

FY2015

FORT JACKSON

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, Installation Management Command (IMCOM), the US Army Environmental Command (USAEC), Fort Jackson (FTJA), 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

AAFES	Army, Air Force Exchange Services
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AFVR	Aggressive Fluid Vapor Recovery
AOC	Area of Concern
AST	Aboveground Storage Tank
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
C&D	Construction and Debris
CA	Corrective Action
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CDC	Child Development Center
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESAS	Corps of Engineers, South Atlantic Division, Savannah District
CLIN	Contract Line Item Number
CMI	Corrective Measures Implementation
CMI(C)	Corrective Measures Implementation - Construction
CMI(O)	Corrective Measures Implementation - Operations
CMIP	Corrective Measures Implementation Plan
CMS	Corrective Measures Study
CNFA	Conditional No Further Action
CR	Compliance Restoration
CS	Confirmatory Sampling
CTT	Closed, Transferring, and Transferred
cy	cubic yard
DD	Decision Document
DERP	Defense Environmental Restoration Program
DES	Design
DMM	Discarded Military Munitions
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EOD	Explosive Ordnance Disposal
ER	Emergency Removal
ER,A	Environmental Restoration, Army
FJFC	FTJA Flight Club
FP	Free-Product
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet
FTJA	Fort Jackson
FY	Fiscal Year
GW	Groundwater
HRR	Historical Records Review
HRS	Hazard Ranking System
HW	Hazardous Waste

Acronyms

IAP	Installation Action Plan
IM	Interim Measures
IMCOM	Installation Management Command
IMP	Implementation
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
ISCO	In Situ Chemical Oxidation
K	thousand
kg	kilogram
LF	Landfill
LNAPL	Light Non-Aqueous Phase Liquid
LTM	Long-Term Management
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
MC	Munitions Constituents
MEC	Munitions and Explosives of Concern
MILCON	Military Construction
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MR	Munitions Response
MTBE	Methyl Tertiary-Butyl Ether
NFA	No Further Action
NFI	No Further Investigation
NFRAP	No Further Remedial Action Planned
NLT	No Later Than
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
OB	Open Burning
OD	Open Detonation
ODUSD(I&E)	Office of the Deputy Under Secretary of Defense for Installations and Environment
OMA	Operations and Maintenance Account
ORAP	Operational Range Assessment Program
ORC	Oxygen Releasing Compound
OWS	Oil/Water Separator
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PAIO	Plans, Analysis and Integration Office
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PMP	Project Management Plan
POL	Petroleum, Oil and Lubricants
QAPP	Quality Assurance Project Plan

Acronyms

QASP	Quality Assurance Surveillance Program
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
REC	Record of Environmental Consideration
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
RSL	Regional Screening Level
RTC	Response to Comments
SAR	SWMU Assessment Report
SARA	Superfund Amendments and Reauthorization Act
SCARNG	South Carolina Army National Guard
SCDHEC	South Carolina Department of Health and Environmental Control
SI	Site Inspection
SOB	Statement of Basis; RCRA equivalent of DD
SVOC	Semi-Volatile Organic Compound
SW	Solid Waste
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCA	Trichloroethane
TCE	Trichloroethylene
TRC	Technical Review Committee
ug/L	microgram per liter
UIC	Underground Injection Control
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAEHA	United States Army Environmental Hygiene Agency
USATECES	US Army Technical Center for Explosives Safety
USATHAMA	US Army Toxic and Hazardous Materials Agency
USC	US Code
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VA	Veterans Administration
VOC	Volatile Organic Compound
WLA	Weston Lake Area

WP Work Plan

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)

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
CC GW Offsite	AOC CC
CCAOC Q	AOC Q
CCSWMU 53	SWMU 53
CCUST 11-559	AOC W
CCUST 2089	AOC BB
CCUST 3499	AOC X
CCUST 4120	AOC Z
CCUST AOC T	AOC T
CCUST4522	AOC AA
FTJA-001-R-01	AOC D
FTJA-002-R-01	AOC E
FTJA-003-R-01	AOC F
FTJA-004-R-01	AOC G
FTJA-005-R-01	AOC H
FTJA-006-R-01	AOC I
FTJA-007-R-01	AOC J
FTJA-01	SWMU 1
FTJA-011-R-01	AOC S
FTJA-02	SWMU 2
FTJA-03	SWMU 3
FTJA-05	SWMU 5
FTJA-06	SWMU 6
FTJA-13	SWMU 14
FTJA-21	SWMU 21
FTJA-32	SWMU 48
FTJA-34	USTs(ER,A)
FTJA-39	SWMU 49

Installation Information

Installation Locale

Installation Size (Acreage): 52301

City: Columbia

County: Richland

State: South Carolina

Other Locale Information

The US Army Garrison, FTJA is located in Richland County in central South Carolina. The installation is situated on the eastern edge of the city of Columbia, and covers an area of approximately 52,301 acres (approximately 82 square miles).

Installation Mission

The primary mission of the US Army Garrison and FTJA is the initial entry training of troops and combat support advanced individual training.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE), Savannah District

Regulator Participation

Federal

US Environmental Protection Agency (USEPA), Region 4, Federal Facilities Branch

State

South Carolina Department of Health and Environmental Control (SCDHEC), Bureau of Land and Waste Management

National Priorities List (NPL) Status

FORT JACKSON is not on the NPL

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

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

Installation Program Summaries

IRP

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

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

MMRP

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

Affected Media of Concern: Groundwater, Soil

CR

Primary Contaminants of Concern: Other (Chloroform, Dieldrin), Other (Free-product), Other (Naphthalene), Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201010	201109	2011
Planned	201610	201706	2017

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Decision Document for FTJA-05	FTJA-05

Results All remedies still effective and in place.

Actions None

Plans Reevaluate in five years.

Recommendations and Implementation Plans:

The periodic review states that all remedies are effective and in place.

Recommendation: to continue with annual groundwater monitoring and land use controls (LUC) inspections and reevaluate in five years.

FTJA-05, FTJA-10, FTJA-18, FTJA-001-R-01, FTJA-002-R-01 and FTJA-007-R-01, only require continued annual LUC inspections/reports and five-year reviews.

FTJA-06 and FTJA-21 now require only bi-annual groundwater monitoring and LUC reporting.

Land Use Control (LUC) Summary

LUC Title: FTJA-001/002-R-01 LUCs

Site(s): FTJA-001-R-01, FTJA-002-R-01

ROD/DD Title: FTJA-001-R-01 and FTJA-002-R-01 SB

Location of LUC

FTJA-001-R-01, Camp Jackson Range (AOC D) and FTJA-002-R-01, Small Arms Ranges East of Chestnut (AOC E)

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation

Types of Engineering Controls: Signs

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

Date in Place: 201203

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: METALS

Additional Information

N/A

LUC Title: FTJA-02 (SWMU 2) LUCs

Site(s): FTJA-02

ROD/DD Title: FTJA-02 Inactive Sanitary LF 1(SWMU 2)

Location of LUC

At the Inactive Sanitary Landfill 1 (Closed Sanitary Landfill 1 - SWMU 2)

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, 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, 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: 200809

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Land Use Control (LUC) Summary

Contaminants: METALS, PESTICIDES, VOC

Additional Information

N/A

LUC Title: FTJA-03 (SWMU 3) LUC

Site(s): FTJA-02

ROD/DD Title: FTJA-03 Inactive Sanitary LF 2 SWMU 3

Location of LUC

FTJA-03 Inactive Sanitary Landfill 2 (SWMU 3)

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, 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, 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: 200809

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PESTICIDES, VOC

Additional Information

N/A

LUC Title: FTJA-05 LUC

Site(s): FTJA-05

ROD/DD Title: Decision Document for FTJA-05

Location of LUC

FTJA-05 (SWMU 5) ARCADIS TO PERFORM INSPECTIONS/REPORTS THROUGH 201209.

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 drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, 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: Construction Permit, Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200605

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, Other

Contaminants: METALS, VOC

Additional Information

RDX in groundwater exists at more than one groundwater well.

LUC Title: FTJA-06 (SWMU 6) LUCs

Site(s): FTJA-06

ROD/DD Title: FTJA-06 Inactive Tank Hill Landfill

Location of LUC

FTJA-06 (SWMU 6) Tank Hill Landfill.

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, 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, 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: 200912

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH, PESTICIDES, VOC

Additional Information

N/A

LUC Title: FTJA-13 (SWMU14) LUC

Land Use Control (LUC) Summary

Site(s): FTJA-13

ROD/DD Title: FTJA-13 Former Weapons Cleaning Area

Location of LUC

FTJA-13 (SWMU14) Former Weapons Cleaning 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, 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 Groundwater Withdrawal, Restrictions on land use

Date in Place: 201107

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: FTJA-21 (SWMU 21) LUC

Site(s): FTJA-21

ROD/DD Title: FTJA-21 Construction Debris LF, Range 17

Location of LUC

FTJA-21 (SWMU 21) , construction debris landfill, range 17

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, 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: Fences, Signs

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

Date in Place: 201011

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Land Use Control (LUC) Summary

Documentation Date: 200811

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PESTICIDES

Additional Information

N/A

LUC Title: FTJA-32 (SWMU 48)LUC

Site(s): FTJA-32

ROD/DD Title: Inactive acid pit, BLDG 6586 (SWMU 48)

Location of LUC

FTJA-32 (SWMU 48)inactive acid pit, bldg 6586

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 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 Groundwater Withdrawal, Restrictions on land use

Date in Place: 201010

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH, PETROLEUM HYDROCARBON, VOC

Additional Information

N/A

LUC Title: FTJA-39 (SWMU 49) LUC

Site(s): FTJA-39

ROD/DD Title: FTJA-39 - Removal

Location of LUC

FTJA-39, (SWMU 49) Former weapons pool solvent tank

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, 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: 201109

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: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, PAH, VOC

Additional Information

N/A

LUC Title: Submachine Gun Area(AOC J

Site(s): FTJA-007-R-01

ROD/DD Title: Submachine Gun Area CMS FTJA-007-R-01

Location of LUC

Submachine Gun Area, FTJA-007-R-01, AOC J

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation

Types of Engineering Controls: Signs

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

Date in Place: 201308

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201308

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

FTJA is an active US Army installation. The installation provides basic training for newly recruited Soldiers and combat support advanced individual training. It is the largest initial entry training center in the Army. In addition, the installation operates the US Army Soldier Support Institute, the US Army Chaplain Center and School, a reception battalion and a transfer point for US Army personnel. The FTJA provides support services for the South Carolina Army National Guard (SCARNG), the US Army Reserve Centers, and other tenant activities.

The FTJA was first opened in 1917 as the 6th National Army Cantonment on a tract of land donated by the citizens of the city of Columbia. By 1918, some 45,000 military personnel were actively training at Camp Jackson. From 1925 to 1940 the facility was state-controlled and used as an encampment and training area for SCARNG troops. FTJA returned to federal control in 1940 and was once again designated primarily for infantry training. During World War II, at least 10 Army infantry divisions, estimated at 500,000 troops, received training at FTJA. In 1947, the installation was designated as one of four permanent Army replacement centers in the US. In 1968, the installation was annexed into the city of Columbia, and in 1973 it was redesignated as the US Army Training Center and FTJA. More recently, FTJA was redesignated as US Army Garrison and Fort Jackson.

FTJA presently occupies approximately 52,301 acres. It consists of the original cantonment area in the west section of the installation and the weapons ranges, bivouac, and maneuver areas located throughout the remaining installation. The cantonment area encompasses post housing, administrative buildings, and industrial operations.

Tenants located at FTJA include the US Army Soldier Support Institute, Department of Defense (DoD) Chaplain Center and School, the SCARNG, US Marine Corps Reserve, Defense Reutilization and Marketing Office (DRMO), Military Entrance Processing Station, US Army Reserve 81st Regional Support Group, 157th Infantry Training Support Brigade, Defense Commissary Agency, Army and Air Force System Exchange, Medical Department Activity, and the Academy for Credibility Assessment (formerly the Department of Defense Polygraph Institute).

In 1988, the Army began investigating all potential areas of environmental concern at FTJA by implementing its environmental response authority under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)/ Superfund Amendments and Reauthorization Act (SARA). Having a preliminary Hazard Ranking System (HRS) score of 13.2, FTJA did not warrant NPL redesignation.

In October 1991, FTJA was issued a Resource Conservation and Recovery Act (RCRA) Part B permit. Under the corrective action portion of the permit, investigation of inactive or closed sites re-designated as solid waste management units (SWMUs) and other AOCs was initiated. A modification to the RCRA permit was completed in June 2006. The permit modification was primarily an update of the site listings to reflect cleanup progress. An application for renewal of the RCRA permit was submitted to the SCDHEC in fiscal year (FY)08. The application package was amended and re-submitted in early January 2009. Permit modification was achieved by April 2009. Permit renewal was issued March 2010. Another permit modification was implemented in 2011, to add the final remedies for FTJA-001-R-01, FTJA-002-R-01 and FTJA-39. Statements of basis (SOB), the RCRA equivalent of decision documents (DD), were submitted for public review. The public comment period ended March 17, 2011 and the modified permit was signed April 17, 2011. The last RCRA permit modification was done in April 2013, to add one new SWMU and eight new AOCs, two no further actions (NFA) at two AOCs, four remedy selections, two clean closed SWMUs, list four RFIs completed at Military Munitions Response Program (MMRP)-AOCs, and to add one monitored natural attenuation (MNA) remedy for SWMU 1.

The SI for the MMRP sites was physically completed in 2006. The revised final SI report received additional comments in late 2008. The revisions were approved by the SCDHEC in May 2009.

Five sites were recommended for RFI. A performance-based acquisition (PBA) to address these sites was awarded in September 2009. A PBA kickoff meeting was held at FTJA in October 2009. USAEC, three USACE Districts (Savannah, Huntsville, and Charleston) and the Installation Restoration Program (IRP) manager participated in a morning session. The SCDHEC was invited to join in the afternoon portion and they attended.

The project management plan (PMP) and a quality assurance surveillance plan (QASP) were approved since the original drafts from December 2009. CH2Mhill prepared the draft RFI work plan (WP) by spring of 2010. After several iterations of Army and USACE - Huntsville (HNC) comments, the final draft was submitted to SCDHEC in early March 2011. Fieldwork for the five MMRP sites started in the summer of 2011. It was completed by fall of 2011, followed by the hefty individual RFI reports. The RFI reports have all been thoroughly reviewed by FTJA, Huntsville USACE, the US Army Technical Center for Explosives Safety (USATECES), the Department of Defense Explosives Safety Board (DDSB) and then SCDHEC (all a number of times). All five

Cleanup Program Summary

Installation Historic Activity

final RFI reports were approved in 2013.

One of the MMRP sites (FTJA-007-R-01/AOC J) and CCUST 1699 reached remedy-in-place (RIP)/response complete (RC) by the end of FY13 under the Phase II PBA with CH2MHill. One of the new sites entered, FTJA-011-R-01 (VA Cemetery), had a contract awarded by the end of FY14, to address work requirements that overlaps several regulatory agencies. The cemetery contract is to perform an SI to investigate the site initially. The other four MR sites are under PBA III, starting with the CMS phase. The work is expected to begin in FY15.

Installation Program Cleanup Progress

IRP

Prior Year Progress: LTM continued at all ten Installation Restoration (IR) sites under the PBA III contract.

Future Plan of Action: LTM work to continue under PBA III through end of FY18. LTM sites require dermal soil cover maintenance, LUCs and groundwater monitoring until new rulings are obtained. CCUST 4120 should be restored after two years. Confirmatory sampling (CS)/SI at VA cemetery should be completed by FY16. PBA III should have new sites assessed and possibly some closed out of new UST sites.

MMRP

Prior Year Progress: The five RFIs were approved for Munitions Response (MR) sites and one CMI report approved (RIP/RC) for AOC J. PBA III will implement CMS/CMI phases for four remaining MR sites.

Future Plan of Action: All five MR sites are on track for RIP/RC by 2018. The CMS/CMI WPs should be completed by end of FY15 and implemented after a couple of iterations of SCDHEC comments/responses by FY16. By FY16, LTM requirements should be known for all MR sites. Presently, only LUCs and annual inspections are anticipated.

CR

Prior Year Progress: Compliance Restoration (CR) sites CCSWMU 53, CCAOC T/4470, 2089, 3499 and 11-559 require an initial investigation (INV) phase. The INV is underway, with reports forthcoming in FY15. AOC Q has RFI under PBA III. Dieldrin and Chloroform exceedances in creek closer to SWMU6.

Future Plan of Action: The plan is to complete all INV - RA phase at UST sites. CCUST 4522 is in CMI operation [CMI(O)] phase and could be in LTM by FY16. By late FY16, RIP or RC is anticipated at some of the new UST sites.

FORT JACKSON
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 40/30

Installation Site Types with Future and/or Underway Phases

1	Contaminated Ground Water (FTJA-13)
1	Disposal Pit/Dry Well (FTJA-32)
6	Landfill (FTJA-01, FTJA-02, FTJA-03, FTJA-05, FTJA-06, FTJA-21)
2	Underground Storage Tank (FTJA-34, FTJA-39)

Most Widespread Contaminants of Concern

Explosives, Metals, Munitions constituents (MC), Pesticides, 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
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	IRA	FREE PRODUCT RECOVERY	2002
FTJA-39	FORMER WEAPONS POOL SOLVENT TANK	IRA	REMOVAL	2002
FTJA-28	BLDG 9428 WASH PAD & O/W SEPARATOR	IRA	WASTE REMOVAL - SOILS	2003
FTJA-28	BLDG 9428 WASH PAD & O/W SEPARATOR	IRA	REMOVAL	2003
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	IRA	WASTE REMOVAL - SOILS	2003
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	IRA	IN-SITU SOIL TREATMENT	2003
FTJA-01	Active Sanitary Landfill	IRA	OTHER	2006
FTJA-02	INACTIVE SANITARY LANDFILL 1	IRA	CAPPING	2006
FTJA-13	FORMER WEAPONS CLEANING AREA	IRA	BIOREMEDIATION - IN SITU	2006
FTJA-21	CONSTRUCTION DEBRIS LF RANGE 17	IRA	REMOVAL	2006
FTJA-23	REMAGEN IMPACT RANGE	FRA	INSTITUTIONAL CONTROLS	2006
FTJA-001	PBC FORT JACKSON PBC	FRA	OTHER	2007
FTJA-03	INACTIVE SANITARY LANDFILL 2	IRA	INSTITUTIONAL CONTROLS	2007
FTJA-06	TANK HILL LANDFILL	IRA	CAPPING	2007
FTJA-30	FORMER ROADS & GROUNDS STORAGE AREA	IRA	REMOVAL	2007
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	IRA	BIOREMEDIATION - IN SITU GROUNDWATER	2007
FTJA-03	INACTIVE SANITARY LANDFILL 2	FRA	CAPPING	2008
FTJA-03	INACTIVE SANITARY LANDFILL 2	FRA	INSTITUTIONAL CONTROLS	2008
FTJA-05	Inactive WETSITE Landfill (SWMU 5)	FRA	OTHER	2008

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
FTJA-05	Inactive WETSITE Landfill (SWMU 5)	FRA	INSTITUTIONAL CONTROLS	2008
FTJA-06	TANK HILL LANDFILL	FRA	CAPPING	2008
FTJA-01	Active Sanitary Landfill	FRA	OTHER	2009
FTJA-01	Active Sanitary Landfill	FRA	INSTITUTIONAL CONTROLS	2009
FTJA-02	INACTIVE SANITARY LANDFILL 1	FRA	CAPPING	2009
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	FRA	IN-SITU SOIL TREATMENT	2009
FTJA-06	TANK HILL LANDFILL	FRA	INSTITUTIONAL CONTROLS	2010
FTJA-13	FORMER WEAPONS CLEANING AREA	FRA	BIOREMEDIATION - IN SITU	2011
FTJA-13	FORMER WEAPONS CLEANING AREA	FRA	INSTITUTIONAL CONTROLS	2011
FTJA-21	CONSTRUCTION DEBRIS LF RANGE 17	FRA	CAPPING	2011
FTJA-32	INACTIVE ACID PIT, BLDG 6586	FRA	REMOVAL	2011
FTJA-39	FORMER WEAPONS POOL SOLVENT TANK	FRA	NATURAL ATTENUATION	2011
FTJA-39	FORMER WEAPONS POOL SOLVENT TANK	FRA	REMOVAL	2011
FTJA-39	FORMER WEAPONS POOL SOLVENT TANK	FRA	IN-SITU SOIL TREATMENT	2011
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	FRA	REMOVAL	2013
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	FRA	IN-SITU SOIL TREATMENT	2013

Duration of IRP

Date of IRP Inception: 198708

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201302/204509

Date of IRP completion including Long Term Management (LTM): 204509

IRP Contamination Assessment

Contamination Assessment Overview

FTJA has 12 IRP sites open with cost requirements listed in the Army Environmental Database-Restoration (AEDB-R). Some AEDB-R 'sites' include multiple project sites. For example, FTJA-34, actually includes 13 UST sites, designated as one AEDB-R number (all but one of 13 are RIP/RC as of FY12, one is in MNA/LTM).

There are 15 AEDB-R sites with detectable groundwater contamination. Delineation and required risk assessment of these units is complete (excepting Q and T). These sites will require long-term groundwater monitoring (FTJA-01, -02, -03, -06, -13, -21, -23, -32, -34, -39, CCUST 4120, CCUST 4522, CCAOC Q and CCUST AOC T). After reconsideration, FTJA-01 was added back to the DERP IR roster by USAEC, for DERP funding starting in FY16.

There are now 29 AEDB-R sites with NFA planned, RC, or no further remedial action planned (NFRAP). Most recently AOC K received a requested NFA decision from SCDHEC at the end of FY11. SCDHEC no further investigation (NFI) or NFA letters, respectively, were received for AOC J and CCUST 1699 by the end of FY14.

In FY07, FTJA-40 received SCDHEC concurrence for NFA. From FY05 through early FY06, FTJA gained four additional NFRAP designations (FTJA-07,-08, -28 and -38). For FY03 two sites reached RC (FTJA-20 and 37), in FY01 five sites reached RC (FTJA-09, -26, -27, -31, and -33) and in FY99 sites FTJA-13 and FTJA-16 reached RC.

The restoration sites at FTJA include landfill, weapons cleaning/solvent sites, acid neutralization drainage sites, USTs, explosive ordnance disposal (EOD) sites, military munitions response sites, one Davy Crockett/MMRP/Nuclear Regulatory Commission (NRC) site and more recently, three or more potential new sites as a result of Operational Range Assessment Program (ORAP) II investigation (Total = 27).

FTJA's primary contaminants are metals (lead, chromium, arsenic, etc.), petroleum hydrocarbons (fuels, oil, and lubricants), solvents [trichloroethylene (TCE) and others], plus ordnance constituents [i.e., cyclo-trimethylene-trinitramine (RDX), etc.]. These substances are found in varying, if any, concentrations, sometimes above USEPA/SCDHEC criteria at active SWMUs, AOCs, and UST sites.

There is no known off-post contamination from documented IRP sites. However, the DOD ORAP II, though separate from IRP, is documenting evidence uncovered at two to three potential cleanup areas, to be determined.

An overall HRS of 13.8 was computed for FTJA during the RFA. That score is well below the NPL cut-off value.

No public interest in forming a RAB has been expressed after periodic advertisements soliciting interest, per DoD and regulatory guidelines.

On Oct. 5, 1991 the RCRA permit became effective. In accordance with RCRA permit guidelines, between December 1991 and April 1992 WPs were prepared and submitted to the USEPA and the SCDHEC for CS, the RCRA equivalent of SI, and RFI, the equivalent of CERCLA RI.

At that time 48 SWMUs and two AOCs were identified. Additional sites have been identified since then (current total: 53 SWMUs, 28 AOCs and 51 USTs). Eleven AOCs were added to AEDB-R in part due to the MMRP, and three under the CR roster. Three additional UST sites were added in FY12.

Many documents on INVs and RAs have been prepared, reviewed and eventually approved. Over the life of the IRP at FTJA, more than 80 NFAs have been achieved.

The award of the PBA to Arcadis accelerated the IRP progress, as did the PBA to CH2MHill for the MMRP. Turnaround times under the PBA awarded to Arcadis and PBA II to CH2MHill, are generally shorter than in previous decades.

The ORAP Phase II effort uncovered new IRP work to carry out with off post migration of RDX into five residential wells and growing. FTJA put those homes on bottled water. Upwards of 160 private wells have been sampled. Most were sampled more than once.

Received a draft archive search report by the St. Louis District Corps. It is currently under internal review.

IRP Contamination Assessment

Contamination Assessment Overview

After five public meetings and multiple press releases, ORAP II has attracted significant public attention. FTJA has been requesting 'right of entry' form signatures, since fall 2013, to sample/test private drinking wells for RDX. At the fifth public meeting on Feb. 4, 2015, additional right of entry forms were issued to newcomers to the Army's response to the ORAP results (small percent of private wells contaminated).

Cleanup Exit Strategy

Anticipating that regulatory review time to approve proposed work continues to be swift through Tier I Partnering. The SCDHEC turnover has not continued. When SCDHEC management and PMs helped Fort Jackson meet the Army contract goal of RIP/RC for multiple sites for September 2008.

The USAEC interaction has continued to increase since the PBA awards and ORAP II. This further stimulates the involvement of FTJA management in the IRP. Current efforts continue to seek final remedies using aggressive interim measures (IM) at all FTJA sites.

Site FTJA-01 is the youngest and FTJA-02 is the oldest inactive municipal landfill. Both required partial supplemental soil cover, enhanced drainage controls, LUCs and LTM. The RIP/RC is in place and LTM is underway for both sites. FTJA-01 is regulated by the RCRA Subtitle C and RCRA Subtitle D sections of SCDHEC which makes reporting and compliance more complex.

Site FTJA-03 is the largest municipal landfill (100 acres) at FTJA. Substantial grading and cover work was completed as required. ARCADIS supplemented the existing cover as required and established LUCs including LTM, and signage at the entire site.

Sites FTJA-13 and FTJA-36 are adjacent sites with commingling TCE and diesel groundwater plumes. The TCE plume was treated by enhanced reductive dechlorination (ERD). Site FTJA-36 is primarily a former diesel-release site with former light non-aqueous phase liquid (LNAPL) accumulations and dissolved TCE in the groundwater, migrating from FTJA-13. ARCADIS performed soil and LNAPL removal at FTJA-36 and an NFA letter for FTJA-36 was received in August 2009. FTJA-13 is under LTM/MNA using the groundwater monitoring network covering both sites.

Sites FTJA-06 and FTJA-21 are construction and debris (C&D) landfills. IMs were performed in FY07 at both sites, addressed the physical closure requirements. This included recycling of metal debris and all surficial and some buried concrete. A CMI was completed at both sites adding LUCs, LTM and RCRA permit and real property master plan documentation.

Site FTJA-32 had POL and metals contamination in soil and groundwater. After two separate rounds of pre-PBA IM, the majority of source material was removed. ARCADIS grouted in the floor drains used by the former SWMU activity, to satisfy residual SCDHEC concerns. A CMI was approved/executed. It includes LTM and LUCs.

Site FTJA-39. The goal for site FTJA-39 has been to reach MNA under the PBA contract. This appears to have been accomplished after the CMI WP was approved and implemented in 2011. The site is now in MNA after successfully completing the fourth quarter sampling/report. The CMI progress report was approved.

Investigations for all the aforementioned sites, are complete or conditionally approved by the SCDHEC (approval of the recommended final remedies).

IRP Previous Studies

Year	Title	Author	Date
1980	Installation Assessment of FTJA, Report No. 165	US Army Toxic and Hazardous Materials Agency (USATHAMA)	MAR-1980
1988	Update of the Initial Installation Assessment	USATHAMA	APR-1988
1989	Interim Final Report, Hazardous Waste (HW) Consultation No. 37-26-0215-89, Evaluation of SWMUs	US Army Corps of Engineers	SEP-1989
1990	Phase I Site Investigation Report for RI/FS Weapons Cleaning Area.	Law Environmental, Inc. (LAW)	JAN-1990
	Groundwater Quality Study No. 38-26-8822-90	USAEHA	FEB-1990
	Final WP for RI/FS Weapons Cleaning Area	LAW	FEB-1990
	Final Pre-Investigation Submittal for RI/FS Weapons Cleaning Area.	LAW	FEB-1990
	RFA Report of FTJA, USEPA Contract No. 68-W9-0040	A.T. Kearney, Inc.	MAY-1990
1991	Project Master WP, Facility Investigation Active Ordnance Disposal Site (RST4)	Donohue & Associates, Inc. (Donohue)	JAN-1991
	Revised Chemical Data Acquisition Plan, Addendum to Project Master WP, Facility Investigation Active Ordnance Disposal Site (RST4)	Donohue	MAR-1991
	Final Quality Control Summary Report for Abandoned Sewage Treatment Plant	LAW	AUG-1991
	Final WPs for RFI at Wonson/Inchon Explosive Ordnance Disposal Sites	LAW	SEP-1991
	Final Site Investigation for Abandoned Sewage Treatment Plan	LAW	NOV-1991
	Final Report for RI, Phase II - Weapons Cleaning Area.	LAW	NOV-1991
1992	Preliminary SI for FTJA Military Reservation	Advanced Sciences, Inc. (ASI)	JAN-1992
	Quality Control Summary Report for RFI at Wonson/Inchon Explosive Disposal Sites	LAW	JAN-1992
	Final Site Investigation Report, Facility Investigation Active Ordnance Disposal Site (RST4)	Donohue	MAR-1992
	Preliminary SI Report for FTJA Military Reservation	ASI	MAY-1992
	Hazard Ranking System Score Summary Report	ASI	JUL-1992
	Final Engineering Report Soil and Groundwater Testing at Three UST Locations	Ebasco Environmental	AUG-1992
1993	Quality Control Summary Report for RFI/CMS Wonson and Inchon Explosive Ordnance Disposal Sites	LAW	MAY-1993
	Revised Phase III RFI/CMS WP Weapons Cleaning Area	RUST Environmental and Infrastructure (RUST)	SEP-1993
	Draft RFI/CMS WP for Unit Training Equipment Site Septic Tank Systems at SC National Guard	Kleen Sites Geoservices, Inc	SEP-1993

IRP Previous Studies

Year	Title	Author	Date
1993	CS WPs for 14 SWMUs and AOC C	CESAS - Corps of Engineers Division of Hazardous, Toxic & Radioactive Waste Section	SEP-1993
	Revised RFI/CMS WPs for 14 SWMUs	Ecology and Environment, Inc. (E&E)	DEC-1993
1995	Revised Site Assessment WP for Ten UST Sites	E&E	FEB-1995
	7 UST Site Investigation WPs	Bregman & Company, Inc. (Bregman & Co.)	JUN-1995
	Revised CS WPs for 14 SWMUs and AOC C	CESAS	SEP-1995
1996	Site Investigation WPs for 1 UST Site & 1 AST	Foster-Wheeler	FEB-1996
	CS Report for 14 SWMUs and AOC C	E&E	MAY-1996
	RCRA Closure Sampling Report, 48th Explosive Ordnance Detachment Demolition Range Open Burn/Open Detonation (OB/OD) Unit	E&E	MAY-1996
	10 UST Phase II Site Investigation WPs	CESAS	JUN-1996
	Site Investigation WPs for 1 UST Site & 1 AST	Foster-Wheeler	NOV-1996
1997	Phase II Site Assessment Reports for 10 UST Sites	E&E	JUL-1997
	CS Reports for 14 SWMUs and AOC C	E&E	JUL-1997
	Draft Final Investigation Derived Waste Management Plan	CESAS	JUL-1997
	Subsurface Investigation Report for Relative Risk Ranking of Six SWMU Sites. Prepared by CESAS	CESAS	OCT-1997
	Plan of Operation for Interim Removal Action Free Product Recovery Phase III RFI Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)	RUST	NOV-1997
1998	RFI Report for SWMU 47, Former Roads and Grounds Storage Area	E&E	MAR-1998
	CS Report for SWMUs 7, 8, and 9, Former HW Storage Bldg. 2640, 2641, 2642.	Fort Jackson	APR-1998
	RFI Report for SWMU 10, Former PCB Storage Bldg	E&E	APR-1998
	RFI Report for SWMUs 1, 2, 3, Inactive Landfills 3, 1, and 2	E&E	MAY-1998
	Addendum Number One to RCRA Closure Sampling Report, 48th Explosive Ordnance Detachment Demolition Range OB/OD Unit	E&E	JUL-1998
	Phase III Site Assessment WP for 5 UST Areas	E&E	JUL-1998
	WP for Treatability Study in Support of Remediation by Natural Attenuation at Site 9431-F (Site No. 6)	Parsons Engineering	JUL-1998
	WP for Completion of Groundwater Sampling and CAPs at UST Nos. 1 and 6.	E&E	JUL-1998

IRP Previous Studies

Year	Title	Author	Date
1998	RFI Report for SWMUs 6, 20, 21, 23, 30, and 48	E&E	AUG-1998
	Pre-Final Phase EEE RFI Report Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)	RUST	DEC-1998
1999	WP Addendum No. 2 for Phase II RFI, Wonson and Inchon Explosive Ordnance Disposal Sites (SWMUs 12 and 17)	LAW	JAN-1999
	WP for the Phase I RFI at SWMU 49, Weapons Pool Inactive Solvent Tank, Building 3058	E&E	FEB-1999
	RCRA Closure Certification Report, 48th Explosive Ordnance Detachment Demolition Range OB /OD Unit, SWMU 13	E&E	MAY-1999
	IM WP, Inactive Acid Pit, SWMU 48	Omega Environmental Services	AUG-1999
	CS Report-Comment Responses and Revisions, SWMUs 7, 8, and 9	E&E	AUG-1999
	Supplemental CS Report Comment Responses and Revisions, SWMUs 5, 11, 29, 33, 34, 38, and AOC C	E&E	AUG-1999
	Phase I RFI/CMS WP for SWMUs 1, 2, and 3	E&E	AUG-1999
	Progress Report Phase II RFI, Wonson and Inchon Explosive Ordnance Disposal Sites (SWMU 12 and 17)	LAW	AUG-1999
	Groundwater Monitoring Report for the Phase III RFI Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)	RUST	AUG-1999
	Interim Technical Report Phase II RFI, Wonson and Inchon Explosive Ordnance Disposal Sites (SWMUs 12 and 17)	LAW	AUG-1999
	Comment Responses and Revisions Phase III RFI Report, Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)	RUST	SEP-1999
	WP for Background Study	E&E	NOV-1999
	2000	IMs WP, Inactive Acid Pit, SWMU 48	Omega Environmental Services
Draft Phase III RFI WP Addendum, Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)		RUST	MAY-2000
IMs WP, Former Bldg. 9428 Wash Pad & O/W Separator, SWMU 38		Omega Environmental Services	MAY-2000
IMs WP Former Roads and Grounds Storage Area, SWMU 47		Omega Environmental Services	JUN-2000
Phase II RFI WP for SWMUs 6, 20, 21, 23, and 30		E&E	NOV-2000
Comment Responses and Revisions Phase III RFI WP Addendum, Former Weapons Cleaning Area (SWMU#14) Above-Ground Fuel Tank Area (AOC B)		RUST	NOV-2000
Draft Soil Background Study Report		E&E	NOV-2000
Supplemental IMs WP, Inactive Acid Pit, SWMU 48		J.J. Sosa	NOV-2000
2001			

IRP Previous Studies

2001

Title	Author	Date
Phase II RFI WP, SWMUs 1, 2, and 3 (Closed Landfills 3, 1, and 2, respectively)	CH2MHill	JAN-2001
Final Soil Background Study Report	E&E	JAN-2001
Draft Phase II RFI Report, Wonson and Incheon Explosive Ordnance Disposal Sites (SWMUs 12 and 17)	LAW	JAN-2001
SWMU 49 Phase I RFI Report Review Response to Comments (RTC)/Rev. Pgs.	E&E	APR-2001
Letter of Intent to Sell Property	Ft. Jackson Environmental Mgt Office	JUN-2001
SWMU 47 IM Report	CESAS	JUN-2001
SWMU 14/AOC B, Quarterly Report for Addendum No. 1 Phase III RFI Report	Earthtec	JUN-2001
SWMU 14/AOC B, Quarterly Report for Addendum No. 1 Phase III RFI Report	Earthtec	AUG-2001
SWMU 49 IM and Phase II RFI WP	CESAS	AUG-2001
SWMU 47 IM Report	CESAS	AUG-2001
SWMU 14/AOC B, Quarterly Report for Addendum No. 1 Phase III RFI Report	Earthtec	NOV-2001
Single Soldiers Barracks Complex (FTJA-38) Assessment Report	Foster-Wheeler	NOV-2001
SWMUs 6, 20, 21, 25, 30 Phase II RFI WP	E&E	NOV-2001
SWMU 30 Phase II RFI Report.	E&E	DEC-2001
SMWU 14/AOC B, Quarterly Report for Addendum No. 1 Phase III RFI Report	Earthtec	DEC-2001
SWMU 16 CS Report Evaluation of RTCs	CESAS	DEC-2001

2002

SMWU 49 IM WP Revised	CESAS	JAN-2002
SWMU 51 SWMU Assessment Report	Ft. Jackson Environmental Mgt Office	JAN-2002
SMWU 51 Removal Action (IM) WP	Ft. Jackson Environmental Mgt Office	JAN-2002
SMWU 5 LTM Proposal	Ft. Jackson Environmental Mgt Office	APR-2002
SMWU 12 & 17 Final Phase II RFI Report.	LAW	APR-2002
SWMU 30 Phase II RFI Report	E&E	MAY-2002
SWMUs 1, 2, 3, Phase II RFI WP- Revised	CH2MHill	JUN-2002
SWMUs 7-10 RFI WP Responses to SCDHEC Comments	CH2MHill	AUG-2002
SWMU 47 Final Phase II RFI Report	CESAS	AUG-2002
SWMU 49 Final Phase II RFI Report.	CESAS	AUG-2002
SWMU 51 IM WP	CESAS	AUG-2002
SWMU 48 Final Supplemental IM WP	J.J. Sosa	SEP-2002
AOC B Letter of Tanks & Contaminant Barriers Removal.	Ft. Jackson Environmental Mgt Office	OCT-2002

IRP Previous Studies

2002	Title	Author	Date
	SWMU 14/AOC B Final Phase II RFI Report Addendum #1 and Response to SCDHEC Comments	Earthtec	OCT-2002
	SWMU 20 Phase II RFI Report.	E&E	DEC-2002
	SWMU 21 Phase II RFI Report	E&E	DEC-2002
	SWMU 23 Phase II RFI Report	E&E	DEC-2002
	SWMUs 1, 2, 3, Revised Final Phase II RFI WP with responses to SCDHEC Comments Revised	CH2MHill	DEC-2002
2003	AOC B IM/Sampling WP	CESAS	JAN-2003
	SWMUs 1, 2, 3 Revised Final Phase II RFI WP RTCs & Replacement Pages	CH2MHill	FEB-2003
	SWMU 38 IM Report	OMEGASYS	MAR-2003
	SWMU 49 Phase II RFI/IM Report Final	CESAS	MAR-2003
	SWMU 51 IM Report	CESAS	MAR-2003
	SWMU 6 Phase II RFI Report	E&E	MAR-2003
	SWMU 14/AOC B Final Phase III RFI Addendum No. 1 Report Replacement Pages	Earthtec	APR-2003
	SWMU 30 Phase II RFI Report, Replacement Pages/RTCs	E&E	APR-2003
	SWMUs 12 & 17 Phase II RFI Report Replacement Pages/RTCs	LAW	APR-2003
	SWMU 16 Remediation Report	CESAS	MAY-2003
	SWMU 47 IM Report RTCs and Rev. pp	CESAS	MAY-2003
	SWMU 52 Assessment Report	Ft. Jackson Environmental Mgt Office	MAY-2003
	SWMU 20: Phase II RFI Report (RTCs & Revision Pp)	E&E	MAY-2003
	SWMU 51: IMs Report (RTCs & Rev.Pp)	CESAS	JUL-2003
	SWMU 38: IM Report (RTCs & Revision Pages)	CESAS	JUL-2003
	SWMU 12: IM WP	J.J. Sosa	AUG-2003
	SWMU 23: IM WP	J.J. Sosa	AUG-2003
	SWMU 23: IM WP	J.J. Sosa	AUG-2003
	SWMU 10: RFI Report Addendum	CH2MHill	AUG-2003
	SWMU 10: RFI Report Addendum	CH2MHill	AUG-2003
	SWMU 23: Phase II RFI Report	E&E	AUG-2003
	SWMU 21: Phase II RFI Report (RTC)	E&E	OCT-2003
	SWMU 5: Report summarizing well sampling activities.	CESAS	OCT-2003
	SWMU 48: IM Report (RTCs & Revision Pages).	J.J. Sosa	OCT-2003
2004	Landfill Cover Assessment (SWMUs 1, 2, 3, 5, 6, 21)	ARCADIS	FEB-2004

IRP Previous Studies

2004

Title	Author	Date
Site-Wide Field Sampling Plan	ARCADIS	MAR-2004
SWMU 23: Revised Final IM WP	J.J. Sosa	APR-2004
SWMU 14 & AOC B: IM WP	ARCADIS	MAY-2004
SWMU 23: Phase II RFI Report (Revision pp & RTCs)	E&E	MAY-2004
SWMU 5: Letter Report (RTCs)	CESAS	JUN-2004
SWMU 48: Revised Final IM Report	J.J. Sosa	JUN-2004
SWMU 6: Revised RFI Report & RTCs	E&E	JUN-2004
SWMU 21: Phase II RFI Report (Revision Pages & RTCs).	E&E	JUN-2004
SWMU 14 & AOC B: IM WP	ARCADIS	JUL-2004
SWMU 5: Focused CMS WP	ARCADIS	JUL-2004
Site-Wide: Quality Assurance Project Plan	ARCADIS	JUL-2004
Site-Wide: RTCs on the Facility Sampling Plan	ARCADIS	JUL-2004
SWMU 16: Final CS Report & RTCs	Ft. Jackson Environmental Mgt Office	JUL-2004
SWMU 2: Phase II RFI Report	CH2MHill	JUL-2004
Site-Wide: Letter Regarding LUCs.	Ft. Jackson Environmental Mgt Office	JUL-2004
SWMU 47: IM WP	ARCADIS	AUG-2004
SWMU 48: Phase II RFI WP	E&E	AUG-2004
Site-Wide: RTCs to the QAPP	ARCADIS	SEP-2004
SWMU 47: Phase II RFI Report RTCs	CESAS	SEP-2004
Jenkins Street Point of Interest: SWMU Assessment Report (SAR)	Ft. Jackson Environmental Mgt Office	SEP-2004
SWMU 52: RTCs & Revised SAR	ARCADIS	OCT-2004
Site-Wide: Revised Field Sampling Plan	ARCADIS	OCT-2004
SWMU 44: Proposed Supplemental RFI Activities	Kleen Sites Geoservices, Inc.	OCT-2004
SWMU 44: Proposed Supplemental RFI Activities	Kleen Sites Geoservices, Inc.	OCT-2004
SWMU 5: Focused CMS Report & CMI WP	ARCADIS	NOV-2004
SWMU 5: Focused CMS Report & CMI WP	ARCADIS	NOV-2004
SWMU 2: RTCs to the Phase II RFI Report	ARCADIS w/ CH2MHill	NOV-2004
SWMU 48: IM Report (RTCs & Revision Pages)	J.J. Sosa	NOV-2004
SWMU 48: IM Report (RTCs & Revision Pages)	J.J. Sosa	NOV-2004
Site-Wide: Historical Records Review (HRR)	Malcolm Pirnie	DEC-2004
SWMUs 1 & 2: IM WP	ARCADIS	DEC-2004
SWMU 44: Revised Proposed Supplemental RFI Activities	Kleen Sites Geoservices, Inc.	DEC-2004

IRP Previous Studies

2005

Title	Author	Date
SWMU 52: RTCs on the SAR.	ARCADIS	JAN-2005
SWMUs 7-9: RTCs on the Phase I RFI Report	Arcadis	JAN-2005
SWMU 10: RTCs on the Phase II RFI Report	Arcadis	JAN-2005
SWMU 48: Phase II RFI WP	Arcadis	JAN-2005
SWMU 21: Consolidation/Investigation WP	Arcadis	JAN-2005
SWMU 21: RTCs to the Phase II RFI Report	Arcadis	JAN-2005
SWMU 6: Revised Phase II RFI Report & RTCs	Arcadis	JAN-2005
SWMU 14 & AOC B: IM Progress Report/WP Addendum	Arcadis	JAN-2005
SWMU 3: Phase II RFI Report.	Arcadis	FEB-2005
SWMU 7-10: Historical Analytical Data Package	Arcadis	MAR-2005
SWMU 1: Phase II RFI Report	Arcadis	MAR-2005
SWMU Assessment Report (JSPOI)	EEI	MAR-2005
SWMUs 1 & 2: IM WP (RTCs & Revision Pages)	Arcadis	APR-2005
SWMU 5: Final CMS Report/CMI WP	ARCADIS	MAY-2005
SWMU 21: Soil Sampling plan for well near (SAR AOC K)	EEI/GNR	MAY-2005
SWMU 38: CS Addendum Report	CESAS	MAY-2005
SWMU 52: CS WP	Arcadis	MAY-2005
SWMU 21: IM WP	Arcadis	MAY-2005
SWMU 7, 8, 9, 10: RFI Report	Arcadis	JUN-2005
SWMU 47: IM Summary and WP Addendum	Arcadis	JUL-2005
SWMU 7-10: RFI Report	Arcadis	AUG-2005
SWMU 21: Addendum to RFI Phase II Report Version 3	Arcadis	SEP-2005
SWMU 6: RTCs to RFI Phase II Report Version 3	Arcadis	OCT-2005
SWMU 7-10: Phase II RFI Replacement Pages	Arcadis	OCT-2005
SWMU 52: Draft CS Report	Arcadis	OCT-2005
SWMU 47: IM Summary and WP Addendum	Arcadis	NOV-2005
SWMU 1 & 2: IM Completion Report	Arcadis	NOV-2005
SWMU 7-10: Phase II RFI Report Revision 3	Arcadis	NOV-2005

2006

SWMU 14: IM Completion Report	ARCADIS	FEB-2006
RCRA Corrective Action Permit Modification Package	Env.Mgt. Branch, ENRD, Fort Jackson	MAR-2006
SWMU 52: Revised Supplemental CS WP&WellPermit	ARCADIS	MAR-2006

IRP Previous Studies

2006

Title	Author	Date
Draft EA for New National VA Cemetery	URS	MAR-2006
SWMU 23: Addendum 1 to Phase II RFI Report	Ecology & Environment, Inc.	MAR-2006
Supplemental RFI Investigation WP SWMU 49	Corps of Engineering, Savannah District	MAR-2006
SWMU1 Phase II RFI WP Addendum for Well Installation	ARCADIS	APR-2006
SWMU 48 Phase II RFI Report	Ecology & Environment, Inc.	APR-2006
SWMU 21 Consolidation/Investigation Report	ARCADIS	MAY-2006
SWMU 47: IM Summary and WP Addendum Rev 2	ARCADIS	MAY-2006
SWMU 21 RTCs Phase II RFI Report	Ecology & Environment, Inc.	JUN-2006
SWMU 6 & 21: IM WP	ARCADIS	JUN-2006
SWMU 12 & 23: CMS WP	Corps of Engineering, Savannah District	JUN-2006
AOC B Soil Removal WP	ARCADIS	JUN-2006
AOC Q RCRA AR	CTSI	JUN-2006
SWMU 5 CMI WP	ARCADIS	JUN-2006
SWMU 49 Revised Supplemental RFI WP	Corps of Engineering, Savannah District	JUL-2006
SWMU 52: Investigation Summary	ARCADIS	JUL-2006
Community Relations Management Plan	EA Engineering	JUL-2006
SWMU 14 CMS WP	ARCADIS	JUL-2006
SWMU 7-10 Closeout of Consent Order	ARCADIS	JUL-2006
MMRP Final SI Report	Malcolm Pirney	JUL-2006
SWMU 6 & 21: IM WP Revision 1	ARCADIS	SEP-2006
SWMU1 & 2 IM Completion Report Rev 1	ARCADIS	SEP-2006
SWMU 21 Consolidation/Investigation Completion Report	ARCADIS	SEP-2006
SWMU 49 Monitoring Well Request	Corps of Engineering, Savannah District	SEP-2006
SWMU 5 CMI WP Revision 1	ARCADIS	OCT-2006
SWMU 52: Revised Investigation Summary	ARCADIS	OCT-2006
SWMU 2 Confirmation Soil Sampling WP	ARCADIS	NOV-2006
SWMU 2 Revised RFI Report	ARCADIS	NOV-2006
AOC R RCRA AR	CTSI	DEC-2006
SWMU 48 Revised Phase II RFI Report & RTCs	Ecology & Environment, Inc.	DEC-2006
SWMU 49 Revised Supplemental RFI WP & RTCs	Corps of Engineering, Savannah District	DEC-2006
Draft EBS for VA Cemetery	URS	DEC-2006

2007

IRP Previous Studies

2007

Title	Author	Date
SWMU 3 IM WP	ARCADIS	JAN-2007
SWMU 14/AOC B Revised IM Completion Report	ARCADIS	JAN-2007
AOC K Revised CS WP & RTCs	CTSI	FEB-2007
AOC Q Revised RCRA AR & RTCs	CTSI	FEB-2007
UST 6 CAP Addendum & UIC Permit Application	ARCADIS	FEB-2007
UST 8 CAP Addendum & UIC Permit Application	ARCADIS	FEB-2007
Final EA for VA Cemetery	URS	FEB-2007
SWMU 5: Construction Completion Report	ARCADIS	MAR-2007
SWMU 21 IM Completion/CMS Report	ARCADIS	MAR-2007
SWMU 5: CMI Progress Report	ARCADIS	MAR-2007
SWMU 48: Abandonment of Floor Drains	ARCADIS	MAR-2007
SWMU 3: Area of Contamination Addition to IM WP	ARCADIS	MAR-2007
SWMU 6: IM Completion/CMS Report	ARCADIS	MAR-2007
SWMU 48: Revised Final Phase II RFI Rev Pages and RTCs	ARCADIS	MAR-2007
SWMU 1: CMS WP	ARCADIS	MAR-2007
SWMU 2: Revised RFI Report and RTCs	ARCADIS	APR-2007
SWMU 6: Revised IM Completion/CMS Report with RTCs	ARCADIS	JUN-2007
SWMU 21: Revised IM Completion/CMS Report with RTCs	ARCADIS	JUN-2007
SWMU 2: Interim Measures Confirmation Soil Sampling Results	ARCADIS	JUN-2007
Reporting planned changes letter for AOC D	Fort Jackson	JUL-2007
SWMU 14: Groundwater Sampling Plan	ARCADIS	JUL-2007
SWMU 14: CMS WP	ARCADIS	JUL-2007
Fwd Operating Base Planned Public Drinking Well	ARCADIS	SEP-2007
GW Sampling Plan Response to DHEC Comments	ARCADIS	SEP-2007
SWMU 3 IM Completion Report	ARCADIS	OCT-2007
SWMU 2 CMS Report	ARCADIS	NOV-2007
SWMU 47 Phase II RFI, RTCs and IM Completion Report	ARCADIS	NOV-2007
SWMU 48 CMS Work Plan	ARCADIS	NOV-2007
SWMU 1 CMS WP RTCs	ARCADIS	DEC-2007
AOC B CMS Report	ARCADIS	DEC-2007
SWMU 1: CMS WP RTCs	ARCADIS	DEC-2007

2008

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2008

Title	Author	Date
SWMU 14: CMS and Investigation WP	ARCADIS	JAN-2008
SWMU 3: RTCs for IM Completion Report	ARCADIS	JAN-2008
Area Adjacent to SWMU 3: Test Pit Investigation WP	ARCADIS	JAN-2008
SWMU 49: Draft Supplemental RFI Report	Corps of Engineering, Savannah District	JAN-2008
SWMU 44, Semiannual Progress Report - Nov 2007 Event	Kleen Sites Geoservices	FEB-2008
SWMU 2: Revised CMS Report + RTCs	Arcadis	FEB-2008
SWMU 47: Revised Phase II RFI RTCs and IM Completion Report	ARCADIS	FEB-2008
SWMU 14: Revised IM Completion Report + RTCs	Arcadis	MAR-2008
SWMU 48: Revised CMS WP & Ph.2 RFI Report	Arcadis	APR-2008
SWMU 48: Cement Filling of Former Floor Drains	Arcadis	APR-2008
AOC Q: Revised RTCs and CS WP	CTSI	MAY-2008
SWMU 3: CMS Report	Arcadis	MAY-2008
UST 6: PermeOXPlus CAP Perf. Monitorng Rpt	Arcadis	MAY-2008
AOC K: Revised CS WP + RTCs	Arcadis	JUN-2008
SWMU 48: CMS Report	Arcadis	JUN-2008
UST 8: Groundwater Monitoring Report	Arcadis	JUL-2008
SWMU 14: CMS Report	Arcadis	JUL-2008
AOC B: RTCs+IM Completion Report and CMS Report	Arcadis	JUL-2008
SWMU 44: Semiannual Progress Report, June 2008 Event	KSG	SEP-2008
SWMU 48: Revised CMS Report and Phase 2 RFI RTCs	Arcadis	SEP-2008
SWMU 50: Revised CMS Report + RTCs	KSG	SEP-2008
SWMU 1: Revised CMS Report + RTCs	Arcadis	SEP-2008
SWMU 3: Revised CMS Completion Report + RTCs	Arcadis	SEP-2008
SWMU 14: Revised CMS Completion Report + RTCs	Arcadis	SEP-2008
UST 6: Revised PermeOx Plus CAP Performance Monitoring Rpt.	Arcadis	NOV-2008
SWMU 5: Revised CMI Progress Report + RTCs	Arcadis	DEC-2008
UST 1: Long Term Monitoring Report	Arcadis	DEC-2008
SWMU 5: Revised CMI Progress Report + RTCs	Arcadis	DEC-2008
UST 4: Long Term Monitoring Report	Arcadis	DEC-2008

2009

HW Storage Building Closure Request	Environmental Mgt. Branch, Env. Division, Ft. Jackson	JAN-2009
Draft SOB for AOC B	Arcadis	JAN-2009

IRP Previous Studies

2009

Title	Author	Date
Draft SOB for SWMU 47	Arcadis	JAN-2009
Draft SOB for SWMU 3	Arcadis	JAN-2009
Draft SOB for SWMU 48	Arcadis	JAN-2009
SWMU 5: CMI Progress Report	Arcadis	JAN-2009
SWMU 3: IM WP for Surficial Metal Removal	Arcadis	JAN-2009
Reporting Plan Change Related to AOC D and AOC E - Child Development Center (CDC) Construction Notification	L.Estaba,ASIS, EMB,Env.Div.,Ft. Jackson, SC	FEB-2009
SWMU 3 MW Installation Issues Report	Arcadis	MAR-2009
ORAP Well Installation Request	Malcolm Pirnie	MAR-2009
RTCs for Revised SI Report - Military Munitions Response Program	Malcolm Pirnie	APR-2009
ORAP - Well Installation Request	Malcolm Pirnie	MAY-2009
Reporting Plan Change for AOC J	L.Estaba, EMB, Env. Div., Ft. Jackson	MAY-2009
SWMU 14 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
SWMU 1 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
SWMU 14 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
SWMU 1 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
SWMU 2, 3, 6, and 21 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
SWMU 48 Corrective Measures Implementation Work Plan	Arcadis	JUN-2009
Hazardous Waste Storage Building Closure Extension Request	Env. Mgt Branch, Env. Division, Ft. Jackson, SC	JUL-2009
Compilation of Water Well Records	L.Estaba, ASIS, EMB, Env. Div., Ft. Jackson, SC	JUL-2009
SWMU 1 Letter of Concurrence with Additional Comments	Solid Waste Groundwater Section, SCDHEC	SEP-2009
AOC K Monitoring Wells Issue Letter	SCDHEC	SEP-2009
AOC Q - Confirmatory Sampling Report	CTSI	SEP-2009
AOC K - Confirmatory Sampling Report	CTSI	SEP-2009
SWMU 18 and 19 Reporting Plan Change Request	EMB, Env.Div., Ft. Jackson	SEP-2009
AOC A Reporting Plan Change Request	Env. Mgt. Branch, Environmental Division, Ft. Jackson	SEP-2009
Hazardous Waste Storage Building Closure Report	Davis and Floyd	OCT-2009
SWMU 2, 3, 6, and 21 Corrective Measures Implementation Work Plan RTCs	Arcadis	OCT-2009
AOC E Reporting Plan Change Letter	L.Estaba, ASIS, EMB, Env.Div., Ft. Jackson	OCT-2009
Well Record Forms (1903's) Operational Range	Malcolm Pirnie	OCT-2009

IRP Previous Studies

2009

Title	Author	Date
Assessment Report		
SWMU 1 RTCs to Solid Waste GW Section Comments	Arcadis and EMB, Env. Div., Ft. Jackson, SC	NOV-2009
SWMU 14 CMI WP RTCs	Arcadis	NOV-2009
MW3-14 CS WP Letter	L.Estaba, ASIS, EMB, Env.Div., Ft. Jackson	DEC-2009

2010

Final Permit Decision Letter	SCDHEC	FEB-2010
SWMU 14 CMI WP RTCs Rev 2	Arcadis	FEB-2010
SWMU 48 CMI WP RTCs Rev 1	Arcadis	FEB-2010
SWMU 3 Surficial Debris Disturbance Letter	Arcadis	FEB-2010
Final Permit Decision Letter	SCDHEC	FEB-2010
Effective date of RCRA Permit Re-Issue (Renewal)	SCDHEC	FEB-2010
SWMU 14 CMI WP RTCs Rev 2	ARCADIS	FEB-2010
SWMU 3 Surficial Debris Disturbance Letter	ARCADIS	FEB-2010
SWMU 48 CMI WP RTCs Rev 1	ARCADIS	FEB-2010
SWMU 2, 3, 6, 21 - Revised RTCs CMI WP	ARCADIS	MAR-2010
SWMU 23 2009 GW Sampling Report	CESAS	MAR-2010
SWMU 3 MW Installation Issues	ARCADIS	MAR-2010
SWMU 50 Revision Pages and RTCs for CMI WP	KSG	MAR-2010
SWMU 50 GW Monitoring Rpt.	AMEC	MAR-2010
AOC K CS - RTCs	CTSI	APR-2010
SWMU 23 2008 GW Sampling Report	CESAS	APR-2010
SWMU 49 CMS Report	ARCADIS	APR-2010
MMRP RI Work Plan (AOC E, F, G, HI, J)	CH2MHill - PBA	JUN-2010
SWMU 1 GW Quality Assessment Plan	CESAS	JUN-2010
SWMU 49 CMS RTCs	ARCADIS	JUN-2010
SWMU 5 - CMI Progress Report	ARCADIS	JUN-2010
SWMU 50 CMI WP - REC/LUC Language Rev.	AMEC	JUN-2010
VA CEM AOC S-VA Cemetery Letter of Transfer-LOT	VA HQ	JUL-2010
AOC K - RTCs and revised Document	Corps, CE-SAS	JUL-2010
MW3-14 WP	KSG	JUL-2010
SWMU 48 CMI WP RTCs Rev 2	ARCADIS	JUL-2010
SWMU 49 CMS RTCs	ARCADIS	AUG-2010
SWMU 2, 3, 6, 21 - RTCs on REC language for CMI WP	ARCADIS	SEP-2010

IRP Previous Studies

2010

Title	Author	Date
SWMU 49 CMS RTCs (additional)	ARCADIS	SEP-2010
UST 1699 - Site Assessment Work Plan	CH2MHILL	SEP-2010
MMRP RI Work Plan RTCs unofficial highlighted copy	CH2MHill	OCT-2010
AOC Q- Revised CS Report and RTCs	CE-SAS	OCT-2010
SWMU 23 July 2010 GW Sampling Report	CESAS	OCT-2010
SWMU 50 - 2010 Annual Report	AMEC	OCT-2010
SWMU 1 - Fort Jackson Landfill #3 Annual Rpt .	CESAS	NOV-2010
SWMU 1 CMI Progress Report	ARCADIS	DEC-2010
SWMU 50 CMI Work Plan Revision 1	AMEC	DEC-2010
UST 1699 AOC T - Site Assessment Work Plan and RTCs	CH2MHILL	DEC-2010
SWMU 49 CMS Rpt. Rev 2	ARCADIS	DEC-2010

2011

SWMU 5 - CMI Progress Report, Replacement Pages	ARCADIS	JAN-2011
SWMU 50 July 2010 CMI Progress Report	AMEC	JAN-2011
RCRA Permit MOD	Fort Jackson and SCDHEC	APR-2011
SWMU 48 CMI Progress Report - 2010	KSG	JUN-2011
SWMU 1 Temp Well and Surface Water Results - July 2011	CESAS	JUL-2011
SWMU 14 CMI Progress Report	Arcadis	JUL-2011
AOC K Revised CS Report	CESAS	JUL-2011
AOC Q CSR - Rev #2	CESAS	JUL-2011
HW Storage Building Notification - June 2011	CESAS	JUL-2011
Hazardous Waste Storage Bldg Monthly Report - July 2011	CESAS	JUL-2011
SWMU 12 Tree Thinning Reporting Planned Changes	Lahiri Estaba, PB & A	AUG-2011
Hazardous Waste Storage Bldg Monthly Report - August 2011	CESAS	AUG-2011
Assessment Report (AR) Rev 2 Fmr Motorpool Oil/Water Separator Site behind Recycling - SWMU 53	KSG	SEP-2011
SWMU 1 Temp Well and Surface Water Results - July 2011 - RTCs and MW Application	CESAS	SEP-2011
SWMU 49 CMI Completion Report - Soil Only	Arcadis	SEP-2011
Hazardous Waste Storage Bldg Monthly Report - September 2011	CESAS	SEP-2011
Final WP SWMU 1/Landfill 3 Depression Repair	North Wind	OCT-2011
SWMU 23 Annual Groundwater Monitoring Report	CESAS	OCT-2011
SWMU 23 Annual Groundwater Monitoring Report	CESAS	OCT-2011

IRP Previous Studies

2011

Title	Author	Date
SWMU 50 CMI Progress Report	AMEC	OCT-2011
RTCs for SWMU 2	Lahiri Estaba, EEI	OCT-2011
SWMU 1 Final Annual CMI Progress Report	Arcadis	NOV-2011
Hazardous Waste Storage Bldg Monthly Report - October 2011	CESAS	NOV-2011
Hazardous Waste Storage Bldg Demolition Work Plan - November 2011	CESAS	NOV-2011
UST System Closure Report Document - 6 sites - November 2011	J2	NOV-2011

2012

Former FTJA Property, Removal/Disposal of OWS-Disclosure Ltr.	CESAS	JAN-2012
2011 - SWMUs 2, 3, 6 and 21 CMIP Rpt.	Arcadis	FEB-2012
Reporting Planned Changes: SWMU 1	Lahiri Estaba/Fort Jackson	FEB-2012
2011 - SWMU 48 CMIP Report	Arcadis	FEB-2012
RTCs Former FTJA Property OWS Removal Rpt,	North Wind	MAR-2012
UST #6 - Draft Investigation Rpt.	Arcadis	MAR-2012
Sampling Plan - GW and Soil Investigation, Parcel 6 OWS	North Wind	APR-2012
AR (Rev. 03), Former Motorpool OWS Site behind Current Recycling Center	Kleen Sites	MAY-2012
Parcel 6 OWS, GW & Surface Soil Sampling Report	North Wind	MAY-2012
Focused CMS Report, Wonson and Inchon OB/OD Grounds	Lahiri Estaba/FTJA	JUL-2012
SWMU 23 CMS Report	Lahiri Estaba/FTJA	AUG-2012
Revised QAPP CCUST 1	North Wind	OCT-2012
2012 CMIP Report, SMWU 1	Arcadis	NOV-2012
CS Report, AOC Q (MW6-10)	CESAS	NOV-2012
SWMU 48 CMIP Report - 2012	Arcadis	NOV-2012
Statement of Basis, FTJA-007-R-01	CH2MHill	NOV-2012
Final CMS, FTJA-007-R-01	CH2MHILL	NOV-2012
CMI Progress Report, SWMU 1	Arcadis	NOV-2012
Confirmatory Sampling Report, AOC Q (MW-6-10)	CESAS	NOV-2012
Final CAP, CCUST 1699	CH2MHill	NOV-2012
CMI Progress Report - 2012, SWMU 48	Arcadis	NOV-2012
CMI Progress Report-2012, SWMU 2	Arcadis	DEC-2012
Draft-Final CA Completion Report, CCUST 1699	CH2MHill	DEC-2012
Revised QAPP, QAPP-APP B, CCUST 4522	CESAS	DEC-2012

2013

IRP Previous Studies

2013

Title	Author	Date
Final CA Monitoring Report, CCUST 4522	CH2MHill	JAN-2013
RTCs, Rev.1 Confirmatory Sampling Report-Nov 2012, AOC Q (MW6-10)	CESAS	JAN-2013
Final CA Completion Report, CCUST 1699,	CH2MHill	JAN-2013
UST 6, CAP Progress Report, UST 6 (FTJA-34)	Arcadis	FEB-2013
CMI Progress Report-2012, SWMU 1	Arcadis	MAR-2013
Remedial Investigation and CA Summary Report, TASC (CCUST 1)	North Wind	MAR-2013
Rev. 2 QAPP Appendix B, CCUST4522	CESAS	MAR-2013
CMI Progress Report-2012, RTCs, SWMU 48,	Arcadis	MAR-2013
CMI Progress Report-2012, RTCs, SWMU 1	Arcadis	MAR-2013
CMI Progress Report	Arcadis	APR-2013
CMI Progress Report, SWMU 49	Arcadis	APR-2013
Further Revisions,QAPP, Appendix B:Contractor Addendum, CCUST 4522	CESAS	MAY-2013
RTCs and Revised CMI WP, SWMUs 2, 3, 6 and 21	Arcadis	JUL-2013
RTCs and Revised CMI Progress Report,SWMUs 2, 3, 6 and 21	Arcadis	JUL-2013
Draft-Final Engineering Evaluation/Cost Analysis-LUCs-MMRP	Arcadis	JUL-2013
Revised 2012 - CMI Progress Report plus RTCs, SWMU 14	Arcadis	JUL-2013
Draft-Final EE/CA Action Memorandum, LUCs, MMRP	Arcadis	JUL-2013
CMI Progress Report - 2013, SWMU 1	Arcadis	SEP-2013
CMI Progress Report-2013, SWMU 1	Arcadis	SEP-2013
2013-CMI Progress Report, SWMUs 2, 3, 6 and 21	Arcadis	SEP-2013
SWMU 48 CMI Progress Report	Arcadis	SEP-2013
RTCs, CMI Progress Report-2013, SWMU 1	Arcadis	OCT-2013
Monitoring Well Abandonment Report, CCUST 1699	CH2MHill	DEC-2013
RTCs, Revision Pages, CMI Progress Report, 2013, SWMUs 2, 3, 6 & 21	Arcadis	DEC-2013
RTCs, CMI Progress Report and Rev. Pages, SWMU 48, @013	Arcadis	DEC-2013

2014

Final Remedy QAPP, CCUST 4120, Gate 2 AAFES Station	KEMRON	MAR-2014
Bldg 4522 CMI Progress Rpt, Frmr AAFES Gas Station(CCUST 4522)	CESAS	MAR-2014
2013 Annual Report, SWMU 23, Remagen Impact Range	CESAS	APR-2014
Draft Final CMI Rpt + RTCs, FTJA-007-R-01(AOC J)	CH2MHill	APR-2014
Revised Annual Report and RTCs, SWMU 23, Remagen Impact Range	CESAS	MAY-2014

IRP Previous Studies

2014	Title	Author	Date
	Monitoring Well Application,ORAP Domestic Water Supply Investigation	CESAS	JUN-2014
	Final Letter-Rpt, ORAP II Assessment,Boyden Arbor Pond, Surface Water & Sediment Sampling Results	Arcadis-Pika	JUN-2014
	Draft-Final NTCRA LUC Plan	Arcadis-Pika	JUN-2014
	Draft CS WP, AOC BB (Bldg 2089)	KEMRON	JUN-2014
	Draft CS WP, AOCs T, W, X & SWMU 53, Multiple Restoration Sites	KEMRON	JUN-2014
	Draft QAPP Amendment, Multiple Restoration Sites	KEMRON	JUN-2014
	Draft QAPP, Former UST Site 9432 (FTJA-34/UST 6/AOC Y)	KEMRON	JUN-2014
	CS Rpt 2013, AOC Q (MW6-10)	CESAS	JUL-2014
	Corrective Action Monitoring Report, SWMU 49 (FTJA-39)	CESAS	JUL-2014
	Final QAPP Amendment and RTCs, Multiple Restoration Sites	KEMRON	AUG-2014
	Final CS WP, AOCs T, W, X and SWMU 53	KEMRON	SEP-2014
	RTCs to SCDHEC Comments (RTCs), CS Report, AOC Q (MW6-10/CCAOC Q)	KEMRON	SEP-2014
	Final CS WP, AOC BB (Bldg 2089/CCUST 2089)	KEMRON	SEP-2014
	RFI WP, AOC Q (MW6-10/CCAOC Q)	KEMRON	OCT-2014
	Draft 2014 CMI Progress Report, Former NG C & D Landfill (SWMU 50)	AMEC	OCT-2014
	Final QAPP, Addendum to SCDHEC UST Programmatic QAPP, Former UST#6 (FTJA-34/AOC Y)	QRI/PPM	NOV-2014
	Draft Annual Report-2014, Remagen Impact Range (SWMU 23)	CESAS	NOV-2014
	Final QAPP, Addendumto SCDHEC Programmatic QAPP, Bldg 4522/AOC AA/Building 4522	KEMRON	NOV-2014
2015	RTCs, Final Action Memorandum LUCs, NTCRA	Arcadis	JAN-2015
	Corrective Action Monitoring Reports: SWMU 14,Weapons Cleaning Area and SWMU 49, Weapons Pool Solvent Tank	KEMRON	JAN-2015
	2014 CMI Progress Report, Former NG C&D Landfill (SWMU 50)	AMEC	JAN-2015

FORT JACKSON
Installation Restoration Program
Site Descriptions

Site ID: FTJA-01
Site Name: Active Sanitary Landfill
Alias: SWMU 1

STATUS

Regulatory Driver: RCRA
RRSE: HIGH

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199308.....	200809
IRA.....	200502.....	200511
CMI(C).....	200809.....	200812
LTM.....	200812.....	204503

RIP Date: N/A

RC Date: 200812

SITE DESCRIPTION

The PBA site FTJA-01 is located north of Semmes Road at the end of Ivy Road. FTJA-01 is a trench and fill landfill which operated from 1974 to 1988, under SCDHEC Permit No. DPW-098. During operation the permit was amended to expand the landfill as necessary to maintain new fill area. The last 20-acre section of the landfill was closed in April 1994 and regulated by the SCDHEC solid waste (SW) management regulations. It is monitored in accordance with the 30-year post-closure care and monitoring plan approved by SCDHEC. The IRP funds restoration for only the 50-acre portion that did not receive waste after 1988. The following information pertains to the 50 IRP acres.

Three groundwater monitoring wells were installed in June 1980, and were sampled regularly for two years. Based on elevated levels of barium and lead detected between 1980 and 1982, an RFI was required by FTJA's RCRA Part B permit. From 1997 to 1998, five monitoring wells were installed as part of the initial RFI. As part of the RCRA closure of the landfill in 1995, five more wells were installed to RCRA standards and the original three wells were abandoned/replaced. A Phase I RFI was completed in August 1999. Investigation results indicate soil and groundwater impact, and additional work was completed to determine the nature and extent of contamination. Methane off-gassing is being monitored semiannually. A draft Phase II RFI was implemented. The Phase II RFI report was finalized and submitted in FY05. Phase II RFI results do not indicate any immediate threat significant to human health or impact to the environment. The Phase II RFI the report was conditionally approved in FY05. The conditions of the approval were met in the CMS. In addition, an IM was performed in FY05 that included the placement of additional soil cover in deficient areas, grading and seeding of the former mulch site, construction of storm water drainage structures, and removal of surface waste and debris. A CMS WP was submitted in FY07. SCDHEC issued three sets of comment iterations.

The CMS was approved and the Fort Jackson RCRA Part B permit was modified in April 2009. The CMI WP was submitted in June 2009. In FY10, SDHEC comments required additional revisions. The approved language for LUCs involved with the Record of Environmental Consideration (REC) process was crafted/approved over the following months. In addition, the post-closure plan portion of this site, regulated by a different set of regulators at the SCDHEC (RCRA Subtitle D - SW), has imposed further groundwater assessment work triggered by new much lower USEPA Region 9 regional screening levels (RSL) on 1,2 dichloroethane (1,2-DCA). Also, a small area of liner subsidence was discovered during a site walkover (50 acres)/inspection, etc. Estimates for liner repairs were gathered by the USACE. More recent SW requirements arose to repair the liner, and assess groundwater at the SW (20-acre portion). Several meetings were held since FY10, to broach responses to the SCDHEC (i.e., liner repairs, groundwater assessment, dual slightly different reporting, Subtitle D post-closure plan versus RCRA permit requirements, etc.). More meetings followed, internally and with the SCDHEC. FTJA is closer to consolidation of previously separate LTM reporting requirements for SW and RCRA Subtitle C sections at the SCDHEC, but more remains to coordinate/ consolidate. ARCADIS performed the spring sampling (~April) and the USACE in-house technicians performed the fall semiannual groundwater and methane monitoring over the last several years. Repairs were made to the liner in 2012 to SCDHEC's satisfaction. The trichloroethane (TCA) assessment was executed and new wells were installed. LTM in FY15 will continue by the USACE Savannah District in-house staff, until the site receives DERP funds to procure a contract.

Site ID: FTJA-01
Site Name: Active Sanitary Landfill
Alias: SWMU 1

CLEANUP/EXIT STRATEGY

LTM will continue into the out-years starting in FY15 including LUCs, five-year reviews and groundwater monitoring.

Site ID: FTJA-02
Site Name: INACTIVE SANITARY LANDFILL 1
Alias: SWMU 2

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

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

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

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199308.....	200809
IRA.....	200502.....	200511
CMI(C).....	200809.....	200812
LTM.....	200812.....	204509

RIP Date: N/A

RC Date: 200812

SITE DESCRIPTION

The PBA site FTJA-02 is a closed, 15-acre municipal landfill located southwest of Tank Hill on the southeast side of Lee Road. This site served as FTJA's primary landfill from 1941 to 1951. Refuse was burned and buried in trenches at the site. Types of waste disposed of probably included domestic wastes, POL wastes, water and wastewater treatment plant sludges, and general refuse. The US Army Reserve Center building is now located upgradient of the closed landfill, and the Palmetto Lodge, a lodging facility, is located downgradient from the site, surrounded in the rear by the toe of the closed landfill.

The Phase I RFI was completed in 1999. Results indicated that soil, sediment, and groundwater were impacted. Base housing is located adjacent to the southeastern edge of the landfill. The SCDHEC requires LUCs due to potential for human exposure.

The Phase II RFI WP was submitted during FY01 and approved by SCDHEC on March 3, 2003. The WP was implemented and a Phase II RFI report was submitted in FY04. Results of the Phase II RFI do not indicate any significant immediate threat to human health or impact to the environment. Based upon comments from the SCDHEC, a revised Phase II RFI report was submitted in FY06 and was conditionally approved in May 2007.

In addition, an IM (or IRA) was performed in FY05 that included the placement of additional soil cover in deficient areas, construction of storm water drainage structures, removal of surface waste and debris. The IM completion report was conditionally approved in October 2007. The CMS report was submitted in November 2007. Responses to SCDHEC comments and revision pages were submitted. Additional comments were issued in January 2008. Additional comment review iterations continued, until the CMS was approved. The Fort Jackson RCRA Part B permit was modified in April 2009 to reflect this. The CMI WP was submitted in June 2009. The CMI WP was finalized in FY11.

A military construction (MILCON) project expanded the existing parking lot further with cover/fill, after partnering with USACE, Contractors and SCDHEC. Initial concerns were addressed (breaching soil cover and erosion control, etc.). Final product worked out well, actually enhancing the cover with more erosion protection. Annual LTM reports for groundwater monitoring and LUC inspection, under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy includes cover maintenance and inspection (LUCs), annual groundwater monitoring, periodic reviews and annual reports. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-03
Site Name: INACTIVE SANITARY LANDFILL 2
Alias: SWMU 3

STATUS

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

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199308.....	200809
IRA.....	200602.....	200709
CMI(C).....	200709.....	200809
LTM.....	200810.....	204509

RIP Date: N/A
RC Date: 200809

SITE DESCRIPTION

The PBA site FTJA-03 is a closed approximately 100-acre landfill located between Washington and Ewell Roads, east of the DRMO complex. The site was used from 1951 to 1974. Open burning was conducted in pits behind the DRMO facility for the first 10 years. The burned waste and unburned refuse were buried in trenches. Types of waste disposed of probably included domestic wastes, POL wastes, water and wastewater treatment plant sludges, and general refuse.

Phase I RFI was completed in August 1999. Results indicate soil and groundwater impact. Additional work needs to be completed to substantiate and determine the extent. Approximately one-half of the DRMO facility is located on the landfill. Methane off-gassing is a concern.

The Phase II RFI WP was submitted during FY01 and was approved by the SCDHEC on March 3, 2003. The WP was implemented and the Phase II RFI report was submitted in FY05. The revised Phase II RFI report was conditionally approved in FY05. Conditions of the Phase II RFI will be met in the CMS report. To address the SCDHEC concerns regarding the groundwater monitoring network, three additional monitoring wells were installed and all wells were sampled in FY05. An IM was completed in FY07 that included grading, installation of two feet (ft) of soil cover and erosion control features. An IM report was submitted in FY07 and approved. Test pits were conducted to refine landfill acreage on the west side. A CMS was approved in September 2008. Surface debris was removed in February 2009. The RCRA Part B permit was modified in April 2009. The CMI WP was finalized in FY11.

In the fall of 2010 the area at the edge of the landfill boundary (MW3-14) was evaluated for potential chlorinated solvent groundwater contamination from the outside of the landfill. Geoprobe groundwater sampling was performed by FTJA independently of the PBA Contract. A four-hole assessment found no detections from outside the landfill. MW3-14 was resampled during the 2011 LTM event. They found no chlorinated VOC detections either. In mid-2011, FTJA also installed five additional wells on a 10-acre area to the northwest of the landfill. The added acreage makes FTJA-03 a 100-AC site. Annual groundwater and LUC LTM continues without incident under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy includes cover maintenance and inspection, annual groundwater monitoring, periodic reviews and annual reports. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-05
Site Name: Inactive WETSITE Landfill (SWMU 5)
Alias: SWMU 5

STATUS

Regulatory Driver: RCRA
RRSE: MEDIUM
 Contaminants of Concern: Metals, Volatiles (VOC)
 Media of Concern: Groundwater

Phases	Start	End
RFA.....	198911.....	199001
CS.....	199109.....	200108
RFI/CMS.....	200109.....	200411
DES.....	200411.....	200708
CMI(C).....	200709.....	200809
CMI(O).....	200710.....	201010
LTM.....	201010.....	204509
RIP Date:	200809	
RC Date:	201010	

SITE DESCRIPTION

The PBA site FTJA-05 is a closed construction debris landfill located at the southeastern corner of FTJA, in the SCARNG area. This site operated from the early-1940s to the mid-1990s, and it was a trench and fill type landfill approximately two acres in size. The site is completely vegetated by native grasses with no signs of erosion. A recreational pond, constructed in 1984, is located 150 yards downslope of the landfill. The CS was required by the RCRA Part B permit and was completed in 1997. Results from the 1997 confirmatory sampling report required additional confirmatory sampling work, which was completed in FY02. No exceedances were detected, nor were ever found at this site.

This site is located on FTJA property currently leased to the SCARNG.

A soil cover assessment indicated that the existing cover is adequate. A cover assessment was completed and the results were included in the CMS report. Soil cover met or exceeded the two ft standard. The CMS report was approved by the SCDHEC in FY05 and the RCRA permit modification occurred in FY06. A CMI WP was approved in FY07. The site is in LTM. RC was reached after the final round of LTM groundwater monitoring was completed in FY09. The CMI WP required LUC language revisions (complete). The CMI WP was amended and approved by SCDHEC. The LTM of the soil cover and LUCs continue under the PBA III through FY19, using SCDHEC's inspection check list.

CLEANUP/EXIT STRATEGY

The final remedy includes cover maintenance and inspection and annual reports, plus periodic reviews. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-06
Site Name: TANK HILL LANDFILL
Alias: SWMU 6

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199308.....	200710
IRA.....	200603.....	200612
CMI(C).....	200109.....	200912
LTM.....	200912.....	204509

RIP Date: N/A

RC Date: 200912

SITE DESCRIPTION

The PBA site FTJA-06 is a former construction debris landfill covering approximately 14 acres. It is located at the corner of Hartsville Guard and Lee Roads, in the area known as Tank Hill. This landfill consists of steep slopes and gullies and has two access points. Building contractors used this site to dispose of construction debris. The Phase I RFI was completed in August 1998.

The Phase II RFI WP was submitted during FY01 and was approved by the SCDHEC on March 3, 2003. The WP was implemented and the Phase II RFI report submitted, reviewed, revised and finally approved in FY06. An IM WP was prepared and approved later in FY06, pursuing what is expected to be the crux of the final remedy (i.e., grading, two ft of soil cover and erosion control features). The IM was completed in early FY07. A CMS/IM completion report was approved in July 2007. Several RCRA Part B permit modifications have been completed to document phase completions and remedy selections. The PBA completes approximately five years of LTM in 2013, that included groundwater monitoring, LUC inspections/reports and one five-year review.

The CMI WP was revised in FY11. The installation recommended discontinuing groundwater monitoring at this site and FTJA-21. SCDHEC ruled that the LTM continue bi-annually, which will continue under PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy includes cover maintenance and inspection and annual reports, bi-annual groundwater monitoring, periodic reviews. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-13
Site Name: FORMER WEAPONS CLEANING AREA
Alias: SWMU 14

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals, Volatiles (VOC)

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

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199001.....	200807
DES.....	200808.....	201007
IRA.....	200407.....	200608
CMI(C).....	201007.....	201107
CMI(O).....	201107.....	204509

RIP Date: 201107

RC Date: 204509

SITE DESCRIPTION

This combined PBA site includes FTJA-13 and FTJA-36.

Site FTJA-13 consists of former Building 1605 and the surrounding area, located at the intersection of Lee and Washington Roads. Weapons cleaning operations were conducted from the early-1940s to 1965. Building 1605 housed a large vat containing TCE and other vats containing sodium dichromate-rich solutions for weapons cleaning and blueing. Wastes were reportedly discharged into drains connected to a terra cotta drain field, which then discharged to ditches leading to Wildcat Creek. These vats were removed in 1991 along with Building 1605.

Site FTJA-36 consisted of a pair of 200,000-gallon aboveground storage tanks (AST) located near Central Energy Plant No. 3 at Washington Road and Lee Road. The site is located near the southern border of the installation. The tanks were used to store diesel fuel and were removed in FY02. Some underground piping remains in place.

Groundwater flows in two directions at this site, discharging to both branches of Wildcat Creek above the confluence. The site is located near the southern border of the installation, and the proximity to the base boundary poses a potential for off-post surface water contamination.

The Phase III RFI is complete. The Phase III RFI report was reviewed in FY02 and has been revised and approved.

Due to overlapping contaminant plumes, FTJA-13 and FTJA-36 constituted a single investigation. An IRA has been conducted at FTJA-36 to remove free-phase petroleum. The second IRA was conducted for the ASTs and the re-sampling of soils. A third and fourth IRA consisted of insitu bioremediation to address groundwater at FTJA-13 (completed in FY06) and soil and source removal of LNAPL at FTJA-36 (completed in FY07). The IM completion/CMS report for FTJA-36 (AOC B) was approved in summer 2008. An NFA was received in August 2008 for FTJA-36. When injection wells were sampled at FTJA-13, elevated chlorinated volatile organic compounds were detected. Monitoring wells were resampled in preparation for the CMS WP for FTJA-13. The CMS report was approved for monitoring and LUCs with additional ERD as a contingency. The installation will perform MNA monitoring under CMI(O) through FY45. The CMI WP was finalized in FY10. ERD injection was performed as needed through 2011. MNA is currently being conducted at the site. TCE and daughter product concentrations are trending down. Down gradient surface water is sampled as part of the CMI(O). Annual groundwater and LUC LTM continues without incident under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedial action (FRA) at FTJA-13 is being evaluated for MNA and includes semiannual groundwater and SW monitoring, reporting and annual LUCs. Also included are periodic reviews per Army regulations.

Site ID: FTJA-21

Site Name: CONSTRUCTION DEBRIS LF RANGE 17

Alias: SWMU 21

STATUS

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

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199309.....	200707
DES.....	200707.....	201010
IRA.....	200509.....	200609
CMI(C).....	201010.....	201011
LTM.....	201011.....	204503
RIP Date:	N/A	
RC Date:	201011	

SITE DESCRIPTION

The PBA site FTJA-21 is located near the intersection of Hartsville Guard and Old Hartsville Guard Roads. This construction debris landfill is approximately 15 acres and was used to dispose inert debris from road construction and barracks demolition. The site became overgrown with low brush and early growth trees. Debris was trucked to the site and dumped on the surface and into borrow pits.

A characterization and consolidation WP was submitted and approved in FY05. The fieldwork was also conducted in FY05 to remove and consolidate the surface debris. Additional buried debris was also strategically excavated to reduce the landfill size to five acres. Sampling has been completed at this site and indicates there is no severe groundwater contamination.

The boundaries of the landfill have been revised since the Phase I RFI, after historical aerial photograph reviews and thorough site walkovers were performed by the Tier I partnering team. The Phase II RFI report was submitted to and reviewed by the SCDHEC. The report was revised and approved in FY06.

An IM WP was approved and completed in FY06 to apply a dermal cover to all remaining areas of buried debris. The IM was completed in early FY07, (i.e., grading, two ft of soil cover and erosion control features). The CMS was approved and remedy consists of LUCs, groundwater LTM and five-year reviews. The RCRA Part B permit was modified in April 2009.

The CMI WP was finalized in FY11.

Groundwater sampling, and annual LUC inspections are the selected remedy, provided no damage is sustained by soil cover or a known release occurs.

Discontinuation of groundwater monitoring was requested for this site. SCDHEC determined that LTM will continue on a bi-annual basis. Annual groundwater and LUC- LTM continues under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy includes cover maintenance and inspection, bi-annual groundwater monitoring, periodic reviews and annual reports. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-32
Site Name: INACTIVE ACID PIT, BLDG 6586
Alias: SWMU 48

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198911.....	199001
RFI/CMS.....	199308.....	200809
DES.....	200809.....	201009
IRA.....	199906.....	200707
CMI(C).....	201009.....	201010
LTM.....	201010.....	204503

RIP Date: N/A

RC Date: 201010

SITE DESCRIPTION

The PBA site FTJA-32 is located within and adjacent to Building 6586, off Lee Road, north of Imboden Street. The battery room in Building 6586 formerly contained a floor drain, which was connected to an acid pit. Battery acid, which spilled during battery recharge operations, was neutralized. The neutralized solution was hosed down into the floor drain. The acid neutralization pit was operated from the late-1950s to approximately 1989. The IM was funded under the Army Operations and Maintenance Account (OMA) and implemented during late FY99. Removal activities consisted of removing an oil/water separator (OWS), neutralized battery acid drainage pit, and approximately 800 cubic yards (cy) of overburdened and contaminated soil. The extensive soil stockpile required resampling after the removal contractor submitted nonrepresentative composite samples. The approved soil stockpile sample report recommendation to dispose of soil as nonhazardous material was executed in FY00.

Piping and structures (sump) associated with the acid pit were removed during an initial IM and a supplemental IM. The supplemental IM fieldwork was completed and the report was submitted to the SCDHEC in FY04.

The Phase II RFI WP was approved in FY05. This plan included the installation of two monitoring wells and resampling of the existing wells. The Phase II RFI report was conditionally approved in January 2007. The remaining floor drains were filled with grout in accordance with the approved WP for the IM in March 2007. A CMS report was approved in September 2008. The RCRA Part B permit was modified in April 2009 to document this. The CMI WP was finalized in September 2010. LTM began in FY11 to monitor groundwater quality for VOCs, SVOCs, polycyclic aromatic hydrocarbons (PAH) and metals. Annual groundwater and LUC-LTM continues under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy includes building foundation maintenance and inspection, annual groundwater monitoring, periodic reviews and annual reports. LUCs will be implemented to mitigate potential impacts to human health and the environment for a minimum of 30 years.

Site ID: FTJA-34
Site Name: UST 6 (FTJA-34:DERP UST SITES)AOC Y
Alias: USTs(ER,A)

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	199202.....	199203
INV.....	199309.....	199912
CAP.....	199912.....	201207
DES.....	200606.....	201207
IRA.....	199603.....	200709
IMP(C).....	200612.....	201302
IMP(O).....	201207.....	204409
RIP Date:	201302	
RC Date:	204409	

SITE DESCRIPTION

Site FTJA-34 consists of 13 IRP eligible sites spread throughout the post. The tanks were taken out of service in 1984 and removed between 1991 and 1993. The tanks ranged in size from 500-gallon to 12,000-gallon capacity and contained diesel, fuel oil, or gasoline. A total of nine sites (of the original 13) had received NFA as of 2003. Approved corrective action plans (CAP) for the sampling and analysis phase at UST sites 1, 4, 6 and 8 were executed to SCDHEC's satisfaction. Other UST sites not qualifying for Environmental Restoration, Army (ER,A) funds are under the CR program or are funded under the Compliance Cleanup program.

Only UST site 6 remains open under annual MNA sampling. All FTJA UST sites are regulated by risk-based corrective action (RBCA) guidelines adapted by the SCDHEC in 1995 and revised in January 1998.

The selected remedy was MNA at UST site 1. Levels were such that the SCDHEC approved conditional no further action (CNFA) in December 2008. Biox injections were used to enhance MNA at UST site 4. Levels were such that the SCDHEC approved a NFA decision in December 2008. The UST site 8 had pilot tests for soil vapor extraction, followed by attempted injections of oxygen releasing compound (ORC), but the subsurface soils were too tight for those technologies.

The UST site 8 exhibited decreasing hydrocarbon levels and received a NFA decision from the SCDHEC since then. Levels were such that the SCDHEC approved CNFA in August 2008.

Soil removal, tainted groundwater removal, and ORC treatment made up the initial RA/CAP. Phyto-remediation' was also added to UST site 6 in the approved CAP that was implemented. Phyto-remediation has performed very well. Permeox worked well initially, but its effects were reevaluated. The LTM annual monitoring is underway. UST site 6 is the last remaining DERP UST site. Additional soil testing was conducted in the area of PMW3-R. This led to an amended CAP for further excavation. That CAP was approved by SCDHEC and implemented in 2012. In addition, calcium peroxide was added to the bottom of the pit for oxygen release to stimulate petroleum eating aerobic bacteria.

Annual monitoring resumed when the remedial action report was approved in 2013 by SCDHEC. Annual groundwater and LUC-LTM continues under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

Groundwater monitoring will continue until the site meets the established risk-based cleanup goals (MNA,site-specific target levels).

Site ID: FTJA-39

Site Name: FORMER WEAPONS POOL SOLVENT TANK

Alias: SWMU 49

STATUS

Regulatory Driver: RCRA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	199803.....	199805
CS.....	199805.....	199807
RFI/CMS.....	199808.....	201101
DES.....	200309.....	201103
IRA.....	200103.....	200209
CMI(C).....	201103.....	201109
CMI(O).....	200407.....	204503
RIP Date:	201109	
RC Date:	204503	

SITE DESCRIPTION

Site FTJA-39 was discovered in FY98 during a monitoring well abandonment for a UST site that had achieved NFA. It is located behind the back of Building 3058, currently occupied by the 748th EOD. The tank consisted of a concrete vault used as a waste solvent holding tank for weapons cleaning activity at the former Weapons Pool area. The Weapons Pool stored, cleaned, and repaired small arms issued to recruits in training. Weapons cleaning operations were conducted at FTJA-39 from 1972 until the mid-1980s. Subsequently, the Weapons Pool began using self-contained Safety Kleen solvent baths. The site lies on the post boundary adjacent to and upgradient of I-77. The FTJA sampled contents of the tank (primarily rainwater) and adjacent soils. A SWMU assessment report (SAR) was submitted in FY98. This led to an RFI.

Results of the Phase I RFI showed detectable levels of naphthalene, other PAHs and RCRA metals in groundwater and soils at concentrations exceeding applicable screening criteria.

In FY02 an IM was completed to remove the vault, the majority of the pipeline, and approximately 18 cy of soil. A Phase II RFI was conducted concurrently with the IM-removal action. The Phase II RFI report was approved in FY03. A MNA was proposed as a final remedy and scoped as such in the PBA. Additional sampling was requested by the SCDHEC to show MNA was appropriate. Four quarters of sampling were performed by the PBA contractor in FY04-05.

Results of quarterly sampling did not support MNA. USACE assessed the site further by collecting soil and groundwater samples and installing a new well. A supplemental RFI report was submitted to the SCDHEC at that time. In situ treatment was recommended prior to re-initiating the remedy (MNA) under the current PBA scope.

The CMS report was approved in January 2011. The CMI WP was approved in March 2011. A focused excavation including in-situ oxidation treatment was completed by late summer 2011. A construction completion report was submitted to SCDHEC in September 2011.

The CMI progress report covers the first half of 2013 (last sampling event in April). Groundwater monitoring is required semiannually to ensure that the MNA remedy is effective. Annual groundwater and LUC-LTM continues under the PBA III through FY19.

CLEANUP/EXIT STRATEGY

The final remedy consists of semiannual groundwater monitoring, and MNA. LUCs and periodic reviews will also continue. Demolition of Building 3058 is slated for 2015 and will trigger re-evaluation of final remedy.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTJA-001	PBC FORT JACKSON PBC	201303	All CLINs have been awarded
FTJA-04	WETSITE LANDFILL	198905	The site (SWMU 4) was closed under the RFA and listed on the NFA table in the October 1991 RCRA Permit.
FTJA-07	FORMER HW STOR BUILDINGS 2640,2641,2642	200509	The site (SWMUs 07, 08, and 09) was permitted and not eligible for ER,A. Closure was received from SCDHEC Dec. 21, 2005 for this site. The SWMUs are listed on the clean closure table in the RCRA permit.
FTJA-08	FORMER PCB STG BLD 2668	200509	The site (SWMU 10) was permitted and not eligible for ER,A. Closure was received from SCDHEC Dec. 21, 2005 for this site. The SWMU is listed on the clean closure table in the RCRA permit.
FTJA-09	FORMER WASTE OIL TANKS (SWMU 11)	200108	SCDHEC Letter dated July 25, 2001. The site (SWMU 11) is listed on the NFA table in the RCRA permit.
FTJA-10	INACTIVE WONSON OB/OD GROUND	200609	This site is on an operational range and not ER,A eligible. Any RA at this site (SWMU12) has been deferred until the range is other than operational.
FTJA-11	INACTIVE 48TH EOD OB/OD GROUND	199203	The site (SWMU 13) was a permitted facility and not eligible for ER,A. Clean closure was received from SCDHEC in Aug. 9, 1999 and is on the clean closure table in the RCRA permit.
FTJA-12	FORMER CARDBOARD RECYCLE STATION B-3580	198905	The site was closed under the RFA and not listed on the October 1991 RCRA Permit.
FTJA-14	VETERINARY INCINERATOR	198905	The site (SWMU 15) was closed under the RFA and listed as NFA table on the October 1991 RCRA Permit.
FTJA-15	WESTON LAKE SEWAGE TRT PLT	198905	The site was closed under the RFA and not listed on the October 1991 RCRA Permit.
FTJA-16	FORMER SEWAGE TREATMENT PLANT	199908	NFA was received from SCDHEC on Aug. 19, 2004 and the site (SWMU 16) is listed on the NFA table in the RCRA Permit.
FTJA-17	FORMER USED OIL BURNING BOILERS PLT 3	199005	The site was closed under the RFA and not listed on the October 1991 RCRA Permit.
FTJA-18	Inactive INCHON OB/OD Ground-SWMU17	200303	This site is on an operational range and not ER,A eligible. Any RA at this site (SWMU 17) has been deferred until the range is other than operational.
FTJA-19	FORMER TASC HW STORAGE AREA	199701	NFA was received from SCDHEC in July 1998 and the site (SWMU 19) is listed on the NFA table in the RCRA Permit.
FTJA-20	Frmr PCB Sto.Area,Bldg 2569-SWMU 20	200307	NFA was received from SCDHEC on Aug. 18, 2003 and the site (SWMU 20) is listed on the NFA table in the RCRA Permit.
FTJA-22	FORMER TASC WASTE SOLVENT CABINET	199701	NFA was received from SCDHEC in July 1998 and the site (SWMU 18) is listed on the NFA table in the RCRA Permit.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTJA-23	REMAGEN IMPACT RANGE	201403	The site (SWMU 23) is on an operational range and not eligible for ER,A funding. The RCRA required groundwater sampling is being conducted under AEDB-CC. The site is on the LUC table in the RCRA permit.
FTJA-24	OLD ROCKET GRENADE RANGE	199701	The site (SWMU 24) is on an operational range and not eligible for ER,A funding. NFA received from SCDHEC on October 15, 1997 and the site is on the NFA table in the RCRA permit.
FTJA-25	FORMER DRMO BATTERY STORAGE AREA	199701	NFA was received from SCDHEC on October 15, 1997 and the site (SWMU 27) is listed on the NFA table in the RCRA Permit.
FTJA-26	ENERGY PLANT #3 DRAINAGE AREA	200108	NFA was received from SCDHEC on October 15, 1997 and the site (SWMU 29) is listed on the NFA table in the RCRA Permit.
FTJA-27	FORMER BLDG F2182 WASH PAD & O/W SEP	200108	NFA was received from SCDHEC on October 15, 1997 and the site (SWMU 34) is listed on the NFA table in the RCRA Permit.
FTJA-28	BLDG 9428 WASH PAD & O/W SEPARATOR	200506	NFA was received from SCDHEC on June 08, 2005 and the site (SWMU 38) is listed on the NFA table in the RCRA Permit.
FTJA-29	FORMER TANK 5453	199506	NFA was received from SCDHEC on March 6, 1995, and the site (AOC A) is listed on the NFA table in the RCRA Permit.
FTJA-30	FORMER ROADS & GROUNDS STORAGE AREA	200804	NFA was received from SCDHEC on April 03, 2008 and the site (SWMU 47) is listed on the NFA table in the RCRA Permit.
FTJA-31	FORMER SHED 1617 AREA	200108	NFA was received from SCDHEC on July 25, 2001 and the site (AOC C) is listed on the NFA table in the RCRA Permit.
FTJA-33	FORMER BLDG 1611 WASH PAD& O/W SEPARATOR	200108	NFA was received from SCDHEC on July 25, 2001 and the site (SWMU 33) is listed on the NFA table in the RCRA Permit.
FTJA-36	TANKS 1619 & 1700 - (AOC B)	200808	NFA was received from SCDHEC on August 11, 2008 and the site (AOC B) is listed on the NFA table in the RCRA Permit.
FTJA-37	FORMER VARSOL UST	200309	NFA was received from SCDHEC on June 12, 2003 and the site (SWMU 30) is listed on the NFA table in the RCRA Permit.
FTJA-38	SINGLE SOLDIERS HOUSING BARRACKS	200511	NFA was received from SCDHEC on Nov. 30, 2005 and the site is not listed on the RCRA Permit.
FTJA-40	TANK REPAIR SHOP	200610	NFA was received from SCDHEC on October 31, 2006 and the site (SWMU 52) is listed on the NFA table in the RCRA Permit.

IRP Schedule

Date of IRP Inception: 198708

Past Phase Completion Milestones

1989

RFA (FTJA-04 - WETSITE LANDFILL, FTJA-07 - FORMER HW STOR BUILDINGS 2640,2641,2642, FTJA-08 - FORMER PCB STG BLD 2668, FTJA-09 - FORMER WASTE OIL TANKS (SWMU 11), FTJA-12 - FORMER CARDBOARD RECYCLE STATION B-3580, FTJA-14 - VETERINARY INCINERATOR, FTJA-16 - FORMER SEWAGE TREATMENT PLANT)

SI (FTJA-15 - WESTON LAKE SEWAGE TRT PLT)

PA (FTJA-15 - WESTON LAKE SEWAGE TRT PLT)

1990

RFA (FTJA-001 - PBC FORT JACKSON PBC , FTJA-01 - Active Sanitary Landfill , FTJA-02 - INACTIVE SANITARY LANDFILL 1, FTJA-03 - INACTIVE SANITARY LANDFILL 2, FTJA-05 - Inactive WETSITE Landfill (SWMU 5), FTJA-06 - TANK HILL LANDFILL, FTJA-10 - INACTIVE WONSON OB/OD GROUND, FTJA-11 - INACTIVE 48TH EOD OB/OD GROUND, FTJA-13 - FORMER WEAPONS CLEANING AREA, FTJA-17 - FORMER USED OIL BURNING BOILERS PLT 3, FTJA-18 - Inactive INCHON OB/OD Ground-SWMU17, FTJA-19 - FORMER TASC HW STORAGE AREA, FTJA-20 - Fmr PCB Sto.Area,Bldg 2569-SWMU 20, FTJA-21 - CONSTRUCTION DEBRIS LF RANGE 17, FTJA-22 - FORMER TASC WASTE SOLVENT CABINET, FTJA-23 - REMAGEN IMPACT RANGE, FTJA-24 - OLD ROCKET GRENADE RANGE, FTJA-25 - FORMER DRMO BATTERY STORAGE AREA, FTJA-26 - ENERGY PLANT #3 DRAINAGE AREA, FTJA-27 - FORMER BLDG F2182 WASH PAD & O/W SEP, FTJA-30 - FORMER ROADS & GROUNDS STORAGE AREA, FTJA-31 - FORMER SHED 1617 AREA, FTJA-32 - INACTIVE ACID PIT, BLDG 6586, FTJA-33 - FORMER BLDG 1611 WASH PAD& O/W SEPARATOR, FTJA-36 - TANKS 1619 & 1700 - (AOC B), FTJA-37 - FORMER VARSOL UST)

1991

RFA (FTJA-28 - BLDG 9428 WASH PAD & O/W SEPARATOR, FTJA-29 - FORMER TANK 5453)

1992

CS (FTJA-11 - INACTIVE 48TH EOD OB/OD GROUND)

ISC (FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)

1995

CS (FTJA-29 - FORMER TANK 5453)

1997

CS (FTJA-08 - FORMER PCB STG BLD 2668, FTJA-19 - FORMER TASC HW STORAGE AREA, FTJA-22 - FORMER TASC WASTE SOLVENT CABINET, FTJA-24 - OLD ROCKET GRENADE RANGE, FTJA-25 - FORMER DRMO BATTERY STORAGE AREA)

ISC (FTJA-38 - SINGLE SOLDIERS HOUSING BARRACKS)

1998

CS (FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)

RFA (FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)

1999

CS (FTJA-07 - FORMER HW STOR BUILDINGS 2640,2641,2642, FTJA-16 - FORMER SEWAGE TREATMENT PLANT)

2000

CS (FTJA-27 - FORMER BLDG F2182 WASH PAD & O/W SEP)

INV (FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)

2001

CS (FTJA-05 - Inactive WETSITE Landfill (SWMU 5), FTJA-09 - FORMER WASTE OIL TANKS (SWMU 11), FTJA-26 - ENERGY PLANT #3 DRAINAGE AREA, FTJA-31 - FORMER SHED 1617 AREA, FTJA-33 - FORMER BLDG 1611 WASH PAD& O/W SEPARATOR)

2002

RFA (FTJA-40 - TANK REPAIR SHOP)

IRA (FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)

2003

RFI/CMS (FTJA-18 - Inactive INCHON OB/OD Ground-SWMU17, FTJA-20 - Fmr PCB Sto.Area,Bldg 2569-SWMU 20, FTJA-37 - FORMER VARSOL UST)
 IRA (FTJA-28 - BLDG 9428 WASH PAD & O/W SEPARATOR)
 CS (FTJA-40 - TANK REPAIR SHOP)
 INV (FTJA-38 - SINGLE SOLDIERS HOUSING BARRACKS)

2005

CS (FTJA-28 - BLDG 9428 WASH PAD & O/W SEPARATOR)
 RFI/CMS (FTJA-05 - Inactive WETSITE Landfill (SWMU 5), FTJA-07 - FORMER HW STOR BUILDINGS 2640,2641,2642, FTJA-08 - FORMER PCB STG BLD 2668, FTJA-10 - INACTIVE WONSON OB/OD GROUND)

2006

RFI/CMS (FTJA-23 - REMAGEN IMPACT RANGE)
 CAP (FTJA-38 - SINGLE SOLDIERS HOUSING BARRACKS)
 LTM (FTJA-10 - INACTIVE WONSON OB/OD GROUND)
 CMI(C) (FTJA-23 - REMAGEN IMPACT RANGE)
 IRA (FTJA-01 - Active Sanitary Landfill , FTJA-02 - INACTIVE SANITARY LANDFILL 1, FTJA-13 - FORMER WEAPONS CLEANING AREA, FTJA-21 - CONSTRUCTION DEBRIS LF RANGE 17)

2007

IRA (FTJA-03 - INACTIVE SANITARY LANDFILL 2, FTJA-06 - TANK HILL LANDFILL, FTJA-30 - FORMER ROADS & GROUNDS STORAGE AREA, FTJA-32 - INACTIVE ACID PIT, BLDG 6586, FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)
 RFI/CMS (FTJA-21 - CONSTRUCTION DEBRIS LF RANGE 17, FTJA-40 - TANK REPAIR SHOP)
 CMI(C) (FTJA-001 - PBC FORT JACKSON PBC)
 DES (FTJA-05 - Inactive WETSITE Landfill (SWMU 5))

2008

RFI/CMS (FTJA-01 - Active Sanitary Landfill , FTJA-02 - INACTIVE SANITARY LANDFILL 1, FTJA-03 - INACTIVE SANITARY LANDFILL 2, FTJA-06 - TANK HILL LANDFILL, FTJA-13 - FORMER WEAPONS CLEANING AREA, FTJA-30 - FORMER ROADS & GROUNDS STORAGE AREA, FTJA-32 - INACTIVE ACID PIT, BLDG 6586, FTJA-36 - TANKS 1619 & 1700 - (AOC B))
 CMI(C) (FTJA-03 - INACTIVE SANITARY LANDFILL 2, FTJA-05 - Inactive WETSITE Landfill (SWMU 5))
 CMI(O) (FTJA-001 - PBC FORT JACKSON PBC)

2009

CMI(C) (FTJA-01 - Active Sanitary Landfill , FTJA-02 - INACTIVE SANITARY LANDFILL 1)

2010

CMI(C) (FTJA-06 - TANK HILL LANDFILL)
 DES (FTJA-13 - FORMER WEAPONS CLEANING AREA, FTJA-32 - INACTIVE ACID PIT, BLDG 6586)

2011

RFI/CMS (FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)
 CMI(C) (FTJA-13 - FORMER WEAPONS CLEANING AREA, FTJA-21 - CONSTRUCTION DEBRIS LF RANGE 17, FTJA-32 - INACTIVE ACID PIT, BLDG 6586, FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)
 DES (FTJA-21 - CONSTRUCTION DEBRIS LF RANGE 17, FTJA-39 - FORMER WEAPONS POOL SOLVENT TANK)
 CMI(O) (FTJA-05 - Inactive WETSITE Landfill (SWMU 5))

2012

DES (FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)
 CAP (FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)

2013

IMP(C) (FTJA-34 - UST 6 (FTJA-34:DERP UST SITES)AOC Y)

LTM (FTJA-001 - PBC FORT JACKSON PBC)

2014

LTM (FTJA-23 - REMAGEN IMPACT RANGE)

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
FTJA-10	INACTIVE WONSON OB/OD GROUND	FTJA-10 Inactive wonson ob/od ground	20250930

Final RA(C) Completion Date: 201302

Schedule for Next Five-Year Review: 2017

Estimated Completion Date of IRP at Installation (including LTM phase): 204509

FORT JACKSON IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-01	Active Sanitary Landfill	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-02	INACTIVE SANITARY LANDFILL 1	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-03	INACTIVE SANITARY LANDFILL 2	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-05	Inactive WETSITE Landfill (SWMU 5)	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-06	TANK HILL LANDFILL	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-13	FORMER WEAPONS CLEANING AREA	CMI(O)						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-21	CONSTRUCTION DEBRIS LF RANGE 17	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-32	INACTIVE ACID PIT, BLDG 6586	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-34	UST 6 (FTJA-34:DERP UST SITES)AOC Y	IMP(O)						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-39	FORMER WEAPONS POOL SOLVENT TANK	CMI(O)						

FORT JACKSON
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 12/4

Installation Site Types with Future and/or Underway Phases

- 4 Small Arms Range
(FTJA-001-R-01, FTJA-002-R-01, FTJA-005-R-01, FTJA-007-R-01)
- 4 Unexploded Munitions/Ordnance
(FTJA-003-R-01, FTJA-004-R-01, FTJA-006-R-01, FTJA-011-R-01)

Most Widespread Contaminants of Concern

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
FTJA-001-R-01	Camp Jackson Ranges (AOC D)	FRA	INSTITUTIONAL CONTROLS	2012
FTJA-002-R-01	Small Arms Ranges East of Chestnut	FRA	INSTITUTIONAL CONTROLS	2012
PBA@MR Jackson	PHASE II PBA for MR @ FORT JACKSON		INSTITUTIONAL CONTROLS	2012
FTJA-007-R-01	Submachine Gun Area	FRA	WASTE REMOVAL - SOILS	2014
FTJA-007-R-01	Submachine Gun Area	FRA	INSTITUTIONAL CONTROLS	2014
PBA@MR Jackson	PHASE II PBA for MR @ FORT JACKSON		REMOVAL	2014

Duration of MMRP

Date of MMRP Inception 199909

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201912/201912

Date of MMRP completion including Long Term Management (LTM): 204912

MMRP Contamination Assessment

Contamination Assessment Overview

The DoD has established the MMRP under the DERP to address DoD sites with MEC including unexploded ordnance (UXO), discarded military munitions (DMM), and MC.

The US Army's inventory of closed, transferring, and transferred (CTT) military ranges and sites has identified sites eligible for action under the MMRP.

The MMRP-eligible sites include nonoperational ranges where UXO, DMM, and MC are known or suspected and the release occurred prior to Sept. 30, 2002. Properties classified as operational ranges are not eligible and, therefore, are excluded from the MMRP program.

The MMRP began in the late-1990s as a result of key drivers such as processes outlined in the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) as authorized by CERCLA, 42 US Code (USC) 9605, as amended by the SARA, Pub. L. 99-499.

While it is DoD's goal to address MMRP sites under CERCLA, the Army recognizes that some installations, including FTJA, will need to address these sites under the RCRA CA program.

The process began with three phases of range inventories. Phase I consisted of installations (FTJA) filling out an initial data call issued by the Training and Doctrine Command, where they sought information about ranges on their installations. USAEC managed the implementation of Phases II and III of the MMRP inventory.

The Phase II inventory dealt with active and inactive range considerations. Phase III involved the CTT range inventory conducted in 2002. Included were extensive mapping, data collection for upload to the Army range inventory database, assessment of explosives safety risk using the risk assessment code methodology for CTT ranges or sites with UXO or DMM identified in the inventory, and the determination of which sites on the inventory potentially qualify for the MMRP.

The Phase III final CTT range inventory report for FTJA is dated June 2003. The CTT marked the completion of the PA phase work under CERCLA and the RFA phase under the RCRA CA program. In September 2004, the historical records review (HRR) was conducted by Malcolm Pirnie for USAEC/FTJA. The HRR included a limited scope records search to document historical and other known information, and to facilitate decisions on what information is needed to determine the next steps in the CERCLA/RCRA process. Upon completion of the HRR report, the SI was initiated in FY05.

The CS (SI) phase was completed in 2006. Responses to residual SCDHEC comments were incorporated into the finalized CS (SI) report. Ten sites that form seven AOCs were investigated. The seven sites were added to the FTJA RCRA Part B permit in early 2006 as: AOC D, AOC E, AOC F, AOC G, AOC H, AOC I and AOC J. Site AOC D consists of the Camp Jackson ranges. Site AOC E comprises the small arms ranges east of Chestnut Road. Site AOC F is the live hand grenade court 2. Site AOC G consists of the FTJA Flight Club (FJFC) Salerno ranges. Site AOC H is the FJFC Saint Lo range. Site AOC I comprises the safety fans for mortar ranges 5A, 7 and 8. AOC J is the dismantled and moving vehicle submachine gun area.

Results of the CS (SI) indicate that five of these seven sites will move forward into the RFI/RI phase, and that NFA is required at the other two (AOCs D and E). RFI activities at the five MR sites began in FY09. The RFI WP was drafted, reviewed and approved, after several iterations. The RFIs were performed and reports written in 2011-12 and approved in 2012-13.

The CMS phase is to follow under a new PBA (III) contract. FTJA completed the SI in FY07. Results of the CS (SI) indicated that five MMRP sites move forward into RFI/RI phase. The RFIs were performed and reports written in 2011-12 and completed in FY13.

FTJA-007-R-01, went on to complete soil hot spot removals under the CMI(C) phase and was approved for RIP/RC in the summer of 2014.

The draft CMS is pending for the four remaining sites.

Cleanup Exit Strategy

The RFI activities at these five sites began in FY09 and were completed in late FY13. Four MR sites remain for CMS and CMI phases. CMS begins in early FY15. WPs are forthcoming. More details are included in the individual site descriptions. These

MMRP Contamination Assessment

sites will require LTM consisting of no less than LUC inspection/reports and five-year reviews.

MMRP Previous Studies

Year	Title	Author	Date
2003	Phase 3 CTT Range Inventory Report	Malcolm Pirnie	SEP-2003
2004	HRR	Malcolm Pirnie	SEP-2004
2005	Draft SI WP	Malcolm Pirnie	MAR-2005
2006	Draft EA for New National VA Cemetery	URS	MAR-2006
	MMRP Final SI Report	Malcolm Pirnie	JUL-2006
	EBS VA Cemetery Parcel	URS	DEC-2006
2007	Final EA for VA Cemetery	URS	FEB-2007
	Final EA for VA Cemetery	URS	FEB-2007
	Final SI Report for Ft. Jackson, Columbia, SC	Malcolm Pirnie Inc.	DEC-2007
2008	Final SI Report for Ft. Jackson, Columbia, SC, Revision 1	Malcolm Pirnie, Inc.	JAN-2008
2009	Reporting Plan Change Related to AOC D and AOC E - Child Development Center (CDC) Construction Notification	EMB, Env.Div., Ft. Jackson, SC	FEB-2009
	Final SI Report for Ft. Jackson, Columbia, SC, Revision 2	Malcolm Pirnie, Inc.	APR-2009
	Reporting Plan Change for AOC J	Ft. Jackson, EMB, Env. Div	MAY-2009
	AOC E Reporting Plan Change Letter	EMB, Env.Div., Fort. Jackson	OCT-2009
2010	Draft RFI Work Plan	CH2M Hill	APR-2010
	Revised Draft MMRP RI Work Plan	CH2MHILL	JUN-2010
	VA CEM AOC S-VA Cemetery Letter of Transfer-LOT	VA-DA HQ	JUL-2010
	VA CEM AOC S - VA Cemetery Letter of Transfer - LOT	HQ DOD/VA	JUL-2010
	MMRP RI Work Plan RTCs unofficial highlighted copy	CH2MHill	OCT-2010
2011	MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUN-2011
	MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUN-2011
	MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUL-2011
	MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUL-2011
	MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUL-2011

MMRP Previous Studies

2011

Title	Author	Date
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	JUL-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	AUG-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	AUG-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	AUG-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	AUG-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	SEP-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	SEP-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	SEP-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	SEP-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	OCT-2011
MMRP PBA Fort Jackson (AOC F, G, H, I, J) RFI Weekly Status Report	CH2MHill	OCT-2011

2012

Final CMI WP MMRP Sites AOC D & E	CH2MHill	JAN-2012
Draft RFI Report:MMRP Site FTJA-005-R-01	CH2MHill	APR-2012
Final: Reporting Plan Changes:FTJA-007-R-01	FTJA	APR-2012
Draft RFI Report, MMRP Sites FTJA-06-R-01 &FTJA-007-R-01	CH2MHill	APR-2012
Draft Final Engineering Evaluation/Cost Analysis(EE/CA) for LUCs at FTJA under MMRP	CH2MHill	MAY-2012
Draft-Final RFI Report, MMRP Sites:FTJA-003-R-01 and FTJA-004-R-01	CH2MHill	MAY-2012
FTJA-007-R-01 Draft RFI, Replacement Pages and RTCs	CH2MHill	JUN-2012
FTJA-007-R-01 Draft RFI Replacement Pages and RTCs	CH2MHill	JUL-2012
Reporting Planned Changes:Build Sidewalks at AOC J	FTJA	JUL-2012
RFI Report Replacement Pages and RTCs, FTAJA-003-R-01, FTJA-005-R-01, FTJA-006-R-01	CH2MHill	JUL-2012
Draft Statement of Basis, FTJA-007-R-01	CH2MHill	JUL-2012
Reporting Planned Changes:Build Sidewalks at AOC J	FTJA	JUL-2012
Final RFI Report Replacement Pages and RTCs, FTJA-005-R-01	CH2MHill	AUG-2012
Final RFI Report Replacement Pages and RTCs, FTJA-005-R-01	CH2MHill	AUG-2012
Draft-Final CMS, FTJA-007-R-01	CH2MHill	AUG-2012
Final Statement of Basis, FTJA-007-R-01	CH2MHill	NOV-2012
Final CMS Report, FTJA-007-R-01	CH2MHill	NOV-2012

MMRP Previous Studies

2014

Title	Author	Date
Draft Final CMI Rpt and RTCs, FTJA-007-R-01	CH2MHill	APR-2014
Draft-Final NTCRA Land Use Control Plan	Arcadis-Pika	JUN-2014
Final Corrective Measures Implementation Report, FTJA-007-R-01	CH2MHill	JUN-2014
Final Action Memorandum, LUCs NTCRA	Arcadis-Pika	JUN-2014

FORT JACKSON
Military Munitions Response Program
Site Descriptions

Site ID: FTJA-001-R-01
Site Name: Camp Jackson Ranges (AOC D)
Alias: AOC D

STATUS

Regulatory Driver: RCRA
MRSPP Score: No longer required
Contaminants of Concern: Munitions constituents (MC)
Media of Concern: Soil

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200905
DES.....	200909.....	201009
CMI(C).....	201009.....	201203
LTM.....	201204.....	204504

RIP Date: N/A
RC Date: 201203

SITE DESCRIPTION

The Camp Jackson ranges (AOC D) encompass approximately 62 acres in the cantonment area. The site consists of five ranges that were used for small arms training during World War I. These ranges were used over a short period of time more than 85 years ago. The area where the ranges are located has been disturbed/re-worked as a result of redevelopment, troop training (field) exercises, and/or timber harvesting. Historical information provided general locations of former range features (e.g., firing lines, target areas, and backstop berms). With the exception of the 300-yard range, these features are no longer discernible. The Camp Jackson Ranges include the 1000-yard range, 600-yard range, machine gun range, pistol range and 300-yard range.

Per the revised final SI, there is no further action projected for this site, with the exception of LUCs and five-year reviews. Minor revisions were made to the final SI Report that was finalized and approved in early 2006. Modified phase dates include the LUC design under design (DES) and CMI(C) phases. The final land use control implementation plan (LUCIP) was submitted to SCDHEC in January 2012 and approved Feb. 21, 2012. The statements of basis was approved by SCDHEC. In the RCRA Part B permit modification completed in April 2010, this site was placed in the LUC table (in RCRA permit). The state provided an NFI letter that requires LUCs. The Army requires periodic reviews and DHEC requires annual LUC inspections/reports.

CLEANUP/EXIT STRATEGY

It is anticipated that the installation will continue to perform annual inspection of the LUCs, per RCRA Part B permit requirements and periodic reviews, per Army CERCLA requirements.

Site ID: FTJA-002-R-01
Site Name: Small Arms Ranges East of Chestnut
Alias: AOC E

STATUS

Regulatory Driver: RCRA
MRSP Score: No longer required
Contaminants of Concern: Munitions constituents (MC)
Media of Concern: Soil

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
DES.....	200909.....	201009
CMI(C).....	201009.....	201203
LTM.....	201204.....	204504
RIP Date:	N/A	
RC Date:	201203	

SITE DESCRIPTION

The Small Arms Ranges East of Chestnut Road (AOC E) encompasses approximately 453 acres. The site is comprised of four ranges. The firing lines and target areas for these ranges account for a much smaller area (approximately 80 acres). The ranges were used from the 1940s through 1970s for small arms training. The area where the ranges are located has been disturbed/re-worked as a result of redevelopment, troop training (field) exercises, and/or timber harvesting. Historical information provided general locations of former range features (e.g., firing lines/lanes and target areas); however, these features are no longer discernible at the site.

Per the final SI, there is no further action planned for this site. SCDHEC has requested that this site be retained in the The Defense and State Memorandum of Agreement Joint Execution Plan for FTJA's MMRP. Minor revisions to final SI report were finalized and approved in early 2006.

The Phase II PBA awarded in September 2009 to finalize RIP/RC. Modified phase dates include the LUC design/implementation under DES and CMI(C) phases.

The statement of basis was approved by SCDHEC and a RCRA Part B permit modification was completed in April 2010. The site was added to the LUC table of the RCRA Part B permit. The state provided a NFI letter that required LUCs. A final LUCIP was submitted to SCDHEC in January 2012 and approved on Feb. 21, 2012. The Army requires periodic reviews and SCDHEC requires annual LUC inspections/reports.

CLEANUP/EXIT STRATEGY

It is anticipated that the installation will continue to perform annual inspections of the LUCs, per RCRA Part B permit requirements and periodic reviews, per Army CERCLA requirements.

Site ID: FTJA-003-R-01
Site Name: Live Hand Grenade Court 2 (AOC F)
Alias: AOC F

STATUS

Regulatory Driver: RCRA
MRSPP Score: 03
 Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
RFI/CMS.....	200906.....	201709
CMI(C).....	201809.....	201909
LTM.....	202001.....	204912
RIP Date:	N/A	
RC Date:	201909	

SITE DESCRIPTION

The Live Hand Grenade Court 2 (AOC F) was located east of Chestnut Road in the area overlapped by the Camp Jackson ranges (specifically, the 300-yard range) and the small arms ranges east of Chestnut Road. The site encompasses approximately 33 acres. The Hand Grenade Court was used during the 1940s and 1950s. The period of use and types of grenades (live and practice) were approximated based on the reviewed mapping information. This area was also used for field fortification training in the 1970s and 1980s indicating it has been extensively disturbed since its use as the Live Hand Grenade Court.

The final RFI report was approved in 2012. The RFI report recommended surface MEC clearance and LUCs. PBA III awarded in late 2014 for a CMS (underway), a CMI(C) phase, LUCs and periodic reviews.

CLEANUP/EXIT STRATEGY

The CMS is pending. It is anticipated that completion of a surface MEC removal will be performed as the final remedy, followed by LUCs and periodic reviews.

Site ID: FTJA-004-R-01
Site Name: FTJA Flight Club Salerno Ranges
Alias: AOC G

STATUS

Regulatory Driver: RCRA
MRSPP Score: 03
 Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
RFI/CMS.....	200906.....	201801
CMI(C).....	201801.....	201912
LTM.....	202001.....	204912

RIP Date: N/A
RC Date: 201912

SITE DESCRIPTION

The FJFC Salerno Range (AOC G) includes a 22-acre area located east of Wildcat Road and north of Shenandoah Road in the northern portion of the FJFC area. The Salerno ranges were used primarily for rocket, rifle grenade, and small arms training. Most range features are no longer discernible at the site, but historical information provided general locations for the firing lines and target areas.

The final RFI report was approved in 2012. The RFI recommended surface MEC removal, lead hot spot removal, and LUCs. PBA III awarded in late 2014 for a CMS (underway), a CMI(C) phase, LUCs and periodic reviews.

CLEANUP/EXIT STRATEGY

CMS initiation/completion is underway in FY15, for a surface MEC removal to be followed by LUCs and periodic reviews.

Site ID: FTJA-005-R-01
Site Name: FJFC Saint Lo Range (AOC H)
Alias: AOC H

STATUS

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

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
RFI/CMS.....	200906.....	201803
CMI(C).....	201804.....	201912
LTM.....	202001.....	204912
RIP Date:	N/A	
RC Date:	201912	

SITE DESCRIPTION

The FJFC Saint Lo Range (AOC H) includes a 19-acre area located east of Wildcat Road and north of Shenandoah Road in southern and western portion of the FJFC area. The Saint Lo range was used as a machine gun range in the 1950s, 1960s and 1970s. This site also includes the overlapping range fans for other small arms training ranges that were located at the FJFC. Historical information provided general locations for the firing lines and target areas, some of which are still discernible at the site. The site includes a cleared, level area that is surrounded by pine trees and grass. The flat, cleared portion of the site has been used as an airstrip for remote controlled model airplanes since the late-1980s.

The final RFI report was approved in 2012. The RFI report recommended lead hot spot removal and LUCs. PBA III awarded in late 2014 for a CMS (underway), a CMI(C) phase, LUCs and periodic reviews.

CLEANUP/EXIT STRATEGY

CMS completion is forthcoming. It is anticipated that completion of a surface MEC removal will be performed as the final remedy, followed by LUCs and periodic reviews.

Site ID: FTJA-006-R-01
Site Name: Mortar Range 5A, 7, and 8 SF (AOC I)
Alias: AOC I

STATUS

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

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
RFI/CMS.....	200906.....	201803
CMI(C).....	201804.....	201912
LTM.....	202001.....	204912
RIP Date:	N/A	
RC Date:	201912	

SITE DESCRIPTION

Mortar Range 5a, 7, and 8 Safety Fans (AOC I) were located in the northern section of the Weston Lake Area (WLA). The area was once part of the safety fans associated with three mortar ranges used in the 1940s. The total acreage for the WLA Mortar Range 5a, 7, and 8 Safety Fans is 305 acres and excludes areas designated as operational range (i.e., the dirt access road in the northeastern portion of the site). This site includes the portions of these mortar ranges that were designated as the safety fans (not the firing lines or impact areas) so mortars are not expected. The Dismounted Submachine Gun No. 1 Range, the Moving Vehicle Submachine Gun Range, and the Dismounted Submachine Gun No. 2 Range overlap the mortar range area. The Mortar Range 5a, 7, and 8 Safety Fans are now part of the Weston Lake recreation area; however, the mortar range safety fan area has not been improved and is not accessible from the main Weston Lake recreation area facilities.

The final RFI report was approved in 2012. The RFI report recommended lead hotspot removal and LUCs. PBA III awarded in late 2014 for a CMS (underway), a CMI(C) phase, LUCs and periodic reviews.

After RFI/CMS completion, a surface hot spot lead removal will be completed followed by LUCs.

CLEANUP/EXIT STRATEGY

After CMS completion, it will be determined if a surface hot spot lead removal will be completed, followed by LUCs and periodic reviews.

Site ID: FTJA-007-R-01
Site Name: Submachine Gun Area
Alias: AOC J

STATUS

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

Phases	Start	End
RFA.....	200208.....	200306
CS.....	200404.....	200606
RFI/CMS.....	200906.....	201208
CMI(C).....	200912.....	201403
LTM.....	201403.....	204509
RIP Date: N/A		
RC Date: 201403		

SITE DESCRIPTION

The Dismounted and Moving Vehicle Submachine Gun Area (AOC J) was located in the northern part of the Weston Lake recreation area. The site consists of the 13 acres associated with the Dismounted Submachine Gun No. 1 Range, the Moving Vehicle Submachine Gun Range, and the Dismounted Submachine Gun No. 2 Range that are not overlapped by the Mortar Range 5a, 7, and 8 Safety Fans.

The site was used for small arms training prior to construction of Weston Lake. Range features are no longer discernible at the site, but historical information provides general locations for the firing lines and target areas. A portion of the submachine gun area, which is located within the main Weston Lake recreation area, has been improved with a boat ramp, boat docks, picnic areas, and rental cabins.

The final CMS report was approved in 2012. The CMI(C) removal action was completed in the summer of 2014 and the CMI(C) completion report was approved by the fourth quarter of FY14. The Army requires periodic reviews and SCDHEC requires annual LUC inspections/reports.

CLEANUP/EXIT STRATEGY

It is anticipated that LUCs and periodic reviews will continue, per the RCRA Part B permit and Army requirements.

Site ID: FTJA-011-R-01
Site Name: VA Cemetery Dudded Area
Alias: AOC S

STATUS

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

Phases	Start	End
RFA.....	201104.....	201203
CS.....	201204.....	201610
RIP Date:	N/A	
RC Date:	201610	

SITE DESCRIPTION

This area is a 115.08-acre tract recently transferred to the Veterans Administration as part of a 583.77-acre parcel now a National Cemetery. The southwest 115 acres denoted by range control as a duded area previously used for military munitions training. This area was overlapped by one former 1950s era mortar range safety fan, which is noted as both Mortar Range NR3 and NR4 on historical installation maps dated from 1949 to 1957. The area was also overlapped by other small arms range fans, including Squad in Defense Ranges NR 1 and NR 2, Close Combat Range NR 2, and Machine Gun Field Firing Range NR 1. The area also was within the northernmost portion of the North Impact Area shown on 1952 and 1957 historical installation maps. The potential presence of MEC and MC associated with the former military munitions use needs to be investigated. The site also coincides with the area chosen for Davy Crockett demonstrations/training in the 1960s. Additional attention has been given to this site by the NRC and the Department of the Army.

A confirmatory sampling is planned to be completed in 2016.

CLEANUP/EXIT STRATEGY

The need for additional investigation will be determined after the completion of the confirmatory sampling.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTJA-008-R-01	MORTAR RANGE	200607	The SI recommended this site be included in site FTJA-006-R-01 (AOC I). FTJA-008-R-01 is not on the RCRA permit.
FTJA-009-R-01	RIFLE GRENADE RANGE NR2	200607	As part of the SI it was determined that this range was located on an operational range area and therefore ineligible for ER,A funds.
FTJA-010-R-01	SUBMACHINE GUN AREA	200607	As part of the HRR/SI the area of this range was split into FTJA-007-R-01 (AOC J) and FTJA-006-R-01 (AOC I).
PBA@MR Jackson	PHASE II PBA for MR @ FORT JACKSON	201403	All CLINs have been awarded.

MMRP Schedule

Date of MMRP Inception 199909

Past Phase Completion Milestones

2001

RFA (PBA@MR Jackson - PHASE II PBA for MR @ FORT JACKSON)

2003

RFA (FTJA-001-R-01 - Camp Jackson Ranges (AOC D), FTJA-002-R-01 - Small Arms Ranges East of Chestnut , FTJA-003-R-01 - Live Hand Grenade Court 2 (AOC F), FTJA-004-R-01 - FTJA Flight Club Salerno Ranges, FTJA-005-R-01 - FJFC Saint Lo Range (AOC H), FTJA-006-R-01 - Mortar Range 5A, 7, and 8 SF (AOC I, FTJA-007-R-01 - Submachine Gun Area , FTJA-008-R-01 - MORTAR RANGE, FTJA-009-R-01 - RIFLE GRENADE RANGE NR2, FTJA-010-R-01 - SUBMACHINE GUN AREA)

2006

CS (FTJA-002-R-01 - Small Arms Ranges East of Chestnut , FTJA-003-R-01 - Live Hand Grenade Court 2 (AOC F), FTJA-004-R-01 - FTJA Flight Club Salerno Ranges, FTJA-005-R-01 - FJFC Saint Lo Range (AOC H), FTJA-006-R-01 - Mortar Range 5A, 7, and 8 SF (AOC I, FTJA-007-R-01 - Submachine Gun Area , FTJA-008-R-01 - MORTAR RANGE, FTJA-009-R-01 - RIFLE GRENADE RANGE NR2, FTJA-010-R-01 - SUBMACHINE GUN AREA)

2008

CS (PBA@MR Jackson - PHASE II PBA for MR @ FORT JACKSON)

2009

CS (FTJA-001-R-01 - Camp Jackson Ranges (AOC D))

2010

DES (FTJA-001-R-01 - Camp Jackson Ranges (AOC D), FTJA-002-R-01 - Small Arms Ranges East of Chestnut)

2012

CMI(C) (FTJA-001-R-01 - Camp Jackson Ranges (AOC D), FTJA-002-R-01 - Small Arms Ranges East of Chestnut)

RFA (FTJA-011-R-01 - VA Cemetery Dudded Area)

IRA (PBA@MR Jackson - PHASE II PBA for MR @ FORT JACKSON)

RFI/CMS (FTJA-007-R-01 - Submachine Gun Area , PBA@MR Jackson - PHASE II PBA for MR @ FORT JACKSON)

2014

CMI(C) (FTJA-007-R-01 - Submachine Gun Area , PBA@MR Jackson - PHASE II PBA for MR @ FORT JACKSON)

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: 201912

Schedule for Next Five-Year Review: 2017

Estimated Completion Date of MMRP at Installation (including LTM phase): 204912

FORT JACKSON MMRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-001-R-01	Camp Jackson Ranges (AOC D)	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-002-R-01	Small Arms Ranges East of Chestnut	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-003-R-01	Live Hand Grenade Court 2 (AOC F)	RFI/CMS						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-004-R-01	FTJA Flight Club Salerno Ranges	RFI/CMS						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-005-R-01	FJFC Saint Lo Range (AOC H)	RFI/CMS						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-006-R-01	Mortar Range 5A, 7, and 8 SF (AOC I)	RFI/CMS						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-007-R-01	Submachine Gun Area	LTM						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
FTJA-011-R-01	VA Cemetery Dudded Area	CS						

FORT JACKSON
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 12/3

Installation Site Types with Future and/or Underway Phases

- 2 Contaminated Ground Water
(CC GW Offsite , CCAOC Q)
- 1 Oil Water Separator
(CCSWMU 53)
- 6 Underground Storage Tank
(CCUST 11-559, CCUST 2089, CCUST 3499, CCUST 4120, CCUST AOC T, CCUST4522)

Most Widespread Contaminants of Concern

Other (Chloroform, Dieldrin), Other (Free-product), Other (Naphthalene), Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern

Groundwater, Soil

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

Site ID	Site Name	Action	Remedy	FY
CCUST4522	UST SITE REMEDIATION	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	2010
CCUST4522	UST SITE REMEDIATION	FRA	CHEMICAL REDUCTION/OXIDATION	2010
CCUST4522	UST SITE REMEDIATION	FRA	NATURAL ATTENUATION	2010
CCUST 1	Former 1980s Fuel Depot	IRA	REMOVAL	2013
CCUST 4120	UST Site Remediation	IRA	FREE PRODUCT RECOVERY	2013
CCUST 1699	UST Site Remediation	FRA	NATURAL ATTENUATION	2014

Duration of CR

Date of CR Inception: 199706

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201806/204812

Date of CR completion including Long Term Management (LTM): 204809

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the IRP and the MMRP. On Dec. 29, 2008, the Office of the Deputy Under Secretary of Defense for Installations and Environment, ODUSD(I&E), issued an interim policy for 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 MR program have been migrated from Army Environmental Database - Compliance-related Cleanup (AEDB-CC) and given the naming convention of other MR sites. The newly eligible non-MR type sites are considered to be Installation Restoration (IR) sites. However, the newly eligible sites are being coded as Compliance Restoration (CR) in AEDB-R to distinguish them from the original IR sites and IR metrics.

Cleanup Exit Strategy

CR Sites are mostly UST sites, excepting CCAOC Q, CCSWMU 53 and the new ORAP sites. Most of the new UST sites are anticipated to be clean closed upon completion of investigations, but the rest of these sites require CMI(O) followed by groundwater LTM. Once SCDHEC receives/reviews three consecutive LTM reports establishing significant decreases in contaminant concentrations or non detections, they will consider an NFA decision. See individual sites for the cleanup exit strategies.

CR Previous Studies

	Title	Author	Date
2012	Final SAR for UST 1699	CH2MHill	JAN-2012
	Corrective Action Monitoring Report, CCUST 4522	CESAS	JAN-2012
	CCUST 1 QAPP	North Wind	MAR-2012
	Revised QAPP and RTCs - CCUST 1	North Wind	MAR-2012
	CCUST 1 CAP	North Wind	MAY-2012
	CCUST 4522 - UIC Permit Application and QAPP RTCs	CESAS	JUN-2012
	Draft-Final CAP CCUST 1699	CH2MHill	AUG-2012
	UIC Permit Application, CCUST 4522	CESAS	AUG-2012
	Revised Quality Assurance Project Plan, TASC QAPP - CCUST 1	North Wind	OCT-2012
2014	BLDG 4522 Marion St., Former AAFES Gas Station (CCUST4522)	CESAS	FEB-2014
	CCUST 4120, Final Remedy QAPP	QRI/PPM	MAR-2014
	Final Remedy QAPP, Revision 1	QRI/PPM	APR-2014
	Draft QAPP, BLDG 4522	CESAS	JUN-2014

FORT JACKSON
Compliance Restoration
Site Descriptions

Site ID: CC GW Offsite
Site Name: Southern ORAP Area East of WLA
Alias: AOC CC

STATUS

Regulatory Driver: CERCLA

Phases	Start	End
PA.....	200906.....	201403
SI.....	201403.....	201806
RIP Date:	N/A	
RC Date:	201806	

SITE DESCRIPTION

The site covers an area where ORAP II determined RDX is in the groundwater at the south of the southern boundary of Fort Jackson. Eighteen additional well pairs (shallow and deep) on the fort side, were installed at the end of FY14. Sampling schedule was determined by the Corps of Engineers, South Atlantic Division, Savannah District (CESAS). The investigation will continue as funds allow, to determine the extent of the RDX contamination in order to make intelligent remediation decisions. The investigation continues through FY15.

CLEANUP/EXIT STRATEGY

To delineate the extent of the RDX contamination in soil and groundwater and remediate the problem by restoration and/or replacement of the citizen's water supply (either run city water or provide filtration or bottled water). Bottled water is currently being provided to at least five homes, and more are being added after the last sampling event.

Site ID: CCAOC Q
Site Name: MW6-10
Alias: AOC Q

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Other (Chloroform, Dieldrin)
Media of Concern: Groundwater

Phases	Start	End
RFA.....	200410.....	200510
CS.....	200809.....	201309
RFI/CMS.....	201309.....	201803
RIP Date:	N/A	
RC Date:	201803	

SITE DESCRIPTION

The forested area is a compass training course for GIs. This site is a point of interest surrounding one well in the woods, with little known history or date of operation.

Site AOC Q - MW6-10 is a background monitoring well that was placed too far outside the SWMU 6 boundary during the final RFI in 2005. It is a single monitoring well (MW6-10) approximately 1750 ft from SWMU 6 (FTJA-06), which is a C&D landfill that is included in the FTJA IR PBC. The well is next to a creek and deemed too far away to connect to FTJA-06. It was, therefore, spun off as a separate site.

The RCRA Part B permit lists it as AOC Q and requires a confirmatory sampling investigation. FTJA prepared a RCRA assessment report that included groundwater sampling data detections for chloroform: 0.17 ug/L J and dieldrin: 0.0135 ug/L. Both detections are exceedances. The USEPA risk-based concentration for chloroform is 1.5E-1 and the USEPA RSL for dieldrin is 4.2E-3. Subsequent sampling efforts showed higher concentrations of dieldrin that further exceed USEPA RSL standards (0.039 ug/L) by nearly three times, as noted by the SCDHEC. Additional confirmatory sampling was performed in 2009, 2010 and 2011, because each time, the CS report request for NFA was answered with requirements to re-sample well per the RCRA Part B permit.

The most recent SCDHEC letter states that additional groundwater and surface water samples were collected, to verify the presence and extent of chloroform and dieldrin contamination. The report indicates that both constituents were detected above USEPA screening criteria in the well and one of the two creek samples.

An RFI/CMS phase was initiated in FY14 under PBA III. Draft report preparation is underway.

CLEANUP/EXIT STRATEGY

An RFI/CMS phase will be completed. NFA is anticipated at this time. The path forward will be determined based on the results of the RFI. NFA is anticipated.

Site ID: CCSWU 53
Site Name: Overgrown Oil Water Separator site
Alias: SWU 53

STATUS

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

Phases	Start	End
RFA.....	201103.....	201104
CS.....	201201.....	201603
RIP Date:	N/A	
RC Date:	201603	

SITE DESCRIPTION

An OWS was unexpectedly found behind the location of a former motorpool approximately 500 ft laterally from FTJA-32. Contamination occurred at depth down to 12 ft. The SCDHEC requires additional investigation as, per the RCRA Part B permit. PBA III initial investigation is underway. Draft report is pending.

CLEANUP/EXIT STRATEGY

The need for additional requirements will be determined when the confirmatory sampling is completed.

Site ID: CCUST 11-559
Site Name: Former Chapel Used for Meetings
Alias: AOC W

STATUS

Regulatory Driver: RCRA

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

Media of Concern: Soil

Phases	Start	End
RFA.....	200905.....	201111
CS.....	201201.....	201603

RIP Date: N/A

RC Date: 201603

SITE DESCRIPTION

Contamination was found upon removal of a heating oil UST. SCDHEC requires additional investigation. The site is being investigated under RCRA corrective action. It is located in Building 11-559, is a former chapel and meeting place for organizational events. PBA III performed initial investigation. Draft report preparation is underway.

CLEANUP/EXIT STRATEGY

The need for additional requirements will be determined when the confirmatory sampling is completed.

Site ID: CCUST 2089
Site Name: Former Fuel Station Controls Bldg
Alias: AOC BB

STATUS

Regulatory Driver: RCRA

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

Media of Concern: Soil

Phases	Start	End
ISC.....	200805.....	201111
INV.....	201201.....	201603

RIP Date: N/A

RC Date: 201603

SITE DESCRIPTION

Building 2089 was used as a fueling station office/utility space. Three 10,000-gallon USTs were located at the site. Two-thirds of the dispensing lines were for diesel fuel, the rest for motor gasoline. The USTs were removed in 1991. The rest of the appurtenances were removed by Fort Jackson in 2010, leading to SCDHEC requirements for further corrective action there. The PBA III investigation is underway. FP was discovered floating on the groundwater. Draft report preparation is underway.

CLEANUP/EXIT STRATEGY

The need for additional requirements will be determined when the confirmatory sampling is completed.

Site ID: CCUST 3499
Site Name: PAIO Office Building
Alias: AOC X

STATUS

Regulatory Driver: RCRA

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

Media of Concern: Soil

Phases	Start	End
RFA.....	200905.....	201111
CS.....	201201.....	201603

RIP Date: N/A

RC Date: 201603

SITE DESCRIPTION

Petroleum contamination was found upon removal of 550-gallon fuel oil tank. SCDHEC requires additional investigation/corrective action (underway).

CLEANUP/EXIT STRATEGY

The need for additional requirements will be determined when the confirmatory sampling is completed.

Site ID: CCUST 4120
Site Name: UST Site Remediation
Alias: AOC Z

STATUS

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

Phases	Start	End
ISC.....	200107.....	200202
INV.....	200203.....	201209
CAP.....	201309.....	201512
IRA.....	200504.....	201210
IMP(C).....	201409.....	201512
IMP(O).....	201509.....	204809
RIP Date:	201512	
RC Date:	204812	

SITE DESCRIPTION

This site is currently the active Gate 2 Army, Air Force Exchange Services (AAFES) shoppette/fuel station where gasoline and diesel are dispensed. Prior to the late-1990s the site was a vacant field. Impact to soils became evident in 2001 after the original tank removals, as documented in the tank closure report. FP was discovered in 2004.

IMs have been implemented by using an automated solar FP skimmer, by bailing an absorbent FP trap, and by 15 aggressive fluid vapor recovery (AFVR) events.

The Tier I and Tier II assessments document the severe groundwater contamination, making this site high priority for FTJA and the SCDHEC. This site is near the post boundary with potential for impact to the nearby creek and off-post migration. Site CC UST 4120 represents the most severe groundwater impact of any of FTJA's sites. Contaminants of concern and an example of levels observed are:

- Benzene: >123,000 ug/L,
- Toluene: >761,000 ug/L,
- Ethylbenzene: >99,000 ug/L,
- Xylenes: >687,000 ug/L,
- MTBE: >476,000 ug/L, and
- Naphthalene: >350 ug/L.

The Tier II supplemental reports show that the benzene, toluene, ethylbenzene and xylene (BTEX)/methyl tertiary-butyl ether (MTBE) groundwater plume is nearly fully delineated. Tanks passed tightness tests in 2005, 2007, and 2008.

FTJA performed a tracer test fall of 2008. Results indicate that the gasoline system is not leaking. Contract was awarded for surfactant recovery work to recover remaining FP. FTJA has been re-evaluating the product source to delineate the contamination. In the interim, additional AFVR events were performed in 2008-09 bringing the total to 17 events. Based on negative tracer test results and observation wells installed in UST basin, the option of surfactant injection/extraction was implemented in the summer of 2011. That IRA reduced the BTEX levels by 90 percent in some cases, as well as lowering FP thickness to approximately 1/10-ft. That still leaves the concentrations >10,000 ug/L. Dual phase extraction (DPE) is the best management practice technology found, to address the remaining dissolved petroleum in groundwater and injection to contain the plume from reaching I-77. A PBA contract was awarded in late FY13 to install a DPE system, perform CMI(O)/monitor groundwater for up to three years. Operation permits and the National Pollutant Discharge Elimination System discharge applications are underway.

CLEANUP/EXIT STRATEGY

The installation of a DPE system will occur in FY15. It will continue to run up to three years or until the groundwater reaches

Site ID: CCUST 4120
Site Name: UST Site Remediation
Alias: AOC Z

remedial goals.

There are two additional years in the contract to conduct LTM. Army requirements dictate periodic reviews, as well.

Site ID: CCUST AOC T
Site Name: Former UST site
Alias: AOC T

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Other (Free-Product)
Media of Concern: Groundwater

Phases	Start	End
RFA.....	201007.....	201105
CS.....	201201.....	201603
RIP Date:	N/A	
RC Date:	201603	

SITE DESCRIPTION

The heating oil UST site at Building 4470 received a groundwater assessment that led to an NFA letter in 2005 from SCDHEC. A well abandonment event years later revealed approximately one-foot of FP in MW-1. The SCDHEC reopened the site under the RCRA Subtitle C program (named AOC T) in 2012. PBA III was awarded in 2013, to include the restoration work at AOC T. The investigation WP was approved during this data call. Fieldwork began in late 2014, and is anticipated to continue in late FY15.

CLEANUP/EXIT STRATEGY

The need for additional requirements will be determined when the confirmatory sampling is completed.

Site ID: CCUST4522
Site Name: UST SITE REMEDIATION
Alias: AOC AA

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Volatiles (VOC)
Media of Concern: Groundwater

Phases	Start	End
ISC.....	200204.....	200402
INV.....	200205.....	200712
CAP.....	200801.....	200806
IMP(C).....	200903.....	200912
IMP(O).....	200912.....	204503
RIP Date:	200912	
RC Date:	204503	

SITE DESCRIPTION

This former UST site is located off Marion Avenue at Building 4522, adjacent to Semmes Lake. In February of 2002 contamination was discovered at this former AAFES station. The gas station was closed after tanks were pulled in FY02. A water sports rental shop (Marion Street Station) now occupies the site. It is surrounded by a paved area. There is a creek on the back side and a paved walking trail and grassy covered grounds on the lake side. Previous studies that document results include: a tank closure report, initial groundwater assessment and Tier I and Tier II supplemental reports.

Analytical evidence of groundwater contamination includes regulatory exceedances for VOCs (i.e. benzene-1480 ug/L, toluene-6510 ug/L, ethylbenzene-956 ug/L and MTBE-4319 ug/L).

Contamination from the site has impacted the creek (low MTBE concentrations). Additional investigation and wells were required by SDHEC. This investigation was completed in FY06.

The approved CAP (FY08) is for in situ chemical oxidation (ISCO) injections at the source and ISCO injections at wells near the drainage creek, to reduce BTEX/MTBE levels. That work was performed in FY09 during three events. The follow-on groundwater monitoring was conducted in FY09 and FY10. The sampling report followed.

FP was discovered when "daylighting" occurred downgradient of the ISCO injections near the building entrance. An additional monitoring well was added and sampled in FY12. The corrective action report was completed in FY12. In FY13-FY14, ORC socks were used to enhance natural attenuation of petroleum residue. New PBA III contractor pulled them out in late FY14, to evaluate their effect.

CLEANUP/EXIT STRATEGY

It is anticipated that the installation will continue to monitor the annual groundwater until the site meets remedial objectives. The Army requires periodic reviews.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CC AOC K	Soils Eval. Adjacent to SWMU 21	201109	NFA was received from SCDHEC on September 15, 2011 and the site (AOC K) is listed on the NFA table in the RCRA Permit.
CCUST 1	Former 1980s Fuel Depot	201212	A conditional NFA was received from SCDHEC on March 27, 2013. If site use (industrial) changes then the site needs to be reopened.
CCUST 1699	UST Site Remediation	201403	NFA was received from SCDHEC on August 28, 2013 and the site (AOC V) is listed on the NFA table in the RCRA Permit.

CR Schedule

Date of CR Inception: 199706

Past Phase Completion Milestones

1998

ISC (CCUST 1699 - UST Site Remediation)

2002

ISC (CCUST 4120 - UST Site Remediation)

2004

ISC (CCUST4522 - UST SITE REMEDIATION)

2006

RFA (CC AOC K - Soils Eval. Adjacent to SWMU 21, CCAOC Q - MW6-10)

2008

INV (CCUST4522 - UST SITE REMEDIATION)

CAP (CCUST4522 - UST SITE REMEDIATION)

2010

IMP(C) (CCUST4522 - UST SITE REMEDIATION)

2011

CS (CC AOC K - Soils Eval. Adjacent to SWMU 21)

RFA (CCSWMU 53 - Overgrown Oil Water Separator site, CCUST AOC T - Former UST site)

2012

RFA (CCUST 11-559 - Former Chapel Used for Meetings , CCUST 3499 - PAIO Office Building)

INV (CCUST 1699 - UST Site Remediation, CCUST 4120 - UST Site Remediation)

ISC (CCUST 1 - Former 1980s Fuel Depot, CCUST 2089 - Former Fuel Station Controls Bldg)

2013

IRA (CCUST 1 - Former 1980s Fuel Depot, CCUST 4120 - UST Site Remediation)

INV (CCUST 1 - Former 1980s Fuel Depot)

CS (CCAOC Q - MW6-10)

2014

IMP(C) (CCUST 1699 - UST Site Remediation)

PA (CC GW Offsite - Southern ORAP Area East of WLA)

IMP(O) (CCUST 1699 - UST Site Remediation)

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: 201512

Schedule for Next Five-Year Review: 2017

Estimated Completion Date of CR at Installation (including LTM phase): 204809

FORT JACKSON CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CC GW Offsite	Southern ORAP Area East of WLA	SI						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCAOC Q	MW6-10	RFI/CMS						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCSWMU 53	Overgrown Oil Water Separator site	CS						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST 11-559	Former Chapel Used for Meetings	CS						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST 2089	Former Fuel Station Controls Bldg	INV						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST 3499	PAIO Office Building	CS						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST 4120	UST Site Remediation	CAP						
		IMP(C)						
		IMP(O)						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST AOC T	Former UST site	CS						
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CCUST4522	UST SITE REMEDIATION	IMP(O)						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201307

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: 201308

Efforts Taken to Determine Interest

FTJA has published public notices in a local newspaper, soliciting interest in establishing a RAB. Based on the response to the public notices, it was determined that there was not sufficient community interest to sustain a RAB for FTJA.

Results

People have turned out to the public meetings, but no written community responses have been received to date.

Follow-up Procedures

No RAB has been established to date. Solicitation efforts for the formation of a RAB will reoccur in August 2015.

Additional Community Involvement Information

None

Administrative Record is located at

SCDHEC
2600 Bull Street
Columbia, SC 29201

Information Repository is located at

Fort Jackson
Directorate of Public Works
Environmental Division
2563 Essayons Way
Fort Jackson, SC

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

TAPP Title: N/A

Potential TAPP: N/A

