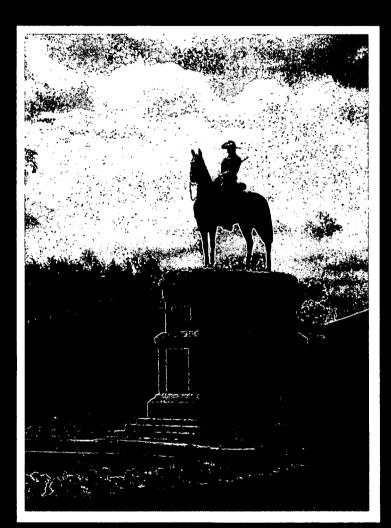
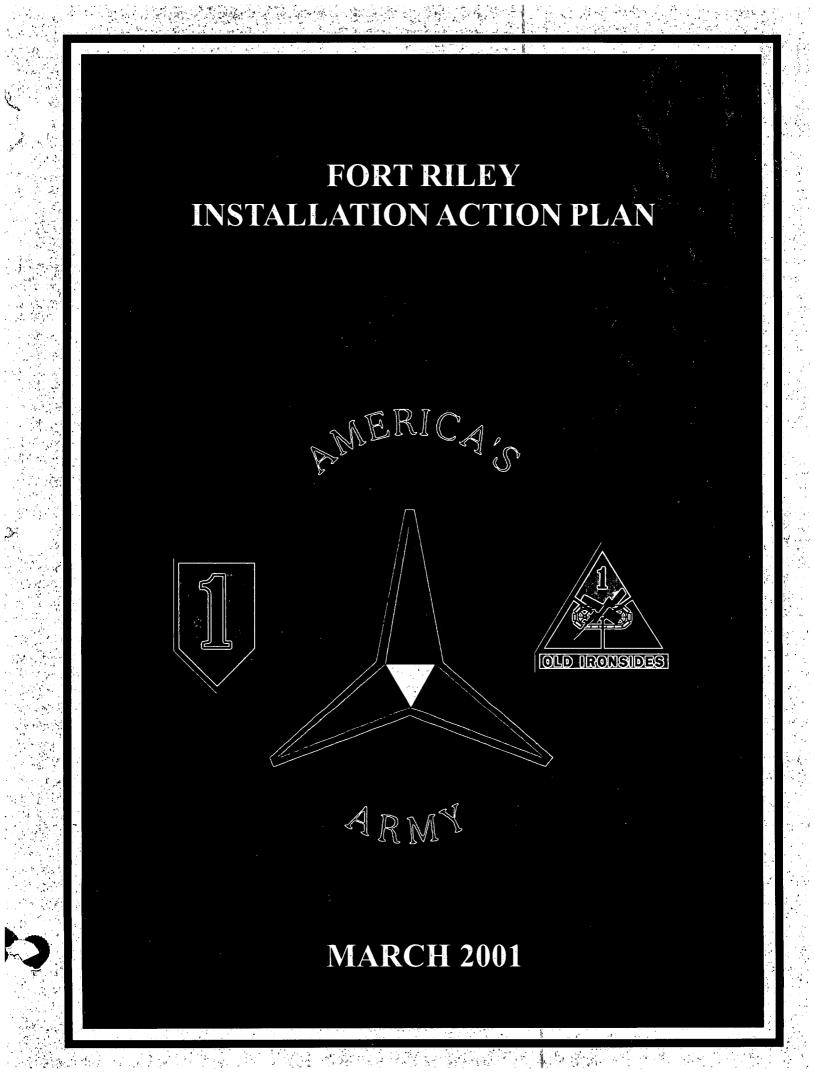
## INSTALLATION RESTORATION PROGRAM INSTALLATION ACTION PLAN



# FORT RILEY MARCH 2001





# PURPOSE

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year restoration program for an installation. The plan will define all Installation Restoration Program (IRP) requirements and propose a comprehensive approach and associated costs to conduct future investigations and remedial actions at each IRP site at the installation and other areas of concern.

In an effort to coordinate planning information between the IRP manager, major army commands (MACOMs), installations, executing agencies, regulatory agencies, and the public, an IAP has been completed for Fort Riley. The IAP is used to track requirements, schedules and budgets for all major Army installation restoration programs.

This Fort Riley IAP was principally developed in June 2000 at a meeting in Overland Park, Kansas. Participants included representatives of Kansas Department of Health and Environment, EPA Region VII, Fort Riley's Restoration Advisory Board, U.S. Army Environmental Center, U.S. Army Forces Command Headquarters, as well as the Fort Riley Directorate of Environment and Safety, the Kansas City District Army Corps of Engineers, and the U.S. Geological Survey. This IAP is updated and submitted to FORSCOM and the Department of the Army annually in the spring.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change. Under current project funding, Fort Riley will have all remedies in place by 2007.

# APPROVAL

## **FORT RILEY**

- Fyle

PHILIP T. POPE COL, INFANTRY Garrison Commander Fort Riley Kansas

# CONCURRENCE

## **FORCES COMMAND**

Fruba

MIKE FRNKA Chief, Environmental Branch HQ FORSCOM

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# **CONTRIBUTORS TO THIS YEAR'S IAP**

## NAME

## ORGANIZATION

Walt Aucott	U.S. Geological Survey
Craig Bernstein	U.S. Environmental Protection Agency, Region VII
Randy Carlson	Kansas Department of Health and Environment
Carol Fittro	Fort Riley, DES
Leland Fuerst	U.S. Army Corps of Engineers, Kansas City District
Tina Gassen	Dynamac Corporation/Fort Riley
Tiffany S. Gates-Tull	U.S. Army Forces Command, IRP Support
Kathy Brown George	Fort Riley Community Restoration Advisory Board Co-Chair
Michael Greene	U.S. Army Corps of Engineers, Kansas City District
George Gricius	U.S. Army Forces Command
Kevin Higgins	Tech Law, support to USEPA Region VII
Donald Hooker	U.S. Army Corps of Engineers, Kansas City District
Joe King	U.S. Army Environmental Center
Kim Mulhern	U.S. Army Corps of Engineers, Omaha District
Nathan Myers	U.S. Geological Survey
Craig Phillips	Fort Riley, DES
Cynthia Randall	Kansas Department of Health and Environment
Debora Richert	Fort Riley, Director of DES
Richard Van Saun	U.S. Army Corps of Engineers, Kansas City District
Janet Wade	Fort Riley, DES

# **ACRONYMS & ABBREVIATIONS**

AC/RC	Active Component/ Reserve Component
AEC	Army Environmental Center
AOC	Area of Concern
AR	Administrative Record
AST	Aboveground Storage Tank
Bldg	Building
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CA	Corrective Action
CAP	Corrective Action Plan
CC	Construction Cost
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CENWK	U.S. Army Corps of Engineers, Kansas City District
CMI	Corrective Measure Implementation
CMS	Corrective Measure Study
CY	Cubic Yards
DA	Department of Army
DASA(ESOH)	Deputy Assistant Secretary of Army (Environmental Safety and Occupational Health)
DCE	Dichloroethyene / Dichlorothene
DCF	Dry Cleaning Facilities
DD	Decision Document
DOH	Directorate of Engineering and Housing (now Public Works)
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DES	Directorate of Environment and Safety
DM	Decision Memorandum
DOD	Department of Defense
DOL	Directorate of Logistics
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DSERTS	Defense Sites Environmental Restoration Tracking System
DS/GS	Direct Support / General Support
EE/CA	Engineering Evaluation/Cost Analysis
EPA	United States Environmental Protection Agency
ER,A	Environmental Restoration, Army (formally known as DERA)
FFA	Federal Facility Agreement
FORSCOM	U.S. Army Forces Command
FS	Feasibility Study
FTRI FY	Fort Riley Fiscal Yéar
GW	Groundwater
GMS	Groundwater Modeling System
HRS	Hazard Ranking Score
HW	Hazardous Waste
IAP	Installation Action Plan
IAG	Interagency Agreement
IFI	Initial Field Investigation
IR	Information Repositories
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IWSA	Installation Wide Site Assessment
JP-4	Jet Propellant Number Four
JP-8	Jet Propellant Number Eight

# **ACRONYMS & ABBREVIATIONS**

#### LIST OF ACRONYMS AND ABBREVIATIONS CONTINUED...

KDHE	Kansas Department of Health and Environment
KDWP	Kansas Department of Wildlife and Parks
KSU	Kansas State University
LTM	Long Term Monitoring
LTO	Long Term Operation
MAAF-FFTA	Marshall Army Airfield - Former Fire Training Area
MATES	Mobilization and Training Equipment Site
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NE	Not Evaluated
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NOV	Notice of Violation
NPL	National Priorities List
OB/OD	Open Burning / Open Detonation
OMA	Operations and Maintenance - Army
OU	Operable Unit
OWS	Oil and Water Separator
PA	Preliminary Assessment
PAOC	Potential Areas of Concern
PCB	Polychlorinated Biphenyls
PCE	Perchloroethylene, Perchloroethene (Tetrachloroethylene/Tetrachoroethene)
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
PPB	Parts Per Billion
PPM	Parts Per Million
PSF	Pesticide Storage Facility
PW	Public Works
PX	Post Exchange
PY	Prior Year
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RAP	Remedial Action Plan
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
S&A	Supervision and Administration
SARA	Superfund Amendments and Reauthorization Act
SE	Southeast
SFL	Southwest Funston Landfill
SEFL	Southeast Funston Landfill
SI	Site Inspection or Site Investigation
S&R	Supervision and Review

# **ACRONYMS & ABBREVIATIONS**

#### LIST OF ACRONYMS AND ABBREVIATIONS CONTINUED...

STP	Sewage Treatment Plant
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TCE	Trichloroethylene, Trichloroethene
TCLP	Toxicity Characteristic Leachate Procedure
TMP	Transportation Motor Pool
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine (formerly AEHA)
USAEC	United States Army Environmental Center
USATHAMA	United States Army Toxic and Hazardous Materials Agency (now AEC)
USGS	United States Geological Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWTP	Wastewater Treatment Plant

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# SUMMARY

Fort Riley was placed on the National Priorities List in 1990. HRS Score is 33.8 which exceeds the 28.5 minimum score for listing on the NPL. 71 DSERTS sites Active ER, A Eligible Sites 18 53 **Response Complete Sites** STATUS: 19 11 Spill Site Areas Underground Tank Farms Landfills 7 4 Storage Areas NUMBER OF DSERTS SITES: 4 Sewage Treatment Plants 4 Above Ground Storage Tanks 3 Contaminated Groundwater Sites 3 Fire Training Areas 3 Incinerators 2 **Pesticide Shops** 2 Surface Impoundments/Lagoons 2 Small Arms Range **DIFFERENT SITE TYPES:** 1 Surface Disposal Area 1 Disposal Pit/Dry Well **Firing Range** ł Dip Tank 1 1 Explosive Ordnance Disposal Area 1 Industrial Discharge Site Unexploded Munitions/Ordnance Area 1 Chlorinated solvents, Pesticides, Petroleum hydrocarbons, Metals Soil, Groundwater, Surface Water REM - Excavation of lead contaminated soils at FTRI-035 (FY94) (Construction Cost (CC) = \$533,000) CONTAMINANTS OF CONCERN: REM - Excavation of pesticide contaminated soils at FTRI-030 (FY94) (CC = \$788,000) **MEDIA OF CONCERN:** REM - Replacement of leaking sewers at FTRI-027 (FY94 & FY96) (CC = \$100,000) • • REM - Numerous UST removals (FY90 - 95) (CC = \$1,500,000) COMPLETED REM/IRA/RA: ٠ REM - Bank stabilization and landfill cover repair and cover improvement at FTRI-003 (FY94 and FY96) (CC = \$4,000,000) Pilot Study - Soil vapor extraction at FTRI-027 (FY95) (CC = \$500,000) Pilot Study - Soil vapor extraction and bio-venting at FTRI-019 (FY95) (CC = \$900,000) REM - Fuel lines and contaminated soil removed at FTRI-057 (FY96-97) (CC = \$2,300,000) REM - Free Product Recovery at FTRI-062 and -063 (FY95) (CC = \$37,500) REM - Soil Removal at FTRI-029 FY99 and FY00 (CC=\$269,585) REM - Cover Improvement at FTRI-036 FY99 and FY00 (CC=\$348,968) REM - River Bank Stabilization at FTRI-038 FY00 (CC-\$826,743) **CURRENT IRP PHASES:** RI/FS (11 sites) IRA (3 sites) LTM (6 sites) **PROJECTED IRP PHASES:** RI/FS (0 sites) IRA (2 site) RD (2 sites) RA (2 sites) RA (O) (2 sites) LTM (10 sites) IDENTIFIED POSSIBLE REM/IRA/RA: Groundwater treatment at FTRI-019, 027, 031 (in addition to current) Soil/pipeline removal at FTRI-031, 056 PRIOR YEAR THROUGH 1999: 48,250,000 FUNDING: \$ FY 2000: 3,567,600 S FY 2001: \$ 3,429,000 FUTURE REQUIREMENTS: \$ 28,287,000 \$ TOTAL: 83,532,000 1989 YEAR OF IRP INCEPTION: **DURATION:** YEAR OF IRP COMPLETION EXCLUDING LTM (Remedy in Place): 2007 YEAR OF IRP COMPLETION INCLUDING LTM: 2034 Fort Riley - Installation Action Plan

Summary - Page 1

# **INSTALLATION INFORMATION**

#### LOCALE

Fort Riley is located on 100,671 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. Fort Riley is west of Manhattan (population 38,000). Milford Reservoir bounds part of the western side of the installation.

#### **COMMAND ORGANIZATION**

#### MAJOR COMMAND:

United States Army Forces Command (FORSCOM)

#### INSTALLATION:

Fort Riley, Directorate of Environment and Safety (DES)

#### **IRP EXECUTING AGENCY**

- · U.S. Army Corps of Engineers, Kansas City District
- · U.S. Geological Survey, Kansas District

#### **REGULATOR PARTICIPATION**

FEDERAL: U.S. Environmental Protection Agency (EPA), Region VII

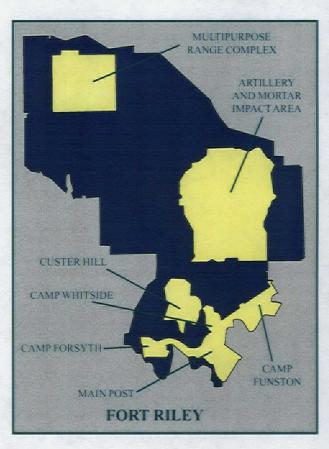
STATE: Kansas Department of Health and Environment (KDHE), Bureau of Environmental Remediation and Bureau of District Operations

#### **REGULATORY STATUS**

- · NPL Installation (entire installation), 1990, CERCLIS Site KS6214020756
- · CERCLA/RCRA Federal Facility Agreement (FFA or IAG), Effective June 1991
- RCRA-Part B Permit (1998)
- No Notices Of Violations have been issued for any of Fort Riley's IRP sites

#### **MAJOR CHANGES TO ACTION PLAN FROM PREVIOUS YEAR (FY 00)**

- Performed additional RI field investigations at 354 Area Solvent Detection Site (FTRI-031) and revised schedule
- Prepared RI Report for MAAF (FTRI-019) and revised schedule
- Performed additional investigations at DCF Area (FTRI-027)
- Performed removal action to stabilize river bank at Forsyth Landfill Area 2 (FTRI-038)



# **INSTALLATION DESCRIPTION**

#### LOCATION

Fort Riley is located in the Flint Hills region of Kansas along I-70 about 125 miles west of Kansas City, between Junction City and Manhattan. As the fourth largest employer in the state of Kansas, Fort Riley's economic impact exceeded \$577,366,000 in FY 2000. Fort Riley has a daytime population of over 22,000 and is home to over 3,000 families. This population makes Fort Riley the 16th largest city in Kansas. The reservation covers 100,671 acres, of which 70,926 acres are used for maneuver training.

#### HISTORY

In an 1843 expedition, Captain John C. Fremont, "The Pathfinder," camped at the junction of the Smoky Hill and Republican Rivers. He reported great numbers of elk, antelope and Indians. Within a few years, the "Great Migration" along the Oregon Trail and trade along the Santa Fe Trail brought thousands of pioneers through Indian Territory, as Kansas was formerly known.

In 1852, Major E.A. Ogden established a temporary camp north of the Kansas River in the area where Fort Riley's Main Post is now located. The encampment was originally known as "Camp Center" because it was thought to be the geographic center of the United States. A permanent post was authorized the following year and the new installation was named Fort Riley in honor of Major General Bennet Riley, who had been a distinguished veteran of the Mexican War and commander of the first military escort along the Santa Fe Trail. Fort Riley was designated a Cavalry Headquarters in 1885 resulting in the post becoming known as the "Cradle of the Cavalry." Fort Riley stood as the major horse cavalry training school in our country and boasted a position as one of the best cavalry training schools in the world.

Fort Riley has trained and deployed military forces in virtually every major war of our nation's history.

For over 30 years, Fort Riley was home to the 1st Infantry Division, but world-wide commitments resulted in the 1st Infantry Division Headquarters deploying to Wuerzburg, Germany, in 1996. In 1999, Fort Riley became the headquarters of the 24th Infantry Division (Mech). Currently, Fort Riley is home to two combat brigades (1st Brigade, 1st Infantry Division, Mechanized and 3rd Brigade, 1st Armored Division) and an engineer group (937th).

The post has always been an integral part of the state of Kansas and American military history and is known as the "Home of America's Army."

#### MISSION

The 24th Infantry Division and Fort Riley provides training, readiness, and deployment support for two Brigade Combat Teams and one Engineer Group; serves as higher headquarters providing Training/Readiness Oversight, pre-and post-mobilization training and mobilization validation for three enhanced Separate Brigades; provides planning, mobilization, validation and demobilization for Active Components (AC) and Reserve Component (RC) units and individuals; and provides exemplary well-being for soldiers, civilians and their families.

The Directorate of Environment and Safety's (DES) Mission is to protect life, property, and natural resources for use today and in the future, by integrating environment and safety programs with Fort Riley missions.

# **CONTAMINATION ASSESSMENT**

The Army initially began environmental restoration-related investigations as a result of the 1981 closure of the Southwest Funston Landfill where monitoring indicated groundwater contamination. Also, practices at a pesticide facility prior to the mid 1970's resulted in contamination in the soils and in sediments in the drainage way behind the building.

Fort Riley's placement on the National Priorities List was announced on 30 August 1990 with a Hazard Ranking System (HRS) score of 33.8. The minimum HRS score for NPL listing is 28.5. A Federal Facilities Agreement (FFA or IAG) was signed by the DASA (ESOH) and the 1st Infantry Division Commander in August, 1990. The Kansas Department of Health and Environment (KDHE) and the U. S. Environmental Protection Agency (USEPA or EPA) signed this agreement in February, 1991. The IAG, which incorporates both Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Resource Conservation and Recovery Act (RCRA) actions, became effective in June 1991. Project schedules are re-negotiated annually based on available resources or as needed due to project requirements.

Five IRP sites have been designated as Operable Units (OUs). Three OUs are currently the subject of Remedial Investigation / Feasibility Studies. Three Removal Actions were performed in 1994 with additional phases performed in FY95 at one site. Removal Actions were performed in FY99 and FY00 at 3 additional sites. Removal Actions have been completed at seven sites (FTRI-003, FTRI-029, FTRI-030, FTRI-057, FTRI-035, FTRI-036 and FTRI-038). An Installation-Wide Site Assessment was performed in 1993 to identify additional potential areas of concern and several sites were investigated in phases under the Multiple Sites Investigations project. Two of these sites were designated as Operable Units in FY95 including one (FTRI-019) which is adjacent to the installation boundary and contamination is known to exist off post. Many of the sites have been determined to require no further action, while several warranted further investigation and/or action.

The Five Operable Units (OUs) are: FTRI-003 Southwest Funston Landfill (SFL), FTRI-030 Pesticide Storage Facility (PSF), FTRI-027 Dry Cleaning Facilities (DCF), FTRI-019 Marshall Army Airfield - Former Fire Training Area (MAAF-FFTA), and FTRI-031 354 Area Solvent Detections site (354-Solvent). These sites have been identified as sites with significant contamination due to past operational activities resulting in spills and releases to the environment. The primary contaminants of concern are chlorinated solvents and pesticides.

The Southwest Funston Landfill was operated from the mid-1950's through 1981. Post-closure monitoring and RI/FS sampling detected contaminants such as chlorinated solvents, petroleum hydrocarbons, and metals in the groundwater at low levels. A Removal Action was completed to stabilize the Kansas River bank and to reduce infiltration through the cover. The ROD was finalized in FY96. Institutional controls and long-term monitoring have been implemented.

Pesticides stored and mixed at the former PSF are believed to have been released to the environment through past operational and disposal practices. Pesticide and arsenic contamination in soils was the primary concern. A Removal Action to excavate and dispose of contaminated soils was taken in FY94. The RI/FS and a ROD for No Further Action for this site was completed in FY 97. Because residual contamination is still present, five-year reviews will be conducted per the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Per the IAG, Fort Riley is subject to stipulated penalties assessed by the EPA. If a deadline for a primary document is not met, stipulated penalties may be assessed. In June 1993, the Draft Final RI Report for the Pesticide Storage Facility was not submitted on its scheduled date. In December 1993, EPA assessed a penalty of \$65,000. Fort Riley disputed the method used to determine the amount assessed. A Dispute Agreement reduced the monetary penalty to \$34,000 and the completion of three removal actions (SFL Bank Stabilization, PSF & Colyer Manor). The penalty was paid in FY97.

Perchloroethylene (PCE) has been used at the adjacent former and current Dry Cleaning Facilities. Organic contamination of soils, sediments and groundwater was confirmed in a Preliminary Assessment / Site Investigation (PA/SI) completed in the fall of 1992. Regulatory approval was received on RI/FS planning documents, and RI field activities occurred in the fall of 1993. A Pilot Study for soil vapor extraction was successful in removing most of the soil contamination (therefore, a formal

Removal Action was not performed). Following review of the RI and the Draft FS it was determined, in concert with EPA and KDHE, that additional characterization of the adjacent alluvial aquifer ("The Island") was warranted. "The Island" characterization was performed in the spring of 1996. The RI was approved in April 1996 and the FS completed in April 1998. The proposed remedy included a Long Term Monitoring (LTM) program focused on the Kansas River and the associated alluvial groundwater, institutional controls, and required periodic reviews as well as a contingency to develop and implement a future response action if neccessary. Proposed plans were submitted in 1998. EPA and KDHE invoked dispute resolution over ARARs which were resolved. A revised Proposed Plan was submitted in May 1999, but new groundwater data in a downstream location prompted additional review of the site by EPA and KDHE. Soil and groundwater screening was performed in the Fall of 2000.

Extensive site characterization was performed at the FFTA-MAAF site under the Site Investigation. A pilot study was conducted to address soil contamination in the vicinity of the FFTA in FY94-95. Additional groundwater investigations were conducted in FY97-99 to further characterize the off-post groundwater plume. Private wells in the area have been monitored. A Removal Action Engineering Evaluation/Cost Analysis (EE/CA) was prepared which recommended providing an alternate water source to two impacted property owners and an Action Memorandum was prepared. Access to the property has not been granted by the owners to implement this action. A tracer study and a natural attenuation evaluation were performed in FY99-00. The RI Report was prepared in FY00 to delineate and refine the fate and transport estimation. The FS Report will be completed in FY01.

The 354 Area Solvent Detections site was discovered during investigations of a POL/UST site. Initial field investigations were conducted in 1997 which defined the eastern limit of contamination. The RI/FS Workplans were developed and received regulator approval in FY98. RI field investigations were initated in FY99 and continued in FY00 which identified a significantly larger area of contamination than anticipated. Additional data needs have been identified and additional RI investigations performed.

The Installation-Wide Site Assessment was performed in 1992 and the results presented in the Draft Final Installation-Wide Site Assessment (IWSA) for Fort Riley, Kansas, dated 7 December 1992 and revised on 16 February 1993. It identified 25 groups of potential areas of concern (PAOC), with 23 sites being identified for further Site Investigations. Contaminants associated with these sites vary greatly from potentially lead-contaminated soils at old firing ranges to potential releases of solvents due to practices at furniture repair shops. The IWSA was conducted consistent with EPA requirements for Preliminary Assessments under CERCLA. Based on EPA's Preliminary Assessment (PA) methodology, potential risk posed by the PAOCs was estimated using the Hazard Ranking System (HRS). The IWSA identified PAOCs subject to RCRA corrective actions and/or CERCLA where a release of hazardous substances to the environment has occurred or is considered likely, where migration pathways from the site exist, and where potential receptors are known to exist. Specifically, 23 PAOCs were identified and evaluated using the HRS PA SCORE methodology. As outlined in the NCP, the results of the PA were used to identify sites requiring further investigation of SI's.

These PAOCs were addressed under the Multiple Site Investigations project which is further broken down into groupings including the Sensitive Receptor Lead Sites, the "High Priority" Sites, and the "Other Sites". The Sensitive Receptor Lead Sites were expedited due to the accessibility of the areas to the general public (especially children). Only one area near the Colyer Manor Family Housing Area was identified as having elevated levels of lead in the soils, and a removal action involving excavation and disposal of soils was performed. The High Priority Sites field investigations were completed in November, 1993. Results are indicated in the following site contamination summaries. The Former Fire Training Area, Marshall Army Airfield (FFTA-MAAF) was broken out as a separate site because of the magnitude of detected contamination and off-post contamination. The "Other Sites" grouping consisted of 14 sites which had very low PA HRS scores and have a low potential for release of contaminants to the environment. Field work for these "Other" sites occurred in the spring and summer 1994. A joint review of the Multiple Sites with EPA & KDHE in the summer of 1995 resulted in concurrence on the designation of two sites as formal Operable Units (MAAF-FFTA and 354-Solvent), on the recommendations of No Further Action on numerous sites, and identified several sites which warranted additional characterization or action. The Forsyth Landfill Area 2 and the Southeast Funston Landfill and Incinerator and the OB/OD range required additional work. No Further Action Decision Memoranda for many of the Multiple Sites have been prepared.

Phase I and II Site Investigations were completed at seven POL UST sites from 1992 to 1995. Remedial Action Plans were prepared for these sites and submitted to KDHE in FY97. KDHE placed 5 sites into LTM status and 2 sites were approved for NFA. Workplans for investigation of the Abandoned Gas Line (FTRI-056) and POL Tank Farm were completed in FY98 and FY99, respectively; field work will begin in FY01.

Title	Author	Date
Installation Assessment of the Headquarters, 1st Infantry Division (Mechanized) and Fort Riley, KS	Environmental Science and Engineering (for USATHAMA)	June-1983
Evaluation of Solid Waste Management Units, Fort Riley, KS	Army Environmental Hygiene Agency	June-1989
Installation-Wide Site Assessment	Louis Berger & Associates	Dec 1992 w/ Feb 1993 revisions
Impact Area Site Assessment Report	Louis Berger & Associates	March-1993
Site Investigation Report for High Priority Sites	Louis Berger & Associates	February-1994
Site Investigation Report for "Other Sites"	Louis Berger & Associates	April-1995

#### Southwest Funston Landfill (OU 001)

	Law Environmental, Ft. Riley DEH,	Jul 1993 w/ Aug1993
Engineering Evaluation / Cost Analysis w/ August 1993 Supplement	Environmental and Natural Resources Division	Supplement
Remedial Investigation Report	Law Environmental	April-1994
Feasibility Study Report	Law Environmental	April-1994
Proposed Plan	Law Environmental	November-1994
Record of Decision	Law Environmental / Ft Riley DES	December-1995
Operation and Maintenance Plan	Kansas City District, Corps of Engineers	September-1996
Longterm Groundwater Monitoring Plan	Kansas City District, Corps of Engineers	January-1997
Removal Action Report	Kansas City District, Corps of Engineers	June-1997
Institutional Controls Plan	Ft. Riley DES	November-1997
Annual Monitoring Report, Dec 1995 - Nov 1996	U.S Geological Survey, Lawrence, Kansas	August-1997
Annual Monitoring Report, 1997	U.S Geological Survey, Lawrence, Kansas	September-1998
Annual Monitoring Report, 1998	U.S Geological Survey, Lawrence, Kansas	September-1999
See Camp Funston Area Groundwater for USGS Modeling Report		

Title	Author	Date
Pesticide Storage Facility (OU 002)		
	Ft. Riley DEH, Environmental and Natural	
Engineering Evaluation / Cost Analysis	Resources Division	August-1993
		Jul 93 w/ Dec 93
Remedial Investigation	Law Environmental	revisions
		Jun 1997 w/ Aug 1997
Remedial Investigation Addenda	Law Environmental	revisions
Record of Decision	Law Environmental / Ft Riley DES	September-1997
Proposed Plan	Ft Riley, DES	August-1997
Land Use Management Plan	Ft Riley, DES	July-1999

#### Dry Cleaning Facilities, OU 003

Remedial Investigation Report	Louis Berger & Associates	March-1995
Draft Final Remedial Investigation Addendum / Monitoring Expansion Report	Louis Berger & Associates	April-1998
Draft Final Feasibility Study Report	Louis Berger & Associates	April-1998

#### Former Fire Training Area, Marshall Army Airfield, OU 004

Expanded Site Investigation Sampling and Analysis Plan (includes reporting of data to-date)	Louis Berger & Associates	May-1994
Site Investigation Report	Louis Berger & Associates	Aug 1995 w/ revisions
Pilot Study Report	Louis Berger & Associates	March-1999
Remedial Investigation / Feasibility Study Work Plan	Burns & McDonnell	April-1997
Engineering Evaluation / Cost Analysis, Exposure Control Action	Louis Berger & Associates	December-1997
Action Memorandum, Exposure Control	Louis Berger & Associates	April-1998
Institutional Control Evaluation	DPRA	June-2000
Remedial Investigation Report	Burns & McDonnell	October-2000

Title	Author	Date	
354 Area Solvent Detection Site, OU 005			
Preliminary Evaluation of Data	Kansas City District, Corps of Engineers	June-1995	
Initial Field Investigations Sampling and Analysis Plan	Burns & McDonnell	July-1997	
Initial Field Investigations Report	Burns & McDonnell	March-1998	
RI/FS Work Plan	Burns & McDonnell	January-1999	
Monitoring Well Installation Report	Kansas City District, Corps of Engineers	May-2000	
RI/FS Work Plan Addendum	Burns & McDonnell	July-2000	

#### Custer Hill Sanitary Landfill (activities performed under DERA only)

Data Summary and Evaluation Report	Kansas City District, Corps of Engineers	August-1992
Data Summary and Evaluation Supplement	Louis Berger & Associates	June-1993
Interim Sampling Data Report for the Custer Hill Sanitary Landfill	Louis Berger & Associates	December-1993
Interim Sampling Data Report for the Custer Hill Sanitary Landfill	Louis Berger & Associates	July-1994

#### **Camp Funston Area Groundwater**

Monitoring Well Installation Report	Kansas City District, Corps of Engineers	August-1997
Camp Funston Annual Report: Hydrogeological Data for Digital Groundwater Flow Model	U. S. Geological Survey, Lawrence, Kansas	September-1997
Chemical and Isotope Evaluation Report	Dept. of Geology, Kansas State University	November-1997
Work Plan for Hydrologic Evaluation of the Camp Funston Area	U. S. Geological Survey, Lawrence, Kansas	September-1998
Annual Groundwater Monitoring Report, 1997	U. S. Geological Survey, Lawrence, Kansas	October-1998
Annual Groundwater Monitoring Report, 1998	U. S. Geological Survey, Lawrence, Kansas	October-1999
Monitoring Well Installation Report	Kansas City District, Corps of Engineers	November-2000
Characterization and Simulation of Groundwater Flow in the Kansas River Valley at Fort Riley, Kansas	•	
1990-1998	U. S. Geological Survey, Lawrence, Kansas	March-2000

#### **Multiple Sites Follow-On Investigations**

Site Investigation Report Addendum, Former Wherry Substation and DRMO Area 1 Drainage Ditch	Louis Berger & Associates	February-1997
Site Investigation Report Addendum, Open Burn/Open Detonation Area	Louis Berger & Associates	August-1998
Site Investigation Report Addendum, Southeast Funston Landfill Incinerator Area	Louis Berger & Associates	July-1997
Decision Memorandum - Multiple Sites	Louis Berger & Associates	September-1998
Decision Memorandum - DRMO Area 1	Louis Berger & Associates	April-1998
Decision Memorandum - Building 727 Former Service Pit	Louis Berger & Associates	May-1999

Title	Author	Date
Engineering Evaluation / Cost Analysis	Corps of Engineers, Kansas City District	June-1998
Action Memorandum	Corps of Engineers, Kansas City District	March-1999
Removal Action Report	Wenck Associates Inc	August-2000

#### Southeast Funston Lanfill

Engineering Evaluation / Cost Analysis	Corps of Engineers, Kansas City District	January-1999
Action Memorandum	Corps of Engineers, Kansas City District	June-1999
Removal Action Report	Wenck Associates Inc	August-2000

#### Petroleum / Underground Storage Tanks

Tett ofeum / enderground storage Tanto		
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 5390, Fort Riley, KS.	Dames & Moore	August-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 1890, Fort Riley, KS.	Dames & Moore	June-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 1637, Fort Riley, KS.	Dames & Moore	July-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 1539, Fort Riley, KS.	Dames & Moore	July-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 1044, Fort Riley, KS.	Dames & Moore	July-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 1245, Fort Riley, KS.	Dames & Moore	July-1997
Remedial Action Plan and Final Site Investigation Report for POL/UST Site 388, Fort Riley, KS.	Dames & Moore	June-1997
Annual Groundwater Sampling Report	Hydrogeologic, Inc	March-1999
Annual Groundwater Sampling Report	Hydrogeologic, Inc	May-1999
Annual Groundwater Sampling Report	Hydrogeologic, Inc	June-2000
Annual Groundwater Sampling Report	Hydrogeologic, Inc	October-2000

## OPERABLE UNITS/ INDIVIDUAL SITE PROJECTS

## FTRI-003 (OPERABLE UNIT 001) SOUTHWEST FUNSTON LANDFILL

#### SITE DESCRIPTION

Southwest Funston Landfill is located in the southern portion of Fort Riley, adjacent to the southwest corner of the Camp Funston cantonment area. This approximately 120 acre landfill was closed in 1981. The RI indicated sporadic hits of low level organic contamination. A Bank Stabilization action was accomplished in the winter/spring of 1994 and cover repairs were performed in 1995. Another action consisting of regrading and improving the native soil cover was completed in the spring of 1997. Minor bank stabilization repairs, re-seeding and monitoring well abandonment were accomplished in 1998.

The site does not present significant risk to human health and the environment under current conditions. The ROD includes a contingency for future action, the completed native soil cover, institutional controls to prevent on-site groundwater use, long-term groundwater monitoring, and further hydrogeologic characterization of surface water/groundwater interaction in conjunction with LTM efforts.

Groundwater monitoring is performed semi-annually and site inspections are performed annually.

#### **PROPOSED PLAN**

Groundwater monitoring is continuing on a semi-annual basis. This work is included on the Army Region VII LTM/LTO Pilot Bundling contract, beginning in FY01.

The USGS has prepared annual groundwater monitoring reports including hydrogeologic evaluations. The 1999/2000 and subsequent monitoring reports will be prepared by a contractor.

Since some contamination will remain on-site, statutory reviews will be required at 5 year intervals. Five year reviews are planned through 2027. The USGS will continue to collect hydrogeologic data for use in 5 year reviews in 2002 & 2007.

Annual inspections and periodic maintenance of the bank stabilization and cover will be conducted. Monitoring well pump replacement may be necessary. In the future, additional RI/FS and closure monitoring wells may be closed.

#### **IRP STATUS**

#### RRSE RATING: High Risk

**CONTAMINANTS OF CONCERN:** Metals, VOCs (primarily Vinyl Chloride)

MEDIA OF CONCERN: Groundwater

#### COMPLETED IRP PHASE:

PA/SI, RI/FS, IRA, Proposed Plan, ROD CURRENT IRP PHASE: LTM FUTURE IRP PHASE: LTM





#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
RD							
RA(C)							
LTO							
IRA							
LTM	254	288	573	128	83	182	1793
PROJECTED TOTAL: \$3,300,000							

### FTRI-019 (OPERABLE UNIT 004) FORMER FIRE TRAINING AREA FFTA - MAAF

#### SITE DESCRIPTION

This site consists of a former fire training area and former drum storage area located at Marshall Army Airfield (MAAF) near the installation boundary. The former fire training pit consisted of an unlined pit filled with crushed stone. The fire training area operated from the mid 1960s to 1984. A drum of tetrachloroethene (PCE) was accidentally released into the fire training pit in 1982. Efforts were made to recover the spilled material; however, only a portion was recovered.

The Installation Wide Site Assessment (dated 1992) indicated that the activities at FFTA-MAAF site potentially impacted the soils and groundwater in the vicinity of the site. Site Investigation (SI) activities conducted from 1993 through 1995 indicated off-post contamination which was confirmed by analyses taken from private wells. A Soil Vapor Extraction (SVE) and Bioventing Pilot Study was completed in 1994/1995 to address the source area. Remedial Investigations (RI) have been ongoing since 1996 to perform plume characterization and fate and transport.

An EE/CA was performed (Dec 97) to assess the need for a Removal Action for Exposure Control, and an Action Memorandum was completed.

A second EE/CA was performed (1998) to evaluate groundwater "hot spot" removal. The evaluation concluded that natural degradation was occuring faster than the available technologies could effectively accomplish a removal, and the EE/CA was discontinued.

A Natural Attenuation bench scale study and an Aquifer Tracer Study were completed in FY99.

A groundwater model has been developed and is presented in the RI.

#### **PROPOSED PLAN**

Two new wells outside of the plume (proposed in the Exposure Control EE/CA) will be installed for two off-post properties (delayed due to litigation and property access).

The RI document was prepared in FY00 and will be finalized in FY01. The FS document was begun in FY00. Periodic Groundwater Monitoring to continue, estimated at 2 times per year.

After the RI/FS report is completed, a PP/ROD will be prepared.

Remedial Design will start in FY03, and Remedial Action will start in FY04. Remedial Action will be implemented according to the alternative selected.

<b>IRP STATUS</b>	IRP	<b>STATUS</b>
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**RRSE RATING:** High Risk

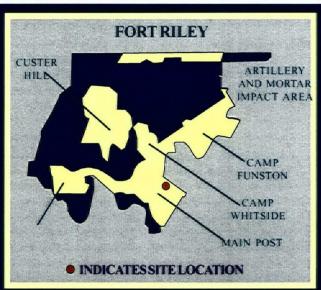
CONTAMINANTS OF CONCERN: VOCs, TPH, Napthalene

MEDIAOF CONCERN: Groundwater, Soil

COMPLETED IRPPHASE: PA/SI, IRA (Pilot Study, Bioventing)

CURRENT IRP PHASE: RI/FS, IRA

FUTURE IRP PHASE: RI/FS, RD, RA, RA(O), LTM





#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	732	622	70				
RD			1419	686			
RA					1572	1266	
RA(O)							1600
IRA	20						
LTM						90	2537
PROJECTED TOTAL: \$10,614,300							

## FTRI-027 (OPERABLE UNIT 003) DRY CLEANING FACILITIES AREA

#### SITE DESCRIPTION

The former Dry Cleaning Facility is located in the southwest corner of the Main Post cantonment area, about 800 feet north of the Kansas River. A PA/SI was completed for the Former DCF in September 1992 and an RI/FS initiated. Chlorinated solvent contamination was found in soils and groundwater. A Pilot Study for Groundwater and Soil Vapor Extraction was completed. The groundwater pumping tests, conducted in the overburden and bedrock aquifer, indicated that groundwater extraction would be an ineffective remedy, as the pumping rate was approximately 0.75 gallons per minute. Soil Vapor Extraction rates were low, also, but yielded enough contaminant removal to extend the pilot study for two months to further assess sustainable removal rates. The SVE was successful in removing most of the soil contamination.

Following review of the RI and the Draft FS it was determined, in concert with EPA- and KDHE, that additional characterization of the adjacent alluvial aquifer ("The Island") was warranted. This work, accomplished in the spring of 1996, showed that contaminant levels exceed Safe Drinking Water Act (SDWA) MCLs, and the results were reported in an RI addendum. Leakage from a nearby sewer servicing the laundry was corrected in 1996.

Baseline risk assessment indicates minimal risk associated with the site. Exposure to impacted groundwater has not occurred and is not expected to occur. Data shows contaminant levels are steadily declining. The Proposed Plan includes a Long Term Monitoring Program, focusing on the Kansas River and associated alluvial groundwater, institutional controls, periodic reviews and a contingency to develop and implement a future response action, if necessary. New alluvial wells installed in 1999 indicate need for additional investigations to define actual extent.

#### **PROPOSED PLAN**

Additional RI activities will be conducted in FY01 to investigate areas open due to building removal.

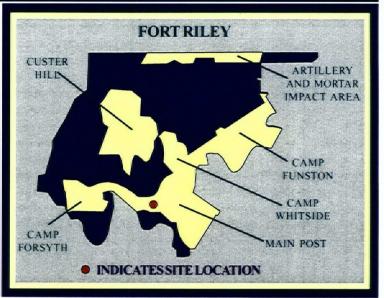
Complete Proposed Plan and ROD.

Periodic groundwater monitoring.

Five year reviews will be required per the NCP. Groundwater action may be required in the future.

### **IRP STATUS**

RRSE RATING: High Risk CONTAMINANTS OF CONCERN: VOCs MEDIA OF CONCERN: Groundwater COMPLETED IRP PHASE: PA/SI, IRA (Pilot Study, SVE) CURRENT IRP PHASE: RI/FS FUTURE IRP PHASE: RI/FS, RD, RA, RA(O), LTM





**CONSTRAINED COST TO COMPLETE** 

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	729	424	10				
RD					150		
RA						1000	
RA(O)							1400
IRA							
LTM			325	235	235	270	1405
	PROJ	ECTEI	) TOT	AL:	\$6,184,	750	

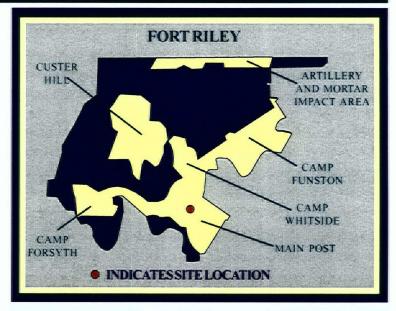
## FTRI-030 (OPERABLE UNIT 002) PESTICIDE STORAGE FACILITY (MIXING)

#### SITE DESCRIPTION

Sampling conducted in 1983-1984 detected pesticide contamination in the soils in the area behind the building. It has been determined that prior to the mid 1970's, pesticide wastewaters and inadvertent spills that occurred when mixing pesticides were allowed to run onto the ground in the equipment-washing area behind the facility. A removal action consisting of excavation and off site disposal occurred in the spring of 1994.

A No Further Action ROD was signed in September 1997. This decision is based on continued industrial land use and will be annotated in the installation master plan for consideration if land use changes. Because residual contamination remains in place, five year reviews are required.

A Land Use management plan was prepared in 1999.





## PROPOSED PLAN

The first five year review will occur in FY02. Four additional reviews are anticipated.

#### **IRP STATUS**

RRSE RATING: Low Risk (High Risk prior to REM) CONTAMINANTS OF CONCERN: Pesticides (Chlordane, DDT, Dieldrin, Heptachlor, PAHs, metals (arsenic) ) MEDIA OF CONCERN: Soils, Groundwater COMPLETED IRP PHASE: PA/SI, Removal, RI, Proposed Plan, ROD CURRENT IRP PHASE: LTM (5 year reviews) FUTURE IRP PHASE: LTM (5 year reviews)

#### **CONSTRAINED COST TO COMPLETE**

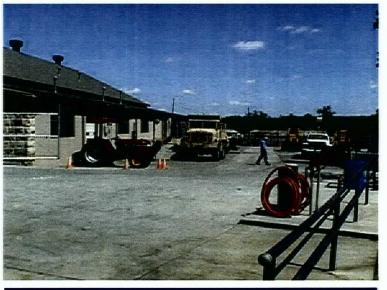
PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
RD							
RA							
RA(O)							
IRA							
LTM		10			Solit Contraction		40
	PRO	JECTE	ED TO	FAL:	\$50,00	00	

## FTRI-031 (OPERABLE UNIT 005) 354 AREA SOLVENT DETECTIONS

#### SITE DESCRIPTION

Solvent storage and dispensing previously occurred near Bldg 354 in the Public Works (PW) Yard. USTs were removed in 1990/91. Perchloroethylene and its breakdown products have been detected above MCLs in groundwater monitoring wells. In FY97 initial field investigations were performed. The RI Workplan was developed in 1998. RI fieldwork was conducted from July 1999 through April 2000. A potential source area was identified, 2 blocks north of PW, just east of Bldg 367. The southern extent of investigation was expanded to include the point bar along the Kansas River. Carbon tetrachloride (CCl.) has been detected in laboratory confirmation samples. The northern extent of CCl, has not been fully delineated. Monitoring wells, piezometers and data collection platforms have been installed to support the RI investigation.

#### FORT RILEY ARTILLERY AND MORTAR MPACT AREA MAND MORTAR MPACT AREA CAMP FUNSTON CAMP WHITSIDE CAMP FORSYTH INDICATES SITE LOCATION



#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	798	789	410	235	205	75	
RD			a de la composición de la comp				
RA(C)							
RA(O)							
IRA							
LTM						128	1567
	PROJ	ECTEI	) TOT	AL:	\$4,207,	000	

#### **PROPOSED PLAN**

Prepare Work Plan Addendum

Complete RI including periodic groundwater monitoring for one year

A possible IRA for soils and/or groundwater hotspots will be considered

Complete FS, Proposed Plan, ROD, and LTM plan. Perform LTM of semiannually through 2012, annually thereafter. Assumes 20 years of monitoring after the ROD (through 2022) and four 5 year reviews.

#### IRP STATUS RRSE RATING: High Risk CONTAMINANTS OF CONCERN:

CONTAMINANTS OF CONCERN: VOCs MEDIA OF CONCERN: Groundwater, Soil COMPLETED IRP PHASE: PA/SI CURRENT IRP PHASE: RI/FS FUTURE IRP PHASE: PP/ROD, IRA, LTM

# SUPPLEMENTAL SITE INVESTIGATIONS

## FTRI-009 OPEN BURNING/OPEN DETONATION GROUND (RANGE 16)

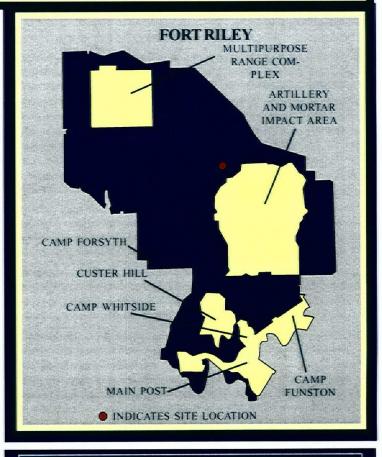
#### SITE DESCRIPTION

Range 16 is used to destroy defective rounds. Historical practices included use of solvents in an open burn area. This practice was discontinued in the early 1980s. In 1993, low levels of solvents were detected in the groundwater. Due to its remote locations, there are no nearby receptors. Eight surface soil, eight deep borings, two surface water, and three sediment samples were collected and analyzed for explosives, VOC's, SVOC's, and uranium. Four monitoring wells were installed and sampled for the same analytes. The open burn pit has not been used since approximately 1993. Groundwater sampling performed in winter 1995/96 confirmed low level VOC contamination.

Site hydrogeology is complex and, therefore, additional characterization was needed. In 1997, four additional groundwater monitoring wells and five nested piezometers were installed. Recent sampling results indicate higher VOC contamination.

A hand dug well (part of a historic farmstead) was converted to a permanent groundwater monitoring well. In 1998, 5 surface water samples from the ephemeral streams onsite were collected and analyzed. The results were non-detect for contaminants of concern.

Additional monitoring and data collection is being performed to better understand this complex site and to aid in potential future investigation scoping activities. This includes the sampling of surface water using an automated surface water collection system designed and installed by the USGS in 1999. This system will operate for at least 5 years to evaluate potential migration pathways. In 1999, a Stratigraphic/Structural Evaluation of the area was completed by KSU, Department of Geology. An Ecological Risk Screening Evaluation was performed in 1998 and found low risk to ecological receptors.



#### **IRP STATUS**

RRSE RATING: Medium Risk CONTAMINANTS OF CONCERN: VOCs MEDIA OF CONCERN: Soils, Groundwater COMPLETED IRP PHASE: PA/SI CURRENT IRP PHASE: RI/FS FUTURE IRP PHASE: RI/FS

#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	102	102	102	132	10		
RD							
RA(C)		100					
LTO							
IRA							
LTM						- Normal Street	teris in sec. It
	PRO	JECTE	D TOT	TAL:	\$447,0	00	

#### **PROPOSED PLAN**

Continue to monitor stream flow and surface water quality for 5 years (started in 1998).

Prepare reports as needed and DD.

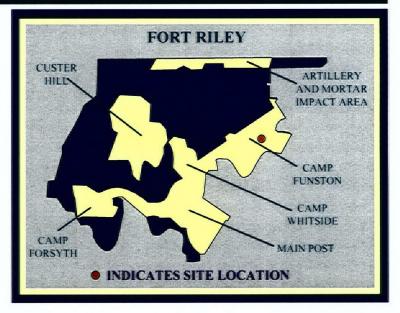


## FTRI-011 CAMP FUNSTON GROUNDWATER DETECTIONS

#### SITE DESCRIPTION

For additional information, see SE Funston Landfill, DRMO Area 2, Former DSGS site and Funston area (1000 Area) POL/UST sites. Groundwater screening and monitoring well sampling data indicate apparent wide spread, but low level solvent (includes vinyl chloride) and some metals contamination. No specific source has been identified. Hydrogeology of the area is variable due to alluvial deposits and influence of oxbow lakes as well as the fluctuating and meandering Kansas River. The installation boundary is nearby and the city of Ogden is immediately adjacent. A well field in Ogden supplies not only the city, but a large rural water district. Private wells exist in the immediate area. Sampling of the identified private wells do not show groundwater contamination. Additional groundwater monitoring wells have been installed to fill data gaps and replace abandoned monitoring wells.

The USGS has performed data evaluation and developed a groundwater model. A GW Modeling report was issued in 2000.



#### **PROPOSED PLAN**

Prepare DD. Perform LTM through 2027 with decreasing scope in the out years.

IRP STATUS	CONS	STRA	INED	COS	эт то	O CO	MPLI	ETE
RRSE RATING: High Risk	PHASE	2001	2002	2003	2004	2005	2006	2007+
CONTAMINANTS OF CONCERN: VOCs. Metals	RI/FS	15						
MEDIA OF CONCERN:	RD							
roundwater OMPLETED IRP PHASE:	RA(C)							
A/SI CURRENT IRP PHASE:	LTO							
VFS, LTM	IRA				1			
UTURE IRPPHASE: TM	LTM	95	145	55	40	40	75	620
	aut Dilux Installation Ast		IECTEI	D TOT	AL:	\$1,071,	,000	

## **FTRI-029 OLD INCINERATOR SITE SOUTHEAST FUNSTON**

#### SITE DESCRIPTION

This site is located adjacent to the southeast portion of the installation. The land was transferred to the Kansas Department of Wildlife and Parks when Highway K-18 was constructed. The incinerator was abandoned in the mid 1950's or earlier. Incinerator ash with high lead content has been detected over a wide area within the approximate 10 acre site. Ten (10) of 78 surface soil sample locations analyzed by X-Ray Fluorescence (XRF) indicated high concentrations of lead (up to 5600 ppm). Additional sampling in FY97 identified three localized areas of high lead concentration. UXO has been encountered during previous investigations. An ecological risk screening was conducted in 1998 showing minor risk from soil contamination. The incinerator building itself is a safety hazard (slips, trips and falls) and is being addressed by KDWP.

In 1999-2000, metals contaminated soil and debris were removed to levels compatible with land use and placed in SEFL. This project was completed in conjunction with the cover improvements on the SEFL (FTRI-036). A Removal Action Report was prepared in 2000.

#### **PROPOSED PLAN**

Prepare decision document.

Metals

Soil

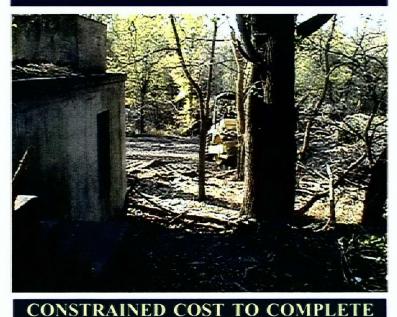
PA/SI

RI/FS

RC

Five year reviews will be done in conjunction with FTRI-036.

FOI	RT RILEY
CUSTER	
HILLS	ARTILLERY
	AND MORTAR
	IMPACT AREA
	4
	CAMP
	FUNSTON
	CAMP
	WHITSIDE
CAMP	
FORSYTH	MAIN POST
INDICATES	S SITE LOCATION



#### **IRP STATUS** PHASE 2001 2002 2003 2004 2005 2006 20074 **RRSE RATING:** Medium Risk 10 **RI/FS CONTAMINANTS OF CONCERN:** RD MEDIA OF CONCERN: RA(C) **COMPLETED IRP PHASE:** LTO CURRENT IRPPHASE: IRA LTM FUTURE IRP PHASE: \$10,000 **PROJECTED TOTAL:**

## FTRI-036 SOUTHEAST FUNSTON LANDFILL

#### SITE DESCRIPTION

This former municipal solid waste landfill, 50 acres, is located in the southeast portion of the installation. Operations ceased in the mid 1950's. Eleven (11) soil gas sampling locations indicated no VOC contamination. Four (4) perimeter monitoring wells were installed and sampled during SI. Initial laboratory analysis showed low levels of 1,2 dichloroethylene, and low levels of lead exceeded MCL. Confirmation sampling of groundwater in December 1995 indicated similar results to previous data. Organic contaminants were detected in the western portion of the landfill. Groundwater sampling and analysis conducted after 1995 have not shown groundwater contamination.

In FY98-99, an EE/CA, Action Memorandum/Responsiveness Summary and Design were completed for cover improvements to 10 acres of the western portion of the landfill to correct for subsidence and improve drainage. This project was combined with the soil removal at the Southeast Funston Landfill Incinerator (FTRI-29) and performed in 1999. A Removal Action Report was issued in 2000.

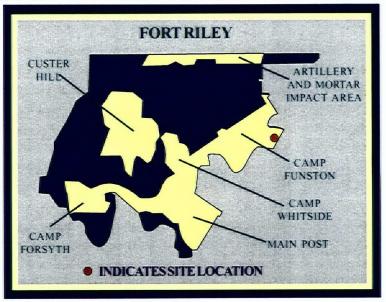
#### PROPOSED PLAN

Prepare Decision Memorandum

Perform cover inspection and repairs

Perform 5 year reviews

# IRP STATUS RRSE RATING: Medium Risk CONTAMINANTS OF CONCERN: Metals (including lead), VOCs MEDIA OF CONCERN: Soils, Groundwater COMPLETED IRP PHASE: PA/SI CURRENT IRP PHASE: RI/FS FUTURE IRP PHASE: LTM





#### **CONSTRAINED COST TO COMPLETE PHASE 2001** 2002 2003 2004 2005 2006 2007+ **RI/FS** 10 RD RA(C) LTO IRA 20 20 85 20 LTM **PROJECTED TOTAL:** \$155,000

## FTRI-038 FORSYTH LANDFILL(S)

#### SITE DESCRIPTION

Located south and west of Camp Forsyth, five separate areas have been identified as areas which have received dumping. One of these areas is present in the aerial photos taken in 1939. In 1994, soil gas and groundwater sampling did not detect any contaminants of concern. In Area 2, along the Republican River on the western side of Camp Forsyth, landfill material is exposed on the surface, in a drainage, and along the riverbank. Landfill material may include UXO. UXO was found on a sandbar adjacent to Area 2 after 1993 flooding. Landfill Areas 1, 3, 4, and 5 and the groundwater media of Area 2 are included in the Multiple Sites Decision Document as No Further Action.

In 1997, the Army entered into a license agreement to allow for pedestrian and recreational access along a specified corridor adjacent to this site.

Evaluations show that approximately a 100 ft. width of river bank along an 800 ft. section of the Landfill Area 2 has been eroded by the Republican River since 1982.

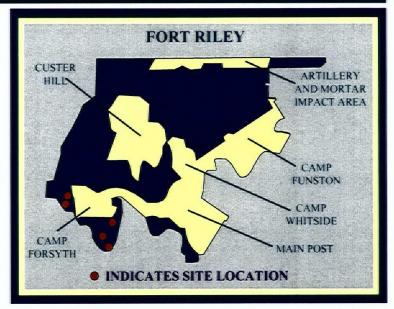
In 1998, an EE/CA and design to stabilize landfill material exposed and eroding along the river bank were prepared. In 1999, the Action Memorandum was completed. Construction of the bank stablization project was performed in the summer of 2000.

#### PROPOSED PLAN

Construct Phase II in 2001. Prepare Removal Action Report. Prepare DD. Five year reviews including inspection and repairs.

#### **IRP STATUS**

RRSE RATING: Medium Risk CONTAMINANTS OF CONCERN: Metals, Explosives MEDIA OF CONCERN: Soil, Surface Water COMPLETED IRP PHASE: PA/SI CURRENT IRP PHASE: RI, IRA FUTURE IRP PHASE: LTM





#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	10						
RD							
RA(C)							
LTO							
IRA	40						
LTM		10			and an article	i. materi	620
	PRO	JECTE	<b>D</b> ТОТ	AL:	\$680,0	00	

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## **POL/UST SITES**

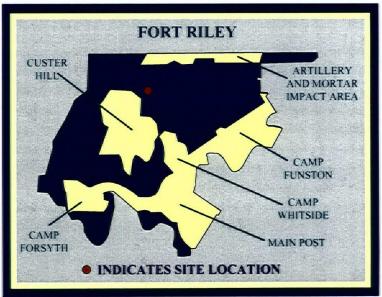
Fort Riley - Installation Action Plan Site Descriptions - Page 13

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## FTRI-053 POL TANK FARM

#### SITE DESCRIPTION

The POL Tank Farm is a consolidated storage facility located on 1st Division Road, Custer Hill. Contamination is due to documented surface releases and piping leakage from past operations. Limited site investigations have found free product and high levels BTEX and PAHs. Groundwater contamination in the shale formation may be impractical to remediate because of relatively small amounts of groundwater in a fracture controlled formation. A Site Investigation work plan was completed in FY99.



#### **PROPOSED PLAN**

Non-IRP funds are being used to remove free product from a recent spill.

IRP will:

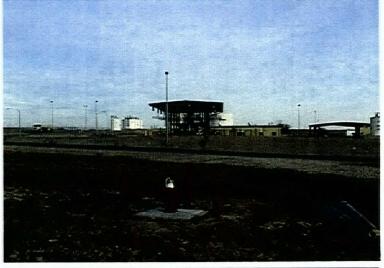
- Perform additional characterization of the soil & ground-water contamination.

- Investigate shallow overburden contamination along utility trenches.

- Conduct Groundwater Monitoring.

- Natural attenuation possible remedy.

A Remedial Action Plan will be prepared.



#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	286	34					
RD							
RA(C)							
LTO							
IRA							
LTM		20	20	20	20	20	110
	PRO	JECTE	D TOT	AL:	\$530,0	00	

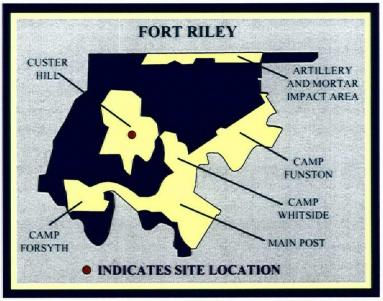
#### **IRP STATUS**

RRSE RATING: High Risk CONTAMINANTS OF CONCERN: BTEX, PAHs MEDIA OF CONCERN: Soils, Groundwater COMPLETED IRPPHASE: PA/SI CURRENT IRP PHASE: RI/FS FUTURE IRPPHASE: RI/FS, LTM

## FTRI-054 CUSTER HILL PX USTS BLDG 5320

#### SITE DESCRIPTION

This site was closed and 5 USTs were removed in 1991. In 1995, the station was reopened and above ground storage tanks were installed. Soil contamination was documented during the tank removal. Site investigations have found moderate to high levels of BTEX in ground water and low levels of BTEX in soils. Groundwater contamination in the shale formation may be impractical to remediate because of relatively small amounts of groundwater in a fracture controlled formation. A Remedial Action Plan was submitted to KDHE in 1997. KDHE has placed the site in "on hold" status pending support of "closure". Quarterly sampling was conducted in FY98. Annual sampling event was conducted in Summer 1999.



#### **PROPOSED PLAN**

Long Term Monitoring for 5 years to support closure (started in 1998).

	CONS	STRA	INED	COS	т то	O CO	MPL	ETE
IRP STATUS	PHASE	2001	2002	2003	2004	2005	2006	2007+
RRSE RATING: Low Risk			Part of the Part of		and all and		and the second sec	
CONTAMINANTS OF CONCERN:	RI/FS				1. S. S.			
BTEX, 1, 2-dichloroethane, methyl-t-butyl ether	RD			100 N.				
MEDIA OF CONCERN:	RD						1.1.1.1.1	
Soils, Groundwater	RA(C)				1.1			
COMPLETED IRP PHASE:	ITO							
Tank Removal, PA/SI, RI	LTO					1.1		
CURRENT IRP PHASE:	IRA							
LTM	IINA		<u> </u>					
FUTURE IRPPHASE:	LTM	4	4	Lincolita	and the second	and had to had		
LTM	Installation Act		OJECT	ED TO	TAL:	\$8,00	0	

## FTRI-056 ABANDONED GASOLINE LINE

#### SITE DESCRIPTION

The site consists of an abandoned 3 mile pipeline and three former underground storage tanks at the terminus. Preliminary assessment conducted by the Corps did not identify any releases along the pipeline in the areas explored. Evidence of releases were identified in terminus area. Preliminary investigation of the terminus area shows contamination in the soil and ground water.

A SI was conducted in 1994. Based on the recommendations, further investigation is required. Widespread groundwater contamination not expected. A gas line location survey conducted in FY98 located the line and identified gaps in the line. Line was surveyed in. A work plan for future investigation was completed in FY98.

#### **PROPOSED PLAN**

RI will include:

- Geoprobe investigation of soils. Sample for TPH, Benzene and 1,2 DCA

- Install temporary monitoring wells and conduct groundwater sampling for BTEX and 1,2 DCA

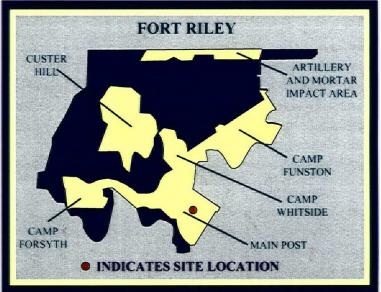
- Install 4 driven well points at terminus and sample GW for BTEX, Napththalene and 1,2DCA

- Subsurface sampling for TPH, benzene and 1,2 DCA IRA for possible pipeline removal.

#### LTM will include:

- Conduct quarterly sampling for one year and annual sampling for 4 years

- Abandon (close and seal) wells.





#### **CONSTRAINED COST TO COMPLETE**

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	256	169	10				
RD							
RA(C)							
LTO							
IRA		132	167				
LTM		Antificia a second	40	40	20	20	30
	PRO	JECTE	d tot	AL:	\$884,0	00	

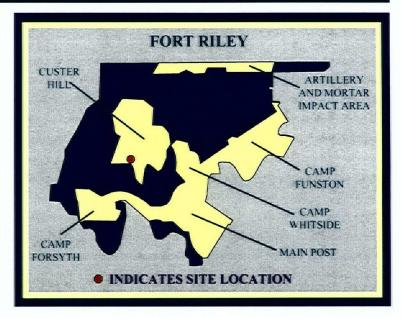
#### **IRP STATUS**

RRSE RATING: Medium Risk CONTAMINANTS OF CONCERN: BTEX, Lead MEDIA OF CONCERN: Soils, Groundwater COMPLETED IRP PHASE: Tank Removal, PA/SI CURRENT IRP PHASE: RI/FS FUTURE IRP PHASE: RI/FS, IRA, LTM

## FTRI-057 6200 AREA FUEL OIL LINE

## SITE DESCRIPTION

This former heating oil dispensing system consisted of two underground storage tanks and a pump house. The heating oil was distributed through underground piping which serviced 100 housing units. Heating oil was released within the tankhold and along piping trenches which also held the water lines and other utilities serving the housing unit. The tanks and the piping have been removed. Source removal of contaminated trench backfill materials and surrounding soils was completed in 1997. Groundwater contamination in the limestone formation is impractical to remediate because of relatively small amounts of groundwater in a fracture controlled formation. Removal Action Report was submitted in FY99.



#### **PROPOSED PLAN**

Prepare Decision Document. Conduct LTM of sumps.

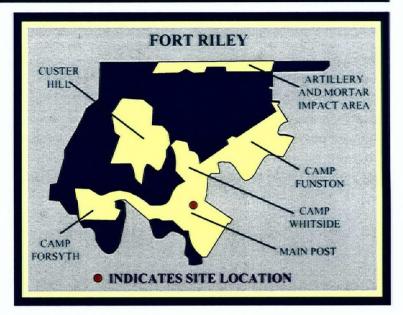
	<b>CONSTRAINED COST TO COMPLETE</b>								
IRP STATUS	PHASE	2001	2002	2003	2004	2005	2006	2007-	
RRSE RATING: Low Risk	1114SD	2001	2002	2005	2004	2005	2000	2007	
CONTAMINANTS OF CONCERN:	RI/FS	15							
PH, BTEX, PAHs			earte eller classi el xan	Net constants					
EDIA OF CONCERN:	RD	-			- Parts				
oils, Groundwater	RA(C)			12 1					
OMPLETED IRP PHASE:	$\mathbf{RA}(\mathbf{C})$	To the start				1. A. A.	la de la composition de la composition Composition de la composition de la comp	1000	
VSI, RI/FS, IRA	LTO								
URRENT IRP PHASE:			ale and a second			-			
I/FS, LTM	IRA					and the second			
UTURE IRP PHASE:	LTM	8	5	5	5	5			
TM		And a second	Anti-Anti-Anti-	and the second	in in ander in	and all the	Sec. Sec.	Link Charles	
		PRC	DJECTI	ED TO	TAL:	\$43,0	00		

Site Descriptions - Page 17

## FTRI-062 TMP GAS STATION (BUILDING 388)

## SITE DESCRIPTION

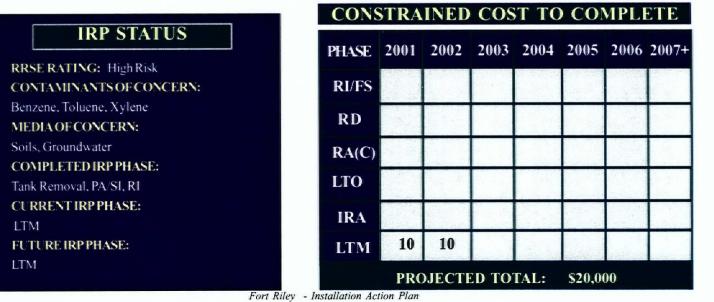
This TMP site is located in the southern portion of the Main Post area. Contamination is due to past leakage from dispensing lines which have been replaced. Site investigations have identified a limited amount of free product, high levels of BTEX in groundwater. Soil contamination is limited. KDHE has approved the Remedial Action Plan (RAP) for long term monitoring. USTs removed April 1998. LTM initiated, FY98.



## **PROPOSED PLAN**

Long Term Monitoring for 5 years, started in FY98.

After the 5 year site review, no further action is anticipated.

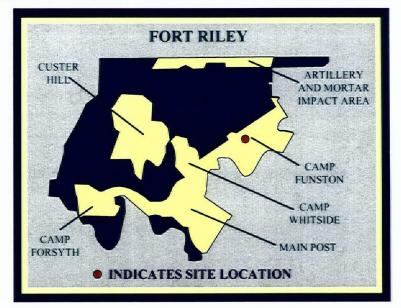


Site Descriptions - Page 18

# **FTRI-063** FORMER BUILDING 1044 DISPENSING AREA

## SITE DESCRIPTION

This site is located in the northwest portion of Camp Funston. The dispensing stations dated from WWII and were used through the 1970's and 80's. The USTs were removed in early 1990's. Site investigations have found soil and groundwater contamination, including a limited amount of free product. KDHE has approved the Remedial Action Plan (RAP) for long term monitoring. LTM started in FY98.



## **PROPOSED PLAN**

Long Term Monitoring for 5 years, started in FY98.

After the 5 year site review, no further action is anticipated.

IRP STATUS					• • • •		• • • • •	
RSE RATING: High Risk	PHASE	2001	2002	2003	2004	2005	2006	2007+
ONTAMINANTS OF CONCERN:	RI/FS							
nzene, Toluene, Xylene								
EDIA OF CONCERN:	RD							
ils, Groundwater	RA(C)		Sec. 2					
OMPLETED IRP PHASE:								<u> </u>
nk Removal (IRA), Free Product Removal	LTO		A. Start					1 . A
A), PA/SI, RI   <b>RRENT IRP PHASE:</b>	IRA							
FM		15	15					
TURE IRP PHASE:	LTM	15	15			the second states	and a side	la constante de
M		PRO	<b>)JECTI</b>	ED TO	TAL:	\$30,0	00	

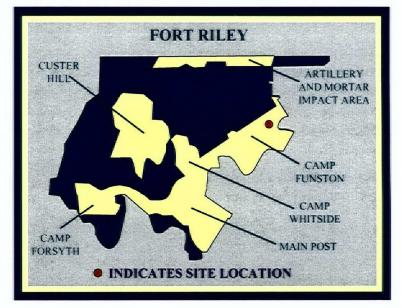
Site Descriptions - Page 19

# FTRI-066 FORMER BUILDING 1245 DISPENSING STATION

## SITE DESCRIPTION

This site is located near the eastern boundary of Camp Funston. The city of Ogden is approximately 4000 feet east of this site. Five USTs were removed in the early 1990's. Site investigation results indicate areas with medium to high levels of TPH and BTEX, which do not appear to be migrating.

KDHE has approved the Remedial Action Plan (RAP) for long term monitoring.



## **PROPOSED PLAN**

Long Term Monitoring for 5 years started in FY98.

After the 5 year site review, no further action is anticipated.

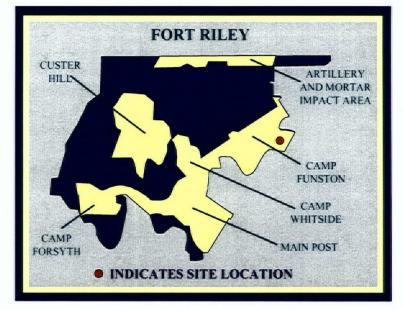


Site Descriptions - Page 20

# FTRI-068 FORMER BUILDING 1637 DISPENSING AREA

## SITE DESCRIPTION

This site is located in the eastern portion of Camp Funston. The dispensing stations dated from WWII and were used through the 1970's and 80's. The tanks were removed in early 1990's. Site investigations have identified moderate BTEX groundwater contamination. Migration does not appear to be occurring. Soil contamination is low (BTEX). KDHE has approved the Remedial Action Plan (RAP) for long term monitoring.



## **PROPOSED PLAN**

Long Term Monitoring for 5 years started in FY98.

After the 5 year site review, no further action is anticipated.

CONS	<b>STRA</b>	INED	COS	ST TC	O COI	MPLI	ETTE
PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
RD	1259						1.1
RA(C)							
LTO		4					
IDA							
	10	10					
	der Schittare	Burnal in		CAL.	\$20,00		
	PHASE RI/FS RD RA(C)	PHASE       2001         RI/FS          RD          RA(C)          LTO          IRA          LTM          10	PHASE       2001       2002         RI/FS       I       I         RD       I       I         RA(C)       I       I         LTO       I       I         IRA       I       I         IRA       I       I         ITO       10       10	PHASE200120022003RI/FSRDRA(C)LTOIRALTM1010.	PHASE       2001       2002       2003       2004         RI/FS	PHASE       2001       2002       2003       2004       2005         RI/FS       I       I       IIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RD       I       I       I         RA(C)       I       I       I         LTO       I       I       I         IRA       I       I       I         LTM       10       10       I       I

Fort Riley - Installation Action Plan Site Descriptions - Page 21

# **RESPONSE COMPLETE CERCLA Sites**

Three Decision Memoranda were completed in FY98 and early FY99: Multiple Sites, Former DRMO Area 1, and Main Post Landfill and Building 727 Former Service Pit. The sites addressed in the Decision Memoranda fall into three categories: those not warranting investigation, those which are being addressed under other regulatory programs (No Action under CERCLA), and those warranting No Action or No Further Action following investigations or Removal Actions.

As a result of the IWSA, numerous sites were determined to not have the potential to pose a risk to human health or the environment and, therefore, not warrant site investigations. These sites or site groupings were:

DSERTS No.	Common Site Name - may differ from DSERTS site name
FTRI-005	Construction/Demolition Debris Landfill - Custer Hill
FTRI-007, 008	PCB Storage Areas
FTRI-020	Central Vehicle Wash Facility
FTRI-028	Former Fire Training Area - Camp Funston
FTRI-032	Impact Zone
FTRI-033	Multi-purpose Range Complex (MPRC)
FTRI-035	Non-Impact Area Small Arms ranges: Pistol Range - Marshall Army Airfield (MAAF)
FTRI-035	Non-Impact Area Small Arms ranges: Soils Moved from Small Arms Ranges
FTRI-055	Disposal of Trash and Demolition - Milford Recreation Center
FTRI-040	Former Oil Testing Laboratory
FTRI-042, 043	Tactical Equipment and Maintenance Shops, Former Gas Stations/Garages,
	Former Fuel Facilities
FTRI-044	Former Asphalt Plant (near Bldg 354)
FTRI-046	FormerDSGS - Bldg 1693 and Adjacent Areas
FTRI-049	Mercury Use Sites
	Commissary Landfill - Main Post
	Radioactive Storage Facilities

Investigations of the sites not screened out following the IWSA were performed under the general designation of "Multiple Site Investigations" and divided into three projects for phased execution. These projects are designated as the Sensitive-Receptor Lead Sites, High-Priority Sites, and "Other Sites" Site Investigations. While most of the sites investigated in these projects are addressed by the Decision Memoranda, a few are being investigated and considered further (and are presented separately in this IAP).

The Site Investigation (SI) for the Sensitive-Receptor Lead Sites was initiated in June 1993. These sites were identified and evaluated based on a potential for lead contamination in shallow soils in areas readily accessible to the public. The Sensitive-Receptor Lead Sites project was later incorporated into the High Priority Sites project. The High Priority sites were identified as having the potential to pose a more immediate risk to human health and the environment than other sites, or there was a desire by Fort Riley to collect environmental information at an earlier stage for these sites due to other planned activities. The High Priority Sites SI was initiated in September 1993 and the results were reported in the SI Report for High Priority Sites. The remaining sites, referred to as the "Other Sites", were examined in an SI initiated in March 1994 and the results were reported in the SI Report for Other Sites. SI Addenda were prepared to address supplemental investigations performed at a few sites such as DRMO Area 1 and others. The SI reports provide detailed information about the site history, and the scope and results of the investigations.

As a result of site investigations, the following sites or site groupings were determined to not have the potential to pose a risk to human health or the environment under current and anticipated land use. A Removal Action was accomplished at the Colyer Manor Housing Area in 1994, removing lead-contaminated soils from an area behind the housing units.

DSERTS No.	Common Site Name - may differ from DSERTS site name
FTRI-004	Main Post Landfill
FTRI-006, 015, 012	Defense Reutilization and Marketing Office Areas 1, 2 and 3
FTRI-035	Non-Impact Area Small Arms ranges: Sensitive-Receptor Lead Sites (Colyer Manor
	Housing Area, Ware and Custer Elementary Schools, Former Mullins Park)
FTRI-037	Old Whitside Incinerator Area
FTRI-038	Camp Forsyth Landfills Areas 1, 2, 3, 4, and 5 (except Area 2 riverbank)
FTRI-041	Former Furniture Repair Shops (Former Buildings 1301 and 1605)
FTRI-041	Former Furniture Repair and Small Arms Shop (Building 319)
FTRI-045	Print and Publications Shops
FTRI-047	Former Livestock Dipping Facility
FTRI-048	Custer Hill Golf Course Pesticide Storage Facility
FTRI-050	Former Electrical Substations
FTRI-051	Building 727 Former Service Pit
FTRI-052	Former Camp Whitside Landfill
FTRI-055	Former Milford Lake Recreation Area

The following sites were determined to require No Action under CERCLA/SARA because site investigations have revealed that they do not have the potential to pose a risk to human health or the environment and/or they are being addressed under other existing regulatory programs as noted:

DSERTS No.	Common Site Name - may differ from DSERTS site r	ame
FTRI-001	Custer Hill Sanitary Landfill	RCRA Subtitle D
FTRI-002	Whitside Construction/Demolition Landfill	RCRA Subtitle D
FTRI-014	Hospital Incinerator	RCRA / Clean Air Act
FTRI-020	Custer Hill (Industrial) Wastewater Retention Ponds	Clean Water Act
FTRI-022-025	Wastewater Treatment Plants (Former Camp Funston,	Clean Water Act
	Camp Forsyth, Main Post, Custer Hill)	
FTRI-022-025	Sludge Drying Beds (Former Camp Funston, Camp	Clean Water Act
	Forsyth, Main Post, Custer Hill)	
FTRI-026	Range Complex Waste Water Lagoons	Clean Water Act
FTRI-039	Consolidated Maintenance Facility (Building 8100),	RCRA Subtitle I
	Waste Underground Storage Tanks	
	Petroleum Sites / Underground Storage Tanks	RCRA Subtitle I

The following DSERTS sites were addressed prior to commencement of NPL/CERCLA activities at Fort Riley.

DSERTS No.	Common Site Name - may differ from DSERTS site name
FTRI-008	PCB Storage CONEX near Bldg 348
FTRI-010	Pesticide (2-4D) UST at Camp FUnston
FTRI-013	Abandoned VOC Tanks North oF IACH
FTRI-016	Waste Oil AST - 3 <sup>rd</sup> Battery
FTRI-017	Waste Oil AST - 4th Battery

# RESPONSE COMPLETE CERCLA SITES

## FTRI-034 Impact Area Perimeter Small Arms Ranges.

Both active and inactive ranges are located around the perimeter of the Impact Area. These were generally evaluated in the *Impact Area Site Assessment* (FTRI-032). No significant levels of contamination was detected. Site is considered response complete in DSERTS and will be included in a future Decision Document with the Impact Area.

## FTRI-044 Former Asphalt Plant (Near Building 354)

This site was identified in the Installation-Wide Site Assessment. No significant contamination has been identified, based on the results of investigations at the 354 POL/UST (FTRI-061) and the site is considered Response Complete in DSERTS. Further review of the site is pending the completion of investigations at 354 Area Solvent Detections (FTRI-031) site.

# **RESPONSE COMPLETE - POL Sites**

## SITE DESCRIPTION

Dispensing stations dating from WWII through 70's and 90's. Tanks were removed in the early 1990's through 1998. Site investigations have been completed. No further action is required at the following sites:

- FTRI-010 Pesticide (2-4D) USTs at Camp Funston
- FTRI-013 Abandoned VOC Tanks North of IACH
- FTRI-018 UST and Fire Training Area Facility (892) (Response Complete under ERA-A).
- FTRI-059 Remove USTs
- FTRI-060 Main Post PX Gas Station/218
- FTRI-061 Former Gas Service Station Building 354 (SEE ALSO FTRI-031)
- FTRI-064 Former Building 1090 Dispensing Station
- FTRI-065 Former Building 1190 Dispensing Station
- FTRI-067 Former Building 1539 Dispensing Station
- FTRI-069 Former Building 1890 Dispensing Station
- FTRI-070 Former Building 2341 Dispensing Station
- FTRI-071 Former Building 2345 Dispensing Station
- FTRI-072 Building 8340 Fuel Oil UST
- FTRI-073 Building 8360 Fuel Oil UST

## **PROPOSED PLAN**

No further action is required at these sites.

## **IRP STATUS**

RRSE RATING: Not Evaluated CONTAMINANTS OF CONCERN: TPH, Benzene, Toluene, Xylene MEDIA OF CONCERN: Groundwater, Soil COMPLETED IRP PHASE: Tank Removal, PA/SI, RI CURRENT IRP PHASE: Response Complete FUTURE IRP PHASE: Response Complete

# SCHEDULE

## PAST MILESTONES

#### 1983-1984

Installation Assessment (By USATHAMA)

#### 1988-1989

Solid Waste Management Unit Survey (By AEHA) IRP Initiation

#### 1990

NPL Listing Published IAG - Dept. Army Signature IAG - Fort Riley Signature

#### 1991

IAG - EPA Region VII Signature

IAG - KDHE Signature

IAG - Effective Date

#### 1993

PA/SI - Installation Wide Site Assessment SI/SA - FTRI-032, Impact Zone SI/SA - FTRI-001, Custer Hill Landfill RI/FS - FTRI-003, SW Funston Landfill RI/FS - FTRI-030, Pesticide Storage Facility RI/FS (PA/SI) - FTRI-027, Dry Cleaning Facilities RI/FS (SI) - FTRI-019, Marshall Army Airfield-Former Fire Training Area 1994 RI/FS - FTRI-003, SW Funston Landfill (SFL) RI/FS - FTRI-030, Pesticide Storage Facility RI/FS - FTRI-027, Dry Cleaning Facilities RI/FS (SI) - FTRI-019, Marshall Army Airfield-Former Fire Training Area REM - FTRI-035, (Excavation of lead contaminated soils, Colyer Manor) REM - FTRI-030, PSF (Excavation of pesticide contaminated soils) IRA - FTRI-003, SFL (River bank stabilization and cover repair/improvements) (FY 94-96) IRA - FTRI-027, DCF (Sewer line replacement- OMA funded) (FY 94-96)

#### 1995

RI/FS - FTRI-003, SW Funston Landfill (SFL) RI/FS - FTRI-030, Pesticide Storage Facility RI/FS - FTRI-027, Dry Cleaning Facilities RI/FS (SI) - FTRI-019, Marshall Army Airfield-Former Fire Training Area REM - FTRI-019, Marshall Army Airfield-Former Fire Training Area (Soil vapor extraction & bioventing pilot study)

REM - FTRI-027, Dry Cleaning Facilities (Soil vapor extraction pilot study)

## PAST MILESTONES (continued)

RI/FS (SI) - FTRI-019, Marshall Army Airfield-Former Fire Training Area Site Investigation Report

#### 1996

RI/FS - FTRI-003, SW Funston Landfill ROD RI/FS - FTRI-030, Pesticide Storage Facility RI/FS - FTRI-027, Dry Cleaning Facilities RI/FS (SI) - FTRI-019, Marshall Army Airfield-Former Fire Training Area

#### FY 1997

IRA - FTRI-003, SFL Removal Action Report

LTM/RA(O) - FTRI-003, SFL LTM & O&M Plans

RI/FS - FTRI-006, (DRMO & Wherry Substation) Site Investigations

RI/FS - FTRI-019, Marshall Army Airfield-Former Fire Training Area Work Plans

IRA - FTRI-019, Marshall Army Airfield-Former Fire Training Area Exposure Control EE/CA initiated

RI/FS - FTRI-027, Dry Cleaning Facilities, Draft Revised FS

RI/FS - FTRI-030, Pesticide Storage Facility, RI Addendum, Proposed Plan, ROD (Sep 97)

RI/FS – FTRI-031, 354 Area Solvent Detections Site Initial Field Investigations

RI/FS, LTM - FTRI-054, -063, -066, -068, Remedial Action Pl;ans

RI/FS - FTRI-067 and FTRI-069, No Further Action required

RAB Formation (Sept 97)

#### FY 1998

Decision Memorandum - FTRI-various, Multi-Sites and DRMO

Decision Memorandum - FTRI-004 (MPLF), -051 (727), and multiple UST sites

LTM - FTRI-003, Southwest Funston Landfill Final Institutional Controls Plan, 1997Annual Monitoring Report, 1997 Inspection Report

1997 Inspection Report

RI/FS - FTRI-009, OB/OD SI Addendum Report

RI/FS - FTRI-011, Camp Funston GW Detections Annual (Investigation) Monitoring Report

RI/FS – FTRI-019, Marshall Army Airfield-Former Fire Training AreaRI/FS Work Plan (Final Oct 97) Basic Plans

(Final Jul 98), Plume Characterization, Natural Attenuation Work Plan

IRA - FTRI-019, MAAF-FFTA Exposure Control EE/CA (Jan 98) Action Memo Signature (Apr 98)

IRA - FTRI-019, MAAF-FFTA Groundwater Action EE/CA (Draft Apr 98, Discontinued)

RI/FS - FTRI-027, Dry Cleaning Facilities RI Addendum/FS (Approved May 98)

PP - FTRI-027, Dry Cleaning Facilities, Draft Proposed Plan (Aug 98)

RI/FS - FTRI-029, SEFL Incinerator, SI Addendum Report

IRA- FTRI-029 SEFL Incinerator EE/CA, Preliminary IRA Design

RI/FS - FTRI-031, 354 Area Solvent Detections Site Initial Field Investigations Report

IRA- FTRI-036, SE Funston Landfill EE/CA, Preliminary IRA Design

IRA - FTRI-038, Forsyth Bank Stabilization, EE/CA (Aug 98),

LTM - FTRI-054, -063, -066, -068, POL/UST Sites

#### FY 1999

LTM/RA(O) - FTRI-003, Southwest Funston Landfill, 1998 Annual Monitoring Report (Sep 99), 1998 Inspection Report, Maintenance, Contract Award (Sep 99)

RI/FS - FTRI-009, OB/OD Risk Screening Report (Final Apr 99)

RI/FS - FTRI-011, Camp Funston GW Detections, 1997 Annual (Investigation) Monitoring Report (Final Dec 98), Groundwater Isotope Report (Final Mar 99), 1998 Annual (Investigation) Monitoring Report (Sep 99)

RI/FS - FTRI-027, Dry Cleaning Facilities Area, Draft Proposed Plan (Aug 98, May 99), Dispute Resolution

(Jan – Apr 99)

RI/FS - FTRI-019 MAAF-FFTA, Tracer Study, Microcosm Study

IRA - FTRI-029, Old Incinerator Site SEFL, EE/CA (Feb 99), Action Memo Signature (Jun 99), Construction Award for Soil Removal (Jun 99)

## PAST MILESTONES (continued)

LTM - FTRI-030, Pesticide Storage Facility Land Use Management Plan

RI/FS - FTRI-031, 354 Area Solvent Detections, RI/FS Work Plans (Final Mar 99), Phase I Field Investigations

IRA - FTRI-036, Southeast Funston Landfill, EE/CA (Feb 99), Action Memo Signature (Jun 99), Construction Award for Cover Improvements (Jun 99)

RI/FS - FTRI-038, Forsyth Landfill(s), Data review

IRA - FTRI-038, Forsyth Landfill, Area 2 Action Memo Signature (Apr 99), Bank Stabilization Design

RI/FS – FTRI-053, POL Tank Farm, RI/FS Work Plan

LTM - FTRI-054, Custer Hill PX USTs

IRA - FTRI-057, 6200 Area Fuel Oil System, Removal Action Report

LTM - FTRI-062, TMP Gas Station (Bldg 388)

LTM - FTRI-063, Former Building 1044 Dispensing Area

LTM - FTRI-066, Former Building 1245 Dispensing Station

LTM - FTRI-068, Former Building 1637 Dispensing Area

#### FY 2000

LTM/RA(O) - FTRI-003, Southwest Funston Landfill, Maintenance Construction (Oct 99), 1999 Annual Inspection Report (Nov 99)

RI/FS - FTRI-009, OB/OD Surface Water monitoring

RI/FS - FTRI-011, Camp Funston GW Detections, Groundwater Modeling Report

RI/FS - FTRI-019, MAAF-FFTA, Draft Remedial Investigation Report

IRA - FTRI-019, MAAF-FFTA, Construction of Exposure Controls pending real estate issues

RI/FS - FTRI-027, Dry Cleaning Facilities Area, Additional site evaluation

RI/FS - FTRI-031, 354 Area Solvent Detections, Remedial Investigations, preliminary evaluation

LTM - FTRI-054, Custer Hill PX USTs

LTM - FTRI-062, TMP Gas Station (Bldg 388)

LTM - FTRI-063, Former Building 1044 Dispensing Area

LTM - FTRI-066, Former Building 1245 Dispensing Station

LTM - FTRI-068, Former Building 1637 Dispensing Area

## **FUTURE MILESTONES**

#### FY 2001

LTM - FTRI-003, Southwest Funston Landfill, Maintenance Inspection/ Report, 1999/2000 Annual Monitoring Report

RI/FS - FTRI-009, OB/OD, Surface Water sampling/reporting

RI/FS - FTRI-011, Camp Funston GW Detections, Decision Memorandum

LTM - FTRI-011, Camp Funston GW Detections, initiate LTM

RI/FS - FTRI-019, Marshall Army Airfield-Former Fire Training Area, Remedial Investigation Report

RI/FS - FTRI-019, Marshall Army Airfield-Former Fire Training Area, FS Report (Draft Jun 01),

RI/FS - FTRI-027, Dry Cleaning Facilities Area, Additional Site Characterization, Finalize Revised Proposed Plan, ROD (TBD)

RI/FS - FTRI-029, Old Incinerator Site SEFL, Draft Decision Memorandum

IRA - FTRI-029, Old Incinerator Site SEFL, Finalize Removal Action Report

RI/FS - FTRI - 031, 354 Area Solvent Detections, RI/FS Workplan Addendum, Additional Characterization

IRA - FTRI - 031, 354 Area Solvent Detections, initiate EE/CA for source treatment, source treatment

RI/FS - FTRI-036, Southeast Funston Landfill Draft Decision Memorandum

IRA - FTRI-036, Southeast Funston Landfill, Finalize Removal Action Report

IRA - FTRI-038, Forsyth Landfill(s), Bank Stabilization Removal Action Report

RI/FS - FTRI-053, POL Tank Farm, Site Investigations

LTM - FTRI-054, Custer Hill PX USTs

RI/FS - FTRI-056, Abandoned Gasoline Line, Site Investigations

RI/FS - FTRI-057, 6200 Area UST, Decision Memorandum

LTM - FTRI-057, 6200 Area UST initiate 5 years of LTM if needed

LTM - FTRI-062, TMP Gas Station (Bldg 388)

LTM - FTRI-063, Former Building 1044 Dispensing Area

LTM - FTRI-066, Former Building 1245 Dispensing Station

LTM - FTRI-068, Former Building 1637 Dispensing Area

#### FY 2002

Five Year Review - FTRI-003, 011, 030, all sites

LTM - FTRI-003, Southwest Funston Landfill

RI/FS - FTRI-009, OB/OD, Surface Water sampling/reporting

RI/FS - FTRI-019, MAAF-FFTA, FS Report, Proposed Plan

IRA - FTRI-019, MAAF-FFTA, possible source area action

RI/FS - FTRI-027, Dry Cleaning Facilities Area, Finalize ROD (TBD)

RI/FS - FTRI-031, 354 Area Solvent Detections, RI Report

LTM - FTRI-036, Southeast Funston Landfill (maintenance every 2 years for about 15 years)

LTM - FTRI-038, Forsyth Landfill(s), Bank Stabilization Repairs about every 5 years, major repair estimated FY 2010

LTM - FTRI-053, POL Tank Farm, LTM for 10 years

LTM - FTRI-054, Custer Hill PX USTs

RI/FS - FTRI-056, Abandoned Gasoline Line

LTM - FTRI-057, 6200 Area UST LTM FY00-04

LTM - FTRI-062, TMP Gas Station (Bldg 388)

LTM - FTRI-063, Former Building 1044 Dispensing Area

LTM - FTRI-066, Former Building 1245 Dispensing Station

LTM - FTRI-068, Former Building 1637 Dispensing Area

#### FY 2003

LTM - FTRI-003, Southwest Funston Landfill

RI/FS - FTRI-009, OB/OD, Surface Water sampling/reporting

RI/FS - FTRI-019, MAAF-Former Fire Training Area, ROD

RI/FS - FTRI-031, 354 Area Solvent Detections, RI Report Completion, FS Alternataive Development

LTM - FTRI-027, Dry Cleaning Facilities Area

RI/FS, IRA, LTM – FTRI-056, Abandoned Gasoline Line Decision Document, IRA Source Removal/Treatment, initiate GW LTM (FY03-07) LTM - FTRI-057, 6200 Area UST

#### FY 2004

LTM - FTRI-003, Southwest Funston Landfill

RI/FS - FTRI-009, OB/OD, Surface Water sampling/reporting

RA(O) - FTRI-019, Old Fire Training Area-Marshall Army Airfield - FY04-08

LTM - FTRI-027, Dry Cleaning Facilities Area

RI/FS - FTRI-031, 354 Area Solvent Detections, Complete FS

LTM - FTRI-056, Abandoned Gasoline Line (FY03-08)

LTM - FTRI-057, 6200 Area UST

## **FUTURE MILESTONES (continued)**

#### FY 2005

LTM - FTRI-003, Southwest Funston Landfill RI/FS - FTRI-009, OB/OD, Finalize Decision Memorandum RA - FTRI-019, MAAF-FFTA RD - FTRI-019, MAAF-FFTA Contingency Groundwater Action LTM/RD - FTRI-027, Dry Cleaning Facilities Area, Contingency migration control action RI/FS - FTRI-031, 354 Area Solvent Detections - Proposed Plan

#### FY 2006

Various sites - Continue LTM per above											
LTM / RA - FTRI-019, MAAF-FFTA, Contingency Groundwater Action											
LTM - FTRI-031, 354 Area Solvent Detections (FY06-FY24)											
RI/FS - FTRI-031, 354 Area Solvent Detections ROD											
LTM/RA - FTRI-027, Dry Cleaning Facilities Area, Contingency migration control action											
FY 2007											
Various sites - Continue LTM per above											
LTM / RA(O) - FTRI-019, MAAF-FFTA, Contingency Groundwater Action FY07-10											
LTM /RA(O) - FTRI-027 Dry Cleaning Facilities Area, Contingency Groundwater Action FY07-10											
Five Year Reviews – FY 02, 07, 12, 17, 22, 27, etc.											
Remedy-in-Place - Completion of Construction of final remedial action: 2007, FTRI-019											
Deletion from NPL 2007											

RA Completion Date - FY Last RA completed Or RA(0) system shut off

2010, FTRI-019, FTRI-027 GW System

**IRP Completion Date** Includes LTM

2034, FTRI-019

# SCHEDULE

## **NO FURTHER ACTION SITES**

The following sites currently require no further action by the Installation Restoration Program: CUSTER HILL SANITARY LANDFILL **FTRI-001** WHITSIDE CONSTRT. DEBRIS LANDFILL-ACTIVE **FTRI-002** MAIN POST LANDFILL **FTRI-004** CUSTER HILL ROAD RUBBLE DUMP **FTRI-005 FTRI-006** DRMO STORAGE AREA **PCB STORAGE BUILDING 343 FTRI-007** PCB STORAGE CONEX (BUILDING 348) **FTRI-008** PESTICIDE (2-4D) UST AT CAMP FUNSTON **FTRI-010** WASTE STORAGE DRMO SECONDARY AREA **FTRI-012** ABANDONED VOC TANKS NORTH OF IACH **FTRI-013** HOSPITAL INCINERATOR-IRWIN ACH **FTRI-014** FORMER DRMO LOCATION (DRMO AREA 2) **FTRI-015** WASTE OIL AST-3RD BATTERY **FTRI-016 FTRI-017** WASTE OIL AST-4TH BATTERY **FTRI-018** ACTIVE FIRE TRAINING AREA **FTRI-020** INDUSTRIAL WASTEWATER SYSTEM (CUSTER HILL) FORMER WWTP AND SLUDGE BEDS-CAMP FUNSTON **FTRI-022** CUSTER HILL WWTP AND SLUDGE BEDS **FTRI-023** FTRI-024 FORSYTH WWTP AND SLUDGE BEDS **FTRI-025** MAIN POST WWTP AND SLUDGE BEDS FTRI-026 RANGE COMPLEX WW LAGOONS **FTRI-028** FMR FIRE TRAINING AREA CAMP FUNSTON **FTRI-032 IMPACT ZONE FTRI-033** DOUTHIT RANGE IMPACT AREA PERIMETER SMALL ARM RANGES **FTRI-034** NON-IMPACT AREA SMALL ARMS RANGES **FTRI-035** OLD WHITSIDE INCINERATOR AREA **FTRI-037** CONSOLIDATED MAINTENANCE FACILITY **FTRI-039** FORMER OIL TESTING LAB (BLDG. 1022) **FTRI-040** FURNITURE REPAIR SHOPS (3) **FTRI-041** TAC VEHICLE MAINTENANCE SHOPS **FTRI-042 FTRI-043** FORMER GAS STATIONS/GARAGES FTRI-044 FORMER ASPHALT PLANT (NEAR BLDG 354) PHOTO AND PRINT PLANTS **FTRI-045** FRMR DSGS - BLDG 1693 AND ADJACENT AREAS **FTRI-046** FORMER LIVESTOCK DIPPING FACILITY **FTRI-047** FORMER PESTICIDES FACILITIES **FTRI-048** MERCURY CONTAMINATION AREAS **FTRI-049** PCB SPILL AREAS /TRANSFORMER SITES **FTRI-050 FTRI-051 BUILDING 727 FORMER SERVICE PIT INACTIVE LANDFILLS - CAMP WHITSIDE FTRI-052 FTRI-055** MILFORD LAKE CAMPGROUND/MARINA WELLS

> Fort Riley - Installation Action Plan Schedule - Page 6

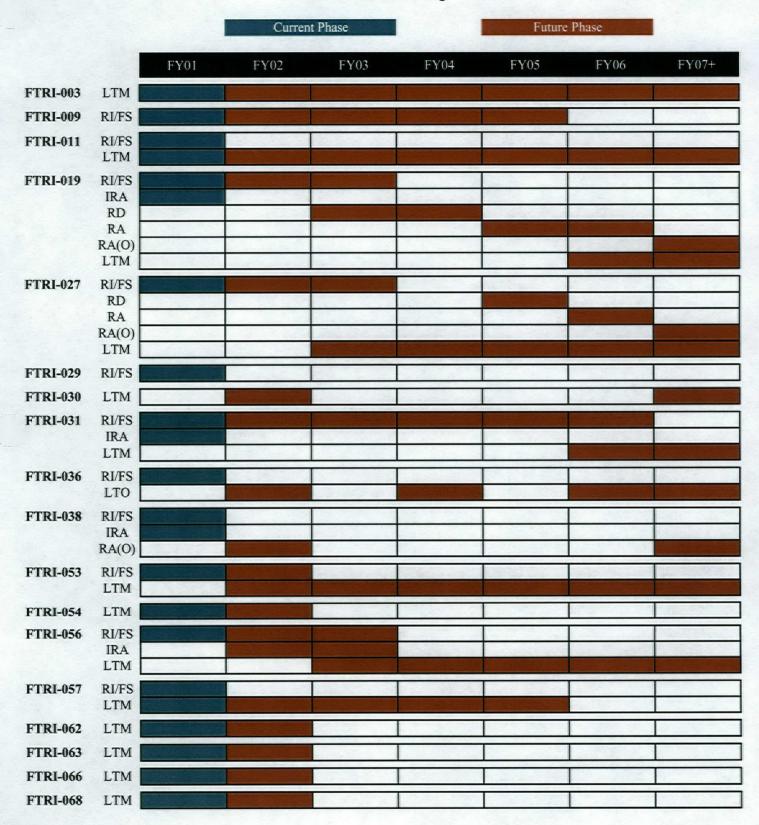
# SCHEDULE

## NO FURTHER ACTION SITES (continued)

FTRI-059	REMOVE USTS
FTRI-060	MAINPOST PX GAS STATION / 218
FTRI-061	FORMER GAS SERVICE STATION BLDG 354
FTRI-064	FMR BLDG 1090 DISPENSING STATION
FTRI-065	FMR BLDG 1190 DISPENSING STATION
FTRI-067	FMR BLDG 1539 DISPENSING STATION
FTRI-069	FMR BLDG 1890 DISPENSING STATION
FTRI-070	FMR BLDG 2341 DISPENSING STATION
FTRI-071	FMR BLDG 2345 DISPENSING STATION
FTRI-072	BLDG 8340 FUEL OIL UST
FTRI-073	BLDG 8360 FUEL OIL UST

### Fort Riley's IRP Schedule

Based on Current Funding



DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM Site, 4. Installation Phase Summary Report														
Installation Programs:		<b>FRILEY</b>	J	BRAC I, BRAC II, BRAC III, BRAC IV, IRP										
	Subprograms:Compliance, Restoration, UXOInstallation count for Programs:1													
NPL Options: Delisted, No, Proposed, Yes														
Installations count for Programs a1Site count for Programs and NPL:71														
Phase / Status / Sites														
		PA						SI						
	С	U	F	RC		С	U	F	RC					
	71	0 RI / FS	0	4		65	0	0 RD	16					
	С	U	F	RC		С	U	F						
	31	11 RA(C)	0	27		4	0	2 RA(O)						
	C 13	U 0	F 2	RC 13 C	LTM U	C 0 F	U 0 N	F 2	RC 0					
			Rei	0 medy / Sta	6 tus / Site	10 s (Actions	55 s)			,				
					IRA									
		С			U			F						
	16	(22)		3 (	3)			2	(2)					
					FRA									
	С				U			F						
	13	(13)		0 (	0)		2(2)							
<b>RIP</b> Total	l <b>:</b>	0												
RC Total:	:	60												

**Reporting Period End Date:** 09/30/2000

#### DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM Site, 7. SITE SUMMARY

#### 11/20/2000

Installatio	n:	FORT RILEY					Major Com FORSCOM									
FFID: Program ( Subprogra	Options:	KS214020756 IRP, BRAC I, BRAC II, BRAC III, BRAC IV Compliance, Restoration, UXO			Subcommand:											
1 0	•	1 ,				Pha	se Sta	tus								
Site	Description		Site Type	RRSE	PA	SI	RI	RD	RA(C)	RA(O)			IRA Underv	RIP way	RC	
FTRI-001	CUSTER HILL	SANITARY LANDFIL	Landfill	NE	С	С	С				N	0	0		199308	
		NSTRT. DEBRIS LAN		3A	С	С	С			Ν	Ν	0			199803	
		FUNSTON LANDFILL		1A	С	С	С	С	С	Ν	U	3	0		199709	
	MAIN POST L		Landfill	3A	С	С	С			Ν	Ν	0	0		199712	
		ROAD RUBBLE DUM	Surface Dispos	NE	С						Ν	0	0		199305	
	DRMO STORA		Spill Site Area	3A	С	С	С			Ν	Ν	0	0		199809	
		E BUILDING 343	Storage Area	NE	С	С					Ν	0	0		198909	
		E CONEX (BUILDING	•	NE	С	С		С	С		Ν	0	0		199012	
		ND (RANGE 16)	Explosive Ordr	2A	С	С	U				Ν	0	0		200508	
		4D) UST AT CAMP FL	•		С	С		С	С		Ν	0	0		199204	
		ON GW DETECTIONS			С	С	U			Ν	F	0	0		200105	
FTRI-012	WASTE STOR	AGE DRMO SECONDA	Storage Area	3A	С	С	С			Ν	Ν	0	0		199509	
		VOC TANKS NORTH	-	NE	С	С		С	С		Ν	0	0		199202	
FTRI-014	HOSPITAL IN	CINERATOR-IRWIN A	Incinerator	ŃE	С	С					Ν	0	0		198909	
FTRI-015	FORMER DRM	10 LOCATION (DRMC	Storage Area	2A	С	С	С			Ν	Ν	0	0		199509	
FTRI-016	WASTE OIL A	ST-3RD BATTERY	Above Ground	NE	С	С					Ν	0	0		198909	
FTRI-017	WASTE OIL A	ST-4TH BATTERY	Above Ground	NE	С	С					Ν	0	0		198909	
FTRI-018	FIRE TRAININ	IG AREA FACILITY (8	Fire/Crash Trai	NE	С	С					Ν	0	0		198909	
		TRAINING AREA FF			С	С	U	F	F	F	F	2	1 3	200610	201009	
FTRI-020	INDUSTRIAL	WASTEWATER SYST	Surface Impour	2A	С	С	С			Ν	Ν	0	0		199803	
<b>FTRI-022</b>	FORMER WW	TP AND SLUDGE BEE	Sewage Treatm	NE	С	С					Ν	0	0		199305	
FTRI-023	CUSTER HILL	WWTP AND SLUDGE	Sewage Treatm	NE	С	С					Ν	0	0		199305	
		<b>VTP AND SLUDGE BE</b>	-		С	С					Ν	0	0		199305	
		WTP AND SLUDGE B	-		С	С					Ν	0	0		199305	
		LEX WW LAGOONS			С	С					Ν	0	0		199305	
		NG FACILITIES AREA	-	1A	С	С	U	F	F	F	F	1	0	200610	201009	

Site	Description	Site Type	RRSE	PA	SI	RI	RD RA(	C)RA(O	) LTM	IRA	IRA	RIP	RC
									Com	•	Underv	•	
FTRI-028	FMR FIRE TRAINING AREA CAMP	Fire/Crash Trai	NE	С	С	С	C		Ν	0	0		99309
	OLD INCINERATOR SITE SE-CAMP		2A	С	С	U			Ν	1	0		0109
	PESTICIDE STORAGE FACILITY (M		3A	С	С	С		Ν	F	1	0		99709
FTRI-031	BLDG 354 AREA SOLVENT DETEC	Contaminated C	1A	С	С	U		Ν	F	0	0		)0609
FTRI-032	IMPACT ZONE	Unexploded M		С	С	С		Ν	Ν	0	0		9309
FTRI-033	DOUTHIT RANGE	Firing Range	NE	С	С				N	0	0		99305
FTRI-034	IMPACT AREA PERIMETER SMALL	. Small Arms Ra	NE	С	С			Ν	Ν	0	0		99612
FTRI-035	NON-IMPACT AREA SMALL ARMS	Small Arms Ra	2A	С	С	С		Ν	Ν	1	0		0007
FTRI-036	SOUTHEAST FUNSTON LANDFILL	Landfill	2A	С	С	U		Ν	F	0	1		0109
FTRI-037	OLD WHITSIDE INCINERATOR AR	I Incinerator	2A	С	С	С		Ν	Ν	0	0		99507
	FORSYTH LANDFILL(S)	Landfill	2A	С	С	U			F	0	1	20	0110
FTRI-039	CONSOLIDATED MAINTENANCE I	FIndustrial Disch	NE	С	С				Ν	0	0	19	99305
FTRI-040	FORMER OIL TESTING LAB (BLDG	Spill Site Area	NE	С					Ν	0	0		99305
FTRI-041	FURNITURE REPAIR SHOPS (3)	Spill Site Area	NE	С	С	С		Ν	Ν	0	0	19	99507
FTRI-042	TAC VEHICLE MAINTENANCE SHO	Spill Site Area	NE	С					Ν	0	0		99305
FTRI-043	FORMER GAS STATIONS/GARAGE	Spill Site Area	NE	С					N	0	0	19	99305
FTRI-044	FORMER ASPHALT PLANT (NEAR	Spill Site Area	NE	С	С			Ν	N	0	0	19	99509
FTRI-045	PHOTO AND PRINT PLANTS	Spill Site Area	3A	С	С	С		Ν	Ν	0	0	19	99507
FTRI-046	FRMR DSGS - BLDG 1693 AND ADJ	Spill Site Area	2A	С	С	С		N	Ν	0	0	19	99507
FTRI-047	FORMER LIVESTOCK DIPPING FAC	Dip Tank	3A	С	С	С		Ν	Ν	0	0	19	99507
FTRI-048	FORMER PESTICIDES FACILITIES	Pesticide Shop	NE	С	С	С		Ν	Ν	0	0	19	99507
FTRI-049	MERCURY CONTAMINATION ARE	Spill Site Area	NE	С			. C		Ν	0	0	19	99305
FTRI-050	PCB SPILL AREAS /TRANSFORMER	R Spill Site Area	3A	С	С	С		Ν	Ν	0	0	19	99803
FTRI-051	BLDG. 727 WASTE PIT	Disposal Pit/Dr	3A	С	С	С		Ν	Ν	0	0	19	99903
FTRI-052	INACTIVE LANDFILLS - CAMP WH	Landfill	NE	С	С	С		Ν	Ν	0	0	19	99507
FTRI-053	POL TANK FARM	Above Ground	1B	С	С	U		Ν	F	0	0	20	00208
FTRI-054	CUSTER HILL PX USTS BLDG 5320	Underground T	3B	С	С	С			U	1	0	19	99709
FTRI-055	MILFORD LAKE CAMPGROUND/M	Contaminated (	3A	С	С	С		N	Ν	0	0	19	99507
FTRI-056	ABANDONED GASOLINE LINE	Underground T	2B	С	С	U	N	Ν	F	0	0	20	0309
FTRI-057	6200 AREA FUEL OIL LINE	Underground T	3B	С	С	U		N	F	1	0	20	00106
FTRI-059	REMOVE USTS	Underground T	NE	С			C		Ν	0	0	19	99012
FTRI-060	MAINPOST PX GAS STATION / 218	Underground T	3B	С	С				Ν	1	0	19	99506
FTRI-061	FORMER GAS SERVICE STATION I	Underground T	2B	С	С			Ν	Ν	2	0	19	99510
FTRI-062	TMP GAS STATION BLDG 388	Underground T	1 <b>B</b>	С	С	С		Ν	U	1	0	19	99710
FTRI-063	FMR BLDG 1044 DISPENSING STAT	Underground T	1 <b>B</b>	С	С	С		Ν	U	2	0	19	99710
FTRI-064	FMR BLDG 1090 DISPENSING STAT	Underground T	NE	С	С	С	C		Ν	0	0	19	99504

Site	Description	Site Type	RRSE	PA	SI	RI	RD RA(	C)RA(O	LTM	IRA I	RA I	RIP	RC
	-								Com	olete U	Inderwa	iy	
FTRI-065	5 FMR BLDG 1190 DISPENSING STA	T Underground	Γ ΝΕ	С	С	С	C		Ν	0	0		199504
FTRI-066	5 FMR BLDG 1245 DISPENSING STA	T Underground	Г 1В	С	С	С		Ν	U	1	0		199708
FTRI-067	7 FMR BLDG 1539 DISPENSING STA	T Underground	Г 2В	С	С	С		Ν	Ν	1	0		199708
FTRI-068	8 FMR BLDG 1637 DISPENSING STA	T Underground <sup>7</sup>	Г 1В	С	С	С		Ν	U	2	0		199708
FTRI-069	9 FMR BLDG 1890 DISPENSING STA	T Underground	Г 2В	С	С	С		Ν	Ν	1	0		199708
FTRI-07	) FMR BLDG 2341 DISPENSING STA	T Underground	Γ ΝΕ	С	С		С	Ν	N	0	0		199502
FTRI-07	I FMR BLDG 2345 DISPENSING STA	T Underground 7	Γ ΝΕ	С	С		С	Ν	Ν	0	0		199508
FTRI-072	2 BLDG 8340 FUEL OIL UST	Underground 7	Γ ΝΕ	С	С		С	Ν	Ν	0	0		199508
FTRI-073	3 BLDG 8360 FUEL OIL UST	Underground	Γ ΝΕ	С	С		С	Ν	Ν	0	0		199504
		-					Damant Dam	and Trank	Datas (	0/20/2	000		

Report Period End Date: 09/30/2000

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# **REM/IRA/RA ASSESSMENT**

## PAST REM/IRA/RA

## Dry Cleaning Facility (FTRI-024) - FY94

The possibility of "slip-lining" the sanitary and storm sewers to reduce or eliminate a driving force moving contamination from soils to the groundwater was evaluated. Camera inspection of the lines indicated, however, that the sanitary sewer line contained too much mineral scaling (from nearby boiler plant) to allow slip-lining. The storm sewer is very steep, circuitous and in pretty good shape, making slip-lining difficult and unnecessary. Therefore, replacement of the one damaged sanitary sewer line was performed. Remaining lines, suspected to leak also, were assessed and a project was completed in 1996 to abandon in-place and construct new lines.

Soil vapor extraction and groundwater extraction and treatment pilot studies were initiated in August 1994. Pumping tests performed on the groundwater extraction wells indicated extremely low flow rates and determined the impracticality of this technology as a remedial action. The test was extended to determine if the mass removal rates would be sustainable (they were not) and because volatiles, (albeit low levels), were being extracted from the soils. The system operated until March 1995, when vapor analysis indicated no detections of VOC's. The action directed at remediating soils was implemented to address this media as a continuing source for groundwater contamination, not because of any determined risk due to exposure to the soils. Had the extraction been sustainable, an EE/CA would have been prepared and a Removal Action undertaken. However, pilot test removed much of the soil contamination.

### Custer Hill Sanitary Landfill (FTRI-001) - FY93/94

Low level contamination was revealed by the site investigation. Rather than carry the site through the CERCLA/IAG process, the site was addressed under the state-administered RCRA subtitle D program for closure and post-closure monitoring.

### Marshall Army Airfield -Former Fire Training Area (FTRI-019) - FY94/95 Total Construction Cost = \$900,000

Initial Site Investigations and off-post private well data indicated there was soil contamination in two areas on post and groundwater contamination likely existed on-post and extended off-post. Since the soil contamination was a potential source for additional groundwater contamination, soil treatment options were considered for implementation of an early action. Pilot Studies were developed for Bioventing and/or SVE in each of the two areas respectively and implemented in the winter 1994/95. These proved successful and were extended to gain additional design information while an EE/CA was being prepared to evaluate performance of these technologies as Removal Actions. The EE/CA was terminated because evaluation of field data (including drop off of removal rates) indicated that much of the contamination had been removed and continued operation was not cost effective.

#### **Numerous UST Removals**

### Total Construction Cost = \$1,500,000

Total Construction Cost = \$ 4,000,000

Numerous additional tank removals have been conducted under OMA tank management program

#### Southwest Funston Landfill Landfill (FTRI-003) - FY94/96

Settlement and minimal maintenance of the closure cover has resulted in ponding and otherwise poor drainage. Landfilling occurred along and near the Kansas River bank. Erosion of materials into the river has occurred. A "Non-time Critical" Removal Action has been completed. The Engineering Evaluation/Cost Analysis (EE/CA) for cover improvements and bank stabilization was issued for public comment on 16 August 1993. Design was initiated concurrent with preparation of the EE/CA with the intent that the design be complete by the time the Decision Document is completed. However, in light of the stipulated penalties, the Bank Stabilization removal action was expedited and substantially completed by 9 April 1994. It was fully completed by June 1994. The cover portion of the removal action was contracted for 4th Q FY94. Construction of the

## PAST REM/IRA/RA (continued)

cover repairs was completed 1995, however it was discovered that insufficient cover existed in some places and a 2nd contract was developed to correct this situation. Additional cover improvements were completed in 1997. LTM and RA(O) was initiated at the site in FY96.

#### Pesticide Storage Facility (FTRI-030) - FY94

Removal of contaminated soils was completed in May 1994. Sampling during the removal action revealed significantly greater volumes of contaminated soil than identified in the RI. The amount of soil removed was approximately 2700 tons. This IRA allowed the Final Remedial Action to be No Further Action based on anticipated industrial land use.

#### Sensitive Receptor Lead Sites (FTRI-035) - FY94

An "expedited" removal assessment performed in June 1993 revealed that a small area near a housing and recreation area was a "hot spot" of lead contamination. Removal of lead contaminated soils was completed May 1994. The amount of soil removed was 1338 tons.

#### 6200 Area Fuel Oil Line (FTRI-057)

This former heating oil dispensing system consisted of two underground storage tanks and a pump house. The heating oil was distributed through underground piping which serviced 100 housing units. Heating oil was released within the tankhold and along piping trenches which hold water lines and other utilities serving the housing unit. The tanks and the piping have been removed. Source removal of contaminated trench backfill materials and surrounding soils was completed in 1997.

#### Southeast Funston Landfill - Incinerator (FTRI-29) - FY99

In FY98 an EE/CA, Design, and Action Memorandum with public comment and RAB involvement were completed for excavation of ash/metals contaminated soil. The incinerator Removal Action was combined with the cover improvements for the SE Funston Landfill (SEFL) where the soils were re-buried in the western portion of the SEFL site. Construction activities were conducted from early Oct 99 through early Nov 99. Construction Contract Award Amount \$270K. Construction performed Oct-Nov 1999.

#### Southeast Funston Landfill – Inactive (FTRI-036) – FY99/00

In FY98 an EE/CA, Design and Action Memorandum, with public comment and RAB involvement, were completed for landfill cover improvements to the western portion of the SEFL. The cover improvements were designed to control surface runoff and to address landfill trench subsidence problems. Construction Contract Award Amount \$218K with FY00 modification of 131K. Construction performed Oct-Nov 1999.

### Forsyth Landfill Area 2 (FTRI-038) - FY00

Evaluations show that approximately a 100 ft. width of river bank along an 800 foot section of the Landfill Area 2 had been eroded by the Republican River. Therefore an IRA is being conducted and includes riverbank stabilization and erosion control (eroded material has in the past included UXO). In 1998 and 1999 an EE/CA and Action Memorandum (respectively) were completed.

## Total Construction Cost = \$788,000

Total Construction Cost = \$533,000

Total Construction Cost = \$2,300,000

## **Total Construction Cost = \$270,000**

#### **Total Construction Cost = \$795,000**

Total Construction Cost = \$349.000

## **CURRENT REM/IRA/RA**

#### Marshall Army Airfield - Former Fire Training Area (FTRI-019)

Private wells in the area have been monitored since this site was discovered. Because private wells have been impacted, an Engineering Evaluation/Cost Analysis (EE/CA) was performed (completed December 1997) to assess the need for a Removal Action aimed at Exposure Control. New wells outside the plume will be installed for two off-post properties (delayed due to litigation and property access).

Another EE/CA was drafted to evaluate technologies and develop alternatives appropriate to address the high concentrations in the groundwater plume as an interim action. This effort was discontinued due to significant declines in Groundwater concentrations, apparently due to previous source treatment.

## **FUTURE REM/IRA/RA**

#### FY2001

IRA - FTRI-031 354 Area Solvent Detection Site, Pending investigation results, initiate soil/groundwater "hot spot" Removal Action

#### FY2002

IRA - FTRI-056 Abandoned Gas Line, Decision Document, IRA Source Removal/Treatment, initiate GW LTM

#### FY2003

RA - FTRI-027 Dry Cleaning Facilities Area, Contingency migration control action IRA - FTRI-056 Decision Document, IRA Source Removal/Treatment, initiate GW LTM

#### FY2005

RA - FTRI-019 MAAF-Former Fire Training Area/Marshall Army Airfield, Contingency Groundwater Action

#### FY2006

LTM - FTRI-027 Dry Cleaning Facilities Area, assessing natural attenuation of the contaminants in the ground water.

## INNOVATIVE MEANS TO EXPEDITE THE STUDY PROCESS TO RA PHASE

- Partnering with the regulators and the RAB Community co-chair through an IAP Development Workshop.
- With concurrence between the signatories of the IAG, perform Removal Actions as "Time Critical" when actions are simple, straightforward, and quickly implementable. Example: "Sensitive Receptor Lead Sites".
- Again, with concurrence between the signatories of the IAG, perform response actions as either "Time Critical" or "Non-Time Critical" Removal Actions rather than initiating RI/FS's. This approach is planned for all sites identified under the IWSA for site investigations. Time and resources will be saved through streamlined study, documentation and decisionmaking processes.
- For "Non-time Critical" Removal Actions, initiate and perform design and contract documents concurrent with EE/CA preparation, public comment period, and Decision Document preparation and staffing. Procurement actions can be initiated as well, although the Notice-to-Proceed would not be issued until Decision Document signatures have been obtained. There is some risk that re-design and/or contract modifications may be required due to public comment.
- Transfer projects to other on-going regulatory programs to reduce IAG administrative requirements. Example: Custer Hill Landfill.
- Use of field screening and other data collection methods such as automated data collection platforms with satellite telemetry, soil gas surveys, "geo-probe" groundwater sampling, on-site analyses, cone-penetrometer, geo-physical surveys.
- Use of risk-based corrective action evaluations particularly helpful in addressing UST sites to avoid costly cleanups where little or no risk exists to receptors.
- Use of "dynamic" sampling plans.
- Participation in DA LTM/LTO pilot "contract bundling" project for EPA Region VII IRP/FUDs sites.

# **PRIOR YEAR FUNDING**

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## **FY00**

FTRI-003	LTM
FTRI-003	LTO
FTRI-009	RI/FS
FTRI-011	RI/FS
FTRI-019	RI/FS
FTRI-019	IRA
FTRI-027	RI/FS
FTRI-029	IRA
FTRI-031	RI/FS
FTRI-036	IRA
FTRI-038	IRA
FTRI-053	RI/FS
FTRI-054	LTM
FTRI-056	RI/FS
FTRI-062	LTM
FTRI-063	LTM
FTRI-066	LTM
FTRI-068	LTM
Restoration A	dvisory Board

FY00 TOTAL:

186,682.85 32,720.91 67,419.16 118,593.74 790,685.65 2,499.99 581,526.93 20,369.16 661,344.89 161,868.77 864,724.82 2,479.11 3,837.38 1,869.84 14,209.51 21,591.54 17,463.99 17,711.76 8,000.00

3,575,600.00

Fort Riley - Installation Action Plan Cost Estimates - Page 1

## Fort Riley's FY01 Required CTC

DSERTS #	SITE TITLE	PHASE	FY01	FY02	FY03	FY04	FY05	FY06	FY07+	PHASE TOTAL	SITE TOTAL	ACITITY DESCRIPTION
FTRI-003	Southwest Funston Landfill	LTM	254			128		112	1863	3300	3300	Monitoring, 5 year reviews, reduce after each review
A STATE OF AN AN AND AN AND AND AND AND AND AND AN	OB/OD Grounds (RANGE 16)	RI/FS	- 102	102 - 2	102	132	+10 +3			447	447	5 yrs surf water sampling, DD; NFA / LUCs; 2 Auto stream samplers, with 6 samples & report
FTRI-011	Camp Funston GW Dete	RI/FS	15							15		GW modeling, report, DD
	-	LTM	95	145	55	40	40	40	655	1071		Monitoring thru 2030, 5 year review, update model, USGS database
FTRI-019	FORMER Fire Training	RI/FS	732		<b>. 70</b>			al Estar	*			Monitoring, NA Study, Reports
		IRA	20					的影響和		e. e. · 20		Provide new wells to 2 <sup>t</sup> properties.
		RD **			1323	782	a sa an			2105		design
		RA					2419	419		. 2838		In-situ gw ttmt = iron-reduction injection (sodium di-thionate)
		RA(O)							1600	1600		inject maintenance
an a		LTM							2627	- 2627	10614	semi-annual reduced to annual
FTRI-027	Dry Cleaning Facilities	RI/FS	729	424	10					1164		PP/ROD
		RD					150			150		design
		RA						1000		1000		In-situ groundwater ttmt - s.a. Sodium di- thionate -> iron reduction
		RA(O)							1400	1400		Add'l well monitoring of performance, add'l injections
		LTM			325	235	235	235	1440	2470	6184	Well Abandonment, LTM, Nat Attn Est - 25 - 30 yrs - 2030
FTRI-029	Old Incinerator Site SE- Camp Funston	RI/FS	10							10	10	Decision Memo expected to specify Institutional Controls
FTRI-030	Pesticide Storage Facility (MIXING)	LTM		10					40	50	50	5 year reviews of land use, re-sample for residual contam, perform unrestricted site use risk assessment ('02)
FTRI-031	Building 354 Area Solvent Detections	RI/FS	473	739	460	235	205	75		2187		Soil & GW investigations - Water @ 50-60 feet in uplands, ~20 in alluvium; 2 plumes superimposed - PCE/TCE/DEC and Carbon Tet

# Fort Riley's FY01 Required CTC

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DSERTS	1 - 19 2								PHASE	SITE	
# SITE TITLE	PHASI	E FY01	FY02	FY03	FY04	FY05	FY06	FY07+	TOTAL	TOTAL	ACITITY DESCRIPTION
	IRA	325							325		Streamlined EE/CA, Source soil ttmt / hot spot groundwater s.a. peroxide, Geocleanse, etc.
	LTM					0	120	1575	1695	4207	semi annual -2012, annual 2024, 5 year reviews
FTRI-036 Southeast Funston La	nd RI/FS	10							10		Post-Removal Action - Final Dec Memo
	LTM		20		20		20	85	145	155	Cover inspection & minor repairs, 5YRs
FTRI-038 Forsyth Landfill(s)	RI/FS	10									PY S&R
	IRA	40	7.410 7						<b>.</b> 40		Bank stabilization
	LTM		10					620	630	680	5 year reviews & repairs to stabilization.
FTRI-053 POL Tank Farm	RI/FS	290	30						320		Soil and GW investigation
	LTM		20	20	20	20	20	110	210	530	Free product recovery, LTM
FTRI-054 Custer Hill PX USTS	BILTM	4	4		19 19				8	8	one well; report
FTRI-056 Abandoned Gasoline	LirRI/FS	305	120	10					435		soil and GW investigation
	IRA		299						299		remove pipeline?
	LTM			40	40	20	20	30	150	884	1 year quarterly, 4 years annually, 5YR
FTRI-057 6200 Area Fuel Oil L	IN RI/FS	. 15		$\frac{\partial r}{\partial r}$					15	i in j	GW investigation
	LTM	. 8	5	5	5	5			28	43	Monitor sumps, 1 year quarterly, 4 years annually
FTRI-062 TMP Gas Station (Bl 388)	ig LTM	10	10						20	20	Annually, 3 wells, reduced from 5 FY00; report
FTRI-063 Former Building 104		15	15		مار به الأر مار به الأربي المربية ا	ار میکند. میکند میکند. میکند میکند میکند داری			. 30	30	Annually, 4 wells; report
FTRI-066 Former Building 124		10	10						20	20	Annually, 4 wells; report
FTRI-068 Former Building 163		- 10	10		al de la constante				20	20	Annually, 2 wells; report
		3482	2883	2992	1636	3187	2061	12045	28287	28287	

# Fort Riley's FY01 Programmed CTC

DSERTS #	SITE TITLE	PHASE	FY01	FY02	FY03	FY04	FY05	FY06	FY07+	PHASE TOTAL	SITE TOTAL	ACITITY DESCRIPTION
FTRI-003	Southwest Funston Landfill	LTM	254	288	573	128	83	182	1,793	3,300	3,300	Monitoring, 5 year reviews, reduce after each review
FTRI-009	OB/OD Grounds (RANGE 16)	RI/FS	102	102	102	132	10			447	447	5 yrs surf water sampling, DD, NFA / LUCs; 2 Auto stream samplers, with 6 samples & report
FTRI-011	Camp Funston GW	RI/FS	15		1. 19 20	197.3				15		GW modeling, report, DD
		LTM	95	145	55	40	40	75	620	1,071	1,086	Monitoring thru 2030, 5 year review, update model, USGS database
FTRI-019	FORMER Fire Training	RI/FS	732	622	70			1. 1. 1.		1,424		Monitoring, NA Study, Reports
		IRA	20							20		Provide new wells to 2 properties
		RD		R. Martines	1,419	686			1. S. S. S.	2,105		design
		RA					2,419	419		2,838		In-situ gw ttmt = iron-reduction injection (sodium di-thionate)
		RA(0)		and a second					1,600	1,600		injection maintenance
		LTM						90	2,537	2,627	10,614	semi-annual reduced to annual
FTRI-027	Dry Cleaning Facilities	RI/FS	729	424	10					1,164		PP/ROD
	Area	RD					150			150		design
		RA			194			1,000		1,000		In-situ groundwater ttmt - s.a. Sodium di- thionate -> iron reduction
		RA(0)							1,400	1,400		Add'l well monitoring of performance, add'l injections
		LTM			325	235	235	270	1,405	2,470	6,184	Well Abandonment, LTM, Nat Attn Est - 25 - 30 yrs - 2030
FTRI-029	Old Incinerator Site SE- Camp Funston	RI/FS	10							10	10	Decision Memo expected to specify Institutional Controls
FTRI-030	Pesticide Storage Facility (MIXING)	LTM		10					40	50	50	5 year reviews of land use, re-sample for residual contam, perform unrestricted site use risk assessment ('02)
FTRI-031	Building 354 Area Solvent Detections	RI/FS	473	789	410	235	205	75		2,187		Soil & GW investigations - Water @ 50-60 feet in uplands, ~20 in alluvium; 2 plumes superimposed - PCE/TCE/DEC and Carbon Tet

## Fort Riley's FY01 Programmed CTC

DSERTS									PHASE	SITE	
# SITE TITLE	PHASE	FY01	FY02	FY03	FY04	FY05	FY06	FY07+	TOTAL	TOTAL	ACITITY DESCRIPTION
	IRA	325							325		Streamlined EE/CA, Source soil ttmt / hot
											spot groundwater s.a. peroxide, Geocleanse, etc.
	LTM						128	1,567	1,695	4,207	semi annual -2012, annual 2024, 5 year reviews
FTRI-036 Southeast Funston	RI/FS	10							10		Post-Removal Action - Final Dec Memo
Landfill -Inactive	LTM		20		20		20	85	145	155	Cover inspection & minor repairs, 5YRs
FTRI-038 Forsyth Landfill(s)	RI/FS	10							10		PY S&R
	IRA	40							40		Bank stabilization
	LTM		10					620	630	680	5 year reviews & repairs to stabilization.
FTRI-053 POL Tank Farm	RI/FS	286	34			E Sala		a the	320	1. St. 1	Soil and GW investigation
	LTM	1.1	20	20	20	20	20	110	210	530	Free product recovery, LTM
FTRI-054 Custer Hill PX USTS B	LTM	4	4				and the second		8	8	one well; report
FTRI-056 Abandoned Gasoline	RI/FS	256	169	10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.200			435		soil and GW investigation
Line	IRA		132	167					299		remove pipeline?
	LTM	4 - C. M		40	40	20	20	30	150	884	1 year quarterly, 4 years annually, 5YR
FTRI-057 6200 Area Fuel Oil	RI/FS	15							15		GW investigation
Line	LTM	8	5	5	5	5			28	43	Monitor sumps, 1 year quarterly, 4 years annually
FTRI-062 TMP Gas Station (Bldg 388)	LTM	10	10						20	20	Annually, 3 wells, reduced from 5 FY00; report
FTRI-063 Former Building 1044 L	LTM	15	15						30	30	Annually, 4 wells; report
FTRI-066 Former Building 1245 L		10	10	203				Sugar St.	20	20	Annually, 4 wells; report
FTRI-068 Former Building 1637 L		10	10				Star Star		20	20	Annually, 2 wells; report
Total in Thousands of Dollars		3,429	2,819	3,205	1,540	3,187	2,299	11,807	28,287	28,287	
	POM	3,429	2,819	3,205	1,540	3,187	2,299	11,807			
D	Difference	0	0	0	0	0	0	0			

# **COMMUNITY INVOLVEMENT**

## TECHNICAL REVIEW COMMITTEE

A Technical Review Committee was organized and met for the first time on January 16, 1992. The TRC charter was approved at the next meeting held on June 18, 1992. Meetings were held approximately twice a year. The TRC has not been active since the fall of 1994.

## FORMATION OF FORT RILEY'S RESTORATION ADVISORY BOARD

Fort Riley held its orientation meeting September 30, 1997 for members of the community who may be interested in participating on a Restoration Advisory Board (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 (DES) were invited to the orientation meeting by direct mail. Newspaper advertisements, television and radio announcements were additional methods used to announce the formation of Fort Riley's RAB.

At the orientation meeting, interested community members were asked to complete an application, a biographic information form and a demographic information form, if they had not completed and returned an application to DES before the meeting. A Community Co-chair was elected by community representatives in attendance. Due to the number of applications received at that time, everyone that applied to be a member of the RAB served. Approximately 20 people attended the orientation meeting.

## RAB MEMBERSHIP

The current members include representatives from Fort Riley military community, local Environmental businesses, private business, Unified School District 475, Geary County Extension Office, Riley County Planning, Geary County (Commissioner), Clay County (Commissioner), Kansas State University, City of Ogden (former Mayor), EPA, and KDHE.

The RAB lost several members and appointed new members in 2000. Recruitment for new members was completed by letters and applications being sent to members of the local communities that had expressed an interest in serving on the RAB. Several people applied for the vacancies. The Garrison Commander and both RAB Co-Chairs reviewed the applications and selected the new members to serve.

## **RAB ACTIVITIES**

The RAB members have been reviewing projects and funding plans and providing input concerning project priorities. A Public Awarness Education Program was implemented in FY98 by holding meetings in the surrounding communities. RAB members have provided comments on documents open for public comment review. The RAB was represented with a booth at the Fort Riley Open House, April 2000.

## **PROJECTIONS FOR THE RAB**

Over the next year, the members will continue to gain knowledge of site characteristics and issues, review documents, provide technical advice, and participate in formal public comment period activities.

A newsletter was created and is published for the RAB members every other month, during non-meeting months, to keep the members up-to-date on the current status of the projects.

## DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM Installation, 7. RAB REPORT 11/20/2000

**Command:** FORSCOM **SubCommand:** Installation: FORT RILEY

RAB Established Date:	199709 Reason RAB Not Establish:
RAB Adjourned Date:	<b>Reason RAB Adjourned:</b>

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**TRC Date:** 199201

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<b>RAB</b> Community Members:		Total RAB Community	Members:	16
Business Community				
<b>RAB Government Members:</b>		<b>Total RAB Government</b>	Members:	5
<b>Environmental Protection Ager</b>	юу			
RAB Activities:				•
Advice On Scope/Sch Studies/0	Cleanup			
RAB Advice				
Future Land Use				
TAPP Application Approval	Date:			
TAPP Project Title:			09/30/20	000
TAPP Project Description:				
Site Priorities	Purchase Order			
Award Number	Award Date	Com	pletion Date	
Work Plan Priorities				