOC constituents (DCE, benzene, cis-1,2-DCE, and vinyl chloride) were not in compliance with groundwater risk reduction standard (RRS), along with naphthalene and lead that were established to be out of compliance in the revised final CSR. The revised CSR and its associated addenda was submitted to the GAEPD in June 2005. The CSR was amended with specific corrective action procedures in FY06. Benzene, naphthalene, and lead are COCs near the former FTA, while 1,2-DCE, cis-1,2-DCE, and vinyl chloride are a concern in the DAACG chlorinated solvent area. While the revised final CSR and the addendum to the CSR were under review by the GAEPD, the Installation continued to perform semiannual monitoring of 10 groundwater wells for BTEX in the former FTA, and 10 groundwater wells for VOC constituents in the DAACG chlorinated solvent area. The GAEPD responded to the revised final CSR and the addendum to the CSR the first quarter of FY07 requesting that additional investigation be performed in the DAACG chlorinated solvent area, to determine the boundaries of the solvent plume and location of the source.

In 2008, the GAEPD responded to the CSR addendum requesting additional soil and groundwater delineation within the DAACG chlorinated solvent area and soil delineation to the north of the former FTA. Additional delineation activities were included in a performance-based acquisition (PBA) contract awarded in fourth quarter of FY08. Semiannual groundwater monitoring event was conducted in February 2009 of 10 groundwater monitoring wells in the former FTA for VOCs, SVOCs, and lead, and 10 groundwater monitoring wells in the DAACG chlorinated solvent area for VOCs. Due to the additional soil and groundwater delineation that was requested by the GAEPD a CSR work plan was submitted to the GAEPD in July 2009. The work plan proposed the installation of five soil borings, nine shallow aquifer monitoring wells and two deep aquifer monitoring wells to address the additional characterization requested by the GAEPD.

A CSR was submitted to GAEPD in October 2011 that presented physical, analytical, and risk assessment data to support the conclusion that the potential impacts to the environment by past activities have been sufficiently characterized. A CAP will be developed to address chlorinated VOC, benzene and aldrin impacts in groundwater in the DAACG Area and benzene and naphthalene impacts in groundwater in the former FTA.

CLEANUP/EXIT STRATEGY

Upon approval of the CSR, preparation of the CAP will be initiated. The CAP will be prepared to identify the selected corrective action to be implemented in order to address residual compounds in groundwater and soil that exceed the Type 1 RRS.

Site ID: HAA-09
Site Name: BULK FUEL FACILITY

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

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

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
ISC.....	198301.....	198310
INV.....	199901.....	199906
CAP.....	199906.....	200205
IMP(C).....	200201.....	201108
IMP(O).....	200208.....	201609

RIP Date: 201108

RC Date: 201609

SITE DESCRIPTION

The former UST No. 117, Facility Identification (ID) No. 9-025113*1 and No. 9-025113*2, is the Bulk Fuel Farm (BFF). It is approximately 600 feet by 1,200 feet and covers about 16.5 acres. This is an active facility that currently contains two ASTs [7007 and 7009] for the storage of JP-8 fuel with capacities of approximately 500,000 gal each, aboveground and underground piping, and off-loader and pump stations for the distribution of fuel to and from the tanks. Previously, UST No. 117, a 550-gal JP-4 fuel tank and three 500,000-gal ASTs (AST 7001, 7003, and 7005) previously were located at the bulk fuel farm (BFF) under the (GAEPD) Underground Storage Tank Management Program (USTMP) regulations.

Release No. 1:

Soil samples collected at this site in FY97 indicated high levels of BTEX components. The concentration of benzene in groundwater exceeded MCLs and can be attributed to the former storage of MOGAS and AVGAS. A passive soil gas (GoreSorber) survey was conducted in the first-quarter of FY99 that indicated high levels of petroleum contamination in the soil and groundwater. A CAP-Part A investigation was conducted between December 1999 and January 2000 after the removal of UST No. 117 located near building 7002 at the BFF. The CAP-A was conducted to identify areas of significant contamination concentrations observed. A CAP-Part B investigation was conducted from November 2000 to March 2001 to determine the extent of petroleum contamination at the site. As a part of these investigations, a groundwater plume was identified in the vicinity of AST 7003. Semiannual monitoring of Release No. 1 was initiated in July 2002 and discontinued in January 2003. The GAEPD USTMP granted NFA for Release No. 1 in a correspondence dated Oct. 6, 2003. Monitoring wells associated with Release No. 1 were abandoned in FY06.

Release No. 2: AST 7009

In July 2002, a second release was discovered during the investigation activities at Release No. 1. Free-product was observed in monitoring well BF-MW-E5 located within the bermed area of AST 7009. Semiannual monitoring of Release No. 2 was initiated in July 2004 and discontinued in January 2005 because detected BTEX and PAH constituents were below their respective in-stream water quality standards (IWQS) and the alternate concentration level (ACL). The GAEPD USTMP granted approval of the request to discontinue semiannual groundwater sampling while addressing the free-product. Free-product removal activities were implemented in July 2004 using absorbent socks in well BF-MW-E5 and bimonthly or quarterly pumping of the same well. In July 2007, an eight-hour Enhanced Fluid Recovery ® (EFR®) event was initiated to expedite free-product recovery. Free-product has not been observed in the other wells located within the berm or those located around the perimeter of the berm for AST 7009. Currently, EFR® events are being conducted on a quarterly basis with biannual groundwater monitoring of the sentinel well BF-MW-38. Free-product continues to be measured in BF-MW-E5 at a thickness ranging from 0.14 to 0.97 ft during the vacuum extraction (VE) events. In 2008, Release No. 2 was transferred to the aboveground storage tank management unit at the GAEPD.

Release No. 3: AST 7003

In May 2006, the concrete foundation and berm for AST 7003 were removed by CAPE Environmental and free-product was discovered at a depth of three to four feet below ground surface (bgs). In August 2006, CAPE Environmental installed four two-foot diameter sumps in the bermed area of former AST 7003. In November 2006, 42 monitoring points were installed on 50-foot centers at a depth of 4.5 feet. Griffen Services, an on-site contractor, removed free-product on a routine basis from 2006 through

Site ID: HAA-09
Site Name: BULK FUEL FACILITY

2008.

In 2008, Release No. 3 was transferred to the Aboveground Storage Tank Management Program (ASTMP) at the GAEPD. The site was also transferred to ARCADIS, a performance-based contractor, in 2008. Liquid levels were measured in monitoring points in December 2008; all of the sumps exhibited free-product that ranged from a sheen to 0.21 feet. Four of the forty-two monitoring points exhibited free-product with a maximum of 4.45 feet. The CAP-B Addendum No. 1 was approved by the GAEPD ASTMP in a correspondence dated Nov. 20, 2009. The excavation of the hot spot area associated with Release No. 3 was conducted in December 2009. An oxygen-releasing substance was placed in the excavated area to enhance bioremediation of contaminated groundwater. Six groundwater monitoring wells were installed after backfill and compaction activities were completed. Quarterly and semiannual groundwater events through April 2011 showed that dissolved benzene exceeded the ACL in one monitoring well, but natural attenuation is ongoing. Results from the semiannual sampling in October 2011 were below the ACL for all monitoring wells.

Release No. 2

In FY11, a CAP-B Addendum and Work Plan was submitted to GAEPD for the installation of a pilot scale product recovery system around AST 7009 that will consist of a combination surfactant injection/multiphase extraction system to recover trapped free-product from under the AST and to determine the feasibility of implementing this technology full scale. Free-product continues to be observed at the site of Release No. 2 and as a result, corrective action to address the free-product was required. A Pilot-Scale Recovery System was installed around AST 7009 in third-quarter FY11 consisting of a combination surfactant injection/multiphase extraction system to recover trapped free-product from under the AST. The system will be operated for a period of six months. Wells are gauged for free-product on a quarterly basis for one year following the pilot study. Recent groundwater sampling results indicate benzene concentrations are exceeding the approved ACL. Semiannual monitoring of the four monitoring wells will continue into FY13.

Groundwater samples will be collected from AST 7003 area monitoring wells at Release No. 3 in order to verify that contaminant concentrations are below applicable limits. At least one additional semiannual monitoring event will be conducted to demonstrate concentrations remain below the ACL. After the proper levels are achieved, petition for permanent closure will be submitted with the Final Progress Report.

CLEANUP/EXIT STRATEGY

Upon achievement of remedial objectives at Release No. 2 and Release No. 3, a request for NFA will be sent to GAEPD and upon approval, all associated groundwater monitoring wells will be abandoned and a site closeout report will be submitted.

Site ID: HAA-13
Site Name: PUMP HOUSES #1, #2, AND #6

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
ISC.....	198301.....	198310
INV.....	199606.....	199701
CAP.....	199606.....	200209
IRA.....	199503.....	200309
IMP(C).....	200101.....	201004
IMP(O).....	200210.....	203009

RIP Date: 201004

RC Date: 203009

SITE DESCRIPTION

This project consists of 32 USTs located at three former pumphouses. The pumphouses were taken out of service in 1973. Removal of 16 USTs located at Pump House #1 and Pump House #2 was completed in FY95. Fourteen of the remaining USTs at this site were removed and two defueling tanks, with all associated piping, were closed in-place in June 1998. The CAP-part A was submitted to the GAEPD in May 1997 for each PH (#1, #2, and #6) and were approved. The CAP-part B for PH #6 recommending NFA was approved by the GAEPD in November 1998. In April 2010 the Semiannual Progress Report for PH #2 recommending NFA was approved by GAEPD in August 2010.

The former PH #1 was an aviation-gas fuel island located along the east-west taxiway of HAAF that was used from about 1953 until the early-1970s. It consisted of 10 25,000-gal USTs and a 50,000-gal underground defueling tank. Various closure activities and CAP-part A and CAP-part B investigations were performed at the former PH #1 site between 1995 and 2000. Analytical data from all of the investigations indicated the DAACG facility and the former PH #1 should be combined into one CAP-part B report. This report was submitted to the GAEPD in August 2000 and approved in a correspondence dated December 2000. The former PH #1 CAP-part B report indicated that there are two distinct and separate plumes located in the vicinity of PH #1. Release No. 1 is an area of soil and groundwater contamination near the DAACG facility that is in the vicinity of former fuel pits 1A and 1B, located approximately 900 feet west of former Bldg 8060 (i.e., PH #1). This area had previously been designated in AEDB-R as HAA-11 and was combined with this site due to the groundwater BTEX plumes being contiguous. Release No. 2 is an area of soil and groundwater contamination located near the former PH #1 facility and former fuel pits 1C and 1D, located approximately 200 feet north of the former tank pits. The CAP-part B recommended additional investigation be conducted in the fuel pit 1A / DAACG area (Release No. 1) to further define the extent of the free-product. For Release No. 2 the CAP-part B Report recommended semiannual monitoring of eight groundwater monitoring wells for BTEX. In May 2000, an interim action to remove the free-product within the Pump House #1 Release No. 1 area was implemented through the use of absorbent socks. An addendum to the CAP-part B was completed in July 2002 to address the additional investigation required at PH #1 Release No. 1. During the investigation, free-product in excess of 0.125 inch was observed in six monitoring wells. The CAP-part B Addendum No. 1 report recommended sampling of 30 monitoring wells annually for BTEX in the PH #1 Release No. 1 area. The use of absorbent socks for free-product removal at Pump House #1 Release No. 1 continued until July 2003. In 2003, an additional investigation was conducted to further delineate the horizontal and vertical extent of the free-product in the subsurface at Release No. 1 and Release No. 2 using cone-penetrometer-technology (CPT) equipment with fluorescence detection. The use of absorbent socks was initiated again in 2004. In 2005, the free-product removal method was changed to bi-monthly VE from numerous wells located throughout the Pump House #1 Release No. 1 area. In 2006, a CAP-part B Addendum No. 2 was prepared for PH #1 Release No. 1 and approved by the GAEPD for quarterly VE of free-product at four wells for at least eight hours and annual monitoring of 30 groundwater wells. In May 2006, six injection wells were installed around the Pumphouse #1 Release No. 2 tank pit area to inject an oxygen-releasing material (ORM) to enhance the degradation of BTEX compounds. Injections in this area were conducted from July 2006 through April 2007. Funding for RAs are being conducted under a PBA contract.

In 2008, a Supplemental Site Investigation was conducted at Pumphouse #1 Release No. 1, 45 soil borings were installed throughout the identified plume area to fully delineate soil and groundwater. To monitor natural attenuation in the Pumphouse #1

Site ID: HAA-13

Site Name: PUMP HOUSES #1, #2, AND #6

Release No. 2 area eight groundwater monitoring wells were sampled for BTEX. In 2009 to reduce the estimated timeframe for groundwater to reach the approved ACL levels at the Release No. 1, an active remedy of injecting calcium peroxide (CaP) was proposed in a Revised CAP-Part B Addendum in 2009. To decrease the remedial timeframe and to mitigate impacts to the canal surface water downgradient of the petroleum hydrocarbon plume at the Release No. 2 area, two additional remedial actions were proposed. In-situ chemical oxidation (ISCO) using sodium persulfate to reduce the contaminant mass in two areas of this release and injecting CaP into two offset rows of injection points (barrier wall) upgradient of the canal. These three proposed actions were approved by GAEPD in the first quarter of CY10. Sodium persulfate injections were performed in the Release No. 2 area from February to March 2010. CaP injections at the Release No. 1 area were conducted in April 2010.

In December 2010, a second round of sodium persulfate was injected in the Release No. 2. To maintain the downgradient biological reactive barrier wall of this area a second injection of CaP was performed in February 2011. Quarterly monitoring after the initial injection was conducted for both releases. The CaP injections in the Release No. 1 area exhibited a boost to the rate of attenuation of BTEX and to enhance the attenuation rates in the northern portions of the impacted area a third injection of CaP was conducted in March 2012. The injection of sodium persulfate resulted in significant reductions in one area of Release No. 2 while demonstrating variable reductions in another area. As indicated in the 3rd Quarterly Performance Monitoring Report after the second sodium persulfate injection (March 2012), concentrations in three injections wells within the Release No. 2 area all rebounded to above the ACL for benzene after the injections. This gives an indication of a greater mass of hydrocarbons than originally suspected. This greater mass of hydrocarbons significantly reduces the effectiveness of the sodium persulfate injections. As an alternative to the sodium persulfate injections in the area of Release No. 2 the PBA contractor proposed that a biosparge system be installed to promote aerobic degradation.

CLEANUP/EXIT STRATEGY

Pump House #1 Release No. 1: Continued semiannual sampling will be conducted to monitor the natural attenuation of the residual BTEX.

Pump House #1 Release No. 2

Design and installation of a Biosparge system will be implemented to address the BTEX contamination. Semiannual monitoring of groundwater monitoring wells near the canal and of the canal surface water will be performed to monitor potential impacts.

Site ID: HAA-15
Site Name: MCA BARRACKS SITE

STATUS

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

Phases	Start	End
PA.....	199802.....	199909
SI.....	200008.....	200112
RI/FS.....	200010.....	201211
IRA.....	200407.....	200801
RA(C).....	200804.....	201303
RA(O).....	200806.....	201510
RIP Date:	201303	
RC Date:	201510	

SITE DESCRIPTION

The regulatory statute for this site is the HSRA regulated by the GAEPD under HSI number 10521. It is located north of Lightning Road, west of Mitchell Blvd, east of Griffen Street and south of Cook Blvd. The estimated 75 acre site contains a 10-acre pond and is approximately 0.5 miles and 1.5 miles from the Installation's two main potable water wells (Well No. 1 and Well No. 2 respectively), which withdraw water at a considerably lower depth than the contaminated surficial groundwater. In July 2000, contamination of trichloroethylene (TCE) and vinyl chloride (DCE) at concentrations exceeding action levels [parts per million (ppm) range] were detected. The chlorinated solvent contamination extends from six to 50 feet bgs. Contamination has been identified in groundwater only and the source of contamination is unknown. The most probable source of contamination is former aircraft maintenance operations located at Buildings 811, 813, 843, 844, and/or 845 and/or a former fuel/de-icing fluid transfer line located in the area. In FY01, subsurface geophysical studies were conducted to assist in defining a sampling strategy and 10 vertical profiles/ deep wells were installed in fourth quarter FY01. In FY02, additional wells were installed and purging of pipelines A and B (funded under HAA-03) were completed. In FY04, an ongoing historical investigation identified the potential of a former hospital and motor pool in the area as possible sources. Direct-push screening of soil at five-foot intervals with groundwater sampling at discrete intervals from the water table to 45 feet bgs was conducted at 20 locations beyond the previously defined site boundary. TCE was identified at multiple locations. However, additional sampling will be required to determine if these are discrete or part of a continuous plume. No major source has been identified. The production well and pond remain uncontaminated. An archive search was conducted in FY04 in an attempt to identify the source of the contamination. In the fourth quarter FY04, a performance-based contracting (PBC) was awarded to perform all required investigation and RA. A draft project management plan was submitted in early FY05. As an HSRA site, this site will be delineated to background concentrations. In FY06 and FY07, site delineation for groundwater was conducted and a pilot study was performed to optimize the corrective action of groundwater contamination. The groundwater corrective action consists of implementation of enhanced reductive dechlorination (ERD). The baseline groundwater monitoring event was conducted in February 2006 followed by the initial anaerobic biochemical (ABC) pilot study injection. Two additional rounds of injections of enhanced ABC injections included the addition of zero-valent iron, dehalocaccoides (dhc), and buffering agent (sodium bicarbonate) in FY06 thru 07. Six rounds of groundwater sampling were conducted in FY06 thru FY07 to optimize the performance of the pilot study. A draft CAP and a CSR were completed in FY07. Reports were not submitted due to site transfer to a new PBA contractor in 2008. A partial excavation of a grease trap located in the area of Bldg 811 was conducted by the Installation in FY07 that did not include soil removal. In 2009, an investigation to finalize the delineation of the source(s) of the TCE impacts in groundwater was conducted. The activities comprising the investigation of the TCE plume at HAA-15 included: collection of water level from monitoring wells, evaluation of surface water drainage, vertical profiles using membrane interface probe (MIP) technology followed by soil and groundwater sampling, and installation of four groundwater monitoring wells. Funding for the RAs is being conducted under a PBA contract.

Based on a compilation of all data collected under the conceptual site model (CSM) investigations, two source areas for TCE groundwater impacts at the HAA-15 site were identified: Hanger T-811 area and the former industrial waste treatment plant/washrack area. A revised CSR was submitted to the GAEPD in the first quarter of FY11.

The CSR investigation was completed and the potential impacts to the environment by past activities at HAA-15 were adequately

Site ID: HAA-15
Site Name: MCA BARRACKS SITE

characterized and delineated in order to proceed with development and implementation of a CAP.

CLEANUP/EXIT STRATEGY

Upon approval of the CSR, a CAP will be developed to address chlorinated VOC impacts in groundwater and lead impacts in surface soil. The remedy will include injection into each distinct depth zone (shallow, intermediate, and deep). MNA will be conducted until site reaches approved remedial levels. After the site reaches approved remedial levels and an NFA is approved, all wells and systems will be abandoned and documented in a site closure report to the GAEPD.

Site Name: Groundwater Contamination HAAF

STATUS

Regulatory Driver: OTHER

RRSE: LOW

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

Media of Concern: Groundwater

Phases	Start	End
PA.....	200709.....	200712
SI.....	200809.....	200910
RI/FS.....	200809.....	201211
RA(C).....	200804.....	201311
RA(O).....	200806.....	201711

RIP Date: 201311

RC Date: 201711

SITE DESCRIPTION

During the investigation at USTs 25, 26, and the former HAAF purge facility for BTEX, the following VOCs were detected in the groundwater:

- TCE,
- 1,2-DCE,
- 1,1-DCE,
- 1,1-DCA,
- vinyl chloride,
- acetone, and
- chloroform.

Potential sources were identified as Building 1290, UST 25/26, the former purge facility, the former special weapons facility, the former weapons cleaning facility, and a former drycleaners. Maximum TCE detected was 7,730 ug/L. In May 2007, a total of 21 (shallow and deep combined) groundwater monitoring wells were installed around Building 1290. Wells were installed above the clay confining layer, which is at 40 to 45 feet bgs. In July 2007, 23 groundwater monitoring wells were sampled for VOCs. Analytical results demonstrated no TCE impacts in the vicinity of Building 1290. TCE was detected approximately 675 feet southeast of Building 1290. Between October 2007 and January 2008, 40 MIP vertical profiles were installed approximately 40 to 50 feet bgs. Twenty direct push technology (DPT) borings for soil and groundwater samples were collected from multiple depth intervals. TCE was detected in five (5) DPT locations. Investigations to date indicate that the TCE impact is concentrated around USTs 25 and 26.

Funding for RAs are being conducted under a PBA contract. In FY09 and FY10, additional site investigations were conducted to define the extent of groundwater impacted by TCE. Conclusions of the CSM indicate there are three areas impacted by TCE. The area with the highest concentrations of TCE is in the vicinity of former USTs 25/26. TCE impacts have been observed predominantly at the 20- to 30-foot and 30- to 40-foot bgs intervals. The area extent of the TCE impacts decreases with depth, and the highest TCE concentrations occur predominantly at 20- to 30-foot interval, which is just above the upper clay layer. The other areas impacted by low levels of TCE and VOCs include the former purge facility and a former dry cleaners. A compliance status report (CSR) was completed and submitted to GAEPD in the second quarter of FY11. With one exception, the full extent of TCE in groundwater at the site is delineated horizontally and vertically. Based on the assessment of impacted areas and ecological conditions, there are no ecological risks at this site.

CLEANUP/EXIT STRATEGY

Upon approval of the CSR, a CAP will be submitted proposing the implementation of an enhanced reduction dechlorination system to reduce TCE. MNA will be conducted until site reaches approved remedial levels. After the site reaches approved remedial levels and a NFA is approved, all wells and systems will be abandoned and documented in a site closure report to the GAEPD.

Site ID: PBA@HAAF
Site Name: Funding for PBA @ HAAF

STATUS

Regulatory Driver: OTHER

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200709.....	200712
RI/FS.....	200804.....	200808
RD.....	200804.....	200808
RA(C).....	200804.....	200808
RA(O).....	200806.....	201512

RIP Date: 200808

RC Date: 201512

SITE DESCRIPTION

This PBA site was created to track funding for the PBA awarded in the third quarter FY08. The following sites are under this PBA: HAA-01, HAA-09 (Release No. 3), HAA-13, HAA-15, HAA-17, and HAA-18. Please refer to the individual site descriptions for each site. The statute is listed as other since HAAF is working under the HSRA.

CLEANUP/EXIT STRATEGY

See individual sites for cleanup and exit strategies.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HAA-02	PCB STG AT DEH STG YD BHND BLD 1024	198310	Site was accessed and no sampling required
HAA-03	FORMER USTS AT BLDG 728	200810	Letter received from GA USTMP approving NFA dated July 15, 2008
HAA-03B	FORMER USTS AT BLDG 133	200606	Clean-up goal achieved. Received NFA from GAEPD February 8, 2006
HAA-03C	FORMER USTS AT BLDG 710	200009	System was shutdown and wells abandoned. Ranger Complex Construction
HAA-04	SEW TRT PLANT	198310	Site active not eligible
HAA-05	AIRCRAFT WSH RACKS OW SEP	198310	Site active not eligible
HAA-06	PHOTO LAB BLD 1287, 332	198310	Study complete, No cleanup required
HAA-07	FORMER BLDG 1022 PESTICIDE STORAGE	198310	Study complete, No cleanup required
HAA-08	BLD 1029 FORMER PESTICIDE STORAGE AREA	198310	Study complete, No cleanup required
HAA-10	FORMER SANITARY LANDFILL	198310	Study complete, No cleanup required
HAA-11	DAACG/AIRFIELD INVESTIGATION	199701	Site investigation has been combined with HAA-13
HAA-12	FORMER PDO FACILITY	200903	Letter from GAEPD for Well Abandonment acknowledging that site met all site closeout criteria. Dated 11 March 2009.
HAA-14	FORMER AIRFIELD AREA UST SITES	200210	Site RC due to the site being apart of the state Monitoring Only Program for benzene.
HAA-16	DAACG AREA CHLORINATED SOLVENTS	200307	Site investigation has been combined under HAA-01
HAA-18	HAAF Boundary Investigation	201101	Letter from GAEPD indicating that NFA was required from the installation dated December 2010.

IRP Schedule

Date of IRP Inception: 198301

Past Phase Completion Milestones

1984

SI (HAA-01 - FIRE TRAINING SITE, HAA-02 - PCB STG AT DEH STG YD BHND BLD 1024, HAA-04 - SEW TRT PLANT, HAA-05 - AIRCRAFT WSH RACKS OW SEP, HAA-06 - PHOTO LAB BLD 1287, 332, HAA-07 - FORMER BLDG 1022 PESTICIDE STORAGE, HAA-08 - BLD 1029 FORMER PESTICIDE STORAGE AREA, HAA-10 - FORMER SANITARY LANDFILL)
PA (HAA-01 - FIRE TRAINING SITE, HAA-02 - PCB STG AT DEH STG YD BHND BLD 1024, HAA-04 - SEW TRT PLANT, HAA-05 - AIRCRAFT WSH RACKS OW SEP, HAA-06 - PHOTO LAB BLD 1287, 332, HAA-07 - FORMER BLDG 1022 PESTICIDE STORAGE, HAA-08 - BLD 1029 FORMER PESTICIDE STORAGE AREA, HAA-10 - FORMER SANITARY LANDFILL)
INV (HAA-03 - FORMER USTS AT BLDG 728, HAA-03B - FORMER USTS AT BLDG 133, HAA-03C - FORMER USTS AT BLDG 710)
ISC (HAA-03 - FORMER USTS AT BLDG 728, HAA-03B - FORMER USTS AT BLDG 133, HAA-03C - FORMER USTS AT BLDG 710, HAA-09 - BULK FUEL FACILITY , HAA-13 - PUMP HOUSES #1, #2, AND #6)

1988

ISC (HAA-14 - FORMER AIRFIELD AREA UST SITES)

1993

CAP (HAA-03B - FORMER USTS AT BLDG 133)

1994

PA (HAA-12 - FORMER PDO FACILITY)

1995

ISC (HAA-11 - DAACG/AIRFIELD INVESTIGATION)

1996

CAP (HAA-03C - FORMER USTS AT BLDG 710)
INV (HAA-11 - DAACG/AIRFIELD INVESTIGATION)
IRA (HAA-03C - FORMER USTS AT BLDG 710)

1997

IRA (HAA-14 - FORMER AIRFIELD AREA UST SITES)
CAP (HAA-11 - DAACG/AIRFIELD INVESTIGATION)
INV (HAA-13 - PUMP HOUSES #1, #2, AND #6, HAA-14 - FORMER AIRFIELD AREA UST SITES)

1998

SI (HAA-12 - FORMER PDO FACILITY)
IRA (HAA-12 - FORMER PDO FACILITY)

1999

INV (HAA-09 - BULK FUEL FACILITY)
PA (HAA-15 - MCA BARRACKS SITE)

2000

RI/FS (HAA-12 - FORMER PDO FACILITY)
PA (HAA-16 - DAACG AREA CHLORINATED SOLVENTS)

2001

CAP (HAA-03 - FORMER USTS AT BLDG 728)
IRA (HAA-03B - FORMER USTS AT BLDG 133)

2002

IRA (HAA-03 - FORMER USTS AT BLDG 728)
RA(C) (HAA-12 - FORMER PDO FACILITY)
CAP (HAA-09 - BULK FUEL FACILITY , HAA-13 - PUMP HOUSES #1, #2, AND #6)
SI (HAA-15 - MCA BARRACKS SITE, HAA-16 - DAACG AREA CHLORINATED SOLVENTS)

IRP Schedule

2003

RI/FS (HAA-16 - DAACG AREA CHLORINATED SOLVENTS)
 IRA (HAA-13 - PUMP HOUSES #1, #2, AND #6)
 CAP (HAA-14 - FORMER AIRFIELD AREA UST SITES)

2004

IMP(C) (HAA-03 - FORMER USTS AT BLDG 728, HAA-03B - FORMER USTS AT BLDG 133)

2005

IMP(O) (HAA-03 - FORMER USTS AT BLDG 728)

2006

IMP(O) (HAA-03B - FORMER USTS AT BLDG 133)

2008

RI/FS (PBA@HAAF - Funding for PBA @ HAAF)
 PA (HAA-17 - Groundwater Contamination HAAF, PBA@HAAF - Funding for PBA @ HAAF)
 RFA (HAA-18 - HAAF Boundary Investigation)
 IRA (HAA-15 - MCA BARRACKS SITE)
 RA(C) (PBA@HAAF - Funding for PBA @ HAAF)
 RD (PBA@HAAF - Funding for PBA @ HAAF)

2009

RA(O) (HAA-12 - FORMER PDO FACILITY)
 LTM (HAA-03 - FORMER USTS AT BLDG 728)

2010

CS (HAA-18 - HAAF Boundary Investigation)
 SI (HAA-17 - Groundwater Contamination HAAF)
 IMP(C) (HAA-13 - PUMP HOUSES #1, #2, AND #6)

2011

IRA (HAA-01 - FIRE TRAINING SITE)
 RFI/CMS (HAA-18 - HAAF Boundary Investigation)
 IMP(C) (HAA-09 - BULK FUEL FACILITY)

Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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Final RA(C) Completion Date: 201311

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of IRP at Installation (including LTM phase): 203009

HUNTER ARMY AIRFIELD IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HAA-01	FIRE TRAINING SITE	RI/FS						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HAA-09	BULK FUEL FACILITY	IMP(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HAA-13	PUMP HOUSES #1, #2, AND #6	IMP(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HAA-15	MCA BARRACKS SITE	RI/FS						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HAA-17	Groundwater Contamination HAAF	RI/FS						
		RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
PBA@HAAF	Funding for PBA @ HAAF	RA(O)						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 200703

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: 201008

Efforts Taken to Determine Interest

Fort Stewart/HAAF conducted community interest surveys during FY97, FY00, FY03, FY07 and FY08 to evaluate community interest in the establishment of a RAB. A public notification announcing Fort Stewart/HAAF's community interest survey for a RAB was published in The Savannah Morning News and The Coastal Courier in August 1997, June 2000, May 2003, October 2006 and July 2008. The individual surveys for public officials were mailed in September 1997, June 2000, May 2003, and October 2006 respectively. The installation solicited public interest in FY10.

Results

To date, Fort Stewart/HAAF has not received sufficient response to these public notifications and mailings to warrant establishment of a RAB.

Follow-up Procedures

Fort Stewart/HAAF will continue to monitor the public's desire to form a RAB and will react accordingly. Surveys will be conducted on a regular basis to determine the public's interest in Hunter Army Airfield's IRP.

Additional Community Involvement Information

Fort Stewart/HAAF conducted community interest surveys during FY97, FY00, FY03, FY07, FY08 and FY10 to evaluate community interest in the establishment of a RAB. A public notification announcing Fort Stewart/HAAF's community interest survey for a RAB was published in The Savannah Morning News and The Coastal Courier in August 1997, June 2000, May 2003, October 2006, July 2008 and August 2010. The individual surveys for public officials were mailed in September 1997, June 2000, May 2003, and October 2006, respectively. HAAF is accessible to the public with proper identification.

Administrative Record is located at

DPW Prevention and Compliance Branch
1550 Frank Cochran Drive, Bldg. No. 1137
Fort Stewart, Georgia 31314-4927
912-315-5144 or 912-767-2010

Information Repository is located at

DPW Prevention and Compliance Branch
1550 Frank Cochran Drive, Bldg. No. 1137
Fort Stewart, Georgia 31314-4927
912-315-5144 or 912-767-2010

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

TAPP Title: N/A

Potential TAPP: N/A

