

FY2012

FORT RUCKER

Army Defense Environmental Restoration Program

Installation Action Plan

Printed 24 January 2013

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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, the US Army Environmental Command (USAEC), Fort Rucker (FTRU), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and budgets for all major Army installation cleanup programs.

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

Acronyms

AI	Active and Inactive
ADEM	Alabama Department of Environmental Management
AOC	Area of Concern
ATG	Anti-Tank Grenade
ATR	Anti-Tank Rocket
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, Liabilities Act
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
CMIP	Corrective Measures Implementation Plan
CS	Confirmation Sampling
CTT	Closed, Transferred or Transferring
DD	Decision Document
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
ER,A	Environmental Restoration, Army
FRA	Final Remedial Action
ft	feet
FTRU	Fort Rucker
FY	Fiscal Year
GW	Groundwater
IMCOM	Installation Management Command
IRA	Interim Remedial Actions
K	thousand
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions constituents
MEC	Munitions and explosives of concern
MNA	Monitored Natural Attenuation
MRSPP	Munitions Response Site Prioritization Protocol
N/A	Not Applicable
NPL	National Priorities List
O&M	Operations and Maintenance
PA	Preliminary Assessment
PBA	Performance-Based Acquisition
POL	Petroleum, Oil, and Lubricants
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RC	Response Complete
RD	Remedial Design
RFA	RCRA Facility Assessment
RIP	Remedy-in-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
RSE	Remedial Systems Evaluation

Acronyms

SI	Site Inspection
TAPP	Technical Assistance for Public Participation
TRC	Technical Review Committee
ug/L	micrograms per liter
US	United States
USAACE	US Army Aviation Center of Excellence
USAAVNC	US Army Aviation Center
USACE	US Army Corps of Engineers
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USEPA	US Environmental Protection Agency
VOC	Volatile Organic Compounds

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)

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
AOC-S	AOC-S
FTRU-001-R-01	AOC-W
FTRU-002	SWMU 3
FTRU-003-R-01	AOC-X
FTRU-004-R-01	AOC-Z
FTRU-008	SWMU 10
FTRU-012	SWMU 4
FTRU-040	SWMU 14
FTRU-051	SWMU 15
FTRU-171	SWMU 2D

Installation Information

Installation Locale

Installation Size (Acreage): 62430

City: Daleville

County: Dale and Coffee Counties

State: Alabama

Other Locale Information

This installation is located in southeast Alabama approximately 20 miles northwest of the city of Dothan. It consists of 62,430 acres; 57,885 acres at the main installation and 4,545 acres of satellite airfields and leases and easements.

Installation Mission

Since 1973, when FTRU became the center for all US Army aviation flight training, its mission has been to maintain and operate facilities and provide services and material to support the helicopter pilot training for the US Army. FTRU is the largest helicopter training installation in the world. As the US Army Aviation Center of Excellence (USAACE) and the home of the Aviation Branch, FTRU is charged with producing aviation Soldiers for the worlds premier aviation force.

In addition to this role as the US Army's Aviation Center of Excellence, FTRU houses several tenant activities and directorates. It is the home for the US Army Combat Readiness Center, the Warrant Officer Career College, Air Traffic Services Command, the Army Aviation Flight Test Directorate, the Army School of Aviation Medicine and Aeromedical Research Laboratory.

Lead Organization

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE)- Mobile District

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region IV, Resource Conservation and Recovery Act (RCRA) and Federal Facilities Branch, Waste Management Division.
State	Alabama Department of Environmental Management (ADEM)

National Priorities List (NPL) Status

FORT RUCKER is not on the NPL

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

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

Installation Program Summaries

IRP

Primary Contaminants of Concern: Metals, Other (construction debris and household refuse), Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

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

MMRP

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

Affected Media of Concern: Groundwater, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200802	201006	2010
Planned	201302	201506	2015

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Phase II RFI, Volume I, 1995	FTRU-002, FTRU-004, FTRU-006, FTRU-030, FTRU-075, FTRU-079, FTRU-080, FTRU-110, FTRU-116, FTRU-117, FTRU-119, FTRU-120, FTRU-180, FTRU-181

Results The Five-Year Review for SWMUs 2d, 4, 14 and 10/15 (FTRU-171, 012, 040, 008 and 051) selected monitored natural attenuation with Land Use Controls as the corrective measures to protect human health and the environment.

Actions

Plans

Recommendations and Implementation Plans:

The five-year review is a voluntary non-NPL review requested by the installation and conducted by the USACE Mobile District. FTRU has monitored natural attenuation (MNA) groundwater remedies at closed landfill solid waste management unit (SWMU), including SWMU-2d, SWMU-4, and SWMU-10/15, which are each regulated under a RCRA permit issued by the ADEM. All other SWMUs at FTRU have received no further action (NFA) status. Recommendations as presented in the report include:

-SWMU 4: It is uncertain whether changes in volatile organic compound (VOC) concentrations are caused by natural attenuation processes or reflect variations in groundwater levels. It also appears likely the cis-1,2-DCE is moving off-site due to radial flow from the landfill. Install monitoring wells to assess off-site VOC migration. Site contractor implementation by June 30, 2009.

-Form a remedial systems evaluation (RSE) team to assess the performance of MNA at SWMU 2d, SWMU 4, and SWMU 10/15. US Army implementation by Dec. 15, 2009. Reported issues at SWMUs 2d and 10/15 include:

--SWMU 2d: Contaminant concentrations are increasing in wells adjacent to the landfill boundary and apparently cross gradient to the landfill.

--SWMU 10/15: The report states that it is not readily apparent that MNA is occurring at this site

-Prepare an operations and maintenance (O&M) plan for the corrective action sites, prepare a health and safety plan for corrective action sites, change the analytical method for ferrous iron from 6010B to a field method, post warning signs at corrective action site gates, and perform routine maintenance on monitoring wells as needed.

Land Use Control (LUC) Summary

LUC Title: LUC for FTRU-051

Site(s): FTRU-051

ROD/DD Title: CMS for FTRU-051, July 1997

Location of LUC

SWMU 15 located on Dilly Branch Road.

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

Types of Engineering Controls: Fences

Types of Institutional Controls: Notations in Master Plan

Date in Place: 199707

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: State

Record of LUC: Master Plan or Equivalent

Documentation Date: 201312

LUC Enforcement: Annual Inspections

Contaminants: VOC

Additional Information

N/A

LUC Title: SWMU 2D and AOC-P LUC

Site(s): FTRU-171

ROD/DD Title: FTRU-171

Location of LUC

Located on the corner of Hatch and Engineer Roads. This LUC also covers AOC-P which is adjacent to SWMU 2D.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Restrictions on land use

Date in Place: 200709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

Land Use Control (LUC) Summary

LUC Title: SWMU 3 LUC

Site(s): FTRU-002

ROD/DD Title: FTRU-002

Location of LUC

LUC is located on Landfill north of AERO Medical Research Building.

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

Types of Engineering Controls: Signs

Types of Institutional Controls: Restrictions on land use

Date in Place: 200109

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

On May 1, 1942, FTRU was activated as the Ozark Triangular Division Camp, in response to the US Military escalation following Pearl Harbor. In June 1943, the facility was renamed Camp Rucker, in honor of General Edmund Winchester Rucker.

Camp Rucker served as an infantry training ground and housed artillery, tank, anti-aircraft, medical, and quartermaster troops until 1946. In May 1945 following Victory in Europe Day, the camp became an Infantry replacement Training Center and later an Infantry Advanced Replaced Training Center.

The successful use of helicopters in Korea caused a pressing need for testing and training in the maintenance and operation of rotary-wing aircraft and the Army established an aviation center and school to meet that need. The Army Aviation School of Fort Sill, Oklahoma, was relocated to Camp Rucker. In March 1955, Camp Rucker was officially designated as the US Army Aviation Center (USAAVNC). In October the same year, it became a permanent US military fort, and, consequently, was renamed Fort Rucker.

In 1973, FTRU became the center for all US Army aviation flight training. Since then, its mission has been to maintain and operate facilities and provide services and material to support the helicopter pilot training for the Army.

In addition to its role as the USAAVNC, FTRU houses several tenant activities and directorates. It is the home of the Army Safety Center, the US Army Aviation Development Test Activity, the Aeromedical Center and the Aeromedical Research Laboratory.

Installation Program Cleanup Progress

IRP

Prior Year Progress: A PBA was funded in fiscal year FY09 to conduct RCRA facility investigation (RFI) and achieve RIP for AOC-S by FY11. Due to installation of monitoring wells and regulatory review times, the RIP date was modified to FY13. RFI report being reviewed by ADEM. A PBA was awarded in FY11 to conduct remedial action (operation) [RA(O)] for FTRU-171, FTRU-008, FTRU-051 and FTRU-012 and long-term management (LTM) for FTRU-002, FTRU-040 and AOC-P. PBA is also required to achieve NFA for FTRU-040 by FY15.

Future Plan of Action: Achieve RIP for AOC-S by FY13. Continue RA(O) and LTM activities through FY14 for FTRU-171, FTRU-008, FTRU-051, FTRU-012, FTRU-002, FTRU-040 and AOC-P. Achieve NFA for FTRU-040.

MMRP

Prior Year Progress: A remedial investigation/feasibility study (RI/FS) was awarded in FY09 to achieve record of decision (ROD)/decision document (DD) by FY11. Due to regulatory review times, the ROD/DD date has been modified to FY12. RFI work plan was approved by ADEM in January FY12.

Future Plan of Action: Further activities will be determined upon completion of the RI/FS in FY12.

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Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 108/101

Installation Site Types with Future and/or Underway Phases

1	Contaminated Ground Water (AOC-S)
1	Disposal Pit/Dry Well (FTRU-040)
1	Fire/Crash Training Area (FTRU-051)
4	Landfill (FTRU-002, FTRU-008, FTRU-012, FTRU-171)

Most Widespread Contaminants of Concern

Metals, Other (construction debris and household refuse), Petroleum, Oil and Lubricants (POL), 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
FTRU-182	BLDG 810, REFUELING POINT	FRA	INCINERATION	1996
FTRU-183	CONTAMINATED SOIL, TANK HILL	FRA	INCINERATION	1997
FTRU-008	LF N OF DILLY BR RD/E OF TEST STD,SWMU10	FRA	OTHER	1998
FTRU-010	SI HATCH ROAD NEAR LAKE, SWMU 2C	FRA	WASTE REMOVAL - SOILS	1998
FTRU-041	STORAGE WASTE POL-10K GAL RR TANK,SWMU27	FRA	WASTE REMOVAL - SOILS	1998
FTRU-042	STRG WAST POL(10K GAL RR TANK), SWMU 28	FRA	WASTE REMOVAL - SOILS	1998
FTRU-045	STORAGE WASTE POL(30K GAL AST), SWMU 31	FRA	WASTE REMOVAL - SOILS	1998
FTRU-051	FIREFIGHTING TNG AREA, SWMU 15	FRA	NATURAL ATTENUATION	1998
FTRU-051	FIREFIGHTING TNG AREA, SWMU 15	FRA	THERMAL DESORPTION	1998
FTRU-052	WST FUEL STR SW DILLY BR RD&AVE F SWMU63	FRA	WASTE REMOVAL - SOILS	1998
FTRU-080	WASHRACK W/O W SEP(LOWE AHP), SWMU 71	FRA	WASTE REMOVAL - SOILS	1998
FTRU-082	WASHRACK W/ O W SEP(BLDG 1412), SWMU 73	FRA	WASTE REMOVAL - SOILS	1998
FTRU-101	SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70	FRA	WASTE REMOVAL - SOILS	1998
FTRU-109	MATERIAL STORAGE (BLDG 6015), SWMU K	FRA	WASTE REMOVAL - SOILS	1998
FTRU-115	NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J	FRA	WASTE REMOVAL - SOILS	1998
FTRU-158	WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64	FRA	WASTE REMOVAL - SOILS	1998
FTRU-162	SPENT BATTERY STRG, BLDG 6015, SWMU 41B	FRA	WASTE REMOVAL - SOILS	1998
FTRU-165	WASTE OIL(AST) (BLDG 6015), SWMU 41A	FRA	WASTE REMOVAL - SOILS	1998

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
FTRU-179	PRODUCT STORAGE AREA, SWMU D	FRA	WASTE REMOVAL - SOILS	1998
FTRU-040	WASTE POL DISPOSAL, SWMU 14	IRA	BIOVENTING	1999
FTRU-002	LF NORTH OF AEROMED RES BLD SWMU 3	IRA	OTHER	2001
FTRU-012	LANDFILL OZARK CITY LEASEE, SWMU 4	FRA	NATURAL ATTENUATION	2001
FTRU-073	HERBICIDE STORAGE (BLDG 1448), SWMU 50	IRA	WASTE REMOVAL - SOILS	2001
FTRU-070	PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49	IRA	WASTE REMOVAL - SOILS	2002
FTRU-171	CLOSED SANITARY LANDFILL, SWMU 2D	FRA	CAPPING	2007
FTRU-171	CLOSED SANITARY LANDFILL, SWMU 2D	FRA	NATURAL ATTENUATION	2007
FTRU-171	CLOSED SANITARY LANDFILL, SWMU 2D	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2007

Duration of IRP

Date of IRP Inception: 198202

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201301/203310

Date of IRP completion including Long Term Management (LTM): 203509

IRP Contamination Assessment

Contamination Assessment Overview

In 1988 the FTRU Installation Restoration Program (IRP) identified 111 sites. Forty-four of these sites required further investigation, which was initiated in 1990. Site investigations, recommendations and studies of these sites produced initiatives for NFA, removal, and corrective measures study (CMS). The following is a summary of the IRP initiatives:

- All of the sites at FTRU scored low because the primary contaminant was petroleum hydrocarbons.
- None of the sites has extensive groundwater contamination.
- 108 sites have been evaluated by the state regulators and granted NFA status. These are listed on Table III.2 of the permit.
- Four sites (SWMUs 3, 4, 10 14, and 15) require LTM.
- Removal was completed at SWMU 8, and a cap was installed at SWMU 2D.

There is a reasonable expectation that the IRP at FTRU will declare a large percentage of its sites RC in the near future.

Cleanup Exit Strategy

Remaining cleanup requirements are being addressed under PBAs that were awarded in FY09 and FY11; RIP is expected at all sites. Remaining remedial operations and LTM are expected to be completed by FY20 for a majority of sites and FY40 for others.

IRP Previous Studies

Year	Title	Author	Date
1979	Tech Memo: Groundwater Monitoring, Bldgs 1172, 3425, 3481, 5110	USACE- Alaska District	JAN-1979
1982	Installation Assessment of Fort Rucker, Alabama, Report No. 305	Environmental Science and Engineering, Inc.	JAN-1982
1984	Draft Final Report: Evaluation of SWMUs at Fort Rucker, Report No. 37-26-1648-89	US Army Environmental Hygiene Agency	JAN-1984
	Evaluation of Washrack Leachate, Fort Rucker, Alabama, Hazardous Waste Study No. 37-26-0458-85	U.S. Army Environmental Hygiene Agency	JAN-1984
1987	Geohydrogeologic Study at Fort Rucker, TAC-Runkle Landfill and Dilly Branch Landfills	U.S. Army Environmental Hygiene Agency	JAN-1987
1988	RCRA Facility Assessment Report for Fort Rucker	USEPA	JAN-1988
	Installation Restoration Program Plan for Fort Rucker	U.S. Army Corps of Engineers, Toxic and Hazardous Materials Agency	JAN-1988
1991	Final work plan, Volume 1, Project Management Plan	Metcalf & Eddy, Inc.	MAR-1991
1992	Preliminary Site Inspection for Fort Rucker Military Reservation, Site Inspection Report No. 91030	U.S. Army Corps of Engineers, Toxic and Hazardous Materials Agency	JAN-1992
1993	Volume 1, Final Project Management Plan, Fort Rucker Corrective Measures Study	Metcalf & Eddy, Inc.	JAN-1993
	Volume 2, Final Sampling and Analysis Plan, Fort Rucker Corrective Measures Study	Metcalf & Eddy, Inc.	JAN-1993
1994	Final RCRA Facility Report	U.S. Army Environmental Center	SEP-1994
	Final Corrective Measures Remedial Design Workplan for the Removal of Contaminated Soils at SWMUs 2c, 27, 28, 31, 41a, 41b, 48, 63, 64, 70, 71, D, J and K	Metcalf & Eddy, Inc.	DEC-1994
1995	Phase II RCRA Facility Investigation Final Report, Fort Rucker Alabama	Metcalf & Eddy, Inc.	NOV-1995
1996	Statement of Basis, No Further Action Sites, Fort Rucker Alabama,	Metcalf & Eddy, Inc.	NOV-1996
1997	Final Corrective Measures Study, Fort Rucker, Alabama	Metcalf & Eddy, Inc.	JUL-1997
	Well Closure Plan - Draft	Metcalf & Eddy Inc.	JUL-1997
1998			

IRP Previous Studies

Year	Title	Author	Date
1998	Final Report- Interim Soil Removal at SWMU 15, Fire Fighting Training Area and Removal of Contaminated Soils at CAMU 2-7, Fort Rucker, AL	Mobile District Corps of Engineers	AUG-1998
2000	Final Groundwater Assessment Report for Solid Waste Management Unit 2D, Closed Sanitary Landfill	Metcalf & Eddy, Inc.	MAY-2000
2002	Final Groundwater Assessment Addendum Report for Solid Waste Management Unit 2D, Closed Sanitary Landfill	Metcalf & Eddy, Inc.	FEB-2002
2003	Summary of RCRA-Related Program Activities/Investigation for SWMU 6 - Closed Construction Landfill	Montgomery Watson Harza	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 10 Closed Landfill	MWH Americas, Inc.	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 14 Closed Waste Pol Pit	MWH Americas, Inc.	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 15 Former Fire Training Area, Vol. 1	MWH Americas, Inc.	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 15 Former Fire Training Area, Vol. 2, Appendix F	MWH Americas, Inc.	APR-2003
	Soil Removal and Sampling Report - SWMU 70 and 73	Bhate	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 4, Closed City of Ozark Landfill	MWH Americas, Inc.	APR-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 49, Former Pesticide Storage	MWH Americas, Inc.	MAY-2003
	Summary of RCRA-Related Program Activities/Investigations for SWMU 50, Former Herbicide Storage	MWH Americas, Inc.	MAY-2003
	Revised Semiannual Report for Natural Attenuation Monitoring	Montgomery Watson Harza	JUL-2003
	Final Post-Wide HHRA for Arsenic in Soil Final CMS, M&E 7/97	Montgomery Watson Harza	SEP-2003
	SWMU 2 Draft RFI Report	Montgomery Watson Harza	NOV-2003
2004	SWMU 49 and 50 ADEM Letter of Notice of Concurrence for the Summary of RCRA-Related Program Activities/Investigations (NFA)	ADEM	OCT-2004
2005	Misc Sites ADEM Letter of Review and Comments of Summary of Investigation Activities and Statement of Basis for Closure of Wells	ADEM	MAR-2005
	2005 Project Management Plan	CCI/ARCADIS	MAY-2005
	SWMU 2D ADEM Letter of Review and Comments of Draft CMIP	ADEM	JUN-2005

IRP Previous Studies

2005	Title	Author	Date
	CCI Response to ADEM Comments - SWMU2D CMIP	CCI	JUN-2005
	SWMU 6 ADEM Letter of Review and Comments Groundwater Sampling	ADEM	JUL-2005
	Misc Sites ADEM Letter of Review and Comments of Summary of Investigation Activities and Statement of Basis for Closure of Wells	ADEM	JUL-2005
	SWMU 2D ADEM Letter of Review and Comments of CMIP	ADEM	JUL-2005
	SWMU 8 ADEM Letter of Review and Comments of Sampling Plan Technical Memorandum	ADEM	AUG-2005
	Final SWMU 8 Sampling Plan Technical Memorandum	CCI/ARCADIS	SEP-2005
	SWMU 2D Final CMIP	CCI/ARCADIS	SEP-2005
	SWMU 8 ADEM Letter of Review and Comments of Final Sampling Plan	ADEM	OCT-2005
	SWMU 2D ADEM Letter of Review and Comments of Final Corrective Measures Implementation Plan	ADEM	OCT-2005
	Final Construction Best Management Practices Plan, DeLoney Road Borrow Site for SWMU 2D	CCI/ARCADIS	NOV-2005
	SWMU 6 Draft Groundwater Sampling Results	CCI/ARCADIS	DEC-2005
2006			
	SWMU 6 ADEM Letter of Review and Concurrence of Draft CMIP (NFA)	ADEM	MAR-2006
	SWMU 14 ADEM Letter of Review and Comments of CMIP	ADEM	APR-2006
	2006 Field Sampling Plan	CCI/ARCADIS	JUN-2006
	2006 Quality Assurance Project Plan	CCI/ARCADIS	JUN-2006
	2006 Project Management Plan	CCI/ARCADIS	JUL-2006
	SWMU 8 ADEM Letter of Review and Comments of CMIP	ADEM	SEP-2006
	SWMU 8 Sample Plan Addendum	CCI/ARCADIS	NOV-2006
	SWMU 8 ADEM Letter of Review and Concurrence of Sampling Plan	ADEM	DEC-2006
2007			
	SWMU 6 ADEM Letter of Review and Comments of Well Abandonment Report	ADEM	JAN-2007
	Misc Sites ADEM Letter of Review and Comments CMIP	ADEM	JAN-2007
	SWMU 4 ADEM Letter of Review and Comments of CMIP	ADEM	JAN-2007
	Final Fort Rucker SWMU 6 Well Abandonment Report	CCI/ARCADIS	FEB-2007
	Final SWMU 6 CMIP	CCI/ARCADIS	FEB-2007
	Final SWMU 8 CMIP	CCI/ARCADIS	FEB-2007
	Final Misc Sites CMIP	CCI/ARCADIS	FEB-2007
	SWMU 2D ADEM Letter of Review and Concurrence of CMIP Addendum	ADEM	FEB-2007
	SWMU 2D ADEM Letter of Review and Concurrence of	ADEM	FEB-2007

IRP Previous Studies

2007	Title	Author	Date
	CMIP Addendum		
	SWMU 6 ADEM Letter of Review and Concurrence of Final CMIP (Approval)	ADEM	MAR-2007
	SWMU 8 ADEM Letter of Review and Concurrence of Final CMIP (NFA)	ADEM	MAR-2007
	Misc Sites ADEM Letter of Review and Concurrence of Final CMIP	ADEM	MAR-2007
	SWMU 2D ADEM Letter of Review and Concurrence of Corrective Measures Implementation Plan Addendum	ADEM	APR-2007
	SWMU 10-15 Groundwater Final CMIP	CCI/ARCADIS	MAY-2007
	SWMU 10-15 Groundwater Final CMIP	CCI/ARCADIS	MAY-2007
	Final CMIP for SWMU 4	CCI/ARCADIS	MAY-2007
	SWMU 2D Corrective Measures Implementation Plan Addendum	CCI/ARCADIS	JUN-2007
	SWMU 14 Corrective Measures Implementation Plan	CCI/ARCADIS	JUL-2007
	SWMU 4 ADEM Letter of Review and Concurrence of CMIP	ADEM	AUG-2007
	SWMU 10-15 ADEM Letter of Review and Concurrence for CMIP	ADEM	AUG-2007
	SWMU 10-15 ADEM Letter of Review and Concurrence for CMIP	ADEM	AUG-2007
2008	SWMU 2D Revised Corrective Measures Implementation Plan	CCI/ARCADIS	APR-2008
	SWMU 2D ADEM Letter of Review and Comments of Revised Corrective Measures Implementation Plan Addendum	ADEM	JUN-2008
	SWMU 2D ADEM Letter of Review and Comments of Revised Corrective Measures Implementation Plan Addendum	ADEM	JUN-2008
2009	Project Management Plan, Environmental Remediation Services	CH2MHill	OCT-2009

FORT RUCKER

Installation Restoration Program

Site Descriptions

Site ID: AOC-S
Site Name: PCE in GW near SWMU 8
Alias: AOC-S

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	200503.....	200608
RFI/CMS.....	200612.....	201210
CMI(C).....	201009.....	201212
CMI(O).....	201301.....	202009

RIP Date: 201301

RC Date: 202009

SITE DESCRIPTION

As part of the RFI/CMS sampling for SWMU 8, the ADEM requested that five monitoring wells (8-G1, 8-G2, 8-G3, 8-G4, and 8-G5) near SWMU 8 be sampled for Appendix I VOCs and metals. The SWMU 8 is an incinerator ash landfill and the tetrachloroethylene (PCE) detected in these wells is not related to SWMU 8. The PCE concentrations are higher in wells that are cross and upgradient to SWMU 8. The five monitoring wells were sampled during the September 2005 and February 2006 sampling events under the performance-based contract (PBC) at FTRU, Alabama.

Monitoring wells 8-G3 and 8-G4 are located to the west and hydraulically side-gradient [approximately 225 feet (ft) west of SWMU 8] based on potentiometric maps created from groundwater elevation collected during the sampling events. During the September 2005 and February 2006 groundwater sampling events, PCE was detected in well 8-G3 above its maximum contaminant level (MCL) of five micrograms per liter (ug/L). The concentration was 16.0 ug/L during the September 2005 event and 10.7 ug/L during the February 2006 event. During both sampling events, PCE was detected in well 8-G4. The concentration was 12.1 ug/L during the September 2005 event and five ug/L during the February 2006 event. In addition, PCE was detected in monitoring well 8-G1 which is located approximately 175 ft upgradient of SWMU 8. The concentrations of PCE during the September 2005 and February 2006 event in 8-G1 were 1.2 ug/L and 3.6 ug/L, respectively. The PCE was not detected above laboratory detection limits in monitoring well 8-G2 (located within the SWMU 8 boundary) and 8-G5 (located immediately downgradient of SWMU 8).

Due to these facts, the PCE should not be considered part of SWMU 8 and should be investigated under the designation of AOC-S.

An RFI for AOC-S began in 2007. The draft RFI showed that groundwater within the investigation area has been impacted with PCE at concentrations exceeding its maximum MCL of five ug/L. The apparent source of the PCE in groundwater was a washrack that was operated from the 1950s to the late-1980s. PCE was not detected in soil in the vicinity of the washrack, indicating that the source may have been removed during removal of the washrack.

The PCE plume's dimensions are approximately 2,900 ft by 900 ft, and it covers approximately 60 acres. The plume has migrated southward, following groundwater flow past the FTRU boundary. Right of entry was obtained to install a well off-post. PCE concentrations range from 120 ug/L at approximately 500 ft downgradient of the apparent source to 17 ug/L at the installation boundary. The maximum PCE concentration off-post is six ug/L.

In FY09 PBA was awarded at FTRU to complete performance work statement objectives as required to meet agency cleanup goals at AOC-S. To implement this strategy, the contractor proposal includes completing the RFI, corrective measures implementation plan (CMIP)/CMS, corrective measures implementation (CMI) report and monitoring. The proposal includes installing a zero valence iron wall and MNA.

ADEM requested that additional monitoring wells be installed to further delineate the PCE plume. Due to the additional monitoring wells and regulatory review times (the RFI for this site has yet to be approved by ADEM) the RIP date was modified to FY13. This modification will result in the year one RA(O)/LTM not being issued until FY13 and the year five RA(O)/LTM not being issued within the contract period of performance.

Site ID: AOC-S
Site Name: PCE in GW near SWMU 8
Alias: AOC-S

CLEANUP/EXIT STRATEGY

Site AOC-S was included in a PBA contract awarded in FY09. The PBA contract includes completion of RFI/CMS and implementation of the remedy. The RFI Report is complete and submitted to ADEM for approval. A risk assessment will be submitted in spring 2012. The RA will be based on risk evaluation. MNA and zero valence iron passive reactive barrier are two options that will be evaluated. Post-PBA CMI operation [CMI(O)] will continue through FY20.

Site ID: FTRU-002

Site Name: LF NORTH OF AEROMED RES BLD SWMU 3

Alias: SWMU 3

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Other (construction debris and household refuse)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	198202.....	198611
CS.....	199010.....	199602
RFI/CMS.....	200012.....	200109
IRA.....	200106.....	200109
LTM.....	200510.....	203509

RIP Date: N/A

RC Date: 200109

SITE DESCRIPTION

This site was a landfill of approximately 10 acres located on Ferrel Road adjacent to the US Army Aviation Research Lab. When the site began operation is unknown; it concluded operation in 1986. The site is a terraced landfill consisting of three separate terraces with berms. Construction debris, paper, cardboard, and household refuse was reportedly disposed of here. The initial assessment conducted by the ADEM and the USEPA indicated that no further investigation of this site was warranted based on the Phase II RFI results with the provision that groundcover be maintained to reduce risk by inhalation of trichloroethylene (TCE) in surface soil.

Two 100-year floods, within a five year period, caused severe erosion of the existing cap and slopes of the landfill. This erosion exposed landfill material and scattered debris downstream of the site. The ADEM instructed the installation to correct the erosion problems immediately. The installation formulated a plan to conduct an interim remedial corrective action based on state requirements. The action included repairing the eroded areas by backfilling and diversion of storm water off the site. The severe slope of the berms resulted in erosion of the berm structure, requiring immediate repair to avoid future problems of the same nature.

The LTM will continue to prevent erosion.

A PBA will provide for the cleanup and LTM of all SWMU sites at FTRU. This site is covered under a hazardous waste corrective action permit issued by ADEM.

CLEANUP/EXIT STRATEGY

The entire site has a vegetative cover and long-term maintenance will include erosion control. LTM is expected to continue through FY35.

Site ID: FTRU-008

Site Name: LF N OF DILLY BR RD/E OF TEST STD,SWMU10

Alias: SWMU 10

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Surface Water

Phases	Start	End
RFA.....	198202.....	198611
CS.....	199010.....	199602
RFI/CMS.....	199410.....	199709
CMI(C).....	199801.....	199809
CMI(O).....	199810.....	202809

RIP Date: 199810

RC Date: 202810

SITE DESCRIPTION

This site was a 10 acre landfill located in the southeast portion of FTRU on North Dilly Branch Road and east of the Engine Test Stand. When the site began operation is unknown; however, it operated as a trench and fill landfill until closure in 1970. Household refuse and debris from demolished barracks were placed here.

In 1997 an RFI confirmed that a further investigation was required to determine the impact to this site from three adjacent SWMUs, as well as the impact to downgradient areas. Phase II RFI results confirmed the Phase I data and a CMS was recommended. A CMS was conducted and recommended natural attenuation with enhanced monitoring. The ADEM concurred with the recommendations of the CMS. MNA will continue on a semiannual basis for total petroleum hydrocarbons (TPH).

Results from the 2011 monitoring events indicate that concentrations are consistent with historical results. Results suggest natural attenuation is occurring.

This site is covered under a hazardous waste corrective action permit issued by ADEM.

CLEANUP/EXIT STRATEGY

MNA will continue until cleanup objectives have been met as defined in the approved CMIP dated May 2007. Routine maintenance and repair of the landfill cover is required. Routine maintenance of the road and drainage ditches is required to ensure well sampling continues. Groundwater and surface water are sampled semiannually and annually as defined in the approved CMIP.

Once VOC concentrations have decreased below MCLs for three consecutive monitoring events in a single well, monitoring may be discontinued at the well upon the approval of the revision to the CMIP and a modification to the permit.

Upon approval by ADEM wells will be properly abandoned according to the draft Well Closure Plan prepared by Metcalf and Eddy prepared in 2002 and approved ADEM (335-13-4-.27).

Post-PBA CMI(O) will continue for 14 years (through FY28).

Site ID: FTRU-012

Site Name: LANDFILL OZARK CITY LEASEE, SWMU 4

Alias: SWMU 4

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	198202.....	198611
CS.....	199010.....	199602
RFI/CMS.....	199410.....	200109
CMI(C).....	200109.....	200109
CMI(O).....	200110.....	203109

RIP Date: 200110

RC Date: 203110

SITE DESCRIPTION

This site was a trench and fill landfill of about 10 acres located on Campground Road at the northern edge of FTRU. Woods surround the landfill on three sides and a road and residential houses are located on the fourth side. The landfill was a municipal waste landfill which operated from 1977 to 1982. In addition to the installation, the landfill was used by the city of Ozark and Dale County to dispose of household waste.

Investigation results from the Phase I RFI indicated groundwater contamination at this site and further investigation was required to determine the full extent and impact of this contamination. The Phase II RFI, conducted in 1997, confirmed the Phase I results and this site was recommended for corrective measures. A CMS was conducted, and the recommendations in the CMS were for MNA with enhanced monitoring. On Jan. 5, 1998 the USEPA approval of the CMS was received.

The ADEM concurred with the recommendations of the CMS for MNA with enhanced monitoring on a semiannual basis for VOCs and metals. CMI(O) is required to conduct groundwater monitoring and to maintain access roads to monitoring wells. A PBA will provide for the clean-up and LTM of all SWMU sites at FTRU. The results from the 2001 monitoring events at SWMU 4 indicate that concentrations are consistent with historical results. The VOC trends are either no significant change or significantly decreasing in one well. These results, along with the natural attenuation parameter results, suggest that environmental conditions are favorable for natural attenuation and that it is occurring.

This site is covered under a hazardous waste corrective action permit issued by ADEM.

CLEANUP/EXIT STRATEGY

MNA will continue until cleanup objectives have been met as defined in the approved CMIP dated May 2007. Routine cover maintenance is required. Groundwater is sampled semiannually as defined in the approved CMIP.

The CMIP and the RCRA permit need to be revised to remove metal sampling due to three consecutive sampling events below MCLs.

Once VOC concentrations have decreased below MCLs for three consecutive monitoring events in a single well, monitoring may be discontinued at the well upon the approval of the revision to the CMIP and a modification to the permit.

Upon approval by ADEM wells will be properly abandoned according to the draft Well Closure Plan prepared by Metcalf and Eddy in 2002 and approved by the ADEM (335-13-4-.27).

Post-PBA CMI(O) will continue for 17 years (through FY31).

Site ID: FTRU-040
Site Name: WASTE POL DISPOSAL, SWMU 14
Alias: SWMU 14

STATUS

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

Phases	Start	End
RFA.....	198202.....	198611
CS.....	199010.....	199602
RFI/CMS.....	199610.....	200109
IRA.....	199706.....	199909
LTM.....	200110.....	201509
RIP Date:	N/A	
RC Date:	200109	

SITE DESCRIPTION

This site was an unlined pit approximately 80 ft in diameter and seven ft deep. The pit was located on Faulkner Gate Road and was used to dispose of waste POL products such as contaminated helicopter fuel, tanker truck washouts, and possibly motor oil. Operations at this site ceased prior to 1980 and the pit was capped with clay. Samples taken from the pit in 1980 showed traces of TCE. Both the state of Alabama and Region IV USEPA were notified of the site and immediate closure was recommended. The Phase II RFI conducted in 1997 confirmed the initial investigation results, and a CMS was recommended. The CMS recommended bioventing to digest the POL contamination. A pilot bioventing project was initiated in 1997 and based on its success was optimized and operate for an additional year. A report was submitted to ADEM in April 1999 requesting discontinuation of bioventing. VOCs are below MCLs.

In response to ADEM comments, the CMIP includes the requirement for metals sampling in groundwater. This requirement is due to metals being detected below MCLs in only one sampling event during development of the CMIP.

FTRU has requested NFA status for FTRU-040 from ADEM based on the three required consecutive sampling events below MCLs referenced in the CMIP and the soil's confirmation sampling conducted in 1999. ADEM responded that a CMI report should be submitted prior to requesting NFA Status.

Results from the 2011 monitoring event indicate that concentrations are consistent with historical results. For six semiannual monitoring events there have been no metals detected in the groundwater at concentrations that exceeded screening levels. It is recommended that groundwater sampling be discontinued. This site is expected to achieve NFA by the end of FY15.

This site is covered under a hazardous waste corrective action permit issued by ADEM.

CLEANUP/EXIT STRATEGY

A single round of confirmation soil sampling (for VOCs and metals) will be conducted to support NFA status. Groundwater monitoring and vegetative cover maintenance will continue until NFA is granted by ADEM through permit modification and CMIP revision.

Site ID: FTRU-051
Site Name: FIREFIGHTING TNG AREA, SWMU 15
Alias: SWMU 15

STATUS

Regulatory Driver: RCRA
RRSE: HIGH
 Contaminants of Concern: Volatiles (VOC)
 Media of Concern: Groundwater, Surface Water

Phases	Start	End
RFA.....	198202.....	198809
CS.....	199010.....	199209
RFI/CMS.....	199209.....	199707
DES.....	199610.....	199707
CMI(C).....	199710.....	199809
CMI(O).....	199910.....	202809
RIP Date:	199910	
RC Date:	202810	

SITE DESCRIPTION

This site is located on Dilly Branch Road on the southeast portion of the installation. From the 1950s until 1986 an old unlined fire-training pit was operated here. It was approximately 60 ft in diameter and three ft deep and clay lined. Waste POL (crankcase oil, motor gasoline (MOGAS), jet propellant 4 (JP-4) and other fuels) were poured onto a water buffer inside the pit, ignited, and extinguished. In 1986 a new brick lined fire fighting training pit overlapping the original site was constructed. As a result of the new construction a portion of the original site was excavated and buried nearby.

In 1994 the installation began RFI. Soil samples were collected from both pits. Sediments were sampled in the drainage ditch leading from the fire pit, and wells were installed to determine any impact to groundwater. Further investigation at this site was required since contaminants were found in groundwater downgradient of the site and in the water discharging from the oil/water separator. The Phase II RFI data confirmed the Phase I data and a CMS was recommended. The CMS recommended a removal action for both pits, the drainage ditch, and the old soil disposal area. In 1997 the USACE, Mobile District designed a soil removal and thermal desorption project for the site. Work began in 1997 and was completed in 1998. This resulted in the installation successfully remediating its most heavily contaminated site. Erosion of the site was occurring, so in FY99 a contract was awarded to stabilize the site. Stabilization work was completed in FY00.

MNA was initiated in accordance with 1997 CMS and continued in accordance with the approved 2007 CIMP. Results from the 2011 monitoring events indicate that concentrations are consistent with historical results. Results suggest natural attenuation is occurring.

This site is covered under a hazardous waste corrective action permit issued by ADEM.

CLEANUP/EXIT STRATEGY

MNA will continue until cleanup objectives have been met as defined in the approved CMIP dated May 2007. Routine maintenance of the landfill cap and repair of any deterioration is required. Routine maintenance of the road and drainage ditches is required to ensure well sampling continues. Groundwater and surface water are sampled semiannually and annually as defined in the approved CMIP.

Once VOC concentrations have decreased below MCLs for three consecutive monitoring events in a single well, monitoring may be discontinued at the well upon the approval of the revision to the CMIP and a modification to the permit.

Upon approval by ADEM wells will be properly abandoned according to the draft Well Closure Plan prepared by Metcalf and Eddy prepared in 2002 and approved ADEM (335-13-4-.27).

Site ID: FTRU-051
Site Name: FIREFIGHTING TNG AREA, SWMU 15
Alias: SWMU 15

Post-PBA CMI(O) will continue for 14 years (through FY28).

Site ID: FTRU-171

Site Name: CLOSED SANITARY LANDFILL, SWMU 2D

Alias: SWMU 2D

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	198202.....	198611
CS.....	199908.....	200109
RFI/CMS.....	200106.....	200512
DES.....	200310.....	200512
CMI(C).....	200407.....	200709
CMI(O).....	200407.....	203309
RIP Date:	200709	
RC Date:	203310	

SITE DESCRIPTION

This site was a trench and fill landfill located at the southeast corner of Hatch and Engineer Road in the southeastern area of the installation. It was approximately 40 acres and was operated from about 1950 to the early-1980s. The landfill was used to dispose of a wide variety of materials. The west half of the site was backfilled with clean fill and pine trees were planted. The east half was closed and backfilled with clean fill.

Groundwater monitoring wells were installed at various times throughout the life of the landfill. During this monitoring contamination above MCLs was detected in several wells. In June 1999, the ADEM required the installation to prepare a groundwater corrective action plan (CAP). As a result of the CAP, 16 groundwater monitoring wells were installed to delineate the extent of the contamination. Preliminary analytical data collected indicated the presence of chlorinated solvents, VOCs, and metals. At that time, the contamination appeared to be migrating from the site. Preliminary data suggested the need for additional groundwater monitoring wells to further delineate the plume. In January 2001 the additional monitoring wells were installed. Based upon sampling results, the limits of the contamination were defined.

In 2007 a RCRA cap was constructed to cover the 30.5 acre site as delineated by the use of geophysics and test pits. The CMI(O) includes maintenance, erosion control, and LUCs, as well as MNA and groundwater monitoring as described in the approved 2007 CIMP.

Groundwater monitoring at this site includes required monitoring at AOC-P which is downgradient and contiguous of FTRU-171.

CLEANUP/EXIT STRATEGY

A RCRA constructed cap covers the entire site. The CMI(O) will include erosion control, LUC, MNA and groundwater performance monitoring to estimated end date in 2033. Future LTM will consist of LUCs, groundwater monitoring, and cap maintenance.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRU-001	LANDFILL SOUTH OF OLD HOSPITAL, SWMU 2A	198611	Hazardous Solid Waste Amendment (HSWA) Permit 200311
FTRU-003	LF SW CORNER RED CLOUD/COPTER RD SWMU 6	200701	NFA Letter 200703
FTRU-004	LF PROPERTY DISPOSAL YARD, SWMU 7	199410	HSWA Permit 200311
FTRU-005	LF S OF ENGR RD & N OF RESV BNDRY, SWMU 8	200703	NFA Letter 200703
FTRU-006	LF S OF CASTLE RD & N OF BNDRY, SWMU 9	199602	HSWA Permit 200311
FTRU-007	LF S OF DILLY BR/N OR CASTLE RD, SWMU 11	199602	HSWA Permit 200311
FTRU-009	LANDFILL NEAR ENTRANCE STOR YARD, SWMU 2B	198611	HSWA Permit 200311
FTRU-010	SI HATCH ROAD NEAR LAKE, SWMU 2C	199812	NFA Letter 200501
FTRU-011	LF GULLY ON AIRPORT RD/NEAR SH95, SWMU 13	198611	HSWA Permit 200311
FTRU-013	CONSTRUCTION DEBRIS LANDFILL, SWMU 1	198611	HSWA Permit 200311
FTRU-014	MUNICIPAL WASTE INCINERATOR, SWMU 22	198611	HSWA Permit 200311
FTRU-015	HOSPITAL INCINERATOR, SWMU 23	198611	HSWA Permit 200311
FTRU-020	MAIN POST LANDFILL, SWMU 5	198611	HSWA Permit 200311
FTRU-022	PRESENT AMMO INSP PT BURN TRENCH, SWMU66	198611	HSWA Permit 200311
FTRU-023	FMR AMMO INSP PT BURN TRENCH, SWMU 67	198611	HSWA Permit 200311
FTRU-030	WASTEWATER TREATMENT PLANT, SWMU 20	199208	HSWA Permit 200311
FTRU-031	HATCHEY ARMY HELIPORT STP(LAGOON), SWMU16	198611	HSWA Permit 200311
FTRU-032	KNOX ARMY HELIPORT STP (LAGOON), SWMU 17	198611	HSWA Permit 200311
FTRU-033	LOWE WSTEWTR PRETREAT(CRREDX)PLANT, SWMU19	198611	HSWA Permit 200311
FTRU-034	CAIRNS AHP SEWAGE TREAT PLANT, SWMU 21	198611	HSWA Permit 200311
FTRU-041	STORAGE WASTE POL-10K GAL RR TANK, SWMU27	199803	NFA Letter 200402
FTRU-042	STRG WAST POL(10K GAL RR TANK), SWMU 28	199803	NFA Letter 200402
FTRU-043	STORAGE WASTE POL(10K GAL UST) SWMU 29	198611	HSWA Permit 200311
FTRU-044	STORAGE WASTE POL(10K GAL UST) SWMU 30	198611	HSWA Permit 200311
FTRU-045	STORAGE WASTE POL(30K GAL AST), SWMU 31	199803	HSWA Permit 200311
FTRU-046	WASTE POL(UST)(BLDG 4701) 2EA, SWMU 32AB	198611	HSWA Permit 200311
FTRU-047	WASTE OIL(UST)(BLDG 6021) 2EA, SWMU 33AB	198611	HSWA Permit 200311
FTRU-048	WASTE POL(UST) (BLDG 311) SWMU 34 A & B)	198611	HSWA Permit 200311
FTRU-049	WASTE POL(UST) (BLDG 1102) SWMU 35	198611	HSWA Permit 200311
FTRU-050	WASTE POL(UST) (BLDG 1013), SWMU 36	198611	HSWA Permit 200311
FTRU-052	WST FUEL STR SW DILLY BR RD&AVE F SWMU63	199803	NFA Letter 200403
FTRU-070	PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49	200410	NFA Letter 200410
FTRU-071	PESTICIDE STORE/HANDLE (BLD 1424) SWMU48	199712	NFA Letter 200403
FTRU-073	HERBICIDE STORAGE (BLDG 1448), SWMU 50	200410	NFA Letter 200410
FTRU-075	PESTICIDE/HERBICIDE STE(BLD 20023)SWMU51	199602	HSWA Permit 200311
FTRU-079	WASHRACK W/ O W SEP(BLDG 1436), SWMU 80	199602	HSWA Permit 200311

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRU-080	WASHRACK W/O W SEP(LOWE AHP), SWMU 71	199803	HSWA Permit 200311
FTRU-081	WASHRACK W/O W SEP(BLDG 6035), SWMU 72	199410	HSWA Permit 200311
FTRU-082	WASHRACK W/O W SEP(BLDG 1412), SWMU 73	199803	NFA Letter 200412
FTRU-083	WASHRACK W/O W SEP(ALNG AREA), SWMU 74	199410	HSWA Permit 200311
FTRU-084	WASHRACK W/O W SEP(4000 BLOCK), SWMU 75	198611	HSWA Permit 200311
FTRU-085	WASHRACK W/O W SEP(11TH & 2ND AVE)SWMU76	198611	HSWA Permit 200311
FTRU-086	WASHRACK W/O W SEP(FIRE STATION), SWMU77	198611	HSWA Permit 200311
FTRU-087	WASHRACK W/O W SEP(BLDG 405), SWMU 78	198611	HSWA Permit 200311
FTRU-088	WASHRACK W/O W SEP(BLDG 708), SWMU 79	198611	HSWA Permit 200311
FTRU-089	WASHRACK W/O W SEP(BLDG 706), SWMU 92	198611	HSWA Permit 200311
FTRU-090	WASHRACK W/O W SEP(BLDG 709), SWMU 91	198611	HSWA Permit 200311
FTRU-091	WASHRACK W/O W SEP(BLDG 1406), SWMU 89	198611	HSWA Permit 200311
FTRU-092	WASHRACK W/O W SEP(BLDG 1416), SWMU 81	198611	HSWA Permit 200311
FTRU-093	WASHRACK W/O W SEP(BLDG 4710), SWMU 82	198611	HSWA Permit 200311
FTRU-094	WASHRACK W/O W SEP(BLDG 25104), SWMU 83	198611	HSWA Permit 200311
FTRU-095	WASHRACK W/O W SEP(BLDG 50201), SWMU 85	198611	HSWA Permit 200311
FTRU-096	WASHRACK W/O W SEP(BLDG 30306), SWMU 86	198611	HSWA Permit 200311
FTRU-097	WASHRACK W/O W SEP(BLDG 30301), SWMU 87	198611	HSWA Permit 200311
FTRU-098	WASHRACK W/O W SEP(BLDG 50201), SWMU 84	198611	HSWA Permit 200311
FTRU-099	WASHRACK W/O W SEP(BLDG 30125), SWMU 88	198611	HSWA Permit 200311
FTRU-100	WASHRACK W/O W SEP(BLDG 60115), SWMU 90	198611	HSWA Permit 200311
FTRU-101	SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70	199803	NFA Letter 200406
FTRU-102	RADIOLOGICAL WASTE STG (BLDG1314) SWMU58	198611	HSWA Permit 200311
FTRU-109	MATERIAL STORAGE (BLDG 6015), SWMU K	199803	NFA Letter 200412
FTRU-110	FORMER HAZ WASTE STORAGE AREA, SWMU 61	199410	HSWA Permit 200311
FTRU-112	HAZ WASTE STG AREA BLDG 427, (SWMU 56)	198611	HSWA Permit 200311
FTRU-113	MATERIAL STORAGE YARD(1200 AREA), SWMU59	198611	NFA letter Nov 1995.
FTRU-114	PHOTOGRAPHIC LAB (BLDG 1109), SWMU 57	198611	HSWA Permit 200311
FTRU-115	NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J	199803	NFA Letter 200412
FTRU-116	FMR WASTE PCB STRG (DPDO 113), SWMU 55	199602	HSWA Permit 200311
FTRU-117	FMR WASTE PCB STRG(LUMBER YARD), SWMU 54	199602	HSWA Permit 200311
FTRU-119	ACID PIT B/T BLDG 6015 & 6016, SWMU 68	199410	HSWA Permit 200311
FTRU-120	STORM DRN OUTLETS,WASTE STRG AREA,SWMU60	199410	HSWA Permit 200311
FTRU-150	WASTEOIL (500 GAL TAK)(BLDG 405), SWMU C	198611	HSWA Permit 200311
FTRU-151	WASTE OIL(500 GAL AST) (BLDG 702) SWMU38	198611	HSWA Permit 200311
FTRU-152	FORMER PCB STORAGE AREA, SWMU 53	198611	HSWA Permit 200311

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRU-153	WASTE OIL(1000 GAL)(BLDG 1406)SWMU 7044	198611	NFA letter June 2004.
FTRU-154	PCB STORAGE AREA, SWMU 52	198611	HSWA Permit 200311
FTRU-156	VMS WASTE POL, UST, SWMU 37	198611	HSWA Permit 200311
FTRU-157	AREA OF OIL SPILL, SWMU L	199410	NFA Letter 200405
FTRU-158	WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64	199803	NFA Letter 200403
FTRU-159	WASTE OIL(200 GAL UST)(BLD 4004) SWMU 45	198611	HSWA Permit 200311
FTRU-160	WASTE OIL(500 GAL AST)(BLD 4710) SWMU 39	198611	HSWA Permit 200311
FTRU-161	DEMOLISHED VEHICLE STORAGE YARD, SWMU 62	199410	NFA Letter 200412
FTRU-162	SPENT BATTERY STRG, BLDG 6015, SWMU 41B	199803	NFA Letter 200403
FTRU-163	WASTE OIL(UST) (BLDG 5410) SWMU 46	198611	NFA Letter 200403
FTRU-164	OLD DISMANTLED INCINERATOR,SWMU 24,25,26	198611	NFA Letter 200403
FTRU-165	WASTE OIL(AST) (BLDG 6015), SWMU 41A	199803	NFA Letter 200403
FTRU-166	WASTE OIL(200 GAL UST)(BLD 8304)SWMU 40A	198611	HSWA Permit 200311
FTRU-167	WASTE OIL(50K GAL UST)(BLD 8303)SWMU 40B	198611	HSWA Permit 200311
FTRU-168	EMPTY 50K GALLON TANK, SWMU A	198611	HSWA Permit 200311
FTRU-169	8-BRAVO EOD RANGE, SWMU 65	198611	HSWA Permit 200311
FTRU-170	WASTE OIL(UST) (ALNG SITE) SWMU 43	198611	HSWA Permit 200311
FTRU-172	DIESEL, UST, SWMU H	198611	HSWA Permit 200311
FTRU-173	UNKNOWN UST-LOWE AHP, SWMU I	198611	HSWA Permit 200311
FTRU-174	OIL GAS STATION SITE, UST, SWMU E	198611	HSWA Permit 200311
FTRU-175	OLD GAS STATION SITE, UST, SWMU F	198611	HSWA Permit 200311
FTRU-176	INACTIVE CONSTRUCTION DEBRIS LF, SWMU 12	198611	HSWA Permit 200311
FTRU-177	MAIN SEWAGE TREATMENT PLANT, SWMU 18	198611	HSWA Permit 200311
FTRU-178	VMS, WASTE POL, UST, SWMU 42	198611	HSWA Permit 200311
FTRU-179	PRODUCT STORAGE AREA, SWMU D	199808	NFA Letter 200412
FTRU-180	FORMER HAZ. MAT'L DRUM STORAGE, SWMU G	199602	HSWA Permit 200311
FTRU-181	PCP DIP TANK, SWMU 69	199602	HSWA Permit 200311
FTRU-182	BLDG 810, REFUELING POINT	199607	NFA letter Apr 2002.
FTRU-183	CONTAMINATED SOIL, TANK HILL	199701	This site was never included in the permit issued by the state of Alabama. The removal took place in 1997 to close out this site.

IRP Schedule

Date of IRP Inception: 198202

Past Phase Completion Milestones

1987

RFA

(FTRU-001 - LANDFILL SOUTH OF OLD HOSPITAL, SWMU 2A, FTRU-002 - LF NORTH OF AEROMED RES BLD SWMU 3, FTRU-003 - LF SW CORNER RED CLOUD/COPTER RD SWMU 6, FTRU-004 - LF PROPERTY DISPOSAL YARD, SWMU 7, FTRU-005 - LF S OF ENGR RD & N OF RESV BNDRY, SWMU 8, FTRU-006 - LF S OF CASTLE RD & N OF BNDRY, SWMU 9, FTRU-007 - LF S OF DILLY BR/N OR CASTLE RD, SWMU 11, FTRU-008 - LF N OF DILLY BR RD/E OF TEST STD, SWMU10, FTRU-009 - LANDFILL NEAR ENTRANCE STOR YARD, SWMU 2B, FTRU-010 - SI HATCH ROAD NEAR LAKE, SWMU 2C, FTRU-011 - LF GULLY ON AIRPORT RD/NEAR SH95, SWMU 13, FTRU-012 - LANDFILL OZARK CITY LEASEE, SWMU 4, FTRU-013 - CONSTRUCTION DEBRIS LANDFILL, SWMU 1, FTRU-014 - MUNICIPAL WASTE INCINERATOR, SWMU 22, FTRU-015 - HOSPITAL INCINERATOR, SWMU 23, FTRU-020 - MAIN POST LANDFILL, SWMU 5, FTRU-022 - PRESENT AMMO INSP PT BURN TRENCH, SWMU66, FTRU-023 - FMR AMMO INSP PT BURN TRENCH, SWMU 67, FTRU-030 - WASTEWATER TREATMENT PLANT, SWMU 20, FTRU-031 - HATCHEY ARMY HELIPORT STP(LAGOON), SWMU16, FTRU-032 - KNOX ARMY HELIPORT STP (LAGOON), SWMU 17, FTRU-033 - LOWE WSTEWTR PRETREAT(CRREDX)PLANT, SWMU19, FTRU-034 - CAIRNS AHP SEWAGE TREAT PLANT, SWMU 21, FTRU-040 - WASTE POL DISPOSAL, SWMU 14, FTRU-041 - STORAGE WASTE POL-10K GAL RR TANK, SWMU27, FTRU-042 - STRG WAST POL(10K GAL RR TANK), SWMU 28, FTRU-043 - STORAGE WASTE POL(10K GAL UST) SWMU 29, FTRU-044 - STORAGE WASTE POL(10K GAL UST) SWMU 30, FTRU-045 - STORAGE WASTE POL(30K GAL AST), SWMU 31, FTRU-046 - WASTE POL(UST)(BLDG 4701) 2EA, SWMU 32AB, FTRU-047 - WASTE OIL(UST)(BLDG 6021) 2EA, SWMU 33AB, FTRU-048 - WASTE POL(UST) (BLDG 311) SWMU 34 A & B), FTRU-049 - WASTE POL(UST) (BLDG 1102) SWMU 35, FTRU-050 - WASTE POL(UST) (BLDG 1013), SWMU 36, FTRU-052 - WST FUEL STR SW DILLY BR RD&AVE F SWMU63, FTRU-070 - PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49, FTRU-071 - PESTICIDE STORE/HANDLE (BLD 1424) SWMU48, FTRU-073 - HERBICIDE STORAGE (BLDG 1448), SWMU 50, FTRU-075 - PESTICIDE/HERBICIDE STE(BLD 20023)SWMU51, FTRU-079 - WASHRACK W/O W SEP(BLDG 1436), SWMU 80, FTRU-080 - WASHRACK W/O W SEP(LOWE AHP), SWMU 71, FTRU-081 - WASHRACK W/O W SEP(BLDG 6035), SWMU 72, FTRU-082 - WASHRACK W/O W SEP(BLDG 1412), SWMU 73, FTRU-083 - WASHRACK W/O W SEP(ALNG AREA), SWMU 74, FTRU-084 - WASHRACK W/O W SEP(4000 BLOCK), SWMU 75, FTRU-085 - WASHRACK W/O W SEP(11TH & 2ND AVE)SWMU76, FTRU-086 - WASHRACK W/O W SEP(FIRE STATION), SWMU77, FTRU-087 - WASHRACK W/O W SEP(BLDG 405), SWMU 78, FTRU-088 - WASHRACK W/O W SEP(BLDG 708), SWMU 79, FTRU-089 - WASHRACK W/O W SEP(BLDG 706), SWMU 92, FTRU-090 - WASHRACK W/O W SEP(BLDG 709), SWMU 91, FTRU-091 - WASHRACK W/O W SEP(BLDG 1406), SWMU 89, FTRU-092 - WASHRACK W/O W SEP(BLDG 1416), SWMU 81, FTRU-093 - WASHRACK W/O W SEP(BLDG 4710), SWMU 82, FTRU-094 - WASHRACK W/O W SEP(BLDG 25104), SWMU 83, FTRU-095 - WASHRACK W/O W SEP(BLDG 50201), SWMU 85, FTRU-096 - WASHRACK W/O W SEP(BLDG 30306), SWMU 86, FTRU-097 - WASHRACK W/O W SEP(BLDG 30301), SWMU 87, FTRU-098 - WASHRACK W/O W SEP(BLDG 50201), SWMU 84, FTRU-099 - WASHRACK W/O W SEP(BLDG 30125), SWMU 88, FTRU-100 - WASHRACK W/O W SEP(BLDG 60115), SWMU 90, FTRU-101 - SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70, FTRU-102 - RADIOLOGICAL WASTE STG (BLDG1314) SWMU58, FTRU-109 - MATERIAL STORAGE (BLDG 6015), SWMU K, FTRU-110 - FORMER HAZ WASTE STORAGE AREA, SWMU 61, FTRU-112 - HAZ WASTE STG AREA BLDG 427, (SWMU 56), FTRU-113 - MATERIAL STORAGE YARD(1200 AREA), SWMU59, FTRU-114 - PHOTOGRAPHIC LAB (BLDG 1109), SWMU 57, FTRU-115 - NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J, FTRU-116 - FMR WASTE PCB STRG (DPDO 113), SWMU 55, FTRU-117 - FMR WASTE PCB STRG(LUMBER YARD), SWMU 54, FTRU-119 - ACID PIT B/T BLDG 6015 & 6016, SWMU 68, FTRU-120 - STORM DRN OUTLETS, WASTE STRG AREA, SWMU60, FTRU-150 - WASTE OIL (500 GAL TAK)(BLDG 405), SWMU C, FTRU-151 - WASTE OIL(500 GAL AST) (BLDG 702) SWMU38, FTRU-152 - FORMER PCB STORAGE AREA, SWMU 53, FTRU-153 - WASTE OIL(1000 GAL)(BLDG 1406)SWMU 7044, FTRU-154 - PCB STORAGE AREA, SWMU 52, FTRU-156 - VMS WASTE POL, UST, SWMU 37, FTRU-157 - AREA OF OIL SPILL, SWMU L, FTRU-158 - WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64, FTRU-159 - WASTE OIL(200 GAL UST)(BLD 4004) SWMU 45, FTRU-160 - WASTE OIL(500 GAL AST)(BLD 4710) SWMU 39, FTRU-161 - DEMOLISHED VEHICLE STORAGE YARD, SWMU 62, FTRU-162 - SPENT BATTERY STRG, BLDG 6015, SWMU 41B, FTRU-163 - WASTE OIL(UST) (BLDG 5410) SWMU 46, FTRU-164 - OLD DISMANTLED INCINERATOR, SWMU 24,25,26, FTRU-165 - WASTE OIL(AST) (BLDG 6015), SWMU 41A, FTRU-166 - WASTE OIL(200 GAL UST)(BLD 8304)SWMU 40A, FTRU-167 - WASTE OIL(50K GAL UST)(BLD

IRP Schedule

8303)SWMU 40B, FTRU-168 - EMPTY 50K GALLON TANK, SWMU A, FTRU-169 - 8-BRAVO EOD RANGE, SWMU 65, FTRU-170 - WASTE OIL(UST) (ALNG SITE) SWMU 43, FTRU-171 - CLOSED SANITARY LANDFILL, SWMU 2D, FTRU-172 - DIESEL, UST, SWMU H, FTRU-173 - UNKNOWN UST-LOWE AHP, SWMU I, FTRU-174 - OIL GAS STATION SITE, UST, SWMU E, FTRU-175 - OLD GAS STATION SITE, UST, SWMU F, FTRU-176 - INACTIVE CONSTRUCTION DEBRIS LF, SWMU 12, FTRU-177 - MAIN SEWAGE TREATMENT PLANT, SWMU 18, FTRU-178 - VMS, WASTE POL, UST, SWMU 42, FTRU-179 - PRODUCT STORAGE AREA, SWMU D, FTRU-180 - FORMER HAZ. MAT'L DRUM STORAGE, SWMU G, FTRU-181 - PCP DIP TANK, SWMU 69)

1988

RFA (FTRU-051 - FIREFIGHTING TNG AREA, SWMU 15)

1991

ISC (FTRU-182 - BLDG 810, REFUELING POINT)

1992

CS (FTRU-030 - WASTEWATER TREATMENT PLANT, SWMU 20, FTRU-051 - FIREFIGHTING TNG AREA, SWMU 15)

1994

CS (FTRU-004 - LF PROPERTY DISPOSAL YARD, SWMU 7)

1995

ISC (FTRU-183 - CONTAMINATED SOIL, TANK HILL)

CS (FTRU-010 - SI HATCH ROAD NEAR LAKE, SWMU 2C, FTRU-042 - STRG WAST POL(10K GAL RR TANK), SWMU 28, FTRU-045 - STORAGE WASTE POL(30K GAL AST), SWMU 31, FTRU-052 - WST FUEL STR SW DILLY BR RD&AVE F SWMU63, FTRU-071 - PESTICIDE STORE/HANDLE (BLD 1424) SWMU48, FTRU-080 - WASHRACK W/O W SEP(LOWE AHP), SWMU 71, FTRU-081 - WASHRACK W/O W SEP(BLDG 6035), SWMU 72, FTRU-082 - WASHRACK W/ O W SEP(BLDG 1412), SWMU 73, FTRU-083 - WASHRACK W/O W SEP(ALNG AREA), SWMU 74, FTRU-101 - SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70, FTRU-109 - MATERIAL STORAGE (BLDG 6015), SWMU K, FTRU-110 - FORMER HAZ WASTE STORAGE AREA, SWMU 61, FTRU-115 - NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J, FTRU-119 - ACID PIT B/T BLDG 6015 & 6016, SWMU 68, FTRU-120 - STORM DRN OUTLETS,WASTE STRG AREA,SWMU60, FTRU-157 - AREA OF OIL SPILL, SWMU L, FTRU-158 - WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64, FTRU-161 - DEMOLISHED VEHICLE STORAGE YARD, SWMU 62, FTRU-162 - SPENT BATTERY STRG, BLDG 6015, SWMU 41B, FTRU-165 - WASTE OIL(AST) (BLDG 6015), SWMU 41A, FTRU-179 - PRODUCT STORAGE AREA, SWMU D)

RFI/CMS (FTRU-004 - LF PROPERTY DISPOSAL YARD, SWMU 7)

1996

CS (FTRU-002 - LF NORTH OF AEROMED RES BLD SWMU 3, FTRU-003 - LF SW CORNER RED CLOUD/COPTER RD SWMU 6, FTRU-005 - LF S OF ENGR RD & N OF RESV BNDRY,SWMU 8, FTRU-006 - LF S OF CASTLE RD & N OF BNDRY, SWMU 9, FTRU-007 - LF S OF DILLY BR/N OR CASTLE RD, SWMU 11, FTRU-008 - LF N OF DILLY BR RD/E OF TEST STD,SWMU10, FTRU-012 - LANDFILL OZARK CITY LEASEE, SWMU 4, FTRU-040 - WASTE POL DISPOSAL, SWMU 14, FTRU-041 - STORAGE WASTE POL-10K GAL RR TANK,SWMU27, FTRU-070 - PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49, FTRU-073 - HERBICIDE STORAGE (BLDG 1448), SWMU 50, FTRU-075 - PESTICIDE/HERBICIDE STE(BLD 20023)SWMU51, FTRU-079 - WASHRACK W/ O W SEP(BLDG 1436), SWMU 80, FTRU-116 - FMR WASTE PCB STRG (DPDO 113), SWMU 55, FTRU-117 - FMR WASTE PCB STRG(LUMBER YARD), SWMU 54, FTRU-180 - FORMER HAZ. MAT'L DRUM STORAGE, SWMU G, FTRU-181 - PCP DIP TANK, SWMU 69)

IMP(C) (FTRU-182 - BLDG 810, REFUELING POINT)

1997

RFI/CMS (FTRU-003 - LF SW CORNER RED CLOUD/COPTER RD SWMU 6, FTRU-005 - LF S OF ENGR RD & N OF RESV BNDRY,SWMU 8, FTRU-008 - LF N OF DILLY BR RD/E OF TEST STD,SWMU10, FTRU-051 - FIREFIGHTING TNG AREA, SWMU 15)

IMP(C) (FTRU-183 - CONTAMINATED SOIL, TANK HILL)

DES	(FTRU-010 - SI HATCH ROAD NEAR LAKE, SWMU 2C, FTRU-041 - STORAGE WASTE POL-10K GAL RR TANK, SWMU27, FTRU-042 - STRG WAST POL(10K GAL RR TANK), SWMU 28, FTRU-045 - STORAGE WASTE POL(30K GAL AST), SWMU 31, FTRU-051 - FIREFIGHTING TNG AREA, SWMU 15, FTRU-052 - WST FUEL STR SW DILLY BR RD&AVE F SWMU63, FTRU-071 - PESTICIDE STORE/HANDLE (BLD 1424) SWMU48, FTRU-080 - WASHRACK W/O W SEP(LOWE AHP), SWMU 71, FTRU-082 - WASHRACK W/ O W SEP(BLDG 1412), SWMU 73, FTRU-101 - SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70, FTRU-109 - MATERIAL STORAGE (BLDG 6015), SWMU K, FTRU-115 - NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J, FTRU-158 - WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64, FTRU-162 - SPENT BATTERY STRG, BLDG 6015, SWMU 41B, FTRU-165 - WASTE OIL(AST) (BLDG 6015), SWMU 41A, FTRU-179 - PRODUCT STORAGE AREA, SWMU D)
1998	
CMI(C)	(FTRU-008 - LF N OF DILLY BR RD/E OF TEST STD, SWMU10, FTRU-010 - SI HATCH ROAD NEAR LAKE, SWMU 2C, FTRU-041 - STORAGE WASTE POL-10K GAL RR TANK, SWMU27, FTRU-042 - STRG WAST POL(10K GAL RR TANK), SWMU 28, FTRU-045 - STORAGE WASTE POL(30K GAL AST), SWMU 31, FTRU-051 - FIREFIGHTING TNG AREA, SWMU 15, FTRU-052 - WST FUEL STR SW DILLY BR RD&AVE F SWMU63, FTRU-071 - PESTICIDE STORE/HANDLE (BLD 1424) SWMU48, FTRU-080 - WASHRACK W/O W SEP(LOWE AHP), SWMU 71, FTRU-082 - WASHRACK W/ O W SEP(BLDG 1412), SWMU 73, FTRU-101 - SUMP DRAINAGE SYSTEM-POL SHOP SWMU 70, FTRU-109 - MATERIAL STORAGE (BLDG 6015), SWMU K, FTRU-115 - NEW PCB MTR STORE(ENGR & DILLY BR)SWMU J, FTRU-158 - WASTE OIL(55 GAL DRUMS)(BLD 4004)SWMU 64, FTRU-162 - SPENT BATTERY STRG, BLDG 6015, SWMU 41B, FTRU-165 - WASTE OIL(AST) (BLDG 6015), SWMU 41A, FTRU-179 - PRODUCT STORAGE AREA, SWMU D)
1999	
IRA	(FTRU-040 - WASTE POL DISPOSAL, SWMU 14)
2001	
CMI(C)	(FTRU-012 - LANDFILL OZARK CITY LEASEE, SWMU 4)
RFI/CMS	(FTRU-002 - LF NORTH OF AEROMED RES BLD SWMU 3, FTRU-012 - LANDFILL OZARK CITY LEASEE, SWMU 4, FTRU-040 - WASTE POL DISPOSAL, SWMU 14)
CS	(FTRU-171 - CLOSED SANITARY LANDFILL, SWMU 2D)
IRA	(FTRU-002 - LF NORTH OF AEROMED RES BLD SWMU 3, FTRU-073 - HERBICIDE STORAGE (BLDG 1448), SWMU 50)
2002	
IRA	(FTRU-070 - PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49)
2003	
RFI/CMS	(FTRU-070 - PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49, FTRU-073 - HERBICIDE STORAGE (BLDG 1448), SWMU 50)
2005	
LTM	(FTRU-070 - PESTICIDE STOR/HANDLE(BLDG 1476)SWMU 49, FTRU-073 - HERBICIDE STORAGE (BLDG 1448), SWMU 50)
2006	
RFI/CMS	(FTRU-171 - CLOSED SANITARY LANDFILL, SWMU 2D)
RFA	(AOC-S - PCE in GW near SWMU 8)
DES	(FTRU-171 - CLOSED SANITARY LANDFILL, SWMU 2D)
2007	
LTM	(FTRU-003 - LF SW CORNER RED CLOUD/COPTER RD SWMU 6, FTRU-005 - LF S OF ENGR RD & N OF RESV BNDRY, SWMU 8)
CMI(C)	(FTRU-171 - CLOSED SANITARY LANDFILL, SWMU 2D)

Projected Phase Completion Milestones

See attached schedule

IRP Schedule

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

Site ID

Site Name

ROD/DD Title

ROD/DD Date

Final RA(C) Completion Date: 201212

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of IRP at Installation (including LTM phase): 203509

FORT RUCKER IRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
AOC-S	PCE in GW near SWMU 8	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-002	LF NORTH OF AEROMED RES BLD SWMU 3	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-008	LF N OF DILLY BR RD/E OF TEST STD,SWMU10	CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-012	LANDFILL OZARK CITY LEASEE, SWMU 4	CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-040	WASTE POL DISPOSAL, SWMU 14	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-051	FIREFIGHTING TNG AREA, SWMU 15	CMI(O)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-171	CLOSED SANITARY LANDFILL, SWMU 2D	CMI(O)						

FORT RUCKER
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 7/4

Installation Site Types with Future and/or Underway Phases

- 2 Firing Range
(FTRU-001-R-01, FTRU-003-R-01)
- 1 Small Arms Range
(FTRU-004-R-01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC)

Media of Concern

Groundwater, Soil

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

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of MMRP

Date of MMRP Inception 200202

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201510/201510

Date of MMRP completion including Long Term Management (LTM): 204510

MMRP Contamination Assessment

Contamination Assessment Overview

The Department of Defense (DoD) has established the Military Munitions Response Program (MMRP) under the Defense Environmental Restoration Program (DERP) to address DoD sites with MEC including unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC).

The MMRP eligible sites include other than operational ranges where UXO, DMM and MC is known or suspected and the release occurred prior to Sept. 30, 2002. Because properties classified as operational ranges are not eligible they are excluded from the MMRP program.

The process began with three phases of range inventories. Phase I consisted of installations completing an initial data call. The USAEC managed the implementation of phases two and three of the MMRP inventory.

The Phase II inventory dealt with active and inactive (A/I) range considerations. Phase III involved the 2002 closed, transferred or transferring (CTT) range inventory. Included were extensive mapping, data collection for upload to the Army Range Inventory Database, an assessment of explosives safety risk using the risk assessment code (RAC) methodology for CTT ranges or sites with UXO or DMM identified in the inventory, and a determination of which sites on the inventory potentially qualify for the MMRP.

The US Army's inventory of CTT ranges and sites has identified seven sites eligible for action under MMRP at FTRU. The site inspection (SI) has been conducted and four of these sites are RC. The state has provided concurrence on SIs.

Cleanup Exit Strategy

The RI/FS began in FY09 under a PBA contract (PBA contract includes investigation activities through DD approval). Additional investigation is planned; UXO and soil removal are not likely to be required followed by institutional controls and MEC removal action.

MMRP Previous Studies

	Title	Author	Date
2002	Closed, Transferring and Transferred Range/Site Inventory for Fort Rucker, Alabama	Malcolm Pirnie, Inc.	JAN-2002
2004	Final Historical Records Review, Fort Rucker, Alabama	Malcolm Pirnie, Inc.	JUL-2004
	Final Work Plan, Fort Rucker, Alabama	Malcolm Pirnie, Inc.	OCT-2004
2005	Final Site Investigation, Fort Rucker, Alabama	Malcolm Pirnie, Inc.	JUN-2005
	ADEM NFA Letter MMRP Sites	ADEM	NOV-2005

FORT RUCKER

Military Munitions Response Program

Site Descriptions

Site ID: FTRU-001-R-01
Site Name: ANTI-TANK ROCKET/GRENADE RANGE
Alias: AOC-W

STATUS

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

Phases	Start	End
RFA.....	200202.....	200305
CS.....	200309.....	200506
RFI/CMS.....	200810.....	201211
DES.....	201310.....	201410
IRA.....	201103.....	201210
CMI(C).....	201306.....	201506
LTM.....	201510.....	204510
RIP Date:	N/A	
RC Date:	201510	

SITE DESCRIPTION

The anti-tank rocket/grenade range is located northeast of the cantonment and occupies approximately 57 acres of other than operational range designated area. The area has since been developed and is currently used as a portion of the installation golf course. The anti-tank rocket/grenade range consists of three distinct sub-sites: Anti-tank Rocket Range No. 1 (ATR No. 1), Anti-tank Grenade Range No. 1 (ATG No.1), and an unnamed range.

Much of the former range area (approximately 39.1 acres) has been converted to a golf course for use by installation personnel and guests. Most of this portion of the former range area consists of maintained grassy areas with very few trees. The remainder of the range area (17.9 acres) is wooded. These wooded areas generally lack significant undergrowth and are easily accessible. Most of the ground surface in the wooded areas is covered with leaf litter and fallen limbs/trees.

As noted in the historical records review, training in the anti-tank rocket/grenade range at FTRU took place from about 1942 to 1952. Since range specific usage dates are not available, the anti-tank rocket/grenade range most likely was used for artillery training during this nine-year period.

In June 2005 the SI was completed and recommended further investigations focused on MEC.

In 2009, a PBA was awarded to FTRU to complete performance work statement objectives as required to achieve a ROD/DD for FTRU-001-R-01, FTRU-003-R-01 and FTRU-004-R-01. The contract was modified on Aug. 31, 2010 to require the contractor to complete the RFI/CMS by Oct. 11, 2012.

CLEANUP/EXIT STRATEGY

The RFI/CMS was awarded through a PBA contract in FY09 and is underway. The Army prepared a Remedial Action Cost Engineering and Requirements (RACER) estimate to address potential removal actions and follow-on LTM. The estimate assumes the following MEC actions will be required:

- a remedial design (RD),
- a MEC removal action,
- MEC institutional controls, and
- MEC monitoring.

Since MC contamination is unlikely, no MC removal action is anticipated.

Site ID: FTRU-003-R-01
Site Name: INFILTRATION/GRENADE RANGE
Alias: AOC-X

STATUS

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

Phases	Start	End
RFA.....	200202.....	200305
CS.....	200309.....	200506
RFI/CMS.....	200810.....	201211
DES.....	201210.....	201409
CMI(C).....	201306.....	201506
LTM.....	201510.....	204510
RIP Date:	N/A	
RC Date:	201510	

SITE DESCRIPTION

The infiltration/grenade range is adjacent to, but not contiguous with, the anti-tank rocket/grenade range. Much of the former range area is currently used as a golf driving range and occupies some 44 acres of other than operational range designated area. A previous estimate of the area covered by this site (76.3 acres) was shown to be incorrect because it did not take into account overlapping portions of the individual ranges. The range is made up of three distinct sub-sites: infiltration range no. 2, grenade range no. 1, and the rifle grenade fragmentation range.

The 33.7 acres of the former range area consists of mowed and maintained grassy areas that are used as a driving range and as part of the equestrian center. The remainder of the range area (10.3 acres) is wooded. The wooded areas are generally relatively thick with meandering horse trails. Most of the ground surface in the wooded areas is covered with leaf or pine needle litter.

In June 2005 the SI was completed and recommended further investigations focused on MEC.

In 2009, a PBA contract was awarded to FTRU to complete performance work statement objectives as required to achieve a ROD/DD for FTRU-001-R-01, FTRU-003-R-01 and FTRU-004-R-01. The contract was modified on Aug. 31, 2010 to require the contractor to complete the RFI/CMS by Oct. 11, 2012.

CLEANUP/EXIT STRATEGY

The RFI/CMS was awarded through a PBA contract in FY09 and is underway. The Army prepared a RACER estimate to address potential removal actions and follow-on LTM. The estimate assumes the following MEC actions will be required:

- an RD,
- a MEC removal action,
- MEC institutional controls, and
- MEC monitoring.

Since MC contamination is unlikely, no MC removal action is anticipated.

Site ID: FTRU-004-R-01
Site Name: .22 CALIBER TARGET BUTT
Alias: AOC-Z

STATUS

Regulatory Driver: RCRA
MRSPP Score: 06
Contaminants of Concern: Munitions and explosives of concern (MEC)
Media of Concern: Soil

Phases	Start	End
RFA.....	200202.....	200305
CS.....	200309.....	200506
RFI/CMS.....	200810.....	201211
RIP Date:	N/A	
RC Date:	201211	

SITE DESCRIPTION

The former .22 caliber target butt covers about 2.4 acres located in a central portion of the cantonment area. Most of the area is heavily wooded with thick undergrowth. A closed improved dirt road and cleared overhead power line right-of-way cut east to west through the northern and southern portions of the area, respectively. Running trails with exercise stations also pass through various portions of the area.

The only evidence of the presence of the .22 caliber target butt was found on a 1944 installation map. Installation personnel have no information about this range and no other supporting documentation was found. Range-specific usage dates are not available; however, maps from 1951 and 1952 display the site as a golf course, so it is possible the .22 caliber target butt was used as a range for the duration of World War II. Information regarding the frequency of use was not available. Training is assumed to have occurred year round.

In June 2005 the SI was completed and recommended that further investigations focus on MEC.

This is a no cost site. The current cost for this site is covered under the existing PBA, contract number W91ZLK-05-D-0014 to perform the RI/FS that is currently underway. Field activities to take place are a geophysical instrument assisted walkabout for evidence of munitions or munitions related features and field screening of surface soils using a XRF spectrometry technique for lead and confirmatory analysis for five percent of the screened samples.

It is possible the site was never developed as a range. It is expected this site will achieve NFA status once the RI/FS is complete.

CLEANUP/EXIT STRATEGY

The RI/FS is currently underway. No further activities are anticipated beyond the RI/FS for this site.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRU-002-R-01	LAKE THOLOCCO PISTOL RANGE	200506	Not eligible for ER,A/Base Realignment and Closure (BRAC) Funding
FTRU-005-R-01	A-Grenade and Bayonet Court	200506	SI dated June 2005 identified the site for NFA with state concurrence.
FTRU-006-R-01	B-Grenade and Bayonet Court	200506	SI dated June 2005 identified the site for NFA with state concurrence.
FTRU-007-R-01	C-Grenade and Bayonet Court	200506	SI dated June 2005 identified the site for NFA with state concurrence.

MMRP Schedule

Date of MMRP Inception 200202

Past Phase Completion Milestones

2003

PA (FTRU-002-R-01 - LAKE THOLOCCO PISTOL RANGE, FTRU-005-R-01 - A-Grenade and Bayonet Court, FTRU-006-R-01 - B-Grenade and Bayonet Court, FTRU-007-R-01 - C-Grenade and Bayonet Court)

RFA (FTRU-001-R-01 - ANTI-TANK ROCKET/GRENADE RANGE, FTRU-003-R-01 - INFILTRATION/GRENADE RANGE, FTRU-004-R-01 - .22 CALIBER TARGET BUTT)

2005

CS (FTRU-001-R-01 - ANTI-TANK ROCKET/GRENADE RANGE, FTRU-003-R-01 - INFILTRATION/GRENADE RANGE, FTRU-004-R-01 - .22 CALIBER TARGET BUTT)

SI (FTRU-002-R-01 - LAKE THOLOCCO PISTOL RANGE, FTRU-005-R-01 - A-Grenade and Bayonet Court, FTRU-006-R-01 - B-Grenade and Bayonet Court, FTRU-007-R-01 - C-Grenade and Bayonet Court)

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date: 201506

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of MMRP at Installation (including LTM phase): 204510

FORT RUCKER MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-001-R-01	ANTI-TANK ROCKET/GRENADE RANGE	RFI/CMS						
		DES						
		IRA						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-003-R-01	INFILTRATION/GRENADE RANGE	RFI/CMS						
		DES						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTRU-004-R-01	.22 CALIBER TARGET BUTT	RFI/CMS						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): TBD

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: 201002

Efforts Taken to Determine Interest

Notices were placed in local newspapers to solicit interest in establishing a RAB in 2008, 2009, and 2010. The notices informed the public of the role of the RABs and gave a 30 day window of opportunity to reply.

Results

No public interest was expressed at that time.

Follow-up Procedures

A community involvement plan has not been developed yet. Community interest was last sought in 2005.

Additional Community Involvement Information

N/A

Administrative Record is located at

US Army Aviation Warfighting Center
Building 1121
Fort Rucker, AL
334-255-1652

Information Repository is located at

Alabama Department of Environmental Management (ADEM)
Governmental Hazardous Waste Branch, Land Division
1400 Coliseum Boulevard
Montgomery, Alabama

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

TAPP Title: N/A

Potential TAPP: N/A

