

FY2010
as of Sep 2009

FORT RILEY

Army Defense Environmental Restoration Program

Installation Action Plan



Pub 13.2_014

FY2009

FORT RILEY
Army Defense Environmental Restoration Program
Installation Action Plan

Printed 23 September 2009

(this page intentionally left blank)

Table of Contents

Statement Of Purpose.....	1
Approval.....	2
Acronyms.....	3
Installation Information.....	5
Land Use Control (LUC) Summary.....	7
Cleanup Program Summary.....	11
Installation Restoration Program.....	13
IRP Summary.....	14
IRP Contamination Assessment.....	17
IRP Previous Studies.....	19
Installation Restoration Program Site Descriptions.....	22
FTRI-003 SOUTHWEST FUNSTON LANDFILL	23
FTRI-009 OB/OD GROUND (RANGE 16)	24
FTRI-019 FORMER FIRE TRAINING AREA FFTA-MAAF.....	25
FTRI-027 DRY CLEANING FACILITIES AREA	26
FTRI-030 PESTICIDE STORAGE FACILITY (MIXING).....	27
FTRI-031 354 AREA SOLVENT DETECTIONS (354).....	28
FTRI-056 ABANDONED GASOLINE LINE.....	29
FTRI-057 6200 AREA FUEL OIL LINE (ANCHOR).....	30
Installation Restoration Program Response Complete (No Further Action) Sites Summary.....	31
IRP Schedule.....	36
Installation Restoration Program Milestones.....	36
IRP Schedule Chart.....	40
Installation Restoration Program Costs.....	42
IRP Prior Funding/Current Requirements.....	42
IRP Required Cost-to-Complete Chart.....	44
IRP Programmed Cost-to-Complete Chart.....	45

Table of Contents

Military Munitions Response Program.....	46
MMRP Summary.....	47
MMRP Contamination Assessment.....	48
MMRP Previous Studies.....	49
MMRP Installation Map(s).....	50
Military Munitions Response Program Site Descriptions.....	51
FTRI-001-R-02 SHSAR Impact Slope.....	52
FTRI-003-R-01 Camp Forsyth Landfill Area 2 MRS.....	53
Military Munitions Response Program Response Complete (No Further Action) Sites Summary.....	54
MMRP Schedule.....	55
Military Munitions Response Program Milestones.....	55
MMRP Schedule Chart.....	56
MMRP Costs.....	57
MMRP Prior Funding/Current Requirements.....	57
MMRP Required Cost-to-Complete Chart.....	58
MMRP Programmed Cost-to-Complete Chart.....	59
Community Involvement.....	60

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).

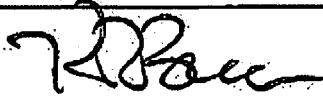
In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Installation Management Command (IMCOM) West, Fort Riley (FTRI), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, 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.

The following persons contributed to the formulation and completion of this Installation Action Plan for FORT RILEY:

Austin, Andrea	Fort Riley
Cook, Michele	Malcolm Pirnie, Inc. for USAEC
Daneke, Travis	Kansas Department of Health and Environment
Gassen, Tina	Fort Riley
Jacobs, Jorge	Kansas Department of Health and Environment
Phillips, Craig	Fort Riley
Safadi, Amer	United States Environmental Protection Agency
Shields, Dick	Fort Riley
Shimp, John	Fort Riley
Taintor, Sophie	Malcolm Pirnie, Inc. for USAEC
Van Saun, Rick	United States Army Corps of Engineers
Weiser, Ryan	Kansas Department of Health and Environment

FORT RILEY
Installation Action Plan Approval Signatures

KEVIN P. BROWN COL, IN Garrison Commander Fort Riley	 Date 11/5/09

Acronyms

A/I	Active/Inactive
AEDB-R	Army Environmental Database - Restoration
AGL	Abandoned Gasoline Line
AOC	Area of concern
AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
DCE	Dichloroethylene
DCFA	Dry Cleaning Facilities Area
DD	Decision Document
DDESB	Department of Defense Explosives Safety Board
DS/GS	Direct Support / General Support
EOD	Explosive Ordnance Disposal
ER,A	Environmental Restoration, Army
ESS	Explosive Safety Submissions
FFA	Federal Facility Agreement
FRA	Future Remedial Action
FS	Feasibility Study
FTRI	Fort Riley
FY	Fiscal Year
HRS	Hazard Ranking System
IAP	Installation Action Plan
ID	Identification
IMCOM	Installation Management Command
IRA	Interim Remedial Action
IRP	Installation Restoration Program
K	Thousand
KDHE	Kansas Department of Health and Environment
KDWP	Kansas Department of Wildlife and Parks
LF	Landfill
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituent
MCL	Maximum Contaminant Level
MEC	Munitions and Explosives of Concern
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MRA	Munitions Response Area
MRS	Munitions response site
N/A	Not Applicable
NFA	No Further Action
NPL	National Priorities List
OB/OD	Open Burning/Open Detonation
OU	Operable Unit

Acronyms

PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethylene (Perchloroethylene)
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
PSF	Pesticide Storage Facility
RA	Remedial Action
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RAP	Remedial Action Plan
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation / Feasibility Study
RIP	Remedy-in-Place
ROD	Record of Decision
SEFL	Southeast Funston Landfill
SFL	Southwest Funston Landfill
SHSAR	Sherman Heights Small Arms Range
SI	Site Inspection
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethylene
TRC	Technical Review Committee
ug/L	micrograms per liter
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWI	World War I
WWII	World War II

Installation Information

Installation Locale

Installation Size (Acreage): 100775

City: Junction City

County: Clay, Geary, & Riley

State: Kansas

Other Locale Information

Fort Riley is located west of Manhattan (population 38,000) on 100,775 acres of land in portions of Clay, Geary, and Riley Counties in northeast Kansas. Interstate 70, Junction City (population 20,000), and Ogden (population 1,600) bound the installation to the south. Milford Lake (16,020 acres) bounds part of the western side of the installation.

Installation Mission

The mission of Fort Riley, as an installation of excellence, is to:

- work in close partnership with local, regional, and state communities,
- provide trained and ready forces to meet joint force requirements across the full spectrum of current and future operations,
- transform and manage unit readiness as directed by the Army campaign plan,
- execute unit re-stationing as directed by US Army Forces Command (FORSCOM),
- execute garrison operations as directed by the IMCOM, and
- conduct homeland defense operations and support civil authorities.

Lead Organization

IMCOM - West

Lead Executing Agencies for Installation

United States Army Corps of Engineers (USACE), Kansas City District

US Geological Survey

Regulator Participation

Federal

USEPA, Region VII

State

Kansas Department of Health and Environment (KDHE), Bureau of Environmental Remediation and the KDHE Bureau of Environmental Field Services - North Central District Office

National Priorities List (NPL) Status

A score of 33.8 was recorded on 199008.

Date for RA(C) Completion:

201209

Date for NPL Deletion

IR: N/A

MR: N/A

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

RAB established 199709

Installation Information

Installation Program Summaries

IRP

Primary Contaminants of Concern: Metals, Perchlorate, Pesticides, Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

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

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201409/201409

Prior Funding: \$70,451.4 K

Current Requirements: \$4,129.0 K

Future Requirements: \$5,108.0 K

MMRP

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

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

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

Prior Funding: \$1,570.8 K

Current Requirements: \$0 K

Future Requirements: \$1,820.0 K

Land Use Control (LUC) Summary

LUC Title: Dry Cleaning Facilities

Site(s): FTRI-027

ROD/DD Title: Dry Cleaning Facilities Study Area

Location of LUC

The former Dry Cleaning Facilities Area (DCFA) is located in the southwest corner of the Main Post cantonment about 800 feet north of the Kansas River. The DCFA operated until 2002. The primary dry cleaning solvent was tetrachloroethylene (PCE).

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: None

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

Date in Place: 200802

Modification Date: N/A

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

LUC Title: Forsyth Ldfl 2 / Repub. R

Site(s): FTRI-038

ROD/DD Title: Forsyth Landfill Area 2 Decison Memo

Location of LUC

Along Republican River, southwest of Camp Forsyth cantonment area. It is only applicable to site FTRI-003-R-01 which is a Military Munitions Response Program (MMRP) site number. Site FTRI-038 CLOSED OUT BY REGULATORS IN 2007

Land Use Restriction: Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system

Types of Engineering Controls: Signs

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

Date in Place: 200209

Modification Date: N/A

Date Terminated: 200708

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

Land Use Control (LUC) Summary

LUC Title: Pest Stor Fac Land Mgmt

Site(s): FTRI-030

ROD/DD Title: RECORD OF DECISION-PESTICIDE STORAGE FAC

Location of LUC

The Pesticide Storage Facility (PSF), Operable Unit 002, is situated on a terrace on the north side of the Kansas River Valley, approximately 2,000 feet north and west of the Kansas River (Figure 1). The PSF site covers about 2/3 of an acre around former building 348 and is located in the Main Post Area in the southeastern portion of the Public Works Storage Yard. The area is fenced and has restricted access. The area of investigation extended south of Dickman Avenue to the southeast across the railroad tracks. The entire site is within a zone designated as Industrial use in the Fort Riley Real Property Master Plan.

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

Types of Engineering Controls: Fences

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

Date in Place: 199710

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

LUC Enforcement: 5 Year Reviews

Contaminants: PESTICIDES

Additional Information

N/A

LUC Title: SE Funston Landfill

Site(s): FTRI-036

ROD/DD Title: Decision Memorandum, SE Funston Landfill

Location of LUC

SE corner of Camp Funston cantonment area, north of Kansas River, adjacent to 12th Street entrance. Site is bounded by river, levee, and highway embankment. SITE CLOSED OUT BY REGULATORS IN 2007

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)

Types of Engineering Controls: None

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

Date in Place: 200209

Modification Date: N/A

Date Terminated: 200711

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

Land Use Control (LUC) Summary

N/A

LUC Title: SW Funston Ldfl Controls

Site(s): FTRI-003

ROD/DD Title: RECORD OF DECISION - SW FUNSTON LANDFILL

Location of LUC

Southwest Funston Landfill (Operable Unit 001) covers approximately 120 acres and is located in the southern portion of Fort Riley adjacent to the southwest corner of the Camp Funston cantonment area (Figure 1-1). It is bordered on the south by the Kansas River, on the north by Well House Road, on the west by a former meander bend in the Kansas River and on the east by Threemile Creek. The landfill lies entirely within the 100-year floodplain of the Kansas River.

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

Types of Engineering Controls: Fences, Signs

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

Date in Place: 199710

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200708

Land Use Control (LUC) Summary

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

Fort Riley's history is closely linked to the history of American westward expansion and development. As early as the 1840s, travelers along the Oregon and Santa Fe Trails began a massive migration across the high plains of Kansas, which created the need for a series of military installations to protect them as they traveled west.

In 1852 Major E.A. Ogden established a temporary camp called Camp Center, north of the Kansas River, near the junction of the Smoky Hill and Republican Rivers. In 1853, the U.S. Congress authorized establishment of a permanent installation there and renamed the encampment Fort Riley, in honor of Major General Bennett C. Riley who led the first military escort along the Santa Fe Trail in 1829.

Fort Riley evolved from a frontier outpost to a military training installation in the first 60 years following its inception in 1853. In the beginning, industry was limited to a few shops (e.g., blacksmiths) and storehouses. Early sewers dumped directly into the rivers. Military operations were limited to small arms, horse-mounted cavalry, and horse-drawn artillery. Practice ranges were located near the barracks areas in the lowlands, and river bluffs were used as natural backstops for the ranges.

During World War I (WWI), there was a build-up of forces at Fort Riley. Camp Funston was established during WWI and, in approximately three months, 1,401 temporary buildings were erected there to house troops. Camp Whitside was also built-up for WWI. Military training activities became more complex and the infrastructure more elaborate. Motor pools and auto repair shops replaced stables and blacksmith shops. Marshall Army Air Field became operational in 1921. The installation areas were electrified, and wastewater treatment plants were constructed.

Prior to World War II (WWII) and through the 1940s, Fort Riley expanded its transportation and industrial activities. Many motor pools were established in Camp Funston, Camp Whitside, Camp Forsyth, and the Main Post. Underground storage tanks (UST) were installed, and a gasoline pipeline was run from the rail spur on the north side of the Kansas River to Marshall Army Air Field. The installation infrastructure included laundry and dry cleaning facilities, numerous vehicle repair shops, boiler plants, and an asphalt plant.

Through the early years of WWII, the installation included the last vestiges of horse-mounted troops, including an animal dip facility on the rail spur for animals brought onto the installation. In 1949, the horse-mounted Cavalry was dissolved.

The heavy weapons training was focused on the main Impact Area, which was acquired in 1942, but small arms ranges were still prevalent along the river bluffs, especially in the Camp Forsyth, Camp Whitside, and Camp Funston areas. During the period between WWII and Vietnam, many of the temporary facilities built for WWII, especially those in Camp Forsyth, Camp Funston, and Camp Whitside, became obsolete and surplus, so they were demolished.

In 1955 the First Infantry Division was assigned to Fort Riley. Troop barracks and tactical equipment shops were built on Custer Hill and integrated with troop support facilities for health and recreational services. Family housing also expanded. Small arms training shifted to the ranges around the Impact Area.

During the Vietnam Era, environmental concerns came to the forefront. The wastewater treatment plants and controlled landfills were put into use. The older industrial activities were frequently upgraded or centralized. Transportation and industrial facilities that had been abandoned were demolished. A systematic review and upgrade of facilities focusing on several environmental concerns proceeded, including USTs, polychlorinated biphenyl (PCB)-containing transformers, and asbestos-containing materials used in buildings. With the passage of stricter federal and state laws governing air and water pollution, protection of natural resources, waste management, and environmental regulation progressively focused on the management of industrial and military activities.

Army personnel are trained at Fort Riley. The installation's history does not include large-scale manufacturing activities. Rather, development of Fort Riley included ancillary activities to support overall installation operations, including print shops, photographic processing facilities, laboratories, furniture repair, dry cleaning, paint shops, sewage treatment plants, and numerous vehicle maintenance and wash facilities.

Hazardous materials used include:

- Ordnance (of which there is no evidence of release of toxic chemical agents and no evidence of release of radioactive substances);
- Chlorinated solvents associated with furniture repair, dry cleaning, and cleaning of printing equipment;
- Pesticides for clearing of brush, pest and termite control, and routine maintenance of facility grounds;
- A variety of small quantities of chemicals associated with laboratories;

Cleanup Program Summary

Installation Historic Activity

- Silver-bearing solutions from the photographic processing and x-ray facilities;
- PCB fluids in electrical equipment; and
- Large quantities of petroleum-based fuels and cleaners associated with vehicle use, maintenance, and repair.

In addition to the waste outlined above, throughout its operational life the installation has generated typical, nonhazardous municipal waste and construction debris.

Past activities at Fort Riley have environmentally impacted several areas of the installation, primarily as the result of spills and leaks, and from previously approved waste disposal and handling practices. Cleanup of Fort Riley began in 1990-1991 in response to the Army's Installation Restoration Program (IRP) and the Federal Facility Agreement (FFA).

Major tenants at Fort Riley include the Kansas Army National Guard, the Army Reserve, and the Irwin Army Community Hospital. In 1990, the installation was placed on the NPL with a Hazard Ranking System score of 33.8. An FFA was signed by the USEPA, Region VII, the KDHE, and the Army and became effective on Feb. 28, 1991. The FFA requires that the installation address all significant environmental releases under the Comprehensive Environmental Response, Compensation, and Liability Act (1980) (CERCLA) and the Resource Conservation and Recovery Act (RCRA).

Installation Program Cleanup Progress

IRP

- Prior Year Progress:
- Monitored natural attenuation (MNA) for Operable Unit (OU)001 (FTRI-003), OU003 (FTRI-027), OU004 (FTRI-019), OU005 (FTRI-031), and Open Burning/Open Detonation(OB/OD) (FTRI-009) was conducted under long-term management (LTM) in fiscal year (FY)09.
 - A soil and sediment sampling event was conducted for OU002 (FTRI-030).
 - A groundwater sampling event and final injection treatment were conducted for Abandoned Gas Line (AGL) (FTRI-056).
- Future Plan of Action:
- LTM will be conducted at OU001 (FTRI-003), OU003 (FTRI-027), OU004 (FTRI-019), OU005 (FTRI-031), and OB/OD (FTRI-009).
 - Dual-phase extraction will be conducted for POL USTs (1044, 1245, and 1631, which are covered under FTRI-057).
 - Groundwater sampling will be conducted for AGL (FTRI-056) in FY10 and FY11.

MMRP

- Prior Year Progress:
- The Explosive Safety Submissions (ESS) were approved by the Department of Defense Explosives Safety Board (DDESB).
 - The draft final remedial investigation (RI)/ feasibility study (FS) work plan was received from the USACE Omaha District.
 - RI/FS fieldwork was initiated.
- Future Plan of Action:
- The RI/FS will be completed and follow-on phases will be conducted as required.

FORT RILEY
Army Defense Environmental Restoration Program
Installation Restoration Program

(this page intentionally left blank)

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/RC Sites: 72/70

Installation Site Types with Future and/or Underway Phases

- 1 Explosive Ordnance Disposal Area
(FTRI-009)
- 1 Fire/Crash Training Area
(FTRI-019)
- 1 Landfill
(FTRI-003)
- 1 POL (Petroleum/Lubricants) Lines
(FTRI-057)
- 1 Pesticide Shop
(FTRI-030)
- 1 Soil Contamination After Tank Removal
(FTRI-056)
- 2 Spill Site Area
(FTRI-027, FTRI-031)

Most Widespread Contaminants of Concern

Metals, Perchlorate, Pesticides, 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	Cost
FTRI-061	FORMER GAS SERVICE STATION BLDG 354	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1989	TBD
FTRI-008	PCB STORAGE CONEX (BUILDING 348)	FRA	IN-SITU SOIL TREATMENT	1990	TBD
FTRI-059	REMOVE USTS	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-063	FMR BLDG 1044 DISPENSING IRA STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-066	FMR BLDG 1245 DISPENSING IRA STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-067	FMR BLDG 1539 DISPENSING IRA STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-068	FMR BLDG 1637 DISPENSING IRA STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-069	FMR BLDG 1890 DISPENSING IRA STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990	TBD
FTRI-054	CUSTER HILL PX USTS BLDG 5320	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991	\$99.0 K
FTRI-061	FORMER GAS SERVICE STATION BLDG 354	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991	TBD
FTRI-010	PESTICIDE (2-4D) UST AT CAMP FUNSTON	FRA	WASTE REMOVAL - SOILS	1992	TBD
FTRI-013	ABANDONED VOC TANKS NORTH OF IACH	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1992	TBD
FTRI-049	MERCURY CONTAMINATION AREAS	FRA	REMOVAL	1992	TBD
FTRI-060	MAINPOST PX GAS STATION / 218	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993	TBD
FTRI-003	SOUTHWEST FUNSTON LANDFILL	IRA	OTHER	1994	\$27.0 K

IRP Summary

Site ID	Site Name	Completed Remedial Actions (Interim Remedial Actions/ Action	Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
FTRI-028	FMR FIRE TRAINING AREA CAMP FUNSTON	FRA	WASTE REMOVAL - SOILS	1994	TBD
FTRI-030	PESTICIDE STORAGE FACILITY (MIXING)	IRA	WASTE REMOVAL - SOILS	1994	\$1,115.0 K
FTRI-035	NON-IMPACT AREA SMALL ARMS RANGES	IRA	WASTE REMOVAL - SOILS	1994	TBD
FTRI-071	FMR BLDG 2345 DISPENSING STATION	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994	TBD
FTRI-072	BLDG 8340 FUEL OIL UST	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994	TBD
FTRI-003	SOUTHWEST FUNSTON LANDFILL	IRA	CAPPING	1995	\$955.0 K
FTRI-027	DRY CLEANING FACILITIES AREA	IRA	SOIL VAPOR TREATMENT	1995	\$1,005.0 K
FTRI-064	FMR BLDG 1090 DISPENSING STATION	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995	TBD
FTRI-065	FMR BLDG 1190 DISPENSING STATION	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995	TBD
FTRI-070	FMR BLDG 2341 DISPENSING STATION	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995	TBD
FTRI-073	BLDG 8360 FUEL OIL UST	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1995	TBD
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF	IRA	BIOREMEDIATION	1996	TBD
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF	IRA	SOIL VAPOR TREATMENT	1996	\$1,000.0 K
FTRI-003	SOUTHWEST FUNSTON LANDFILL	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997	TBD
FTRI-003	SOUTHWEST FUNSTON LANDFILL	FRA	CAPPING	1997	\$338.0 K
FTRI-057	6200 AREA FUEL OIL LINE (ANCHOR)	IRA	WASTE REMOVAL - SOILS	1997	\$230.0 K
FTRI-062	TMP GAS STATION BLDG 388	IRA	FREE PRODUCT RECOVERY	1997	\$637.0 K
FTRI-063	FMR BLDG 1044 DISPENSING STATION	IRA	FREE PRODUCT RECOVERY	1997	\$9.0 K
FTRI-029	OLD INCINERATOR SITE SE- CAMP FUNSTON	IRA	WASTE REMOVAL - SOILS	2000	\$21.0 K
FTRI-036	SOUTHEAST FUNSTON LANDFILL (ANCHOR)	IRA	CAPPING	2000	\$162.0 K
FTRI-038	FORSYTH LANDFILL(S)	IRA	OTHER	2001	\$16.0 K
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	2002	\$544.0 K

Total Environmental Restoration, Army (ER,A) Funding

Prior Funding (Includes BRAC funding from FY04 and prior years):	\$70,451.4 K
Current Requirements:	\$4,129.0 K
Future Requirements:	\$5,108.0 K

IRP Summary

Duration of IRP

Date of IRP Inception: 198312

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201409/201409

Date of IRP completion including Long Term Management (LTM): 202709

IRP Contamination Assessment

Contamination Assessment Overview

The Army initially began environmental restoration-related investigations as a result of the 1982 closure activities of the Southwest Funston Landfill (SFL) where monitoring indicated groundwater contamination.

The installation was evaluated for placement on the NPL with a Hazard Ranking System (HRS) score of 33.8. The placement on the NPL was announced in 1990. An FFA was signed in August 1990 to address the CERCLA and RCRA mandates. Five IRP sites have been designated as OUs:

- FTRI-003 Southwest Funston Landfill,
- FTRI-030 Pesticide Storage Facility,
- FTRI-027 Dry Cleaning Facilities Area,
- FTRI-019 Former Fire Training Area-Marshall Army Airfield, and
- FTRI-031 354 Area Solvent Detections.

These sites have been identified as sites with contamination due to past operational activities which resulted in spills and releases to the environment. The primary contaminants of concern are chlorinated solvents and pesticides.

The SFL was operated from the mid-1950s through 1981. Post-closure monitoring and remedial investigation/feasibility study (RI/FS) sampling efforts detected contaminants such as chlorinated solvents, petroleum hydrocarbons, and metals in the groundwater at low levels. On Aug. 6, 1997, the record of decision (ROD) was signed, and institutional controls and LTM have been implemented.

Prior to 1994, pesticides were stored and mixed at the Pesticide Storage Facility. Pesticides were released to the environment through past operational and disposal practices. Contamination by pesticide and arsenic was the primary concern. A ROD for no further action (NFA) for this site was completed in FY97. A sampling event will be conducted in FY09 to determine if there is residual contamination above actionable levels; if there is none, a remedial action completion report (RACR) will be sought.

The Dry Cleaning Facilities area has two sites with soil and groundwater contamination from dry cleaning operations using PCE. Dry cleaning occurred at Building 180/181 (demolished in 2000) and Building 183 (demolished in 2002). There is minimal contamination at the Building 183 location. The eastern groundwater plume originates at the former site of Building 180/181 with two hotspots: one east of the building centered on a sewer manhole and one at the southwest corner of the building. A utility trench appears to be the conduit for transporting PCE to the west, with the western groundwater plume centered on well DCF02-42. Both plumes move off the terrace into the alluvium and are not degrading Kansas River water quality. The ROD has been signed and a remedial design (RD) / remedial action plan (RAP) has been approved. The alternative of MNA with institutional controls is being implemented. The ROD requires conducting annual groundwater sampling in FY08, FY09, and FY10.

The Former Fire Training Area-Marshall Army Airfield site has contamination as a result of past operational practices. There were petroleum hydrocarbons and PCE present on and off post in the soil and groundwater. Private wells in the area could potentially be affected by the groundwater contamination plume and are being monitored. Two alternative wells were drilled outside the boundaries of the groundwater plume to replace the impacted private wells. The ROD was signed in 2005, and the RD/RAP was approved. The alternative of MNA with institutional controls was put in place. If no contaminants are above the maximum contaminant levels (MCLs) for a period of three years post-ROD, a RACR will be generated. Currently there are no contaminants of concern above the MCLs.

The 354 Area Solvent Detections site has contamination that was discovered during investigations of a POL/UST site. There are volatile organic compounds (VOC) that include PCE, trichloroethylene (TCE), dichloroethylene (DCE), and benzene. The ROD was signed in 2006 and the RD/RAP was approved. The site is in MNA with institutional control. If no contaminants are above the MCLs for a period of three years post-ROD, a RACR will be generated. Currently there are no contaminants of concern above the MCLs in the alluvial aquifer of the Kansas River.

Cleanup Exit Strategy

The principal objectives of the Fort Riley IRP are to protect human health and the environment while working toward the ultimate goal of delisting the installation from the NPL. There is the potential that some of the sites will not reach unlimited use/unrestricted exposure but they will be monitored and under the installation's control. The installation's real property master plan will preclude their utilization for unacceptable land uses. In order to accomplish these objectives, the following efforts have been determined to be essential and must be achieved.

IRP Contamination Assessment

- Conduct LTM for the Operable Units as prescribed in the Proposed Plans (PPs), documented by the RODs, and determined to be required by the analysis of the data from the sampling events.
- Develop RACRs for those OUs that have attained the remedial action objectives defined in the PPs and RODs and no longer have contaminants remaining in situ above actionable levels.
- Perform the five-year review requirements as required under the CERCLA for all sites that may have hazardous substances left in place above the MCLs, have not achieved the remedial action objectives, and/or do not allow for unlimited use and unrestricted exposure based on contaminants above the MCLs.
- Conduct remediation efforts to include long-term management to address fuels-related soil and groundwater contamination at FTRI-063 (1044), 066 (1245), & 068 POL (1637) sites. These three sites are located in Camp Funston, and are covered under FTRI-057 (anchor site).
- FTRI-009 OB/OD has perchlorate and TCE contamination. The site does not have identifiable risks to human health or the environment at this time but requires further monitoring and sampling for two more years. A decision will be required on the disposition of the site after the analysis of the existing data from the monitoring program. This site will remain active for training and emergency disposal of UXO only, per a letter from the KDHE.
- The AGL (FTRI-056) has undergone in-situ treatment for fuels-related soil and groundwater contamination. Monitoring is required to determine the effectiveness of the treatment and if additional remediation is required. Once the soil and groundwater contaminants have reached concentrations that ensure no restrictions on the site's use, closeout approval will be sought.
- Develop the final close-out report to begin the procedures for requesting delisting of the installation from the National Priorities List.

IRP Previous Studies

Year	Title	Author	Date
1993	Remedial Investigation for Remedial Investigation/Feasibility Study Pesticide Storage Facility	Law Environmental	DEC-1993
1994	Remedial Investigation Report for Southwest Funston Landfill	Law Environmental	APR-1994
	Feasibility Study Report for Remedial Investigation/Feasibility Study Southwest Funston Landfill	Law Environmental	APR-1994
	Proposed Plan Southwest Funston Landfill	Fort Riley	NOV-1994
1995	Remedial Investigation Addendum and Feasibility Study Report for Remedial Investigation/Feasibility Study Pesticide Storage Facility	Law Environmental	MAY-1995
	Record of Decision Southwest Funston Landfill	Fort Riley	NOV-1995
1997	Proposed Plan Pesticide Storage Facility	Fort Riley	AUG-1997
	Remedial Investigation Addenda Pesticide Storage Facility	Law Environmental	AUG-1997
	Record of Decision Pesticide Storage Facility	Fort Riley	SEP-1997
2001	Remedial Investigation Report for Former Fire Training Area Marshall Army Airfield	Burns & McDonnell	MAR-2001
2002	Five-Year Review Report	Fort Riley	AUG-2002
2003	Site-Specific Sampling and Analysis Plan Long Term Monitoring Fort Riley Southwest Funston Landfill	Environmental Chemical Corporation	JAN-2003
	Installation-Wide Site Investigation Derived Waste Management Plan for Environmental Investigations at Fort Riley, Kansas	Burns & McDonnell	APR-2003
	Feasibility Study FFTA-MAAF	Burns & McDonnell	SEP-2003
2004	Installation-Wide Sampling and Analysis Plan for Environmental Investigations at Fort Riley, Kansas	Burns & McDonnell	FEB-2004
	Remedial Investigation Addendum for the Dry Cleaning Facilities Area	Burns & McDonnell	APR-2004
	Draft Final Proposed Plan FFTA-MAAF	Burns & McDonnell	MAY-2004
	Abandoned Gas Line, Site Investigation Report AGL Terminus Area	McKinzie	SEP-2004
	Technical Memorandum for Open Burning/Open Detonation Ground Range 16 at Fort Riley, Kansas	Burns & McDonnell	OCT-2004
	354 Area Solvent Detection Site, Feasibility Study Report 354	Burns & McDonnell	DEC-2004
2005	KRBCA Checklists for POL/UST Sites 1044, 1245, & 1637 Fort Riley, Kansas	Burns & McDonnell	FEB-2005
	Feasibility Study Addendum for the Dry Cleaning Facilities Study Area	Burns & McDonnell	MAR-2005

IRP Previous Studies

2005	Title	Author	Date
	Site-Specific Field Sampling Plan for Groundwater, Spring, and Seep Sampling With Addendum - Spring 2005 for Open Burning/Open Detonation Ground (Range 16)	Burns & McDonnell	MAY-2005
	354 Area Solvent Detection Site, Soil-Gas Investigation Report 354 Area Solvent Detection	Burns & McDonnell	MAY-2005
	354 Area Solvent Detection Site, Proposed Plan 354 Area Solvent Detection	Burns & McDonnell	MAY-2005
	Pilot Study Report Pilot Study for Soil Remediation 354 Area Solvent Detections	Burns & McDonnell	JUN-2005
	Site Investigation Work Plans for the Petroleum, Oil, and Lubricant Sites 1044, 1245, & 1637 at Main Post Fort Riley, Kansas	Burns & McDonnell	JUN-2005
	Record of Decision Former Fire Training Area - Marshall Army Airfield	Burns & McDonnell	JUL-2005
	Abandoned Gas Line, Engineering Evaluation/Cost Analysis	McKinzie	AUG-2005
	Community Involvement Plan Fort Riley Superfund Site Fort Riley, Kansas	Fort Riley	AUG-2005
	Action Memorandum Non-Time Critical Removal Action Abandoned Gas Line/Terminus	McKinzie	DEC-2005
2006	Remedial Design/Remedial Action Plan Former Fire Training Area - Marshall Army Airfield	Burns & McDonnell	JAN-2006
	Former Fire Training Area-Marshall Army Airfield, Draft Final Remedial Design/Remedial Action Plan	Burns & McDonnell	JAN-2006
	Work Plan Expanded Site Investigation (Multiple Sites) at Fort Riley, Kansas	Burns & McDonnell	MAY-2006
	Work Plan Removal Action AGL Terminus Area Marshall Army Airfield	McKinzie	JUN-2006
	Record of Decision 354 Area Solvent Detections	Burns & McDonnell	JUN-2006
	Work Plan Removal Action AGL Terminus Area Marshall Army Airfield Fort Riley Kansas	McKinzie	JUN-2006
	Site Specific Sampling Plans for Groundwater Monitoring Activities Building 354	EA Engineering	AUG-2006
	Site Specific Sampling Plans for Groundwater Monitoring Activities Dry Cleaning Facility Area	EA Engineering	AUG-2006
	Site Specific Sampling Plans for Groundwater Monitoring Activities Former Fire Training Area-Marshall Airfield	EA Engineering	AUG-2006
	Quality Control Summary Report June 2006 Sampling Event Pesticide Storage Facility	Corps of Engineers - Kansas City District	AUG-2006
	Work Plan Pilot Study for Soil and Groundwater Remediation DCF Study Area	Burns & McDonnell	SEP-2006
	Quality Control Summary Reports Summer 2006 Sampling Events for the Expanded Site Investigation (Multi-Sites) at Fort Riley, Kansas	Burns & McDonnell	SEP-2006
	2007 Feasibility Study Addendum for the Dry Cleaning Facilities Study Area	Burns & McDonnell	OCT-2006
	Magnetometer Anomaly Investigation Work Plan for the Petroleum, Oil, and Lubricant Sites 1044, 1245, and 1637 at Camp Funston Fort Riley, Kansas	Burns & McDonnell	NOV-2006
2007			

IRP Previous Studies

2007

Title	Author	Date
Draft Final Remedial Design/Remedial Action Plan 354 Area Solvent Detections	Burns & McDonnell	MAR-2007
Magnetometer Anomaly Investigation Report for the Petroleum, Oil, and Lubricant Sites 1044, 1245, and 1637 at Camp Funston Fort Riley, Kansas	Burns & McDonnell	MAR-2007
Quality Control Summary Report for April 2007 Groundwater Sampling Event 354 Site	EA Engineering	MAY-2007
Quality Control Summary Report March 2007 Sampling Event Former Fire Training Area - Marshall Army Airfield	EA Engineering	MAY-2007
Quality Control Summary Report March 2007 Sampling Event Southwest Funston Landfill	Environmental Chemical Corporation	MAY-2007
Design Addendum Investigation Work Plan for the Petroleum, Oil, and Lubricant Sites 1044, 1245, and 1637 at Camp Funston Fort Riley, Kansas	Burns & McDonnell	MAY-2007
Quality Control Summary Report for the April 2007 Groundwater Sampling Event at the Dry Cleaning Facilities Area	EA Engineering	JUN-2007
2007 Annual Sampling Report 354 Solvent Detections Site	EA Engineering	JUL-2007
2007 Annual Sampling Report Dry Cleaning Facilities Area	EA Engineering	JUL-2007
2007 Annual Sampling Report FFTA-MAAF	EA Engineering	JUL-2007
Real Property Master Plan Digest (Institutional Controls)	Black & Veatch	AUG-2007
Long Term Monitoring Report 2007 Southwest Funston Landfill	Environmental Chemical Corporation	SEP-2007
Second Five-Year Review Report Fort Riley, Kansas	Corps of Engineers - Kansas City District	SEP-2007
Quality Control Summary Report Air Site Investigation for the Petroleum, Oil, and Lubricant Sites 1044, 1245, and 1637 Pilot Study Camp Funston Fort Riley, Kansas	Burns & McDonnell	SEP-2007
Quality Control Summary Report August 2007 Groundwater Sampling Event at the Open Burning/Open Detonation (Range 16)	Burns & McDonnell	OCT-2007
Proposed Plan for the Dry Cleaning Facilities Area	Burns & McDonnell	OCT-2007
Quality Control Summary Report for the September 2007 Groundwater Sampling Event at the Dry Cleaning Facilities Area (Pilot Study)	Burns & McDonnell	OCT-2007
2007 Annual Inspection Report Southwest Funston Landfill	Corps of Engineers - Kansas City District	OCT-2007
Reports for Expanded Site Investigation (Multiple Sites) at Fort Riley, Kansas	Burns & McDonnell	OCT-2007
Quality Control Summary Report Air Sample Data for the POL Sites 1044, 1245, and 1637 Pilot Study Camp Funston Fort Riley, Kansas	Burns & McDonnell	NOV-2007

2008

Pilot Study Report for the Dry Cleaning Facilities Area	Burns & McDonnell	JAN-2008
Record of Decision Dry Cleaning Facilities Area	Burns & McDonnell	JAN-2008

FORT RILEY
Installation Restoration Program
Site Descriptions

(this page intentionally left blank)

Site ID: FTIRI-003

Site Name: SOUTHWEST FUNSTON LANDFILL

STATUS

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

Phases	Start	End
PA.....	198312.....	198412
SI.....	198706.....	198909
RI/FS.....	199101.....	199603
RD.....	199510.....	199603
IRA.....	199312.....	199708
RA(C).....	199601.....	199709
LTM.....	199709.....	202709

RIP Date: N/A
RC Date: 199709

SITE DESCRIPTION

The SFL is a closed landfill of approximately 120 acres located in the southern portion of Fort Riley, adjacent to the southwest corner of the Camp Funston cantonment area. From the mid-1950s until 1981, municipal and industrial waste were disposed of here. In 1983, the landfill was closed under a closure plan administered by the KDHE. Following the inspection, the landfill closure was approved by the KDHE in a letter dated 25 Oct. 25, 1983.

Post-closure activities are being performed under the SFL ROD that was signed in 1997. Three components of the remedy addressed the immediate risks of the landfill by implementing access controls, performing river-bank stabilization, and improving the existing cover.

Groundwater monitoring occurred from 1982 to 1983 and from 1992 to 2009. From 1997 to 2006, analysis of the sampling results provided clear evidence of a decreasing trend in the contaminants of concern. In 2006, VOCs were not present at concentrations above MCLs. Two sampling events in 2007 showed the continued presence of vinyl chloride in groundwater in only one well with the concentration near the MCL. The LTM efforts include repair and management of the native grass and soil cover, use of institutional controls to prevent on-site groundwater use, and performance of long-term, annual, groundwater monitoring. An inspection of the landfill is performed annually.

In the five-year review reports in 2002 and 2007, a determination was made that the site does not present a risk to human health and the environment.

A RACR was developed in 2008. The data analyzed indicated no human or ecological health risks exist from exposure to residual contaminants in the groundwater.

The landfill cover and bank stabilization will be maintained to prevent subsidence and erosion by the Kansas River.

CLEANUP/EXIT STRATEGY

Groundwater monitoring will continue on an annual basis until FY12. An RACR will be completed. Prescribed burns will be performed to enhance the native grass cover and to assist with cover inspections. Annual inspections of the bank stabilization structure and cover will be conducted and periodic repair conducted as required. Unnecessary monitoring wells will be removed. Five-year review reports will be required. The next review is planned for 2012.

Site ID: FTRI-009

Site Name: OB/OD GROUND (RANGE 16)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
PA.....	198312.....	198412
SI.....	199111.....	199809
RI/FS.....	199303.....	200409
LTM.....	200410.....	202709

RIP Date: N/A

RC Date: 200409

SITE DESCRIPTION

The OB/OD Ground (Range 16) is used for emergency ordnance disposal and training (no public access is permitted). Historical practices included the use of chlorinated solvents in an open burn area but the practice was discontinued in the early 1980s. In 1993 TCE was detected in the groundwater.

The complex hydrogeology made further characterization necessary. The ephemeral streams were sampled and contaminants of concern were not detected. Interpretation of the data has determined that no contaminants are exiting the site as a result of the complex hydrogeology. An ecological risk-screening evaluation was performed and found low risk to ecological receptors.

Perchlorate was found in 2004. The 2008 sampling event had perchlorate levels at 7.0 micrograms per liter(ug/L) or less. The proposed interim standard is set at 15 ug/L; therefore, the sampling for perchlorate is planned to be discontinued.

Due to the continued presence of TCE in the groundwater, the site will remain in LTM. There will be sampling for VOCs and metals in 2010 and 2011. After analysis of the data from the 2011 sampling event, a course of action will be determined in coordination with the regulatory community.

The site was addressed in the 2002 and 2007 five-year review reports.

CLEANUP/EXIT STRATEGY

Groundwater and surface water monitoring will continue on an annual basis until FY11 when a decision will be made regarding site activities after evaluation of the existing data.

Five-year review reports will be required. The next review is planned for 2012.

Site ID: FTRI-019

Site Name: FORMER FIRE TRAINING AREA FFTA-MAAF

STATUS

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

Phases	Start	End
PA.....	198706.....	198909
SI.....	199111.....	199305
RI/FS.....	199303.....	200509
IRA.....	199411.....	200210
LTM.....	200510.....	201309

RIP Date: N/A
RC Date: 200509

SITE DESCRIPTION

The Former Fire Training Area-Marshall Army Airfield site consists of a former fire training and drum storage area located at Marshall Army Airfield near the installation boundary. The former fire training area consisted of an unlined pit filled with crushed stone. The fire training area operated from the mid 1960s to 1984. In 1982, a drum of PCE was accidentally released into the fire training pit. Efforts were made to recover the spilled material, but only a portion was recovered.

In the 1990s, based on the analysis of samples taken from private wells, off-post groundwater contamination was identified above the MCLs. The impacted private wells have been replaced by new wells drilled outside the groundwater contamination plume. In 1995 a pilot study using soil-vapor extraction and bioventing successfully treated the contaminated soil source.

Since February 2005 all groundwater contaminant concentrations are below their respective MCLs.

The ROD was signed in 2005. The remedy is MNA with institutional controls.

Based on the spring 2009 results having no contaminants of concern above the MCLs in the alluvial aquifer of the Kansas River per the ROD, which specified three years of post-ROD sampling below the MCL, the course of action will be to produce a RACR and cease LTM.

This site was addressed in the five-year review reports completed in August 2002 and in 2007.

CLEANUP/EXIT STRATEGY

Annual groundwater sampling will be conducted in FY10 if groundwater sampling in FY09 exceeds the MCL. A RACR will be filed. The five-year review report is planned for 2012.

Site ID: FTRI-027

Site Name: DRY CLEANING FACILITIES AREA

STATUS

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

Phases	Start	End
PA.....	198312.....	198412
SI.....	198706.....	198909
RI/FS.....	199106.....	200803
IRA.....	199406.....	199502
LTM.....	200803.....	201709

RIP Date: N/A
RC Date: 200803

SITE DESCRIPTION

The former Dry Cleaning Facilities Area (DCFA) is located in the southwest corner of the main post cantonment area, about 800 feet north of the Kansas River. The DCFA operated until 2002. The primary dry cleaning solvent was PCE. Chlorinated solvent contamination above regulatory standards was found in soil and groundwater.

In 1994, a soil-vapor extraction pilot study recovered 20 pounds of PCE. Based on the low yields and minimal impact to groundwater contamination, this technology was determined not viable for this site.

The RI baseline risk assessment indicates minimal risk associated with the site under current and anticipated land use; however, the PCE-contaminated groundwater had degraded the Kansas River alluvial aquifer.

In 2006, a successful pilot study that addressed soil contamination using excavation and land farming was conducted. It also addressed groundwater contamination through enhanced bioremediation and chemical oxidation.

In March 2008 the ROD was approved and had MNA with institutional controls as the selected remedy. The 2010 annual sampling event will conclude the pilot study evaluation.

This site was addressed in the five-year review reports completed in August 2002 and 2007.

CLEANUP/EXIT STRATEGY

Groundwater monitoring will continue on an annual basis through FY10. Five-year review report sampling and a RACR are scheduled for 2012. A final closeout report for all five operable units to facilitate delisting from the NPL will be completed. Five-year review reports will be required in 2012 and 2017, and well abandonment will be conducted.

Site ID: FTRI-030

Site Name: PESTICIDE STORAGE FACILITY (MIXING)

STATUS

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

Phases	Start	End
PA.....	198312.....	198412
SI.....	198706.....	198909
RI/FS.....	199106.....	199709
IRA.....	199312.....	199406
LTM.....	200201.....	202209

RIP Date: N/A

RC Date: 199709

SITE DESCRIPTION

Prior to the mid-1970s, pesticide wastewaters and inadvertent spills that occurred during pesticide mixing were allowed to run onto the ground in the equipment-washing area behind the facility. Sampling conducted in 1983 and 1984 detected pesticide contamination in the soil and in sediments in the lined channel behind the building.

In 1994 a removal action to excavate pesticide-contaminated soil was conducted. An NFA ROD was signed. This decision was based on continued industrial land use and was annotated in the installation master plan for consideration if land use is planned to change.

In August 2002 and 2007, five-year review reports were completed; no changes to the remedy were needed.

In 2009, soil and sediment sampling was conducted, and based on the results of the sampling, a decision was made on whether to produce a close-out document or not.

CLEANUP/EXIT STRATEGY

Based on the results of the 2009 soil and sediment sampling, a decision as to whether to produce an RACR or conduct further testing will be made. The next five-year review is scheduled for 2012.

Site ID: FTRI-031

Site Name: 354 AREA SOLVENT DETECTIONS (354)

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater

Phases	Start	End
PA.....	199111.....	199305
SI.....	199312.....	199507
RI/FS.....	199609.....	200608
LTM.....	200608.....	201209

RIP Date: N/A

RC Date: 200608

SITE DESCRIPTION

Fuel and solvent storage/dispensing occurred near building 354 in the Public Works yard. The USTs were used to store fuel and removed in 1990 and 1991. There are no records to determine if solvents were stored in drums, USTs, or aboveground storage tanks (ASTs). The PCE, its degradation products, carbon tetrachloride, and fuel-related hydrocarbons are present. The site extends from just north of building 430 (the Main Post fire station) to the "point bar" on the north bank of the Kansas River. At building 430, the only contaminant is carbon tetrachloride below the MCL.

In 2004 a pilot study using land farming and potassium permanganate successfully treated the PCE-contaminated soil adjacent to building 367.

Currently, PCE and its degradation products are above the MCLs in groundwater samples in only three terrace wells. They do not pose a risk and do not present an impact to the Kansas River alluvial aquifer. One well in the transition zone has benzene above the MCL.

The ROD was signed and the site remedy is MNA with institutional controls.

Based on the spring 2009 results having no contaminants of concern above the MCLs in the alluvial aquifer of the Kansas River per the ROD, which specified three years of post-ROD sampling below the MCL, the course of action will be to produce a Remedial Action Completion Report (RACR) in FY10 and cease LTM.

This site was addressed in the site-wide five-year review reports completed in August 2002 and 2007.

CLEANUP/EXIT STRATEGY

If the FY09 sampling event does not exceed the MCL then a RACR will be filed. If the groundwater sampling in FY09 exceeds the MCL then an annual sampling event will be conducted in FY10.

The next, and most likely final, five-year review report is planned for 2012.

Well abandonment will be conducted when all monitoring is complete.

Site ID: FTRI-056

Site Name: ABANDONED GASOLINE LINE

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199111.....	199409
SI.....	199408.....	199603
RI/FS.....	199803.....	201209
IRA.....	200609.....	201109

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

The abandoned gasoline line (AGL) terminus area is located west of building 741 on Marshall Army Airfield. The 1.1-mile abandoned steel pipeline associated with this area started at the Union Pacific Railroad line on the main post. In 1951, the pipeline was removed from service after a portion of the line was destroyed during the flooding of the Kansas River. In 1987, the USTs, where various fuels were stored, were removed.

Field investigations in 2001 and 2004 revealed soil and groundwater contamination in the vicinity of the AGL terminus area exceeding risk-based standards for fuels-related contaminants. Sampling along the pipeline did not reveal any contamination.

In 2006 and 2007, a removal action was performed using a chemical oxidant and an oxygen source to enhance bioremediation in the soil and groundwater. In 2007, 2008, and 2009, post-treatment monitoring to analyze the effectiveness was performed. In FY09 a treatment injection was conducted.

CLEANUP/EXIT STRATEGY

There will be two further monitoring events, in FY10 and FY11. A closeout report and well abandonment are scheduled for FY12.

Site ID: FTRI-057
Site Name: 6200 AREA FUEL OIL LINE (ANCHOR)

STATUS

Regulatory Driver: CERCLA
 RRSE: LOW
 Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199010.....	199012
SI.....	199312.....	199502
RI/FS	199606	201409
IRA	199601	201309
RIP Date:	N/A	
RC Date:	201409	

SITE DESCRIPTION

Site FTRI-057 will be retained as an open site to be used for the anchor for the POL UST sites in Camp Funston (FTRI-063, -066, & -068). Sites FTRI-054 and FTRI-062 are being addressed under the Compliance-Cleanup program. They were previously covered under the anchor site. As a result of a pilot study that evaluated dual-phase extraction effectiveness, high levels of soil and groundwater fuels-related contamination and measurable free-product at FTRI-063, 066, and 068 were identified. These sites, which are located in Camp Funston, require further extensive dual-phase extraction and soil-vapor extraction efforts. Camp Funston underwent a massive build-up as a result of new missions and mission changes. This mandates that the contamination at these sites be fully addressed in an expedient manner in order to avoid potential future mission impacts or human health issues.

Site FTRI-063 is the Former Building 1044 Dispensing Station, which consisted of a former fuel dispensing station on the west side of Camp Funston with five 12,000-gallon steel USTs installed in 1942. In July 1990, the tanks were removed along with some of the associated underground piping. Contaminated soil encountered during the removal was excavated and treated, but there is still extensive soil and groundwater contamination.

Site FTRI-066, the Former Building 1245 Dispensing Station, consisted of a former UST area located on the east side of Camp Funston with five 12,000-gallon steel USTs containing fuels that were installed in 1942. In July 1990, the tanks were removed along with some of the associated underground piping. There is extensive soil and groundwater contamination.

Site FTRI-068, the Former Building 1637 Dispensing Station, consisted of a former UST area located in the southeast corner of Camp Funston with seven 12,000-gallon steel USTs, which were installed in 1942 and were used into the 1980s. They originally contained diesel, but prior to removal in 1990, they stored used oil. Approximately 7,200 feet of underground piping may remain in place.

In 2009 a dual-phase extraction system was installed.

CLEANUP/EXIT STRATEGY

The IRA will continue until FY13. Well abandonment and site closure will occur.

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRI-001	CUSTER HILL SANITARY LANDFILL	199308	POST-CLOSURE MONITORING & CARE BEING PERFORMED UNDER RCRA D AND OMA FUNDING.
FTRI-002	WHITSIDE C/D LANDFILL-CLOSED	199803	Landfill closed and inspected by the KDHE in 2002. This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-004	MAIN POST LANDFILL	199712	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-005	CUSTER HILL ROAD RUBBLE DUMP	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-006	DRMO STORAGE AREA	199809	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-007	PCB STORAGE BUILDING 343	198909	This site is part of the overall effort to address improperly closed out sites. It required additional sampling to be conducted in FY08. Received regulatory closure from EPA, Region VII and the KDHE in January 2009.
FTRI-008	PCB STORAGE CONEX (BUILDING 348)	199012	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-010	PESTICIDE (2-4D) UST AT CAMP FUNSTON	199204	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-011	CAMP FUNSTON GW DETECTIONS	200501	Received regulatory closure from the KDHE on 11/9/07 & the EPA, Region VII on 11/26/07.
FTRI-012	WASTE STORAGE DRMO SECONDARY AREA	199509	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-013	ABANDONED VOC TANKS NORTH OF IACH	199202	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-014	HOSPITAL INCINERATOR-IRWIN ACH	198909	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-015	FORMER DRMO LOCATION (DRMO AREA 2)	199509	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-016	WASTE OIL AST-3RD BATTERY	198909	This site is part of the overall effort to address improperly closed out sites.

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-017	WASTE OIL AST-4TH BATTERY	198909	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-018	FIRE TRAINING AREA FACILITY (892)	198909	This site is part of the overall effort to address improperly closed out sites. It required additional sampling to be conducted in FY08. Received regulatory closure from EPA, Region VII and the KDHE in January 2009.
FTRI-020	INDUSTRIAL WASTEWATER SYSTEM (CUSTER HL)	199803	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-022	FORMER WWTP & SLUDGE BEDS (ANCHOR)	200705	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-023	CUSTER HILL WWTP AND SLUDGE BEDS	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-024	FORSYTH WWTP AND SLUDGE BEDS	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-025	MAIN POST WWTP AND SLUDGE BEDS	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-026	RANGE COMPLEX WW LAGOONS	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-028	FMR FIRE TRAINING AREA CAMP FUNSTON	199402	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-029	OLD INCINERATOR SITE SE-CAMP FUNSTON	200308	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-032	IMPACT ZONE	199309	This site is active and therefore ineligible for ER,A funding.
FTRI-033	DOUTHIT RANGE	199305	This site is active and therefore ineligible for ER,A funding.
FTRI-034	IMPACT AREA PERIMETER SMALL ARM RANGES	199612	This site is active and therefore ineligible for ER,A funding.
FTRI-035	NON-IMPACT AREA SMALL ARMS RANGES	200007	Undisturbed ranges were not previously considered for additional investigations/action
FTRI-036	SOUTHEAST FUNSTON LANDFILL (ANCHOR)	200901	This site is part of the overall effort to address improperly closed out sites. It required additional sampling to be

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			conducted in FY08. Received regulatory closure from EPA, Region VII and the KDHE in January 2009.
FTRI-037	OLD WHITSIDE INCINERATOR AREA	199507	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-038	FORSYTH LANDFILL(S)	200708	Received regulatory closure from the EPA, Region VII & the KDHE for IRP in August 2007.
FTRI-039	CONSOLIDATED MAINTENANCE FACILITY	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-040	FORMER OIL TESTING LAB (ANCHOR)	200711	Received regulatory closure from the EPA, Region VII & the KDHE in November 2007.
FTRI-041	FURNITURE REPAIR SHOPS (3)	199507	This site is part of the overall effort to address improperly closed out sites. Two of the three sites received regulatory closure from the EPA, Region VII & the KDHE in 2007. One site (bldg 1605) required additional sampling in FY08 and received regulatory closure from EPA, Region VII and the KDHE in January 2009.
FTRI-042	TAC VEHICLE MAINTENANCE SHOPS	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-043	FORMER GAS STATIONS/GARAGES	199305	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the KDHE in 2008 and the EPA, Region VII in 2009, except one site at Forsyth I Street that was sampled in FY08.
FTRI-044	FORMER ASPHALT PLANT (NEAR BLDG 354)	199509	This site was addressed in the 354 Area Solvent Detections RI/FS/PP and will fall under the ROD developed for FTRI-031.
FTRI-045	PHOTO AND PRINT PLANTS	199507	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-046	FRMR DS/GS Bldg 1693 Adj Areas	199507	This site is part of the overall effort to address improperly closed out sites. It was included under the sampling event in FY08.
FTRI-047	FORMER LIVESTOCK DIPPING FACILITY	200711	Received regulatory closure from the EPA, Region VII & the KDHE in November 2007.
FTRI-048	FORMER PESTICIDES FACILITIES	199507	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-049	MERCURY CONTAMINATION AREAS	199305	This site is part of the overall effort to address improperly closed out sites.

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-050	PCB SPILL AREAS /TRANSFORMER SITES	199803	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-051	BLDG. 727 WASTE PIT	199903	This site is part of the overall effort to address improperly closed out sites. It required additional sampling to be conducted in FY08. Received regulatory closure from EPA, Region VII and the KDHE in January 2009.
FTRI-052	INACTIVE LANDFILLS - CAMP WHITESIDE	199507	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-053	POL TANK FARM	200505	This site has been transferred to the Compliance-Related Cleanup Program.
FTRI-054	CUSTER HILL PX USTS BLDG 5320	199709	This site is part of the overall effort to address improperly closed out sites. It is on hold per a letter from the KDHE-NCDO. It is to be addressed in a new CC site.
FTRI-055	MILFORD LAKE CAMPGROUND/MARINA WELLS	199507	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-059	REMOVE USTS	199012	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-060	MAINPOST PX GAS STATION / 218	199506	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-061	FORMER GAS SERVICE STATION BLDG 354	199510	This site was part of the 354 Area Solvent Detection site ROD.
FTRI-062	TMP GAS STATION BLDG 388	200501	This site is part of the overall effort to address improperly closed out sites. It is to be addressed in a new CC site.
FTRI-063	FMR BLDG 1044 DISPENSING STATION	200501	This site is part of the overall effort to address improperly closed out sites. It is being included in the AEDB-R funding stream and the anchor site is FTRI-057 6200 Area Fuel Oil Line. This site has extensive soil & groundwater contamination. It requires extensive remediation efforts.
FTRI-064	FMR BLDG 1090 DISPENSING STATION	199506	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-065	FMR BLDG 1190 DISPENSING STATION	199506	This site is part of the overall effort to address improperly closed out sites.

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-066	FMR BLDG 1245 DISPENSING STATION	200501	This site is part of the overall effort to address improperly closed out sites. It is being included in the AEDB-R funding stream and the anchor site is FTRI-057 6200 Area Fuel Oil Line. This site has extensive soil & groundwater contamination that requires extensive remediation efforts.
FTRI-067	FMR BLDG 1539 DISPENSING STATION	199708	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-068	FMR BLDG 1637 DISPENSING STATION	200501	This site is part of the overall effort to address improperly closed out sites. It is being included in the AEDB-R funding stream and the anchor site is FTRI-057 6200 Area Fuel Oil Line. This site has soil & groundwater contamination that will require remediation.
FTRI-069	FMR BLDG 1890 DISPENSING STATION	199708	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-070	FMR BLDG 2341 DISPENSING STATION	199601	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-071	FMR BLDG 2345 DISPENSING STATION	199411	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-072	BLDG 8340 FUEL OIL UST	199411	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-073	BLDG 8360 FUEL OIL UST	199505	This site is part of the overall effort to address improperly closed out sites. Received regulatory closure from the EPA, Region VII & the KDHE in 2007.
FTRI-074	WWI INCINERATOR, NW CAMP FUNSTON	200109	A letter requesting site closure has been submitted to the EPA, Region VII and the KDHE for concurrence.

IRP Schedule

Date of IRP Inception: 198312

Past Phase Completion Milestones

1985

PA (FTRI-003 - SOUTHWEST FUNSTON LANDFILL , FTRI-004 - MAIN POST LANDFILL, FTRI-009 - OB/OD GROUND (RANGE 16) , FTRI-023 - CUSTER HILL WWTP AND SLUDGE BEDS, FTRI-024 - FORSYTH WWTP AND SLUDGE BEDS, FTRI-025 - MAIN POST WWTP AND SLUDGE BEDS, FTRI-027 - DRY CLEANING FACILITIES AREA , FTRI-030 - PESTICIDE STORAGE FACILITY (MIXING), FTRI-032 - IMPACT ZONE, FTRI-033 - DOUTHIT RANGE, FTRI-034 - IMPACT AREA PERIMETER SMALL ARM RANGES, FTRI-035 - NON-IMPACT AREA SMALL ARMS RANGES)
 SI (FTRI-032 - IMPACT ZONE)
 RFA (FTRI-008 - PCB STORAGE CONEX (BUILDING 348), FTRI-039 - CONSOLIDATED MAINTENANCE FACILITY)

1989

SI (FTRI-001 - CUSTER HILL SANITARY LANDFILL, FTRI-003 - SOUTHWEST FUNSTON LANDFILL , FTRI-014 - HOSPITAL INCINERATOR-IRWIN ACH, FTRI-022 - FORMER WWTP & SLUDGE BEDS (ANCHOR) , FTRI-023 - CUSTER HILL WWTP AND SLUDGE BEDS, FTRI-024 - FORSYTH WWTP AND SLUDGE BEDS, FTRI-025 - MAIN POST WWTP AND SLUDGE BEDS, FTRI-027 - DRY CLEANING FACILITIES AREA , FTRI-030 - PESTICIDE STORAGE FACILITY (MIXING), FTRI-034 - IMPACT AREA PERIMETER SMALL ARM RANGES, FTRI-035 - NON-IMPACT AREA SMALL ARMS RANGES)
 PA (FTRI-001 - CUSTER HILL SANITARY LANDFILL, FTRI-014 - HOSPITAL INCINERATOR-IRWIN ACH, FTRI-019 - FORMER FIRE TRAINING AREA FFTA-MAAF, FTRI-020 - INDUSTRIAL WASTEWATER SYSTEM (CUSTER HL), FTRI-022 - FORMER WWTP & SLUDGE BEDS (ANCHOR) , FTRI-026 - RANGE COMPLEX VV LAGOONS, FTRI-028 - FMR FIRE TRAINING AREA CAMP FUNSTON, FTRI-029 - OLD INCINERATOR SITE SE-CAMP FUNSTON, FTRI-036 - SOUTHEAST FUNSTON LANDFILL (ANCHOR), FTRI-038 - FORSYTH LANDFILL(S))
 CS (FTRI-007 - PCB STORAGE BUILDING 343, FTRI-008 - PCB STORAGE CONEX (BUILDING 348), FTRI-010 - PESTICIDE (2-4D) UST AT CAMP FUNSTON, FTRI-013 - ABANDONED VOC TANKS NORTH OF IACH, FTRI-016 - WASTE OIL AST-3RD BATTERY, FTRI-017 - WASTE OIL AST-4TH BATTERY)
 DES (FTRI-008 - PCB STORAGE CONEX (BUILDING 348))
 RFA (FTRI-002 - WHITSIDE C/D LANDFILL-CLOSED, FTRI-007 - PCB STORAGE BUILDING 343, FTRI-010 - PESTICIDE (2-4D) UST AT CAMP FUNSTON, FTRI-012 - WASTE STORAGE DRMO SECONDARY AREA, FTRI-013 - ABANDONED VOC TANKS NORTH OF IACH, FTRI-016 - WASTE OIL AST-3RD BATTERY, FTRI-017 - WASTE OIL AST-4TH BATTERY, FTRI-041 - FURNITURE REPAIR SHOPS (3), FTRI-045 - PHOTO AND PRINT PLANTS, FTRI-046 - FRMR DS/GS Bldg 1693 Adj Areas, FTRI-050 - PCB SPILL AREAS /TRANSFORMER SITES)
 ISC (FTRI-018 - FIRE TRAINING AREA FACILITY (892))
 INV (FTRI-018 - FIRE TRAINING AREA FACILITY (892))
 1990
 DES (FTRI-013 - ABANDONED VOC TANKS NORTH OF IACH)
 1991
 ISC (FTRI-059 - REMOVE USTS, FTRI-061 - FORMER GAS SERVICE STATION BLDG 354, FTRI-063 - FMR BLDG 1044 DISPENSING STATION, FTRI-064 - FMR BLDG 1090 DISPENSING STATION, FTRI-065 - FMR BLDG 1190 DISPENSING STATION, FTRI-066 - FMR BLDG 1245 DISPENSING STATION, FTRI-067 - FMR BLDG 1539 DISPENSING STATION, FTRI-068 - FMR BLDG 1637 DISPENSING STATION, FTRI-069 - FMR BLDG 1890 DISPENSING STATION, FTRI-070 - FMR BLDG 2341 DISPENSING STATION)
 INV (FTRI-064 - FMR BLDG 1090 DISPENSING STATION, FTRI-065 - FMR BLDG 1190 DISPENSING STATION)
 CMI(C) (FTRI-008 - PCB STORAGE CONEX (BUILDING 348))
 DES (FTRI-010 - PESTICIDE (2-4D) UST AT CAMP FUNSTON)
 PA (FTRI-057 - 6200 AREA FUEL OIL LINE (ANCHOR))
 IRA (FTRI-066 - FMR BLDG 1245 DISPENSING STATION, FTRI-067 - FMR BLDG 1539 DISPENSING STATION, FTRI-068 - FMR BLDG 1637 DISPENSING STATION, FTRI-069 - FMR BLDG 1890 DISPENSING STATION)
 IMP(C) (FTRI-059 - REMOVE USTS)

IRP Schedule

1992	
CM(C)	(FTRI-010 - PESTICIDE (2-4D) UST AT CAMP FUNSTON, FTRI-013 - ABANDONED VOC TANKS NORTH OF IACH, FTRI-049 - MERCURY CONTAMINATION AREAS)
ISC	(FTRI-054 - CUSTER HILL PX USTS BLDG 5320, FTRI-072 - BLDG 8340 FUEL OIL UST, FTRI-073 - BLDG 8360 FUEL OIL UST)
RFA	(FTRI-049 - MERCURY CONTAMINATION AREAS)
IRA	(FTRI-054 - CUSTER HILL PX USTS BLDG 5320, FTRI-061 - FORMER GAS SERVICE STATION BLDG 354)
1993	
RFA	(FTRI-042 - TAC VEHICLE MAINTENANCE SHOPS, FTRI-048 - FORMER PESTICIDES FACILITIES, FTRI-051 - BLDG. 727 WASTE PIT, FTRI-052 - INACTIVE LANDFILLS - CAMP WHITSIDE)
RI/FS	(FTRI-001 - CUSTER HILL SANITARY LANDFILL, FTRI-028 - FMR FIRE TRAINING AREA CAMP FUNSTON, FTRI-032 - IMPACT ZONE)
SI	(FTRI-004 - MAIN POST LANDFILL, FTRI-006 - DRMO STORAGE AREA, FTRI-015 - FORMER DRMO LOCATION (DRMO AREA 2), FTRI-019 - FORMER FIRE TRAINING AREA FFTA-MAAF, FTRI-020 - INDUSTRIAL WASTEWATER SYSTEM (CUSTER HL), FTRI-026 - RANGE COMPLEX WW LAGOONS, FTRI-028 - FMR FIRE TRAINING AREA CAMP FUNSTON, FTRI-029 - OLD INCINERATOR SITE SE-CAMP FUNSTON, FTRI-033 - DOUTHIT RANGE, FTRI-036 - SOUTHEAST FUNSTON LANDFILL (ANCHOR), FTRI-037 - OLD WHITSIDE INCINERATOR AREA, FTRI-038 - FORSYTH LANDFILL(S), FTRI-047 - FORMER LIVESTOCK DIPPING FACILITY, FTRI-055 - MILFORD LAKE CAMPGROUND/MARINA WELLS)
PA	(FTRI-005 - CUSTER HILL ROAD RUBBLE DUMP, FTRI-006 - DRMO STORAGE AREA, FTRI-011 - CAMP FUNSTON GW DETECTIONS, FTRI-015 - FORMER DRMO LOCATION (DRMO AREA 2), FTRI-031 - 354 AREA SOLVENT DETECTIONS (354), FTRI-037 - OLD WHITSIDE INCINERATOR AREA, FTRI-040 - FORMER OIL TESTING LAB (ANCHOR), FTRI-043 - FORMER GAS STATIONS/GARAGES, FTRI-044 - FORMER ASPHALT PLANT (NEAR BLDG 354), FTRI-047 - FORMER LIVESTOCK DIPPING FACILITY, FTRI-055 - MILFORD LAKE CAMPGROUND/MARINA WELLS)
ISC	(FTRI-053 - POL TANK FARM, FTRI-060 - MAINPOST PX GAS STATION / 218)
CS	(FTRI-002 - WHITSIDE C/D LANDFILL-CLOSED, FTRI-012 - WASTE STORAGE DRMO SECONDARY AREA, FTRI-039 - CONSOLIDATED MAINTENANCE FACILITY, FTRI-041 - FURNITURE REPAIR SHOPS (3), FTRI-045 - PHOTO AND PRINT PLANTS, FTRI-046 - FRMR DS/GS Bldg 1693 Adj Areas, FTRI-048 - FORMER PESTICIDES FACILITIES, FTRI-050 - PCB SPILL AREAS /TRANSFORMER SITES, FTRI-051 - BLDG. 727 WASTE PIT, FTRI-052 - INACTIVE LANDFILLS - CAMP WHITSIDE)
1994	
RA(C)	(FTRI-028 - FMR FIRE TRAINING AREA CAMP FUNSTON)
IRA	(FTRI-030 - PESTICIDE STORAGE FACILITY (MIXING), FTRI-035 - NON-IMPACT AREA SMALL ARMS RANGES, FTRI-060 - MAINPOST PX GAS STATION / 218)
PA	(FTRI-056 - ABANDONED GASOLINE LINE)
INV	(FTRI-070 - FMR BLDG 2341 DISPENSING STATION, FTRI-072 - BLDG 8340 FUEL OIL UST)
ISC	(FTRI-062 - TMP GAS STATION BLDG 388, FTRI-071 - FMR BLDG 2345 DISPENSING STATION)
1995	
IRA	(FTRI-027 - DRY CLEANING FACILITIES AREA)
CAP	(FTRI-064 - FMR BLDG 1090 DISPENSING STATION, FTRI-065 - FMR BLDG 1190 DISPENSING STATION)
INV	(FTRI-060 - MAINPOST PX GAS STATION / 218, FTRI-061 - FORMER GAS SERVICE STATION BLDG 354, FTRI-062 - TMP GAS STATION BLDG 388, FTRI-066 - FMR BLDG 1245 DISPENSING STATION, FTRI-067 - FMR BLDG 1539 DISPENSING STATION, FTRI-068 - FMR BLDG 1637 DISPENSING STATION, FTRI-069 - FMR BLDG 1890 DISPENSING STATION, FTRI-071 - FMR BLDG 2345 DISPENSING STATION, FTRI-073 - BLDG 8360 FUEL OIL UST)
IMP(C)	(FTRI-064 - FMR BLDG 1090 DISPENSING STATION, FTRI-065 - FMR BLDG 1190 DISPENSING STATION, FTRI-071 - FMR BLDG 2345 DISPENSING STATION, FTRI-072 - BLDG 8340 FUEL OIL UST, FTRI-073 - BLDG 8360 FUEL OIL UST)
SI	(FTRI-011 - CAMP FUNSTON GW DETECTIONS, FTRI-031 - 354 AREA SOLVENT DETECTIONS (354), FTRI-044 - FORMER ASPHALT PLANT (NEAR BLDG 354), FTRI-057 - 6200 AREA FUEL OIL LINE (ANCHOR))

IRP Schedule

RI/FS (FTRI-015 - FORMER DRMO LOCATION (DRMO AREA 2), FTRI-037 - OLD WHITSIDE INCINERATOR AREA, FTRI-047 - FORMER LIVESTOCK DIPPING FACILITY, FTRI-055 - MILFORD LAKE CAMPGROUND/MARINA WELLS)

RFI/CMS (FTRI-002 - WHITSIDE C/D LANDFILL-CLOSED, FTRI-012 - WASTE STORAGE DRMO SECONDARY AREA, FTRI-041 - FURNITURE REPAIR SHOPS (3), FTRI-045 - PHOTO AND PRINT PLANTS, FTRI-046 - FRMR DS/GS Bldg 1693 Adj Areas, FTRI-048 - FORMER PESTICIDES FACILITIES, FTRI-052 - INACTIVE LANDFILLS - CAMP WHITSIDE)

1996

INV (FTRI-053 - POL TANK FARM, FTRI-063 - FMR BLDG 1044 DISPENSING STATION)

RD (FTRI-003 - SOUTHWEST FUNSTON LANDFILL)

SI (FTRI-056 - ABANDONED GASOLINE LINE)

RI/FS (FTRI-003 - SOUTHWEST FUNSTON LANDFILL)

IMP(C) (FTRI-070 - FMR BLDG 2341 DISPENSING STATION)

1997

RA(C) (FTRI-003 - SOUTHWEST FUNSTON LANDFILL)

CAP (FTRI-062 - TMP GAS STATION BLDG 388, FTRI-063 - FMR BLDG 1044 DISPENSING STATION, FTRI-066 - FMR BLDG 1245 DISPENSING STATION, FTRI-067 - FMR BLDG 1539 DISPENSING STATION, FTRI-068 - FMR BLDG 1637 DISPENSING STATION, FTRI-069 - FMR BLDG 1890 DISPENSING STATION)

RI/FS (FTRI-004 - MAIN POST LANDFILL, FTRI-030 - PESTICIDE STORAGE FACILITY (MIXING))

IRA (FTRI-003 - SOUTHWEST FUNSTON LANDFILL , FTRI-062 - TMP GAS STATION BLDG 388, FTRI-063 - FMR BLDG 1044 DISPENSING STATION)

INV (FTRI-054 - CUSTER HILL PX USTS BLDG 5320)

1998

RI/FS (FTRI-006 - DRMO STORAGE AREA, FTRI-020 - INDUSTRIAL WASTEWATER SYSTEM (CUSTER HL))

RFI/CMS (FTRI-050 - PCB SPILL AREAS /TRANSFORMER SITES, FTRI-051 - BLDG. 727 WASTE PIT)

SI (FTRI-009 - OB/OD GROUND (RANGE 16))

2000

RI/FS (FTRI-035 - NON-IMPACT AREA SMALL ARMS RANGES)

IRA (FTRI-029 - OLD INCINERATOR SITE SE-CAMP FUNSTON)

2001

SI (FTRI-074 - WWI INCINERATOR, NW CAMP FUNSTON)

IRA (FTRI-036 - SOUTHEAST FUNSTON LANDFILL (ANCHOR), FTRI-038 - FORSYTH LANDFILL(S))

PA (FTRI-074 - WWI INCINERATOR, NW CAMP FUNSTON)

RI/FS (FTRI-038 - FORSYTH LANDFILL(S))

2003

RI/FS (FTRI-029 - OLD INCINERATOR SITE SE-CAMP FUNSTON)

IRA (FTRI-019 - FORMER FIRE TRAINING AREA FFTA-MAAF)

2004

RI/FS (FTRI-009 - OB/OD GROUND (RANGE 16))

2005

LTM (FTRI-011 - CAMP FUNSTON GW DETECTIONS, FTRI-062 - TMP GAS STATION BLDG 388, FTRI-063 - FMR BLDG 1044 DISPENSING STATION, FTRI-066 - FMR BLDG 1245 DISPENSING STATION, FTRI-068 - FMR BLDG 1637 DISPENSING STATION)

RI/FS (FTRI-011 - CAMP FUNSTON GW DETECTIONS, FTRI-019 - FORMER FIRE TRAINING AREA FFTA-MAAF)

CAP (FTRI-053 - POL TANK FARM)

IRP Schedule

2006
RI/FS (FTRI-031 - 354 AREA SOLVENT DETECTIONS (354))
2007
LTM (FTRI-022 - FORMER WWTP & SLUDGE BEDS (ANCHOR) , FTRI-038 - FORSYTH LANDFILL(S))
2008
RI/FS (FTRI-027 - DRY CLEANING FACILITIES AREA)
LTM (FTRI-040 - FORMER OIL TESTING LAB (ANCHOR), FTRI-047 - FORMER LIVESTOCK DIPPING FACILITY)

Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
---------	-----------	--------------	-------------

Final RA(C) Completion Date: 199709

NPL Deletion Date: N/A

Schedule for Next Five-Year Review: 2012

Estimated Completion Date of IRP at Installation (including LTM phase): 202709

FORT RILEY IRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-003	SOUTHWEST FUNSTON LANDFILL	PA						
		SI						
		RI/FS						
		RD						
		IRA						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-009	OB/OD GROUND (RANGE 16)	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF	PA						
		SI						
		RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-027	DRY CLEANING FACILITIES AREA	PA						
		SI						
		RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-030	PESTICIDE STORAGE FACILITY (MIXING)	PA						
		SI						
		RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-031	354 AREA SOLVENT DETECTIONS (354)	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-056	ABANDONED GASOLINE LINE	PA						
		SI						
		RI/FS						
		IRA						

FORT RILEY IRP Schedule

SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-057	6200 AREA FUEL OIL LINE (ANCHOR)	PA						
		SI						
		RI/FS						
		IRA						

IRP Costs

Total Funding through FY 2004: \$63,841.0 K
 Prior Funding

FY	Phase	Site ID	Obligations	FY Total			
2005	LTM	FTRI-003	\$49.0 K	\$2,076.4 K			
		FTRI-009	\$224.2 K				
		FTRI-011	\$21.0 K				
		FTRI-022	\$14.1 K				
		FTRI-040	\$83.2 K				
		FTRI-047	\$40.1 K				
		RAB/TAPP	\$1.4 K				
		RD	FTRI-019		\$46.6 K		
		RI	FTRI-019		\$90.0 K		
			FTRI-027		\$981.4 K		
			FTRI-031		\$79.0 K		
			FTRI-036		\$68.0 K		
			FTRI-053		\$15.0 K		
			FTRI-056		\$22.0 K		
			FTRI-057		\$341.4 K		
		2006	LTM		FTRI-003	\$163.0 K	\$2,189.0 K
FTRI-009	\$140.0 K						
FTRI-019	\$207.0 K						
FTRI-022	\$5.0 K						
FTRI-030	\$20.0 K						
FTRI-031	\$25.0 K						
RAB/TAPP	\$3.0 K						
RD	FTRI-031			\$10.0 K			
RI	FTRI-027			\$458.0 K			
	FTRI-031			\$74.0 K			
	FTRI-036			\$12.0 K			
	FTRI-056			\$386.0 K			
	FTRI-057			\$686.0 K			
2007	LTM			FTRI-003	\$123.0 K	\$1,095.0 K	
				FTRI-009	\$91.0 K		
				FTRI-019	\$65.0 K		
		FTRI-022	\$25.0 K				
		FTRI-031	\$81.0 K				
		RD	FTRI-027	\$2.0 K			
		RI/FS	FTRI-027	\$121.0 K			
			FTRI-036	\$40.0 K			
			FTRI-056	\$140.0 K			
			FTRI-057	\$407.0 K			
2008	LTM	FTRI-003	\$338.0 K	\$1,250.0 K			
		FTRI-009	\$102.0 K				
		FTRI-019	\$71.0 K				

IRP Costs

	FTRI-031	\$79.0 K
	FTRI-040	\$50.0 K
	FTRI-047	\$100.0 K
RAB/TAPP	RAB/TAPP	\$1.0 K
RD	FTRI-027	\$63.0 K
RI/FS	FTRI-027	\$47.0 K
	FTRI-036	\$54.0 K
	FTRI-056	\$15.0 K
	FTRI-057	\$330.0 K

TOTAL PRIOR FUNDING: \$70,451.4 K

Current Requirements

FY	Phase	Site ID	Requirements	FY Total
2009	LTM	FTRI-003	\$147.0 K	\$4,129.0 K
		FTRI-009	\$110.0 K	
		FTRI-019	\$68.0 K	
		FTRI-027	\$61.0 K	
		FTRI-030	\$76.0 K	
		FTRI-031	\$75.0 K	
	RAB	RAB/TAPP	\$2.0 K	
	RI/FS	FTRI-056	\$155.0 K	
		FTRI-057	\$3,435.0 K	

TOTAL CURRENT REQUIREMENTS: \$4,129.0 K

TOTAL FUTURE REQUIREMENTS: \$5,108.0 K

TOTAL PROGRAM COST: \$79,688.4 K

Required Cost-to-Complete

SITE ID	SITE NAME							Out Yrs	Total	
ACTIVITY	Phase	FY10	FY11	FY12	FY13	FY14	FY15			
FTRI-003	SOUTHWEST FUNSTON LANDFILL									
	LTM	100	101	152	766	15			102	1236
Groundwater monitoring and the potential for cover/bank stabilization repairs in out years.								Site Total	1236	
FTRI-009	OB/OD GROUND (RANGE 16)									
	LTM	103	106						264	473
Groundwater monitoring in the out years.								Site Total	473	
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF									
	LTM	118	13	52	108					291
Groundwater monitoring, a RACR, and well abandonment in out years.								Site Total	291	
FTRI-027	DRY CLEANING FACILITIES AREA									
	LTM	67	14	249	26				99	455
Groundwater monitoring, an overall RACR for delisting, and well abandonment in out years.								Site Total	455	
FTRI-030	PESTICIDE STORAGE FACILITY (MIXING)									
	LTM			20						20
FY12 sampling event if warranted after 2009 event results analyzed.								Site Total	20	
FTRI-031	354 AREA SOLVENT DETECTIONS (354)									
	LTM	123		98						221
Groundwater monitoring, a RACR, and well abandonment in out years								Site Total	221	
FTRI-056	ABANDONED GASOLINE LINE									
	RI/FS			50						50
	IRA	25	25							50
Groundwater monitoring, report, and well abandonment in out years.								Site Total	100	
FTRI-057	6200 AREA FUEL OIL LINE (ANCHOR)									
	RI/FS	46	46	46	41	370				549
	IRA	498	485	469	311					1763
O&M of treatment systems through FY13, closure report, & well abandonment in out years.								Site Total	2312	
Totals		1080	790	1136	1252	385			465	5108
								Site Total	5108	

Programmed Cost-to-Complete

SITE ID	SITE NAME		Phase	FY10	FY11	FY12	FY13	FY14	FY15	Out Yrs	Total	
ACTIVITY												
FTRI-003	SOUTHWEST FUNSTON LANDFILL											
	LTM		100	101	152	766	15				102	1236
Groundwater monitoring and the potential for cover/bank stabilization repairs in out years.										Site Total	1236	
FTRI-009	OB/OD GROUND (RANGE 16)											
	LTM		103	106							264	473
Groundwater monitoring in the out years.										Site Total	473	
FTRI-019	FORMER FIRE TRAINING AREA FFTA-MAAF											
	LTM		118	13	52	108						291
Groundwater monitoring, a RACR, and well abandonment in out years.										Site Total	291	
FTRI-027	DRY CLEANING FACILITIES AREA											
	LTM		67	14	249	26					99	455
Groundwater monitoring, an overall RACR for delisting, and well abandonment in out years.										Site Total	455	
FTRI-030	PESTICIDE STORAGE FACILITY (MIXING)											
	LTM				20							20
FY12 sampling event if warranted after 2009 event results analyzed.										Site Total	20	
FTRI-031	354 AREA SOLVENT DETECTIONS (354)											
	LTM		123		98							221
Groundwater monitoring, a RACR, and well abandonment in out years										Site Total	221	
FTRI-056	ABANDONED GASOLINE LINE											
	RI/FS				50							50
	IRA		25	25								50
Groundwater monitoring, report, and well abandonment in out years.										Site Total	100	
FTRI-057	6200 AREA FUEL OIL LINE (ANCHOR)											
	RI/FS		46	46	46	41	370					549
	IRA		498	485	469	311						1763
O&M of treatment systems through FY13, closure report, & well abandonment in out years.										Site Total	2312	
Totals												
			1080	790	1136	1252	385				465	5108
										Site Total	5108	

(this page intentionally left blank)

FORT RILEY
Army Defense Environmental Restoration Program
Military Munitions Response Program

(this page intentionally left blank)

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/RC Sites: 4/2

Installation Site Types with Future and/or Underway Phases

- 1 Landfill
(FTRI-003-R-01)
- 1 Small Arms Range
(FTRI-001-R-02)

Most Widespread Contaminants of Concern

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

Media of Concern

Groundwater, Sediment, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY	Cost
N/A					

Total Environmental Restoration, Army (ER,A) Funding

Prior Funding (Includes BRAC funding from FY04 and prior years): \$1,570.8 K
 Current Requirements: \$0 K
 Future Requirements: \$1,820.0 K

Duration of MMRP

Date of MMRP Inception: 200303
 Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201209/201209
 Date of MMRP completion including Long Term Management (LTM): 201509

MMRP Contamination Assessment

Contamination Assessment Overview

The MMRP manages the environmental and health issues associated with MC and MEC. In 2000, Fort Riley completed the advance range survey followed by an active/inactive (A/I) range inventory in 2002. The closed, transferring, and transferred range/site inventory report was completed in 2003. That report identified the Sherman Heights small arms range (SHSAR) and the Southeast Funston landfill (SEFL) incinerator site as inactive ranges requiring further investigation. In April 2005 the historical records review on these two sites was completed. Site inspection work plan was completed July 1, 2005, and the site inspection was initiated in 2005.

There is a low potential for MEC, MC or UXO at the two sites. Sherman Heights is a small arms range that is wholly contained on the installation. In 1994, lead-contaminated soil was removed from Sherman Heights (Colyer Manor) under CERCLA. The SEFL incinerator site was transferred to the Kansas Department of Wildlife and Parks (KDWP). In 1999, lead contaminated soil and unexploded ordnance were removed from the SEFL incinerator site. In summer 2008, the state of Kansas performed a UXO clearance in association with road construction and found no UXO.

There is a third site near the Camp Forsyth Landfill Area 2 contained in the sandbars within the Republican River. The site contains munitions debris. There have been three occasions where UXO removal or blow-in-place was conducted. The site is on the installation boundary and can be accessed by the general public in a relatively uncontrolled manner.

Cleanup Exit Strategy

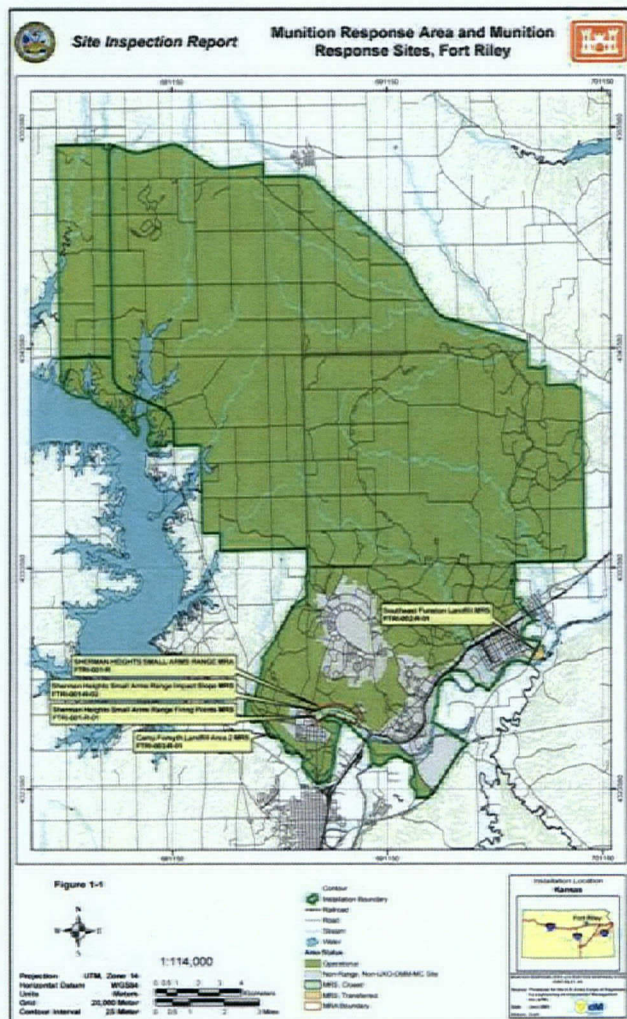
Future actions will be determined on the basis of the results of the RI/FS. MC and MEC soil removal, off-site soil disposal, institutional controls, and monitoring may be required.

MMRP Previous Studies

Year	Title	Author	Date
1993	Action Memorandum for Removal Action Sensitive-Receptor Lead Site - Colyer Manor Area, Fort Riley Military Installation, Fort Riley, Kansas	Fort Riley	DEC-1993
1994	Work Plan for Rapid Response Removal of Contaminated Soils Pesticide Storage Facility and Colyer Manor Sites, Fort Riley, Kansas	OHM Corporation	JAN-1994
	Project Report for Rapid Response Removal of Contaminated Soils Pesticide Storage Facility and Colyer Manor Sites, Fort Riley, Kansas (5 Volumes),	OHM Corporation	JUN-1994
2002	US Army Active/Inactive (A/I) Range Inventory Range Inventory Binder Fort Riley, Kansas	Colorado State University/FORSCOM	MAR-2002
2003	Closed, Transferring, and Transferred Range/Site Inventory Report Fort Riley, Kansas	e2M	OCT-2003
2005	Stakeholder Final of the Military Munitions Response Program Historical Records Review Fort Riley, Kansas	e2m	APR-2005
	Work Plan Military Munitions Response Program Site Inspection Munitions Response Sites Fort Riley - Kansas	e2m	JUL-2005
2006	Site Inspection Report Military Munitions Response Program Site Inspection Fort Riley, Kansas	e2m	MAY-2006

MMRP Installation Map(s)

FORT RILEY MMRP SITE MAP
Map of MMRP Site locations



FORT RILEY
Military Munitions Response Program
Site Descriptions

(this page intentionally left blank)

Site ID: FTIRI-001-R-02
Site Name: SHSAR Impact Slope

STATUS

Regulatory Driver: CERCLA
MRSP Score: 04
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200303.....	200310
SI.....	200406.....	200605
RI/FS.....	200708.....	201012
RD.....	201101.....	201103
RA(C).....	201104.....	201209

RIP Date: N/A
RC Date: 201209

SITE DESCRIPTION

The Sherman Heights Small Arms Range (SHSAR) Impact Slope munitions response area (MRA) covers approximately 50 acres and is located near the Colyer Manor housing area, northeast of Camp Forsyth and is bordered by Sherman Heights to the north and the Republican River to the south. The SHSAR was reportedly operational from the 1880s until about 1945. The SHSAR complex was used primarily as a practice firing range for small arms and machine guns. The ranges that comprised the SHSAR included pistol, 9 millimeter (mm), .22 caliber, .38 caliber, small caliber (sub-caliber) qualification anti-tank and .22 caliber (sub-caliber) anti-aircraft machine gun, .45 caliber, and 4-inch practice mortar ranges. The ranges covered 198.93 acres and overlapped to form an arc-shaped area north of the Republican River. Firing was to the north toward Sherman Heights. This site is the impact area of the SHSAR.

CLEANUP/EXIT STRATEGY

Future actions will depend on the results of the RI/FS. MC and MEC soil removal, off-site soil disposal, and institutional controls may be required.

Site ID: FTRI-003-R-01
 Site Name: Camp Forsyth Landfill Area 2 MRS

STATUS

Regulatory Driver: CERCLA
 MRSPP Score: 04
 Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
 Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	200303.....	200310
SI.....	200406.....	200605
RI/FS.....	200708.....	201104
RD.....	201105.....	201106
RA(C).....	201107.....	201209
LTM.....	201210.....	201509
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

Camp Forsyth Former Landfill Area 2 Munitions Response Site (MRS) (hereinafter referred to as the MRS) lies along the lower southwestern boundary of Fort Riley. The MRS, located in the floodplain of the Republican River known as the Republican Flats, originally covered approximately 26.70 acres and was located between Camp Forsyth on the east and the Republican River on the west. The MRS was identified as a landfill by the USEPA Environmental Monitoring Systems Laboratory in November 1983.

The original MRS footprint was adjacent to a 1,500 foot section of the northern bank of the Republican River. The northern 300 feet of the bank is vegetated and covered with concrete rubble. The remainder of the bank extending approximately 1,200 feet downstream to the next channel bend is undergoing active erosion.

Evidence of erosion and solid waste debris was discovered along the bank of the Republican River following regional flooding during 1993. The Republican River overflowed its banks for approximately 30 days during the 1993 flood. A sand bar in the Republican River, approximately 700 feet downstream from the original MRS footprint, was found to contain significant quantities of UXO in the spring of 1994. Approximately two hundred 3.5- and 2.36-inch rockets, M1 mines, and a variety of small arms ammunition were discovered. The Fort Riley 774th Explosive Ordnance Disposal (EOD) Detachment detonated the rockets and mines in-place during the summer of 1994, and the remaining ordnance was relocated to the Fort Riley EOD Range and properly destroyed.

Due to operational boundary revisions performed by Fort Riley personnel, the actual landfill is now within an operational range and the originally designated MRS footprint area is no longer eligible under the MMRP. Therefore, the footprint of the MRS has been re-designated to include the sandbars and riverbank of the Republican River within the installation boundary and to exclude the operational range area. The MRS encompasses 12.43 acres.

Based on the final SI, further investigation was recommended for MEC and MC.

CLEANUP/EXIT STRATEGY

Future actions will depend on the results of the RI/FS. MC and MEC soil removal, off-site disposal, institutional controls and monitoring may be required.

Response Complete (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTRI-001-R-01	SHERMAN HEIGHTS SMALL ARMS	200605	Made RC after the June 2006 Site Investigation based on no MEC or MC Contamination.
FTRI-002-R-01	SOUTHEAST FUNSTON LANDFILL	200605	Made RC after the June 2006 Site Investigation based on no MEC or MC Contamination.

MMRP Schedule

Date of MMRP Inception: 200303

Past Phase Completion Milestones

2004

PA (FTRI-001-R-01 - SHERMAN HEIGHTS SMALL ARMS , FTRI-001-R-02 - SHSAR Impact Slope, FTRI-002-R-01 - SOUTHEAST FUNSTON LANDFILL, FTRI-003-R-01 - Camp Forsyth Landfill Area 2 MRS)

2006

SI (FTRI-001-R-01 - SHERMAN HEIGHTS SMALL ARMS , FTRI-001-R-02 - SHSAR Impact Slope, FTRI-002-R-01 - SOUTHEAST FUNSTON LANDFILL, FTRI-003-R-01 - Camp Forsyth Landfill Area 2 MRS)

Additional Past Phase Completion Milestones

2003

Preliminary Assessment, Sites FTRI-001-R-01, FTRI-001-R-02, FTRI-002-R-01, FTRI-003-R-01, October

2005

Site Investigation, Sites FTRI-001-R-01, FTRI-001-R-02, FTRI-002-R-01, FTRI-003-R-01, December

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date: 201209

NPL Deletion Date: N/A

Schedule for Next Five-Year Review: 2012

Estimated Completion Date of MMRP at Installation (including LTM phase): 201509

FORT RILEY MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-001-R-02	SHSAR Impact Slope	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY10	FY11	FY12	FY13	FY14	FY15+
FTRI-003-R-01	Camp Forsyth Landfill Area 2 MRS	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

MMRP Costs

Total Funding through FY 2004: \$268.7 K

Prior Funding

FY	Phase	Site ID	Obligations	FY Total
2005	SI	MMRP Sites	\$17.0 K	\$17.0 K
2006	SI	FTRI-001-R-01	\$3.0 K	\$6.0 K
		FTRI-003-R-01	\$3.0 K	
2007	RI	FTRI-001-R-02	\$600.0 K	\$1,236.1 K
		FTRI-003-R-01	\$616.1 K	
	SI	FTRI-003-R-01	\$20.0 K	
2008	RI/FS	FTRI-001-R-02	\$22.0 K	\$43.0 K
		FTRI-003-R-01	\$21.0 K	

TOTAL PRIOR FUNDING: \$1,570.8 K

Current Requirements

FY	Phase	Site ID	Requirements	FY Total
----	-------	---------	--------------	----------

TOTAL CURRENT REQUIREMENTS: \$0 K

TOTAL FUTURE REQUIREMENTS: \$1,820.0 K

TOTAL PROGRAM COST: \$3,390.8 K

Required Cost-to-Complete

SITE ID	SITE NAME		FY10	FY11	FY12	FY13	FY14	FY15	Out Yrs	Total
ACTIVITY	Phase									
FTRI-001-R-02	SHSAR Impact Slope									
	RI/FS	94								94
	RD		26							26
	RA(C)		878							878
RD, soil removal, MEC removal, and institutional controls.									Site Total	998
FTRI-003-R-01	Camp Forsyth Landfill Area 2 MRS									
	RI/FS	74								74
	RD		10							10
	RA(C)		273							273
	LTM				78				387	465
RD, soil removal, MEC removal, institutional controls, and MEC monitoring.									Site Total	822
Totals										
		168	1187		78				387	1820
									Site Total	1820

Programmed Cost-to-Complete

SITE ID	SITE NAME		FY10	FY11	FY12	FY13	FY14	FY15	Out Yrs	Total
ACTIVITY	Phase									
FTRI-001-R-02	SHSAR Impact Slope									
	RI/FS	94								94
	RD		26							26
	RA(C)		878							878
RD, soil removal, MEC removal, and institutional controls.									Site Total	998
FTRI-003-R-01	Camp Forsyth Landfill Area 2 MRS									
	RI/FS	74								74
	RD		10							10
	RA(C)		273							273
	LTM				78				387	465
RD, soil removal, MEC removal, institutional controls, and MEC monitoring.									Site Total	822
Totals										
		168	1187		78				387	1820
									Site Total	1820

Community Involvement

Technical Review Committee (TRC): 199201

Restoration Advisory Board (RAB): RAB established 199709

RAB Adjournment Date: N/A

RAB Adjournment Reason: None

Community Involvement Plan (Date Published): 200509

Additional Community Involvement Information

On Sept. 30, 1997, Fort Riley held its orientation meeting for members of the community who were interested in participating on a RAB. Adjacent landowners, local environmental groups, local college professors, mayors and other public officials, members of the local Chambers of Commerce, and select individuals recommended to the Directorate of Environment and Safety were invited to the orientation meeting by direct mail. Newspaper advertisements and television and radio announcements were also used to announce the formation of the RAB.

Approximately 20 people attended the orientation meeting. If they had not completed and returned an application beforehand, interested community members were asked to complete an application, a biographical information form and a demographic information form. A community co-chair was elected by the community representatives who were in attendance. The low number of applications received at that time made it possible to appoint everyone that applied to be a member of the RAB.

The current RAB members include citizens from Riley and Geary Counties in addition to the USEPA, KDHE, and representatives from the Geary County Extension Office and the city of Ogden (former mayor).

The RAB meets on an as-needed basis or once per year. In July 2004 the RAB members provided public comment on the former fire training area (FTRI-019) PP. The repository was eliminated in Clay Center, KS at Clay Center's request. In 2005 a new community involvement plan was developed. The members also provided public comment on the 354 area solvent detections (FTRI-031) PP.

Two RAB meetings were held in 2007 and RAB meetings also were held in April 2008 and April 2009.

Over the next year RAB members will continue to gain knowledge of Fort Riley's sites and regulatory issues, review documents, provide technical advice, and participate in formal public comment period activities.

Administrative Record is located at

407 Pershing Court
Ft. Riley, KS 66442

Information Repository is located at

Dorothy Bramlage Public Library
230 West Seventh Street
Junction City, KS 66441

Manhattan Public Library
629 Poyntz Avenue
Manhattan, KS 66502

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

TAPP Title: N/A

Potential TAPP: N/A

(this page intentionally left blank)