

FORT HUACHUCA

Army Defense Environmental Restoration Program

Installation Action Plan

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Statement of Purpose

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

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort Huachuca (FTHU), the Arizona Department of Environmental Quality (ADEQ), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and budgets for all major Army installation cleanup programs.

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

Acronyms

AAFES	Army Air Force Exchange Service
ADEQ	Arizona Department of Environmental Quality
AEDB-R	Army Environmental Database-Restoration
AOC	Area of Concern
AWQS	Arizona Water Quality Standards
bgs	below ground surface
BNA	Base Neutral Acid
CA	Consent Agreement
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEWI	Combat Electronic Warfare Intelligence
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
со	Consent Order
CR	Compliance Restoration
CS	Confirmatory Sampling
CTT	Closed, Transferred or Transferring
DD	Decision Document
DDD	p,p'dichlorodiphenyldichloroethane
DES	Design
DMM	discarded military munitions
EAA	East Artillery Area
ENRD	Environmental and Natural Resources Division
EPIC	US Environmental Photographic Interpretation Center
FRA	Final Remedial Action
FS	Feasibility Study
FTHU	AEDB-R designation for Fort Huachuca
FY	fiscal year
HRR	historical records review
IAP	Installation Action Plan
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operation)
INV	Investigation
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
JMM	James M. Montgomery
К	thousand
LAAF	Libby Army Airfield
LF	landfill
LTM	Long-Term Management
LUST	Leaking Underground Storage Tank
MC	Munitions constituents
	Munitions and explosives of concern

Acronyms

MMRP	
MRS	
MRSPP	
MVGC	
MW	5
	Not Applicable
NETCOM	
	No Further Action
NPL	
	Operations and Maintenance
OB	Open Burning
OD	open detonation
ORC	Oxygen Releasing Compound
PA	preliminary assessment
PCB	polychlorinated biphenyls
POL	Petroleum, Oil and Lubricants
ppm	parts per million
PX	Post Exchange
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RI	Remedial Investigation
RIP	Remedy-in-place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SI	Site inspections
SRL	Soil Remediation Level
SRLF	South Range Landfill
SVE	soil vapor extraction
SVOC	Semi-Volatile Organic Compound
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TMP	transportation motor pool
TPH	total petroleum hydrocarbons
TRADOC	Training and Doctrine Command
TRC	Technical Review Committee
USACE	US Army Corps of Engineers
USAEHA	US Army Environmental Hygiene Agency
USAG	U S Army Garrison
USAICoE	US Army Intelligence Center of Excellence
USATHAMA	US Army Toxic and Hazardous Materials Agency
USEPA	United States Environmental Protection Agency

Acronyms

- UST Underground Storage Tank
- UXO unexploded ordnance
- VOC Volitile organic compound
- WWII World War II

Acronym Translation Table

CERCLA

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

RCRA Underground Storage Tank (UST) Site Phase Terms

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

Installation Information

Installation Locale

Installation Size (Acreage): 73000 City: Sierra Vista County: Cochise State: Arizona Other Locale Information

Other Locale Information

Fort Huachuca is located on approximately 73,000 acres of land in Cochise County, Arizona. It is bisected by Arizona State Highway 90. The city of Sierra Vista (population 37,800) is located on the eastern boundary of the installation. Huachuca City (population 2,000) is located on the northeastern boundary of the post. Coronado National Forest lies to the south and to the west are privately owned ranches along with the Appleton-Whittel Research Ranch managed by the Audubon Society.

Installation Mission

Current missions at FTHU include the US Army Intelligence Center of Excellence (USAICoE) and their 111th Military Intelligence Brigade's training mission, as well as the headquarters of the Network Enterprise Technology Command (NETCOM) with their 11th Signal Brigade. Electronics testing missions are conducted by the Joint Interoperability Test Command, the Electronic Proving Ground, and other testing organizations.

In 2003, the FTHU Garrison was transferred from the US Army Training and Doctrine Command (TRADOC) to the Installation Management Command (IMCOM).

Lead Organization

Lead Executing Agencies for Installation

Fort Huachuca Environmental and Natural Resources Division (ENRD), Directorate of Public Works

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region IX
State	ADEQ

National Priorities List (NPL) Status

FORT HUACHUCA is not on the NPL

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

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

Installation Program Summaries

IRP

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

Affected Media of Concern: Groundwater, Soil

MMRP

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

Affected Media of Concern: Groundwater, Soil

Installation Information

CR

Primary Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH) Affected Media of Concern: Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200901	200911	2010

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
FTHU-65 East Range Mine Shaft	FTHU-65

Results The remedy at the East Range Mine Shaft is protective of human health and the environment.

Actions Conduct groundwater sampling required to be performed at the first 5-Year Review period. If results are consistent with historic data, apply for an NFA with ADEQ.

Plans No actions are planned other than continued O&M and monitoring.

Recommendations and Implementation Plans:

Installation Historic Activity

The installation was founded in the 1880s as part of the western expansion. It operated as a cavalry post until the outbreak of World War II (WWII), when it became a training base. The fort was inactive briefly in the early-1950s. Following reactivation in 1954, the fort's primary missions included signal communications and electronics testing. In 1954, the fort was designated as the US Army Electronics Proving Ground. Since that time, additional missions have been added. These include communications testing, military intelligence training, and various flight operations, from unmanned aerial vehicles to C-130 training. Other major tenants on the installation include the Joint Interoperability Test Command, NETCOM, and the USAICOE.

In 1990, FTHU was designated a TRADOC installation and command transferred to the USAICoE, which gained additional missions as part of the Base Realignment and Closure initiatives. In 2003, FTHU Garrison transferred from the TRADOC to the IMCOM.

The permanent population of service members and dependents is approximately 7,300. Several thousand civilian employees are employed at the installation during the day.

Fort Huachuca is not on the national priorities list (NPL). The compliance order, initially issued to the installation by the ADEQ in July 1991, has been dismissed without prejudice. During discussions, the installation agreed to enter into bilateral consent orders (CO) for hazardous waste, underground storage tanks (UST), and solid waste.

The installation has negotiated COs with the state of Arizona for hazardous waste and USTs. No agreement for solid waste is required since sites in question were remediated. The FTHU will continue to work with the state in addressing Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP) sites on the installation. Soil cleanup standards, adopted in December 1997, have resulted in the closure of many IRP sites. Additional site investigation work may be necessary based on future comments from state regulators.

Installation Program Cleanup Progress

IRP	
Prior Year Progress:	FY11-FY12 study indicated that the well at FTHU-10 has gone dry well due to regional climate and water usage. FY12 study indicated that all wells at FTHU-65 are compromised and water samples cannot be collected from them.
	Prior investigation data was compiled for FTHU-85 and FTHU-90 for future planning with state regulatory agency.
Future Plan of Action:	For FTHU-10 and FTHU-65, meetings with the state regulatory agencies are planned to determine the extent of future groundwater sampling and how these samples will be collected.
	For FTHU-85 and FTHU-90, future testing will be conducted to evaluate any possible impact to indoor air.
MMRP	
Prior Year Progress:	A remedial investigation (RI) is in draft form for FTHU-007-R-01 and should be finalized in FY12. No future actions will be required for FTHU-007-R-01. An RI is still in progress for FTHU-013-R-01.
Future Plan of Action: CR	A future feasibility study (FS) is planned for site FTHU-013-R-01 in FY13.
Prior Year Progress:	For CCFTHU-92, it was determined that no further action was required. For CCFTHU-91 (Abandoned Asphalt Batch Plant)an RI will be conducted.
Future Plan of Action:	Site closure is anticipated for FTHU-91in FY13.

FORT HUACHUCA

Army Defense Environmental Restoration Program Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 62/58

Installation Site Types with Future and/or Underway Phases

1	Landfill
	(FTHU-10)
1	Soil Contamination After Tank Removal
	(FTHU-90)
1	Surface Disposal Area
	(FTHU-65)
1	Underground Storage Tank
	(FTHU-85)

Most Widespread Contaminants of Concern

Metals, Pesticides, Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA)) Action Remedy Site ID Site Name

Site ID	Site Name		Remedy	FY
FTHU-54A	PX GAS STATION	FRA	AIR SPARGING	1994
FTHU-71	OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR	FRA	EX SITU SOIL TREATMENT	1995
FTHU-72	11TH SIG MOTOR POOL SPILL SITES	FRA	IN-SITU SOIL TREATMENT	1995
FTHU-53	MIL GAS STATION LUST FILE 0155.05	FRA	OTHER	1997
FTHU-57	AIRCRAFT WASHRACK, LIBBY AAF	FRA	IN-SITU SOIL TREATMENT	1997
FTHU-85	GREELY HALL UST RELEASE SITE	FRA	BIOVENTING	1999
FTHU-90	GREELY HALL GASOLINE RELEASE	FRA	SOIL VAPOR EXTRACTION	2000
FTHU-52	FIRE FIGHTING TRAINING AREA LAAF	FRA	REMOVAL	2002

Duration of IRP

Date of IRP Inception: 197910

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 200203/200809 Date of IRP completion including Long Term Management (LTM): 201312

Contamination Assessment Overview

Site inspections (SI) and groundwater monitoring were conducted by the US Army Environmental Hygiene Agency (USAEHA), the US Army Toxic and Hazardous Materials Agency (USATHAMA), now known as the USAEC, and the US Army Corps of Engineers (USACE), Omaha and Sacramento districts. Additionally, the installation conducted investigations and groundwater monitoring through direct contracts. The ENRD is responsible for the IRP program.

The Installation Assessment of FTHU, Report No. 172, was published by the USATHAMA in June 1980. The report identified explosive wastes, herbicides, pesticides, and arsenic as major contaminants of concern at the installation, and listed training areas, old landfills and burial sites, demolition/burning grounds, and the Willcox Dry Lake bed as areas with potential contamination.

In 1987, the USATHAMA revisited the initial FTHU site assessment to determine if conditions had changed and if such changes, coupled with interim changes in environmental regulations or mission, had altered the contaminant migration/hazard situation. The report concluded that soil contamination may exist at the former Fire-Fighter Training Area, the POL Storage Facility-Libby Army Air Force (AAF), Military POL Filling Station, Post Exchange (PX) Service Station, and the 1970 to 1975 era landfill. The report recommended further testing and analysis at these sites. The report also identified potential sites from aerial photographs. Various additional assessments and SIs were performed in partnership with the USACE, Omaha District. sites included FTHU-10, 17, 18, 51, 52, 53, and 57. In 1993, work was transferred to the Sacramento District; they investigated sites FTHU-66 through 84.

On Sept. 23, 1994, FTHU and the ADEQ signed a Resource Conservation and Recovery Act (RCRA) Consent Agreement (CA) (D-10-91). The CA required FTHU to remediate the 11th Signal Brigade Motor Pool sites FTHU-71 and FTHU-72. These sites were remediated in FY95. The CA also required preparation of a RCRA closure plan for the open burning/open detonation (OB/OD) sites at FTHU. The plan was approved by the ADEQ and on June 1, 2006, following site characterization and remediation, a closure letter was received from the ADEQ. The OB/OD sites, FTHU-17, 18, and 89, are not eligible for Defense Environmental Restoration Account funding. No further action (NFA) is required under the IRP at these sites.

A UST consent order (CO) required the installation to prepare leaking underground storage tank (LUST) site characterizations for the following sites:

FTHU-78, FTHU-79, FTHU-80, FTHU-81, FTHU-84, FTHU-86, FTHU-87, and FTHU-88.

The SIs for the releases were completed in 1998, and all associated LUST files have been closed by the ADEQ. The CO required initiation of corrective action at sites FTHU-54A (PX Service Station), FTHU-85 (Greely Hall Diesel Release), and FTHU-90 (Greely Hall Gasoline Release). An air sparging system was installed in 1994 for remediation of petroleum hydrocarbons, and in 1999, oxygen releasing compounds (ORCs) were released into the groundwater for remediation of methyl tertiary butyl ether at FTHU-54A. Sampling conducted in December 2005 indicated that the corrective action plan (CAP) goals were met. The ADEQ then issued a case closure letter indicating that NFA was required at FTHU-54A. The air sparging system was decommissioned and the monitoring wells (MWs) were abandoned in FY07.

A bioventing system was installed in 1997 for the diesel release at FTHU-85. A soil vapor extraction (SVE) system was installed in 2000 at FTHU-90 for the gasoline release. The historical records for both sites indicated that the leaks had occurred prior to 1986. Risk assessments completed for both sites in January 2008 indicated that there is no unacceptable risk to receptors and that the sites are eligible for closure. A closure request for each site was submitted to the ADEQ. The ADEQ indicated that there was not sufficient data to close the sites owing to the potential for lateral migration of vapors into Greely Hall. It was suggested that indoor air monitoring be conducted to determine whether there remains an unacceptable risk to receptors. This monitoring will be conducted and the risk assessment will be revised to incorporate the results of the sampling.

At FTHU-10, South Range Landfill (SRLF), groundwater monitoring and reporting have been conducted semiannually since 1999, when a well was installed to monitor the quality of groundwater from the regional aquifer downgradient from the site. The monitoring program has expanded over the years to include installation of three additional groundwater monitoring wells, in an attempt to define regional groundwater flow and the extent of groundwater contamination. A fifth well was drilled in 2003 in an

IRPContamination Assessment

Contamination Assessment Overview

attempt to define the boundary between the regional aquifer and the underlying, less permeable, bedrock; however, the borehole was abandoned at a depth of 220 feet below ground surface (bgs), after encountering refusal.

Beginning in FY06, monitoring and reporting has been conducted annually; however, two of the three regional aquifer monitoring wells at the site could not be sampled in FY07 as a result of declining water levels in the regional aquifer. A decision was made to develop adecision document (DD) in FY08 in lieu of annual monitoring. The decision document (DD) is expected to be signed in FY09. From FY09 through FY13, annual monitoring and reporting will be limited to one deep well and two shallow wells. A five-year review is planned for 2014.

Site FTHU-65, East Range Mine Shaft, was reportedly used for disposal of trash and garbage, petroleum products (sometimes burned), small aircraft/drone bodies, and unexploded ordnance (UXO). During the RI phase completed in 1992, three monitoring wells were installed and the wells were monitored annually through 2004. No contaminants above action levels were detected in samples from the wells. In November 2000 a cap was installed to prevent surface water infiltration. In March 2004, a DD was completed. The DD requires annual inspections and if necessary, maintenance of the cap and perimeter fence. The DD also requires that a five-year review be initiated in 2009, to include sampling and analysis of groundwater from the monitoring wells.

In March 1999, the ADEQ submitted a review of FTHU's site summary report. The following sites required NFA by the ADEQ:

FTHU-41, FTHU-75, FTHU-64, FTHU-68, FTHU-73, and FTHU-74.

The following sites required further action by the ADEQ:

FTHU-10, FTHU-52, FTHU-65, FTHU-66, FTHU-69, and FTHU-70.

In April 2000, a different ADEQ reviewer submitted another review of the same FTHU site summary report. The following sites required NFA by the ADEQ:

FTHU-41, FTHU-75, FTHU-64, FTHU-68, FTHU-69, FTHU-70, and FTHU-74.

To close these sites, the ADEQ requested that FTHU prepare a DD. The following sites required further action by the ADEQ: FTHU-10, FTHU-52, FTHU-65, FTHU-66, and FTHU-73. Site FTHU-67 was not addressed.

A DD was submitted to the ADEQ for official closure of the 'NFA sites'. A letter from the ADEQ dated Dec. 15, 2000, FPU 057, notified the installation that sites FTHU-41, FTHU-75, FTHU-64, FTHU-68, FTHU-69, FTHU-70, and FTHU-74 were officially closed as NFA sites. The state based this decision on a review of the NFA DD dated Aug. 18, 2000 and signed by FTHU and ADEQ representatives.

Additional sampling was conducted in 2000 at the Golf Course Pesticide Mix Area, FTHU-73, and at the Vehicle Paint Booth Site, FTHU-66. The results of the SIs showed no detectable arsenic at FTHU-73 and concentrations below the remediation limit at FTHU-66.

Also in 2000, the installation conducted soil sampling at the Libby Army Airfield (LAAF) Fire Fighting Training Area, FTHU-52, to adequately define the vertical and horizontal extent of contamination. In October 2001, soil sampling and minor soil remediation (removal) was conducted. In January 2002, an NFA DD was submitted to the state requesting closure of sites FTHU-52, 66, 67,

Contamination Assessment Overview

and 73. A letter from the ADEQ, FPU 02-104, dated March 14, 2002, notified the installation that the four sites were officially closed out as NFA sites.

FTHU-10 and FTHU-65 are being evaluated because wells for testing are either damaged or dry, and cannot be sampled. FTHU-85 and FTHU-90 will undergo testing for possible impact to indoor air in FY12.

Cleanup Exit Strategy

The four remaining IRP sites, FTHU-10, FTHU-65, FTHU-85, and FTHU-90, are in the long-term management (LTM) phase. For the first two LTM sites, the strategy is to exit the LTM phase in a way that satisfies Arizona regulators and fulfills the spirit and intent of applicable laws, at the least cost to the Army. The last two sites, which are associated with Greely Hall, will require indoor air monitoring to supplement the risk assessment and verify there is no unacceptable risk to receptors. For specifics on future actions at the sites, please see the individual cleanup exit strategies.

	Title	Author	Date
1980			
	US Army Toxic and Hazardous Materials Agency (USATHAMA), APG, MD; Installation Assessment of Fort Huachuca, Report No. 172	Chemical Systems Laboratory (CSL)	JAN-1980
	US Army Toxic and Hazardous Materials Agency (USATHAMA), APG, MD	Installation Files for Ft. Huachuca	JAN-1980
	US Army Environmental Hygiene Agency (USAEHA) APG, MD; Radiation Protection Survey No. 28-43- 0024-80	US Army Medical Department/Dental Activity	JAN-1980
	US Army Environmental Hygiene Agency (USAEHA) APG, MD; Pesticide Special Investigation No. 20-44- 0571-81, Analysis of Transformer Fluid Samples for Polychlorinated Biphenyls (PCBs)	Ft. Huachuca	JAN-1980
981		·	
	US Army Environmental Hygiene Agency (USAEHA) APG, MD; Potable/Recreational Water Quality Survey No. 31-66-0181 and Wastewater Engineering Survey No. 32-66-0182-81	Ft. Huachuca and Aurora, CO	JAN-1981
	Pesticide Resistance Assessment No. 18-660572-81, Insecticide Susceptibility/Resistance Testing of German Cockroaches from Ft. Huachuca	US Army Environmental Hygiene Agency (USAEHA) Aurora, CO	JAN-1981
982			
	Nonionizing Radiation Protection Special Study No. 24- 42-0715-82 AN/TSC-86 Satellite Terminal	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1982
	Nonionizing Radiation Protection Special Study No. 24- 42-0737-82, 20 Mhz-1 Ghz Radiation Test Van, US Army Intelligence and Security Board, Ft. Huachuca	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1982
983			
	Radiation Protection Survey No. 28-43-00327-83, US Army Medical Department/Dental Activity	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1983
	Integrated Pest Management Assessment No. 18- 660554-83, Cockroach and House Fly Control	US Army Environmental Hygiene Agency (USAEHA) Aurora, CO	JAN-1983
984			·
	Radiation Protection Survey No. 28-43-0407-84, US Army Medical Department Activity/Dental Activity	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1984
	Radiation Protection Survey No. 28-43-0905-84, US Army Medical Department Activity/Dental Activity	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1984
	Pest Resistance Laboratory Study No. 16-66-0542-84, Insecticide Susceptibility/Resistance Testing of German Cockroaches from Ft. Huachuca, AZ	US Army Environmental Hygiene Agency (USAEHA) Aurora, CO	JAN-1984
986			
	Installation Assessment Relook Program Working Document, Ft. Huachuca Army Reservation, Cochise County, AZ TS-PIC-85X	US Environmental Photographic Interpretation Center (EPIC), Warrenton, VA	JAN-1986
989			
	Environmental Program Review No. 37-26-7157-90, Ft. Huachuca, AZ	US Army Environmental Hygiene Agency (USAEHA) APG, MD	JAN-1989

	Title	Author	Date
989			
	Environmental Program Review No. 37-26-7157-90, Ft. Huachuca, AZ	US Army Environmental Hygiene Agency, APG, MD	JAN-1989
	Groundwater Quality Survey No. 38-26-8875-89 potential Groundwater Contamination Sites, Ft. Huachuca	Environmental Engineering Consultants	MAR-1989
991	indondoù		
	UST Site Investigation, Post Exchange Gas Station	Kleinfelder, Inc	MAR-1991
	Report on Removal of an Underground Storage Tank at Greely Hall	Kleinfelder, Inc	JUN-1991
92			
	Remedial Investigation Report UST Site: Military POL Filling Station, PX Service Station	James M. Montgomery (JMM) Consulting Engineers, Inc	MAY-1992
	Final Remedial Investigation Report UST Site: Military POL Filling Station, PX Service Station	JMM	MAY-1992
	Tank Trails Dump Sites Remedial Investigation Report	JMM	MAY-1992
	RCRA Facilities Investigation Report: Libby Army Airfield (LAAF) Fire Fighting Training Area, LAAF Aircraft Wash Rack Area, LAAF POL Storage Facility	JMM	MAY-1992
	Final RCRA Facilities Investigation Report: LAAF Fire Fighting Training Area, LAAF Aircraft Wash Rack Area, LAAF POL Storage Facility, May	JMM	MAY-1992
	Subsurface Investigation Building 30126, Underground Storage Tank Excavation, Ft. Huachuca	Hydro Geo Chemical, Inc	MAY-1992
	UST Management; Permanent Closure of Four 10,000 Gallon USTs Initial Site Characterization, AAFES Service Station, Smith Avenue & Whitside Road, Ft. Huachuca	Environmental Engineering Consultants	JUN-1992
993	Illacifica		
	Limited Excavation and Disposal of Petroleum Contaminated Soil Miller & Associates, Inc., Ft. Huachuca AAFES Fuel Facility	Western Technologies Inc	JAN-1993
	Draft Interim Report, PX Service Station Interim Response Action, Ft. Huachuca	International Technology Corporation	AUG-1993
	Draft Interim Report, PX Service Station Interim Response Action, Ft. Huachuca	International Technology Corporation	AUG-1993
	Report on Subsurface Soil Assessment of JP-4 Fuel Contamination From an Underground Storage Tank System at Libby Army Airfield; USAG Ft. Huachuca	Environmental Engineering Consultants	AUG-1993
994		·	
	Draft Report on the Remediation of Petroleum Impacted Soil From Various Sites at USAG Ft. Huachuca	Environmental Engineering Consultants	FEB-1994
	Report on Assessment of Petroleum Hydrocarbon Contamination at Greely Hall, Ft. Huachuca	Environmental Engineering Consultants	FEB-1994
	Report on Assessment of Soil and Perched Groundwater at Bldg 31210, AAFES PX Service Station	Environmental Engineering Consultants	FEB-1994
	Final Preliminary Assessment/Site Investigation Report Miscellaneous Non-UST Sites	Montgomery Watson, Inc	APR-1994
	Final Preliminary Assessment/Site Investigation Report Miscellaneous UST Removal Sites	Montgomery Watson, Inc	APR-1994
	Project Work Plan Soil Sampling and Analysis Investigation Open Burning/Open Detonation Units	Basin & Range Hydrogeologists, Inc	MAY-1994

Title

Author

Date

1	9	9	4
	-	-	

1994			
	South and East Ranges		
	Final Report: Assessment of Subsurface Petroleum Hydrocarbon Impacted Soils at Former Waste Soil Piles (AAFES, Brainard, Radar Station, and Defueling Point), Ft. Huachuca	Environmental Engineering Consultants	JUN-1994
	Air Sparging System Installation, PX Service Station, Ft. Huachuca, Volumes I & II	International Technology Corporation	OCT-1994
	Air Sparging System Installation, PX Service Station, Ft. Huachuca	International Technology Corporation	OCT-1994
	Report on the Remediation of Petroleum Hydrocarbon Impacted Soil From Various Sites at USAG Ft. Huachuca	Environmental Engineering Consultants	OCT-1994
	Report on Removal of One 2,000 Gallon Waste Oil Underground Storage Tank, and Subsequent Soil Assessment and Corrective Action at the Auto Craft Shop (Building 71810) Ft. Huachuca	Environmental Engineering Consultants	DEC-1994
1995		·	
	Soil Sampling and Analysis Investigation Open Burning/Open Detonation Units South and East Ranges, Ft. Huachuca	Basin & Range Hydrogeologists, Inc	FEB-1995
	Site N12 Site Characterization Report (TMP Steam Cleaning Facility), Ft. Huachuca	International Technology Corporation	AUG-1995
	UST Site 6 Site Characterization Report	International Technology Corporation	AUG-1995
	UST Site 8 Site Characterization Report	International Technology Corporation	AUG-1995
	Site N6 Site Characterization Report	International Technology Corporation	AUG-1995
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	Report on Installation and Sampling of Groundwater Monitoring Well; South Range Landfill, USAG Ft. Huachuca	Environmental Engineering Consultants	OCT-1999
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	Monthly Air Quality Monitoring Report, Soil Vapor Extraction System, Bldg 61801 (Greely Hall), ADEQ Air Quality Permit 1001046, USAG Ft. Huachuca	Engineering and Environmental Consultants, Inc	JAN-2004
	Groundwater Sampling Report, East Range Mine Shaft, USAG Ft. Huachuca	Engineering and Environmental Consultants, Inc	JAN-2004
	Monthly Air Quality Monitoring Report, Soil Vapor Extraction System, Bldg 61801 (Greely Hall), ADEQ Air Quality Permit 1001046, USAG Ft. Huachuca	Engineering and Environmental Consultants, Inc	FEB-2004
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	Monthly Air Quality Monitoring Report, Soil Vapor Extraction System, Bldg 61801 (Greely Hall), ADEQ Air Quality Permit 1001046, USAG Ft. Huachuca	Engineering and Environmental Consultants, Inc	FEB-2005
	Leachate and Groundwater Monitoring Semiannual Report, Site FTHU-10, South Range Landfill, USAG	Environmental Engineering Consultants, Inc.	OCT-2005
	Monthly Air Quality Monitoring Report, Soil Vapor Extraction System, Bldg 61801 (Greely Hall), ADEQ Air Quality Permit 1001046, USAG Ft. Huachuca	Engineering and Environmental Consultants, Inc	DEC-2005
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FORT HUACHUCA

Installation Restoration Program

Site Descriptions

Site ID: FTHU-10 Site Name: SOUTH RANGE LF (OLD LF 6 AND 7)





RRSE: LOW Contaminants of Concern: Metals, Pesticides Media of Concern: Groundwater

Phases	Start	End
PA	199203	199404
SI	199203	199404
RI/FS	199203	200105
LTM	200106	201312
RIP Date:	N/A	

RC Date: 200105

SITE DESCRIPTION

Site FTHU-10 is located on FTHUs South Range and covers about 100 acres. This site consists of two adjacent alleged solid waste disposal areas (Locations 10 and 11) originally identified in the report titled "Installation Assessment of Fort Huachuca" prepared by USATHAMA in 1980. Location 10 was allegedly used as a landfill from 1972 to 1975 with disposal of unknown quantities of chemicals including pesticides, herbicides/sterilants, and sodium arsenite. Location 11, adjacent to location 10 on the east, was identified as having been used from 1970 to 1975 for the disposal of routine trash and garbage. Interviews were conducted and perhaps a review of aerial photographs were conducted to evaluate disposal activity. No written records or records of interviews exist to document the disposal activities. In January 1993 a preliminary assessment (PA)/SI was completed followed in 1995 by a site characterization. The PA/SI included soil, shallow (perched) groundwater, and surface water sampling whereas the site characterization included drilling and the sampling of six soil borings to characterize the nature and extent of contamination. Analytes included volatile organic compounds (VOC), base neutral acids (BNA), organochlorine pesticides/ polychlorinated biphenyls (PCB), organophosphorus pesticides, herbicides, and priority pollutant metals. The only analytes detected above regulatory limits (i.e., health-based guidance levels established by the ADEQ) were total cadmium, lead, dieldrin, p,p'dichlorodiphenyldichloroethane (DDD), and total petroleum hydrocarbons (TPH).

In 1999, a single well was installed and semiannual monitoring was initiated. Over the years, three additional monitoring wells were installed to define regional groundwater flow and the extent of contamination. In FY03, at the request of the ADEQ, a fifth well was drilled in an attempt to define the boundary between the regional aquifer and the underlying, less permeable, bedrock; however, the borehole was abandoned at a depth of 220 ft bgs after encountering refusal.

In 2006, the ADEQ concurred with a change from semiannual to annual monitoring of three regional groundwater wells and two leachate wells. In the April 2007 report it was noted that the water table had dropped leaving SRLF MW-3 dry was unable to be purged, and SRLF MW-2 dry after purging only two gallons of water. Similar decline in water levels were observed in the regional aquifer of the Upper San Pedro Basin. Three of the four remaining regional aquifer monitoring wells were abandoned in 2008, two of them because they had gone dry and the third because evidence indicated that it was not hydrologically connected with groundwater beneath the site. SRLF MW-1, located downgradient from the site, has since gone dry. Attempts at sampling indicated this.

In groundwater samples collected since 1999 no pesticides, VOCs, or semi-volatile organic compounds (SVOCs) have been detected above Arizona Aquifer Water Quality Standards (AWQS). There were only three instances in which metals (lead and cadmium) exceeded their respective AWQS. The ADEQ has indicated that long-term monitoring should continue. Compilation of passed sampling and analysis of data needs to be accomplished in order to demonstrate the lack of contamination risk at this site.

Work in FY 12 at FTHU will include evaluations of existing data to address the mitigating factors reducing risk, such as evapotranspiration, and optionally, to install one additional well at a down gradient location to provide defensible chemistry data confirming that there has been no release in the intervening years since 2007. A systematic records search is included in the USACE level of effort. If an optional well is agreed, it is assumed there will be two sampling events (semi- annual) limited to analytes for which there are previous detections: a) VOCs, b) chlorinated pesticides, c) priority metals.

Site ID: FTHU-10 Site Name: SOUTH RANGE LF (OLD LF 6 AND 7)



Future meetings with ADEQ will determine whether future sampling is required.

Site ID: FTHU-65 Site Name: EAST RANGE MINE SHAFT



Regulatory Driver: CERCLA

RRSE: LOW Contaminants of Concern: Metals

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	199003	199111
SI	199003	199111
RI/FS	199003	199111
LTM	199301	201312
RIP Date:	N/A	

RC Date: 199111

SITE DESCRIPTION

Site FTHU-65 is located on the remote East Range. Information concerning the shaft indicated that it had been used since the 1940s for disposal of a variety of waste including refuse, petroleum products (sometimes burned), small aircraft/drone bodies and possibly UXO. In August 1989, the site included the remains of a small earthen berm, partially surrounding a depression in the soil, above a vertical mine shaft. By November 1989, a portion of the depression had settled or collapsed. By early February 1990, the post had re-filled the depression/hole with earth to minimize surface water entry and added a fence around the shaft. The mine shaft is reportedly about 200 feet deep. Groundwater is approximately 275 feet bgs. The potential that a direct pathway existed between possible contaminants and the groundwater was of special concern, especially if surface water entering at the top of the shaft could have provided additional driving force. From 1992 to 2004, the installation monitored three groundwater wells at the site. Groundwater has been sampled for the presence of VOCs, hydrocarbons, metals, and explosives. To date, no contaminants above action levels have been encountered in the wells, although lead was detected in an upgradient well.

In November 2000, at the request of the ADEQ, a cap was installed to prevent surface water from infiltrating the filled mine shaft.

In March 2004, a DD was completed. The DD requires annual inspections and, if necessary, maintenance of the cap and perimeter fence. The DD also requires that a five-year review be conducted in 2009, to include sampling and analysis of groundwater from the monitoring wells. A five-year review was completed in 2010 without monitoring. A monitoring event is planned for FY11. The monitoring event for FY11 did not occur due to inaccessibility of water in the wells.

A single monitoring event needs to be accomplished to determine that there has been no contamination. Past data, along with the current tests, will be reviewed and analyzed to demonstrate the lack of contamination risk at this site. If the existing wells cannot be monitored there are two alternatives. First is to consider the redevelopment or rehabilitation of the existing wells. If the wells cannot be rehabilitated, the second alternative is the installation of an additional well will be considered as a sentry well in a location intermediate between the mine shaft site and the nearest production wells in a downgradient direction. It is assumed that the sentry well will be monitored shortly after installation.

CLEANUP/EXIT STRATEGY

The final groundwater sampling event was attempted in FY12, but the water was not accessible due to probable damaged casing. Meetings with ADEQ will occur to determine how this final groundwater sampling event will be collected. Previous samples have not detected compounds above action levels.

Site ID: FTHU-85 Site Name: GREELY HALL UST RELEASE SITE



Regulatory Driver: RCRA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
ISC	199403	199411
INV	199412	199506
CAP	199507	199508
IMP(C)	199608	199812
IMP(O)	199812	200809
LTM	201101	201310
RIP Date:	199812	
RC Date:	200809	



This site is located at the rear southern service area of the Greely Hall Building 61801. Greely Hall was built in 1959 and included fuel storage and dispensing from USTs located in the rear service area. FTHU-85 is associated with a release of diesel fuel from a UST that provided fuel to emergency generators. The diesel release was associated with the distribution system connecting the tank to the emergency generators. The system piping was known to leak during the period of use. The extent of the leak was confirmed in September 1990. The extent of contamination indicates that the release had been occurring for at least a decade before its discovery. The ADEQ required the installation to perform an SI on LUST Files 0155.05 and 0155.06. The extent of the impacted soil was less than 95 feet deep and 50 feet wide. The regional groundwater at the site is estimated at approximately 400 to 450 feet below the land surface.

The site was characterized and a bioventing system was installed in 1997 to remediate it. The diesel release has reacted positively to bioremediation. Initial sampling showed 56,900 parts per million (ppm) TPH. Two borings were placed and sampled in January 2003, and showed 19,700 ppm TPH. The residential Arizona Soil Remediation Level (SRL) is 4,100 ppm TPH. A confirmation soil boring was placed in May of 2007 with results indicating that the contamination has remained virtually unchanged from 2003 levels. A decision was made to attempt to close the site using a risk-based assessment consistent with Arizona regulations. The risk assessment was completed in January 2008 and a report submitted to the ADEQ for approval. The ADEQ indicated that there was not sufficient data to close the site owing to the potential for lateral migration of vapors into Greely Hall. It was suggested that indoor air monitoring be conducted to determine whether there remains an unacceptable risk to receptors. This monitoring will be funded in FY 12 and conducted as part of a LTM phase for this site and the risk assessment will revised to reflect the sampling results.

CLEANUP/EXIT STRATEGY

An indoor air monitoring event is planned for FY12 to supplement the risk assessment and to verify there is no unacceptable risk to receptors. This indoor air monitoring event will cover both FTHU-85 and FTHU-90. No further funding requirement is anticipated.

Site ID: FTHU-90 Site Name: GREELY HALL GASOLINE RELEASE



Regulatory Driver: RCRA RRSE: LOW Contaminants of Concern: Volatiles (VOC) Media of Concern: Soil

Phases	Start	End
ISC	199506	199507
INV	199804	199805
CAP	199810	199906
DES	199910	199912
IMP(C)	200001	200008
IMP(O)	200009	200809
LTM	201009	201310
RIP Date:	200009	
RC Date:	200809	



This site is located at the rear southern service area of the Greely Hall Building 61801. Greely Hall was built in 1959. A gasoline generator and associated UST were installed in the 1970s to provide emergency power for the communication center. Site FTHU-90 is associated with the release of gasoline from a UST that provided fuel to emergency generators. The generator was removed during the 1970s. In 1995, the storage tank was removed, at which time the contaminant plume, from years of gasoline spillage from overfilling the generators, was discovered. The extent of impacted soil is less than 65 feet deep and less than 70 feet in diameter. In April of 1998, the site was assessed, and 65 ppm of benzene was detected at 30 feet bgs. A CAP was prepared for the gasoline release. In August 1999, a SVE pilot test was conducted to assist in obtaining an air quality permit from the ADEQ. The regional groundwater at the site is estimated at approximately 400 to 450 feet below the land surface.

To reduce levels of benzene that exceeded state residential SRLs, on July 31, 2000 the SVE system was installed and started at this location. In January of 2003, soil borings and sampling were conducted. Benzene was detected above its residential SRL (0.62ppm) from 20 to 30 feet bgs, with the highest concentration of 22 ppm of benzene at 20 feet bgs. An SVE well was grouted, from a depth of 60 feet to the 30 feet to facilitate remediation at the depth where contamination concentrations remain above residential SRLs.

Results from a confirmation soil boring placed in May 2007 indicated that various contaminants exceeded their respective residential SRLs but not the respective non-residential SRLs. A decision was made to attempt to close the site using a risk based assessment consistent with Arizona regulations. The risk assessment was completed in January 2008 and a report submitted to the ADEQ for approval. The ADEQ indicated that there was not sufficient data to close the site owing to the potential for lateral migration of vapors into Greely Hall. It was suggested that indoor air monitoring be conducted to determine whether there remains an unacceptable risk to receptors. This monitoring will be funded in FY 12 and conducted as part of a LTM phase for this site and the risk assessment will be revised to reflect the sampling results.

CLEANUP/EXIT STRATEGY

An indoor air monitoring event is planned for FY12 to supplement the risk assessment and to verify there is no unacceptable risk to receptors. This indoor air monitoring event will cover both FTHU-85 and FTHU-90. No further funding requirement is anticipated.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTHU-01	RAD SOURCE STRG BLDG 12508	198006	Identified as 1 of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980); however, this facility contained only sealed sources of radioactivity and there has never been a known release of material from this site. The report recommended no further investigation, a conclusion reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-02	ABANDONED T,BLDG 90322 AND SLUDGE BEDS	198006	Number 2 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-05	LANDFILL 1 1930-1945	198804	Number 5 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-06	LANDFILL 2 1945-1950	198804	Number 6 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-07	LANDFILL 3 1976-1979	198804	Number 7 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation, This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-08	LANDFILL 4 1939-1975(A)	198804	Number 8 on a list of 24 locations of

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Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-09	LANDFILL 5 1939-1975(B)	198804	Number 9 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-12	LANDFILL 8 1939-1970	198804	Number 12 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-13	LANDFILL 9 1903-1939	198804	Number 13 on a list of 24 locations of known or suspected waste materials in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of potential contamination was found for this landfill. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-17	EAST RANGE OB/OD AREA	200101	Site remediated as a RCRA Corrective Action. Acknowledgement of closure letter dated June 1, 2006 was issued by Arizona Department of Environmental Quality formally closing this site.
FTHU-18	SOUTH RANGE OB/OD AREA	200101	Site remediated as a RCRA Corrective Action. Acknowledgement of closure letter dated June 1, 2006 was issued by Arizona Department of Environmental Quality formally closing this site.
FTHU-30	BLDG 72909 WOOD SHOP	198006	Identified as one of 37 industrial operations in "Installation Assessment of

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-31	BLDG 72908 WELD SHOP	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-32	BLDG 72908 MACH AND PT. SHP	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-33	MUNITIONS REPAIR, BLDG 73902	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-34	BLDG 73903 PAINTING	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-36	BLDG 75902 TIRE REPAIR	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was

Site ID	Site Name	NFA Date	Documentation
			reiterated in "Update of the Initial
			Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-37	BLDG 75901 MOTOR POOL	198006	Identified as one of 37 industrial
			operations in "Installation Assessment of
			Fort Huachuca" prepared by USATHAMA
			(June 1980). No evidence of
			contamination was found at this facility.
			The report recommended no further
			investigation This conclusion was
			reiterated in "Update of the Initial
			Assessment of Fort Huachuca" prepared
			by USATHAMA in 1988.
FTHU-38	BLDG 51419, VEHICLE MAINTENANCE	198006	Identified as one of 37 industrial
			operations in "Installation Assessment of
			Fort Huachuca" prepared by USATHAMA
			(June 1980). No evidence of
			contamination was found at this facility.
			The report recommended no further
			investigation. This conclusion was
			reiterated in "Update of the Initial
			Assessment of Fort Huachuca" prepared
			by USATHAMA in 1988.
FTHU-39	BLDG 30013 MOTOR POOL	198006	Identified as one of 37 industrial
			operations in "Installation Assessment of
			Fort Huachuca" prepared by USATHAMA
			(June 1980). No evidence of
			contamination was found at this facility.
			The report recommended no further
			investigation. This conclusion was
			reiterated in "Update of the Initial
			Assessment of Fort Huachuca" prepared
			by USATHAMA in 1988.
FTHU-40	BLDG 30113 CEWI MOTOR POOL	198006	There are several LUST files associated
			with this facility including 0155.39
			(formerly 4715.4178) for a leaking 200
			gallon used oil UST and 0155.10 (formerly
			4715.1185) for a 16,000 gallon used oil
			tank in an underground vault. LUST file
			0155.39 was closed by ADEQ in a letter
			dated 17 October 1996 and LUST file
			0155.10 was referred to the Solid Waste
			Compliance and Inspection Unit of ADEQ
			for eventual closure with no further action
FTHU-41	BLDG 75801 MOTOR POOL	198006	in a letter dated 30 September 1996.
		198000	Technical Document to support the NFA
FTHU-42	BLDG 74902 PAINT SHOP	198006	Declaration signed on 11/27/2000. Identified as one of 37 industrial
1110-42		190000	operations in "Installation Assessment of
			Fort Huachuca" prepared by USATHAMA
			(June 1980). No evidence of
			contamination was found at this facility.
			The report recommended no further
			investigation. This conclusion was
			reiterated in "Update of the Initial
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Site ID	Site Name	NFA Date	Documentation
			Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-43	BLDG 91110 AVIATION MAINTENANCE SHOP	198006	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-44	BLDG 90201, POST LAUNDRY	198606	Identified as one of 37 industrial operations in "Installation Assessment of Fort Huachuca" prepared by USATHAMA (June 1980). No evidence of contamination was found at this facility. The report recommended no further investigation. This conclusion was reiterated in "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988.
FTHU-51	POL STG, LIBBY AAF LUST FILE	199908	LUST Case Closure Letter from ADEQ dated 31 March 1999 (LUST File #0155.33)
FTHU-52	FIRE FIGHTING TRAINING AREA LAAF	200203	Technical Document to Support the No Further Action Declaration signed on 3/13/2002; no contaminants above ADEQ SRLs.
FTHU-53	MIL GAS STATION LUST FILE 0155.05	199709	ADEQ LUST case closure letter dated 15 April 1998. LUST file number associated with site is 0155.04, not 0155.05.
FTHU-54	POST ELECTRICAL SHOP	198006	The report "Update of the Initial Assessment of Fort Huachuca" prepared by USATHAMA in 1988, noted that 50 transformers were stored in the open at the rear of this facility, but no leaking transformers were observed, none of the transformers reportedly contained PCBs, and all 50 transformers were subsequently transferred to DRMO for disposal. The report recommended no further investigation.
FTHU-54A	PX GAS STATION	200709	Arizona Department of Environmental Quality LUST Case Closure Letter dated 20 June 06.
FTHU-55	BLDG 73904 BATT SHOP	198804	ADEQ issued a letter on 16 July 1996 acknowledging that "No Further Action" was required at this site.
FTHU-57	AIRCRAFT WASHRACK, LIBBY AAF	199610	This site was originally identified as a LUST site under authority of the ADEQ UST Unit; however, the release at this site was not from a UST. The site was

Site ID	Site Name	NFA Date	Documentation
			subsequently transferred to and closed by the ADEQ Solid Waste Unit.
FTHU-61	IMPACT AREA-EAST RANGE	198006	Impact area on East Range is part of an active military range. Until status of range changes, no activities are planned for the site.
FTHU-62	IMPACT AREA SOUTH RANGE	198006	Impact area on South Range is part of an active military range. Until status of range changes, no activities are planned for the site.
FTHU-64	TANKTRAILS DUMP SITE (6)	199706	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-66	VEHICLE PAINT BOOTH BLDG 72907	200108	Technical Document to Support the "No Further Action Declaration" signed on 3/13/2002; no contaminants above ADEQ SRLs.
FTHU-67	TMP DRUM STG AREA	200203	Technical Document to Support the "No Further Action Declaration" signed on 3/13/2002; no contaminants above ADEQ SRLs
FTHU-68	TMP AUTOMATIC WASHRACK, BLDG 76925	199506	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-69	TMP ABOVEGROUND WASTE TANK SITE	200012	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-70	TMP STEAM CLEANING FACILITY	200012	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-71	OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR	199505	A Preliminary Assessment/Site Investigation was performed at this site by James M. Montgomery, Consulting Engineers, in 1992 ("Preliminary Assessment/Site Investigation Report Miscellaneous Non-UST Sites"). Samples collected from the area of concern were analyzed for VOCs, lead, and Total Recoverable Petroleum Hydrocarbons (TRPHs). No VOCs were detected and no samples contained lead or TRPH above the respective ADQE Health Based Guidance levels for these constituents.
FTHU-72	11TH SIG MOTOR POOL SPILL SITES	199511	This is one of the sites investigated and remediated in accordance with Consent

Site ID	Site Name	NFA Date	Documentation
			Order D-10-91. Following a review of the report titled "Report on Excavation, Sampling, and Thermal Treatment of Petroleum Impacted Soil at 11th Signal Brigade" prepared by Environmental and Engineering Consultants, ADEQ issued a letter dated 24 January 1999 approving work performed at the site and concluding that requirements of the consent order pertaining to this site have been met.
FTHU-73	GOLF COURSE PESTICIDE MIX AREA	200203	Technical Document to Support the "No Further Action Declaration" signed on 3/13/2002; no contaminants above ADEQ SRLs
FTHU-74	BLDG 35033 PESTICIDE MIX AREA	199308	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-75	AMSA WASHRACK DISCHARGE	199908	Technical Document to Support the "No Further Action Declaration" signed on 11/27/2000; no contaminants above ADEC SRLs
FTHU-76	UST SITE # 4715-0980 OLD BOILER SITE#1	199607	Case Closure Letter from ADEQ dated 30 September 1996 (LUST File #4715.0980)
FTHU-77	UST SITE # 4715-1192 SITE #2 CLARKSON ST	199609	Case Closure Letter from ADEQ dated 23 January 1997 (LUST File #4715.1192)
FTHU-78	UST SITE # 4715-1185 CEWI MOTOR POOL	199903	Release from 16,000 gallon used oil tank contained within an underground vault originally assigned LUST file 4715.1185 by ADEQ then changed to 0155.10. Tank determined to be under jurisdiction of Solid Waste Inspection and Compliance Unit (ICU) of ADEQ since it was contained in a vault. ICU closed this case (PCS file #1319-S) in a letter dated 30 September 1996 indicating no further action required.
FTHU-79	UST SITE # 4715-0716 (11TH SB) 0155.08	199902	Case closure letter from ADEQ dated 31 March 1999 for LUST file 0155.08.
FTHU-80	UST SITE # 4715-1191 UST REMOVAL SITE #6	199712	In August 1995, IT Corporation completed a site characterization report for this site. The site, near the intersection of Irwin Street and Railroad Avenue, was the location of two diesel fuel USTs that were removed in December 1989. ADEQ assigned a new LUST number to this site (0155.18) in April 1996. The old file number was 4715.1191. ADEQ issued a case closure letter for this site on 1 December 1997 formally acknowledging "No Further Action" required at the site.
FTHU-81	UST SITE # 4715-1190 SITE 7 OLD FUEL PT	199809	Case Closure Letter from ADEQ dated 14 Dec 1998 (LUST Files 0155.16 and 0155.17).

Site ID	Site Name	NFA Date	Documentation
FTHU-82	UST SITE # 4715-1189 SITE 8 DIESEL UST	199710	LUST case closure letter from ADEQ dated 8 December 1997. New LUST file 0155.26 replaced original LUST file 4715.1189.
FTHU-83	UST SITE # 4715-1188 HOSPITAL UST BURN	199302	Case Closure Letter from ADEQ dated 8 Oct 1999 (LUST File 0155.14).
FTHU-84	UST SITE # 4715-1187 SITE 10 EPG 0155.13	199708	Case Closure Letter from ADEQ dated 27 August 1997(LUST File 0155.13)
FTHU-86	ABANDONED PIPELEINE IRWIN ST RELEASE SIT	199812	ADEQ issued a "Satisfaction and Termination" letter on 22 October 1998 formally documenting closure of this LUST site. This LUST file number applicable to this site was 0155.26.
FTHU-87	OLD AUTOCRAFT SHOP BLDG 30126 RELEASE	199601	ADEQ issued a "Satisfaction and Termination" letter on 8 January 1998 formally documenting closure of this LUST site. This LUST file number applicable to this site was 0155.27.
FTHU-88	BLD 30113 WASTE OIL TANK LUST#0155.39	199809	Case Closure Letter from ADEQ dated 6 February 1998 (LUST File 0155.39).
FTHU-89	WEST RANGE OB/OD DISPOSAL UNIT	199908	Site remediated as a RCRA Corrective Action. Acknowledgement of closure letter dated 1 June 2006 was issued by Arizona Department of Environmental Quality formally closing this site.

IRP Schedule

Date of IRP Inception: 197910

	mpletion Milestones
1980	
INV	(FTHU-40 - BLDG 30113 CEWI MOTOR POOL)
SI	(FTHU-01 - RAD SOURCE STRG BLDG 12508, FTHU-02 - ABANDONED T,BLDG 90322 AND SLUDGE BEDS, FTHU-30 - BLDG 72909 WOOD SHOP, FTHU-31 - BLDG 72908 WELD SHOP, FTHU-32 - BLDG 72908 MACH AND PT. SHP, FTHU-33 - MUNITIONS REPAIR, BLDG 73902, FTHU-34 - BLDG 73903 PAINTING, FTHU-36 - BLDG 75902 TIRE REPAIR, FTHU-37 - BLDG 75901 MOTOR POOL, FTHU-38 - BLDG 51419, VEHICLE MAINTENANCE, FTHU-39 - BLDG 30013 MOTOR POOL, FTHU-41 - BLDG 75801 MOTOR POOL, FTHU-42 - BLDG 74902 PAINT SHOP, FTHU-43 - BLDG 91110 AVIATION MAINTENANCE SHOP, FTHU-54 - POST ELECTRICAL SHOP, FTHU-61 - IMPACT AREA-EAST RANGE, FTHU-62 - IMPACT AREA SOUTH RANGE)
ISC	(FTHU-40 - BLDG 30113 CEWI MOTOR POOL)
ΡΑ	(FTHU-01 - RAD SOURCE STRG BLDG 12508, FTHU-02 - ABANDONED T,BLDG 90322 AND SLUDGE BEDS, FTHU-30 - BLDG 72909 WOOD SHOP, FTHU-31 - BLDG 72908 WELD SHOP, FTHU-32 - BLDG 72908 MACH AND PT. SHP, FTHU-33 - MUNITIONS REPAIR, BLDG 73902, FTHU-34 - BLDG 73903 PAINTING, FTHU-36 - BLDG 75902 TIRE REPAIR, FTHU-37 - BLDG 75901 MOTOR POOL, FTHU-38 - BLDG 51419, VEHICLE MAINTENANCE, FTHU-39 - BLDG 30013 MOTOR POOL, FTHU-41 - BLDG 75801 MOTOR POOL, FTHU-42 - BLDG 74902 PAINT SHOP, FTHU-43 - BLDG 91110 AVIATION MAINTENANCE SHOP, FTHU-44 - BLDG 90201, POST LAUNDRY, FTHU-54 - POST ELECTRICAL SHOP, FTHU-61 - IMPACT AREA-EAST RANGE, FTHU-62 - IMPACT AREA SOUTH RANGE)
1986	
SI	(FTHU-44 - BLDG 90201, POST LAUNDRY)
1988	
SI	(FTHU-05 - LANDFILL 1 1930-1945, FTHU-06 - LANDFILL 2 1945-1950, FTHU-07 - LANDFILL 3 1976- 1979, FTHU-08 - LANDFILL 4 1939-1975(A), FTHU-09 - LANDFILL 5 1939-1975(B), FTHU-12 - LANDFILL 8 1939-1970, FTHU-13 - LANDFILL 9 1903-1939, FTHU-55 - BLDG 73904 BATT SHOP)
PA	(FTHU-05 - LANDFILL 1 1930-1945, FTHU-06 - LANDFILL 2 1945-1950, FTHU-07 - LANDFILL 3 1976- 1979, FTHU-08 - LANDFILL 4 1939-1975(A), FTHU-09 - LANDFILL 5 1939-1975(B), FTHU-12 - LANDFILL 8 1939-1970, FTHU-13 - LANDFILL 9 1903-1939, FTHU-55 - BLDG 73904 BATT SHOP)
1992	
RFA	(FTHU-52 - FIRE FIGHTING TRAINING AREA LAAF, FTHU-57 - AIRCRAFT WASHRACK, LIBBY AAF, FTHU-64 - TANKTRAILS DUMP SITE (6))
ISC	(FTHU-53 - MIL GAS STATION LUST FILE 0155.05, FTHU-54A - PX GAS STATION)
CS	(FTHU-52 - FIRE FIGHTING TRAINING AREA LAAF, FTHU-57 - AIRCRAFT WASHRACK, LIBBY AAF, FTHU-64 - TANKTRAILS DUMP SITE (6))
RI/FS	(FTHU-65 - EAST RANGE MINE SHAFT)
PA	(FTHU-51 - POL STG, LIBBY AAF LUST FILE, FTHU-65 - EAST RANGE MINE SHAFT)
INV	(FTHU-53 - MIL GAS STATION LUST FILE 0155.05, FTHU-54A - PX GAS STATION)
SI	(FTHU-65 - EAST RANGE MINE SHAFT)
1993	
CS	(FTHU-17 - EAST RANGE OB/OD AREA, FTHU-18 - SOUTH RANGE OB/OD AREA, FTHU-66 - VEHICLE PAINT BOOTH BLDG 72907, FTHU-67 - TMP DRUM STG AREA, FTHU-68 - TMP AUTOMATIC WASHRACK, BLDG 76925, FTHU-70 - TMP STEAM CLEANING FACILITY, FTHU-71 - OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR, FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES, FTHU-75 - AMSA WASHRACK DISCHARGE)
INV	(FTHU-76 - UST SITE # 4715-0980 OLD BOILER SITE#1, FTHU-77 - UST SITE # 4715-1192 SITE #2 CLARKSON ST, FTHU-78 - UST SITE # 4715-1185 CEWI MOTOR POOL, FTHU-80 - UST SITE # 4715- 1191 UST REMOVAL SITE #6, FTHU-82 - UST SITE # 4715-1189 SITE 8 DIESEL UST, FTHU-83 - UST SITE # 4715-1188 HOSPITAL UST BURN)
RFA	(FTHU-17 - EAST RANGE OB/OD AREA, FTHU-18 - SOUTH RANGE OB/OD AREA, FTHU-66 - VEHICLE PAINT BOOTH BLDG 72907, FTHU-67 - TMP DRUM STG AREA, FTHU-68 - TMP AUTOMATIC WASHRACK, BLDG 76925, FTHU-69 - TMP ABOVEGROUND WASTE TANK SITE, FTHU-70 - TMP STEAM CLEANING

	FACILITY, FTHU-71 - OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR, FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES, FTHU-75 - AMSA WASHRACK DISCHARGE)
CAP	(FTHU-53 - MIL GAS STATION LUST FILE 0155.05, FTHU-54A - PX GAS STATION)
PA	(FTHU-73 - GOLF COURSE PESTICIDE MIX AREA, FTHU-74 - BLDG 35033 PESTICIDE MIX AREA, FTHU-
SI	84 - UST SITE # 4715-1187 SITE 10 EPG 0155.13) (FTHU-73 - GOLF COURSE PESTICIDE MIX AREA, FTHU-74 - BLDG 35033 PESTICIDE MIX AREA, FTHU- 84 - UST SITE # 4715-1187 SITE 10 EPG 0155.13)
RFI/CMS	(FTHU-57 - AIRCRAFT WASHRACK, LIBBY AAF, FTHU-64 - TANKTRAILS DUMP SITE (6))
ISC	(FTHU-76 - UST SITE # 4715-0980 OLD BOILER SITE#1, FTHU-77 - UST SITE # 4715-1192 SITE #2 CLARKSON ST, FTHU-78 - UST SITE # 4715-1185 CEWI MOTOR POOL, FTHU-79 - UST SITE # 4715- 0716 (11TH SB) 0155.08, FTHU-80 - UST SITE # 4715-1191 UST REMOVAL SITE #6, FTHU-81 - UST SITE # 4715-1190 SITE 7 OLD FUEL PT, FTHU-82 - UST SITE # 4715-1189 SITE 8 DIESEL UST, FTHU-83 - UST SITE # 4715-1188 HOSPITAL UST BURN, FTHU-86 - ABANDONED PIPELEINE IRWIN ST RELEASE SIT)
1994	
PA	(FTHU-10 - SOUTH RANGE LF (OLD LF 6 AND 7))
RFI/CMS	(FTHU-75 - AMSA WASHRACK DISCHARGE)
ISC	(FTHU-87 - OLD AUTOCRAFT SHOP BLDG 30126 RELEASE)
INV	(FTHU-87 - OLD AUTOCRAFT SHOP BLDG 30126 RELEASE)
CS	(FTHU-69 - TMP ABOVEGROUND WASTE TANK SITE)
SI	(FTHU-10 - SOUTH RANGE LF (OLD LF 6 AND 7))
IMP(C)	(FTHU-54A - PX GAS STATION)
1995	
INV	(FTHU-79 - UST SITE # 4715-0716 (11TH SB) 0155.08, FTHU-85 - GREELY HALL UST RELEASE SITE)
RFI/CMS	(FTHU-17 - EAST RANGE OB/OD AREA, FTHU-18 - SOUTH RANGE OB/OD AREA, FTHU-68 - TMP AUTOMATIC WASHRACK, BLDG 76925, FTHU-71 - OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR, FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES)
DES	(FTHU-71 - OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR, FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES)
ISC	(FTHU-85 - GREELY HALL UST RELEASE SITE, FTHU-90 - GREELY HALL GASOLINE RELEASE)
CAP	(FTHU-85 - GREELY HALL UST RELEASE SITE)
CMI(C)	(FTHU-71 - OLD 11TH SB MOTORPOOL WASHRACK DISCHG AR, FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES)
1996	
INV	(FTHU-88 - BLD 30113 WASTE OIL TANK LUST#0155.39)
CAP	(FTHU-87 - OLD AUTOCRAFT SHOP BLDG 30126 RELEASE)
ISC	(FTHU-88 - BLD 30113 WASTE OIL TANK LUST#0155.39)
RFA	(FTHU-89 - WEST RANGE OB/OD DISPOSAL UNIT)
DES	(FTHU-53 - MIL GAS STATION LUST FILE 0155.05)
CMI(O)	(FTHU-72 - 11TH SIG MOTOR POOL SPILL SITES)
1997	
CS	(FTHU-89 - WEST RANGE OB/OD DISPOSAL UNIT)
CMI(C)	(FTHU-57 - AIRCRAFT WASHRACK, LIBBY AAF)
IMP(C)	(FTHU-53 - MIL GAS STATION LUST FILE 0155.05)
DES	(FTHU-57 - AIRCRAFT WASHRACK, LIBBY AAF)
RI/FS	(FTHU-84 - UST SITE # 4715-1187 SITE 10 EPG 0155.13)
1998 INV	(FTHU-81 - UST SITE # 4715-1190 SITE 7 OLD FUEL PT, FTHU-90 - GREELY HALL GASOLINE RELEASE)

LTM CAP	(FTHU-88 - BLD 30113 WASTE OIL TANK LUST#0155.39) (FTHU-80 - UST SITE # 4715-1191 UST REMOVAL SITE #6, FTHU-82 - UST SITE # 4715-1189 SITE 8 DIESEL UST)	
1999		
RFI/CMS	(FTHU-89 - WEST RANGE OB/OD DISPOSAL UNIT)	
IMP(C)	(FTHU-85 - GREELY HALL UST RELEASE SITE)	
LTM	(FTHU-78 - UST SITE # 4715-1185 CEWI MOTOR POOL)	
INV	(FTHU-86 - ABANDONED PIPELEINE IRWIN ST RELEASE SIT)	
SI	(FTHU-51 - POL STG, LIBBY AAF LUST FILE)	
RI/FS	(FTHU-51 - POL STG, LIBBY AAF LUST FILE)	
CAP	(FTHU-79 - UST SITE # 4715-0716 (11TH SB) 0155.08, FTHU-90 - GREELY HALL GASOLINE RELEASE)	
2000		
DES	(FTHU-90 - GREELY HALL GASOLINE RELEASE)	
IMP(C)	(FTHU-90 - GREELY HALL GASOLINE RELEASE)	
2001		
RI/FS	(FTHU-10 - SOUTH RANGE LF (OLD LF 6 AND 7))	
RFI/CMS	(FTHU-52 - FIRE FIGHTING TRAINING AREA LAAF, FTHU-66 - VEHICLE PAINT BOOTH BLDG 72907,	
550	FTHU-69 - TMP ABOVEGROUND WASTE TANK SITE, FTHU-70 - TMP STEAM CLEANING FACILITY)	
DES	(FTHU-52 - FIRE FIGHTING TRAINING AREA LAAF)	
2002		
RI/FS	(FTHU-73 - GOLF COURSE PESTICIDE MIX AREA)	
RFI/CMS	(FTHU-67 - TMP DRUM STG AREA)	
CMI(C) 2006	(FTHU-52 - FIRE FIGHTING TRAINING AREA LAAF)	
IMP(O) 2007	(FTHU-54A - PX GAS STATION)	
2007 LTM	(FTHU-54A - PX GAS STATION)	
2008	(FIRU-34A - PX GAS STATION)	
IMP(O)	(FTHU-85 - GREELY HALL UST RELEASE SITE, FTHU-90 - GREELY HALL GASOLINE RELEASE)	
-	e Completion Milestones	
See attache	ed schedule	
Projected Reco Site ID	rd of Decision (ROD)/Decision Document (DD) Approval Dates Site Name ROD/DD Title ROD/DD Date	

Final RA(C) Completion Date: 200203

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of IRP at Installation (including LTM phase): 201312

FORT HUACHUCA IRP Schedule

							= phase u	Inderway
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-10	SOUTH RANGE LF (OLD LF 6 AND 7)	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-65	EAST RANGE MINE SHAFT	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-85	GREELY HALL UST RELEASE SITE	LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-90	GREELY HALL GASOLINE RELEASE	LTM						

FORT HUACHUCA

Army Defense Environmental Restoration Program Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 16/14						
Installation Site Types with Future and/or Underway Phases 2 Firing Range (FTHU-007-R-01, FTHU-013-R-01)						
Most Widespread Contaminants of Concern						
Explosives, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC)						
Media of Concern Groundwater, Soil						
Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA)) Site ID Site Name Action Remedy FY N/A						
Site ID Site Name Action Remedy FY						
Site ID Site Name Action Remedy FY						
Site ID Site Name Action Remedy FY N/A Duration of MMRP						

MMRPContamination Assessment

Contamination Assessment Overview

A closed, transferred, or transferring (CTT) inventory was completed under the MMRP in 2003. The CTT inventory identified 16 munitions response sites (MRS); however, one site was found to be operational and was, therefore, ineligible for the MMRP. The remaining MRSs include three small arms ranges and 12 multi-use ranges. The potential for MEC and MC was suspected at these sites.

The SI phase was initiated in 2005 and was completed in FY08. Based on the historical records review (HRR) in 2006, three MRSs were deemed ineligible for MMRP funding: FTHU-012-R-01, FTHU-014-R-01, and FTHU-016-R-01.

Based on the final SI, NFA for MEC and/or MC was recommended at FTHU-001-R-01 through FTHU-006-R-01, FTHU-009-R-01 through FTHU-011-R-01, and FTHU-015-R-01. The final SI recommended further investigations for MEC and MC at FTHU-007-R-01 and FTHU-013-R-01.

Cleanup Exit Strategy

An RI is underway at both sites and should be completed by FY11. For specifics on future actions anticipated at the two open MMRP sites, please see the individual cleanup exit strategies.

MMRP Previous Studies

	Title	Author	Date
2003			
	Closed Transferring and Transferred Inventory	Techlaw, Inc.	JAN-2003
006			
	Historical Records Review, Military Munitions Response Program, Fort Huachuca, Arizona	URS Group, Inc.	AUG-2006
007		1	
	Work Plan, Site Inspection, Military Munitions Response Program, Fort Huachuca, Arizona	URS Group, Inc.	MAR-2007
800			
	Site Investigation report, Military Munitions Response Program, Fort Huachuca, Arizona	URS Group, Inc.	JAN-2008
009			I
	Final RI Work Plan for Mine Field Near Airport and Eastern AAR 2, Fort Huachuca, AZ	URS	AUG-2009

FORT HUACHUCA

Military Munitions Response Program

Site Descriptions

Site ID: FTHU-007-R-01 Site Name: MINE FIELD NEAR AIRPORT



Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200110	200305
SI	200506	200802
RI/FS	200809	201212
RIP Date:	N/A	
RC Date:	201212	



This range, comprised of 0.40 acres near the installation airport to the north of the cantonment area, is owned currently by the US Army. It is part of an undeveloped open field near the airport runways. The area was reviewed in 1987 for spent munitions. A total of six mines were found: three high-explosive landmines, the practice version of an M4 anti-tank mine, and two training mines. These mines were cleared shortly thereafter, but the Army would not offer a certificate of clearance for this area. Munitions debris was observed during the SI in 2007. The final SI report in 2008 recommended that the site be further investigated for both MEC and MC. No further action is anticipated after the RI/FS phase is completed. The RI is underway at the site.



An RI is underway at the site. No future actions are expected after the RI/FS phase is completed in 2012.

Site ID: FTHU-013-R-01 Site Name: EAA RANGE 2



Regulatory Driver: CERCLA

MRSPP Score: 04

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200110	200305
SI	200506	200802
RI/FS	200809	201409
RIP Date:	N/A	
RC Date:	201608	



This is a transferred range, with private ownership, comprised of 310 acres north and adjacent to the installation's East Artillery Range. No historical information was collected regarding this land's use as a range, except for acquisition documents that described the property as land that was to be used as part of the installation's East Artillery Range. Of note is a report that a child was killed in an historical incident involving UXO at or near the east artillery area (EAA) 3, which is near EAA 2. Although EAA 2 is a separate tract from EAA 3, the two tracts were acquired in the same area, north of the East Artillery Range and, according to acquisition documents, for the same general purposes. This range is currently used primarily as farmland. The munitions found in the EAA ranges were assumed to be the same as the munitions used and found in the East Artillery Range, because these parcels were obtained as range land as part of the East Artillery Range. The munitions found in the East Artillery Range, no remediation activities are known to have taken place. Army ownership of the land for this range began sometime in the late-1930s or early-1940s. When this land was transferred back to other owners is unknown. During the SI, ordnance fragments were observed at the site. The final SI report in 2008 recommended that the site be further investigated for MEC and MC.

RI is still in progress. Based on the partial results, and the anticipated completion of the RI, a feasibility study (FS), proposed plan (PP), and record of decision (ROD) will be conducted. No removal action (RA) or long term monitoring (LTM) are anticipated.

CLEANUP/EXIT STRATEGY

The RI is underway at the site. An FS will be conducted in FY13. It is assumed that the site will be closed out with a no further action ROD.

Site ID	Site Name	NFA Date	Documentation
FTHU-001-R-	RANGE 18	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-002-R-	1934 ARTILLERY PRACTICE FIRING AREA	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-003-R-	CHARLESTON COMBAT CITY	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-004-R-	RANGE 11	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-005-R-	1977 TRAINING AREA A/GOLF COURSE	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-006-R-	1977 TRAINING AREA B/AEROSTAT SITE	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-008-R-	RANGE 12 A/B	200511	Still Active
01			
FTHU-009-R-	INFILTRATION RANGE	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-010-R-	TRANSITION RANGE	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-011-R-	UNIDENTIFIED WESTERN RANGE FAN	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-012-R-	EAA RANGE 1	200802	The 2006 HRR determined this site was
01			not eligible for the MMRP because no
			evidence was found that indicated the
			presence of UXO, DMM, or MC at the site.
FTHU-014-R-	EAA RANGE 3	200802	The 2006 HRR determined this site was
01			not eligible for the MMRP because no
			evidence was found that indicated the
			presence of UXO, DMM, or MC at the site.
FTHU-015-R-	OPEN FIELD ARTILLERY RANGE	200802	The SI report (2008) recommended no
01			further action at this site.
FTHU-016-R-	1977 TRAINING AREA C	200802	The 2006 HRR determined this site was
01			not eligible for the MMRP because no
			evidence was found that indicated the
			presence of UXO, DMM, or MC at the site.

MMRP Schedule

Date of MMRP Inception 200110

Past Phase Completion Milestones

2003

PA (FTHU-001-R-01 - RANGE 18, FTHU-002-R-01 - 1934 ARTILLERY PRACTICE FIRING AREA, FTHU-003-R-01 - CHARLESTON COMBAT CITY, FTHU-004-R-01 - RANGE 11, FTHU-005-R-01 - 1977 TRAINING AREA A/GOLF COURSE, FTHU-006-R-01 - 1977 TRAINING AREA B/AEROSTAT SITE, FTHU-007-R-01 -MINE FIELD NEAR AIRPORT, FTHU-008-R-01 - RANGE 12 A/B, FTHU-009-R-01 - INFILTRATION RANGE, FTHU-010-R-01 - TRANSITION RANGE, FTHU-011-R-01 - UNIDENTIFIED WESTERN RANGE FAN, FTHU-012-R-01 - EAA RANGE 1, FTHU-013-R-01 - EAA RANGE 2, FTHU-014-R-01 - EAA RANGE 3, FTHU-015-R-01 - OPEN FIELD ARTILLERY RANGE, FTHU-016-R-01 - 1977 TRAINING AREA C)

2008

SI

(FTHU-001-R-01 - RANGE 18, FTHU-002-R-01 - 1934 ARTILLERY PRACTICE FIRING AREA, FTHU-003-R-01 - CHARLESTON COMBAT CITY, FTHU-004-R-01 - RANGE 11, FTHU-005-R-01 - 1977 TRAINING AREA A/GOLF COURSE, FTHU-006-R-01 - 1977 TRAINING AREA B/AEROSTAT SITE, FTHU-007-R-01 -MINE FIELD NEAR AIRPORT, FTHU-009-R-01 - INFILTRATION RANGE, FTHU-010-R-01 - TRANSITION RANGE, FTHU-011-R-01 - UNIDENTIFIED WESTERN RANGE FAN, FTHU-012-R-01 - EAA RANGE 1, FTHU-013-R-01 - EAA RANGE 2, FTHU-014-R-01 - EAA RANGE 3, FTHU-015-R-01 - OPEN FIELD ARTILLERY RANGE, FTHU-016-R-01 - 1977 TRAINING AREA C)

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date:

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of MMRP at Installation (including LTM phase): 201409

FORT HUACHUCA MMRP Schedule

					= phase underway			
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-007-R-01	MINE FIELD NEAR AIRPORT	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
FTHU-013-R-01	EAA RANGE 2	RI/FS						

FORT HUACHUCA

Army Defense Environmental Restoration Program Compliance Restoration

CR Summary
Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 2/1
Installation Site Types with Future and/or Underway Phases 1 Contaminated Sediments (CCFTH-91)
Most Widespread Contaminants of Concern
Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH)
Media of Concern Soil
Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))Site IDSite NameActionRemedyFYN/A
Duration of CR Date of CR Inception: 200908 Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201312/201312 Date of CR completion including Long Term Management (LTM): 201312

Contamination Assessment Overview

In 2010, a tar-like substance was observed oozing from the ground in an area that is currently not associated with known historic industrial activity. Excavation by the installation operations and maintenance (O&M) contractor revealed infrastructure that may have been used for an asphalt batch plant. A buried concrete cistern was observed to contain a tar-like substance and sediment in the surrounding area was contaminated with this same substance.

Potholes and trenches were excavated to determine the immediate extent of hydrocarbon impacted soils. An exposed concrete tank base, possibly the remains of a former oil/water separator was located in the central portion of the area of concern. The total area measured was approximately 44' by 94' area (about 4000 sq ft) and consisted of isolated patches of visible contamination on the surface and at shallow depths. The depth of visible contamination was limited to the first 18 inches of depth where visible in trenches, except in the vicinity of the tank where excavations reach approximately three to five feet deep.

Cleanup Exit Strategy

This site will be excavated to remove visibly impacted soils, monitoring the progress of excavations with field test kits. Once field tests indicate clean soils remain, confirmation samples will be collected for analytical laboratory analysis. The analytical suite will include PAHs, diesel-range organics (DROs) and gasoline range organics (GROs). VOCs will not be included due to the unlikely retention of volatile components within the zone of soil aeration since the site was believed to be active in the 1950s. The precise quantity of soil to be removed for disposal is not known.

CR Previous Studies

Title There are no Previous Studies Author

Date

FORT HUACHUCA

Compliance Restoration

Site Descriptions

Site ID: CCFTH-91 Site Name: Abandoned Asphalt Batch Plant



Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA	200912	201001
SI	201004	201101
RI/FS	201201	201312
RIP Date:	N/A	
RC Date:	201312	



In 2010, a tar-like substance was observed oozing from the ground in an area that is currently not associated with known historic industrial activity. Excavation by the installation operations and maintenance (O&M) contractor revealed infrastructure that may have been used for an asphalt batch plant. A buried concrete cistern was observed to contain a tar-like substance and sediment in the surrounding area was contaminated with this same substance.

Potholes and trenches were excavated to determine the immediate extent of hydrocarbon impacted soils. An exposed concrete tank base, possibly the remains of a former oil/water separator was located in the central portion of the area of concern. The total area measured was approximately 44ft by 94ft (about 4000 sq ft) and consisted of isolated patches of visible contamination both on the surface and at shallow depths. The depth of visible contamination was limited to the first 18 inches of depth where visible in trenches, except in the vicinity of the tank where excavations reach approximately three to five ft deep.

This site will be excavated to remove visibly impacted soils, monitoring the progress of excavations with field test kits. Once field tests indicate clean soils remain, confirmation samples will be collected for analytical laboratory analysis. The analytical suite will include PAHs, DRO, and GRO. VOCs will not be included due to the unlikely retention of volatile components within the zone of soil aeration since the site was believed to be active in the 1950s. The precise quantity of soil to be removed for disposal is not known.

CLEANUP/EXIT STRATEGY

As part of the RI, this site will be excavated to remove visibly impacted soils, monitoring the progress of excavations with field test kits. Once field tests indicate clean soils remain, confirmation samples will be collected for analytical laboratory analysis. The analytical suite will include PAHs, DROs, and GROs.

Site ID	Site Name	NFA Date	Documentation
CCFTH-92	Used POL Disposal Sites	201201	

CR Schedule

Date of CR Inception: 200908

 Past Phase Completion Milestones

 2010

 PA
 (CCFTH-91 - Abandoned Asphalt Batch Plant, CCFTH-92 - Used POL Disposal Sites)

 2011

 SI
 (CCFTH-91 - Abandoned Asphalt Batch Plant, CCFTH-92 - Used POL Disposal Sites)

 Projected Phase Completion Milestones

 See attached schedule

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

 To Be Determined

 Final RA(C) Completion Date:

 Schedule for Next Five-Year Review:

Estimated Completion Date of CR at Installation (including LTM phase): 201312

FORT HUACHUCA CR Schedule

					= phase underway			
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCFTH-91	Abandoned Asphalt Batch Plant	RI/FS						

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): TBD

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: TBD

Efforts Taken to Determine Interest

The communities adjacent to FTHU include Sierra Vista and Huachuca City. The ADEQ is responsible for publishing corrective action and closure plans. These plans are also listed on the ADEQ's web site. The ADEQ is required to provide public notification of all RAs addressing USTs and hazardous waste remediation efforts required by the installation. This consists of notifying the community, via the local papers, of the type of RA planned for the site. Additionally, copies of the CAPs are made available in the Sierra Vista Public Library for review by the public before commencing work on remediating the site.

Results

Based on a response from the public, a meeting may be scheduled to address any questions or concerns the community may have about the CAP. A public interest survey was conducted in August 2004. To date the ADEQ has informed the installation that there has been no public interest expressed on any of the corrective actions or closure plan activities on the installation.

Follow-up Procedures

In addition to the above involvement by the state, the installation has worked with the FTHU Public Affairs Office to determine if there is any interest from the neighboring communities in the restoration work on the installation. To date, the installation has not received any comments from the community about the program. Fort Huachuca has not received any requests for establishing a RAB from the surrounding local communities. Based on the lack of response from the efforts of the ADEQ and the Public Affairs Office, the Installation Commander determined that there was not enough community interest to establish a RAB.

Additional Community Involvement Information

The installation is not on the NPL and does not have a large restoration program.

Administrative Record is located at

US Army Garrison, Fort Huachuca Environmental and Natural Resources Division 3040 Butler Road, Building 22526 Fort Huachuca, AZ 85613

Information Repository is located at

US Army Garrison, Fort Huachuca Environmental and Natural Resources Division 3040 Butler Road, Building 22526 Fort Huachuca, AZ 85613

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

TAPP Title: N/A

Potential TAPP: N/A