

FY2016

RED RIVER ARMY DEPOT
Army Defense Environmental Restoration Program
Installation Action Plan

Printed 07 September 2016

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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, 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), Red River Army Depot (RRAD), the executing agencies, the regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and tentative budgets for the Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP) at major Army installations. IAPs are no longer funded for preparation for Base Realignment and Closure (BRAC) or Compliance-related Cleanup (CC) restoration programs.

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

The fiscal year (FY)2016 IRP/MMRP IAP was updated by the IRP/MMRP/CC program manager at Red River Army Depot. A draft FY2016 RRAD IRP/MMRP IAP is typically furnished by the installation to the Texas Commission on Environmental Quality (TCEQ), US Environmental Protection Agency (USEPA) Region 6, USAEC, RRAD BRAC Environmental Coordinator, Fort Worth District US Army Corps of Engineers (USACE), and the Huntsville District USACE.

Acronyms

AEDB-R	Army Environmental Database - Restoration
AMC	Army Materiel Command
APAR	Affected Property Assessment Report
AR	Arkansas
AST	Aboveground Storage Tank
BCP	BRAC Cleanup Plan
Bldg	Building
BRAC	Base Realignment and Closure
CC	Compliance-related Cleanup
CEL	Chromate Equalization Lagoon
CERCLA	Comprehensive Environmental Response Compensation Liability Act of 1980
CIP	Community Involvement Plan
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
COC	Contaminants of Concern
COPC	Contaminants of Potential Concern
CS	Confirmatory Sampling
CTC	Cost-to-Complete
CTT	Closed, Transferred, or Transferring
DD	Decision Document
DES	Design (AEDB-R Phase)
DLA	Defense Logistics Agency
DNAPL	Dense Non-Aqueous Phase Liquids
DRMO	Defense Reutilization and Marketing Office
DRMS	Defense Reutilization and Marketing Service
ER,A	Environmental Restoration, Army
FRA	Final Remedial Action
FS	Feasibility Study
FUDS	Formerly Used Defense Site
FY	Fiscal Year
GPRA	Government Performance and Results Act
IAP	Installation Action Plan
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
IWTP	Industrial Wastewater Treatment Plant
kg	kilogram
LNAPL	Light Non-Aqueous Phase Liquids
LSAAP	Lone Star Army Ammunition Plant
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituents
MEC	Munitions and Explosives of Concern
mg	milligram

Acronyms

mm	millimeter
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
NAPL	Non-Aqueous Phase Liquid
NFA	No Further Action
Ni-Cad	Nickel-Cadmium
NPL	National Priorities List
OB	Open Burning
OD	Open Detonation
OTC	Ordnance Training Center
OTIE	Oneida Total Integrated Enterprises LLC.
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PCL	Protective Concentration Level
PMZ	Plume Management Zone
POL	Petroleum, Oil, and Lubricants
PP	Proposed Plan
PRB	Permeable Reactive Barrier
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RAB	Restoration Advisory Board
RACR	Response Action Completion Report
RAD	Radioactive Waste or a unit of radiation measure
RAP	Response Action Plan
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
RRAD	Red River Army Depot
RRMC	Red River Munitions Center
RRSE	Relative Risk Site Evaluation
SI	Site Inspection
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCA	1, 1, 1 Trichloroethane
TCE	Trichloroethylene or Trichloroethene

Acronyms

TCEQ	Texas Commission on Environmental Quality
TD	Transferred
TRC	Technical Review Committee
TX	Texas
US	United States
USACE	US Army Corps of Engineers
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAEC	US Army Environmental Command
USAEHA	US Army Environmental Hygiene Agency
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordinance
VOC	Volatile Organic Compound
WIA	Western Industrial Area
WWT	Wastewater Treatment

Installation Information

Installation Locale

Installation Size (Acreage): 15840.01

City: Texarkana

County: Bowie

State: Texas (TX)

Other Locale Information

RRAD is located on 15,840.015 acres of land in Bowie County, TX. The installation is approximately 18 miles west of Texarkana, TX (population 37,225 per 2014 census estimate). The installation is adjacent to Hooks, TX (population 2,769) to the north, and New Boston, TX (population 4,550) to the west. The Bowie County population is 93,389 per 2015 US Census estimate, of which 67% is urban, and 33% is rural. The former Lone Star Army Ammunition Plant (LSAAP) is adjacent to RRAD to the east, which after BRAC 2005 closure is now known (partially) as TexAmericas East.

In July 1995, the BRAC recommended realigning RRAD by moving all maintenance missions associated with the M113 tactical vehicle series to other depot maintenance activities. The installation retains its Bradley Fighting Vehicle series and tactical vehicle maintenance missions, road wheel and track remanufacturing missions, Defense Logistics Agency (DLA), and rubber products renovation/ production/ fluidized bed combustion facilities. In BRAC 1995, 765 acres were designated for transfer to the Red River Redevelopment Authority. In 2001, the water treatment plant, industrial waste treatment plant, sewer treatment plant and high voltage electrical distribution system were privatized through BRAC, transferring an additional 32 acres. In 2006 two findings of suitability to transfer for a total of 38 acres, were approved for transfer.

Per BRAC 2005, 3,839 additional acres were identified for transfer. BRAC 2005 realignments included the loss of the Red River Munitions Center (RRMC) ammunition storage and open burning (OB)/open detonation (OD) missions, and the RRAD Patriot and Hawk missile recertification missions. The BRAC 2005 process is not complete, and the most recent action was a March 30, 2015 legal notice for public comment on a finding of suitability for transfer for the 311-acre Western West Excess Parcel.

In a separate realignment action, the intern training center [Army Materiel Command (AMC) Logistics Leadership Center] was closed in January 2013.

Installation Mission

The mission for RRAD is to conduct ground combat, and tactical systems sustainment maintenance operations and related support services worldwide, for the United States (US), Allied Forces, and friendly nations in support of the Warfighter and to be an active and viable partner within our community and the Four States area.

Lead Organization

Army Materiel Command (AMC)

Lead Executing Agencies for Installation

USACE, Ordnance and Explosives Design Center, Huntsville

USACE, Southwestern Division, Fort Worth District

Regulator Participation

State TCEQ

Local TCEQ, Tyler Regional Office

National Priorities List (NPL) Status

RED RIVER ARMY DEPOT is not on the NPL

Installation Information

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

RAB established 199602

Installation Program Summaries

IRP

Primary Contaminants of Concern: Dense nonaqueous phase liquid (DNAPL), Light non-aqueous phase liquids (LNAPL), Metals, Perchlorate, Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

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

MMRP

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

Affected Media of Concern: Building Decontamination, Groundwater, Sediment, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Underway	201510	201701	2017

5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Bldg 373 Dyno Shop RRAD-37	RRAD-37
Bldg 433 RRAD-60	RRAD-60
Building 414 Deed Notice	RRAD-73
Decision Document D Area Y Site D060201	RRAD-006-R-01
Decision Document Vulcan Range	RRAD-001-R-01
FRA for Building 722	RRAD-62
Former DRMO Scrap Yard	RRAD-99
OTC Haz Waste Landfill	RRAD-04
RRAD-43	RRAD-43
RRAD-55 Permit Issuance	RRAD-55
Response Action Plan Building 371	RRAD-36
Response Action Plan Western Industrial	RRAD-35, RRAD-56, RRAD-71
deed notice bldg 1025/1027	RRAD-63

Land Use Control (LUC) Summary

LUC Title: 5 year reviews

Site(s): RRAD-006-R-01

ROD/DD Title: Decision Document D Area Y Site D060201

Location of LUC

Portions of D Area at Red River Army Depot. Warning signs prohibiting digging without permission. Warning signs for this Munitions Response Site were installed beginning in early 2013 on rows D-1 through D-9.

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

Types of Engineering Controls: Signs

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

Date in Place: 201201

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: 5 yr rvws/constr support

Site(s): RRAD-001-R-01

ROD/DD Title: Decision Document Vulcan Range

Location of LUC

former Vulcan Range area

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Signs

Types of Institutional Controls: Construction Permit, Notations in Master Plan, Restrictions on land use

Date in Place: 201201

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, Unexploded Ordnance(UXO)

Additional Information

N/A

LUC Title: Annual inspections

Site(s): RRAD-99

Land Use Control (LUC) Summary

ROD/DD Title: Former DRMO Scrap Yard

Location of LUC

Red River Army Depot parking lot # 57B.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices, Notations in Master Plan, Restrictions on land use

Date in Place: 201110

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: USACE District

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: Bldg 722 in Master Plan

Site(s): RRAD-62

ROD/DD Title: FRA for Building 722

Location of LUC

Bldg 722/723 former SAA incinerators site

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices, Notations in Master Plan, Restrictions on land use

Date in Place: 200609

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: Deed Notice bldg 414

Site(s): RRAD-73

ROD/DD Title: Building 414 Deed Notice

Location of LUC

Former site of demolished storage building 414. Currently under portions of the new Maneuver Systems Sustainment Center,

Land Use Control (LUC) Summary

including new facility 412H.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices

Date in Place: 201302

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: ORGANICS

Additional Information

N/A

LUC Title: LUC RRAD-37

Site(s): RRAD-37

ROD/DD Title: Bldg 373 Dyno Shop RRAD-37

Location of LUC

1.7023-acre groundwater plume management zone and deed notice with restriction to commercial-industrial use only.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Restrictions on land use

Date in Place: 200911

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200911

LUC Enforcement: 5 Year Reviews

Contaminants: PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: RRAD-43

Site(s): RRAD-43

ROD/DD Title: RRAD-43

Location of LUC

Deed notice filed in Bowie County Chief Clerk's Office.

Land Use Restriction: Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices, Restrictions on land use

Date in Place: 200912

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200912

LUC Enforcement: 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: RRAD-60

Site(s): RRAD-60

ROD/DD Title: Bldg 433 RRAD-60

Location of LUC

Deed notice filed at Bowie County Chief Clerk's Office established a Plume Management Zone and restriction to only commercial-industrial use for this 12.962 acre site.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Restrictions on land use

Date in Place: 200911

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200911

LUC Enforcement: 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: Response Plan bldg 371

Site(s): RRAD-36

ROD/DD Title: Response Action Plan Building 371

Location of LUC

Around building 371 at Red River Army Depot.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices

Land Use Control (LUC) Summary

Date in Place: 200812

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: Western Industrial Area

Site(s): RRAD-35, RRAD-56, RRAD-71

ROD/DD Title: Response Action Plan Western Industrial

Location of LUC

Western Industrial Area of Red River Army Depot. Includes IRP sites RRAD-35, -56, -71.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices

Date in Place: 200905

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: deed notice

Site(s): RRAD-62

ROD/DD Title: BUILDINGS 722

Location of LUC

Former site of small ammunition item incinerator facility buildings 722 and 723, which have been partially demolished and renovated. Currently location of RRAD MWR recycling facility.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Restrictions on land use

Date in Place: 200608

Modification Date: N/A

Land Use Control (LUC) Summary

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: deed notice

Site(s): RRAD-63

ROD/DD Title: deed notice bldg 1025/1027

Location of LUC

Former site of buildings 1025/1027, ammunition incinerators, Red River Army Depot, Bowie County, Texas. AEDB-R site RRAD-63 (site absorbed adjacent site RRAD-30).

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Notices

Date in Place: 201302

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

In 1942, the Army purchased the majority of the land for RRAD and LSAAP from several land owners in Bowie County. The installation was initially intended to be a reserve ammunition storage depot; however, in December 1942, additional missions were added. Some of the missions included overhaul and modification of tanks, and the shipment of tanks, tactical vehicles, artillery, and small firearms. From 1943 until March 1944, LSAAP was loosely combined with RRAD as the Texarkana Ordnance Center. In 1945, LSAAP was made a part of RRAD and remained as such until 1951. As a result of partial closure resulting from the BRAC 1995 mandates and ongoing utility privatizations, there are approximately 797 acres of an original 19,081 acres that have already or will soon be transferred out of Army control. Some 3,835 acres will be transferred as a result of BRAC 2005.

During World War II and the Korean War the depot also served as an Ordnance Training Center (OTC) for the purpose of training officers in ordnance support. The OTC was deactivated after the Korean War, but occasionally provides training to US Army Reserve units. An off-depot parcel site RRAD-08 Rifle Range used by the OTC for troop training is now classified as a Formerly Used Defense Site (FUDS).

RRAD is an active US Army facility. The major operational facilities on the depot include maintenance and rebuild of military vehicles, demilitarization of out-of-specification ordnance, ammunition storage, maintenance, modification, and recertification of the Hawk, Chaparral, and Patriot missiles (transferring per BRAC 2005), tank track and road wheel rebuild, and rubber products maintenance. Currently, most of the acreage covered by RRAD is used for commercial forestry, military equipment storage, and industrial activities.

BRAC 95 realigned RRAD by moving the M113 vehicle mission to other depots. The installation retained its Bradley fighting vehicle, light tactical vehicle, engineering intern training, Patriot missile, and rubber production missions.

BRAC 2005 realigned RRAD and moved the ammunition and missile recertification missions elsewhere.

Major historic tenants at RRAD are the Defense Reutilization and Marketing Service (DRMS) (now called DLA Disposition Services), the DLA, and the RRM. DRMS reuses and/or disposes of surplus items. The DLA supports seven of the 11 continental US divisions in an 18-state area.

On Dec. 13, 1988, RRAD was issued a Part B permit for a municipal hazardous waste management site (Permit No. Hazardous Waste-50178-000, USEPA ID No. TX 3213820738), pursuant to the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984. Provision VIII of the permit requires RRAD to conduct RCRA facility investigations (RFI). RFIs are required to determine whether hazardous constituents have been released into the environment. TCEQ is responsible for enforcing the requirements of the part B permit. A ten-year permit renewal was issued Dec. 14, 2012.

In FY95 the installation formed a BRAC cleanup team and the community formed the Red River Local redevelopment authority. In FY96 the installation formed a Restoration Advisory Board (RAB) and prepared a BRAC Cleanup Plan (BCP). The BCP was updated in FY01.

In FY09 18,676.24 acres were recorded in the Real Property Inventory for the RRAD property size. That 18,676.24-acre number was a result of a boundary adjustment between LSAAP and RRAD due to BRAC 2005. All the BRAC boundary adjustments have not been completed as of early 2016. The current RRAD acreage is calculated at 15,840.015.

INSTALLATION RESTORATION PROGRAM (IRP):

Areas of environmental concern at the depot include spill sites associated with previous industrial and pre-RCRA disposal activities, and closed landfills. Trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), and their biodegradation products are the main contaminants affecting groundwater at the installation. Several plume management zones (PMZ) have been deed recorded to identify the contaminated groundwater areas.

RRAD completed a groundwater modeling study in the Western Industrial Area (WIA).

Repairs were made to the installation main industrial areas extensive chrome and storm sewers by relining with cured-in-place-piping.

Cleanup Program Summary

Installation Historic Activity

A pilot study of dual phase extraction was conducted at building 350.

Two permeable reactive barrier (PRB) walls were installed to prevent TCE-contaminated groundwater from impacting Panther Creek.

MILITARY MUNITIONS RESPONSE PROGRAM

In FY07, MMRP sites RRAD-008-R-01 and RRAD-009-R-01 became BRAC 2005 sites. The current non-BRAC active MMRP sites are RRAD-001-R-01, RRAD-006-R-01, and RRAD-011-R-01/02/03. No Further Action (NFA) sites include the 2 BRAC sites, and RRAD-002-R-01, RRAD-003-R-01, RRAD-004-R-01, RRAD-005-R-01, and RRAD-007-R-01.

The Army has completed an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions, or munitions constituents (MC). An additional two MMRP sites were identified after the original MMRP listings, for a total of seven sites at this installation. Remedial investigation (RI) and feasibility studies (FS) on these sites began in FY09.

COMPLIANCE RESTORATION (C(R)) PROGRAM:

Site CC-006-RR Fuel Station had a leaking fuel line. Investigation indicated NFA was required.

COMPLIANCE-RELATED CLEANUP (CC) PROGRAM:

Site CC-002-RR Permitted OB/OD Areas occurred as a result of RRMC closure due to BRAC 2005 and resulted in environmental closure costs for two OB and one OD permitted heavy demolition ranges. The final operations (detonations) under the operating permits occurred in March 2011.

Site CC-005-RR Sludge Drying Beds, is a permitted site requiring long-term groundwater monitoring.

The installation maintains a partnership with the TCEQ through the Defense State Memorandum of Agreement program.

The RRAD does not have any USEPA NPL Superfund sites.

The RRAD was not on the original USEPA Government Performance and Results Act (GPRA) baseline, but RRAD is listed in the USEPA GPRA 2020 baseline.

Installation Program Cleanup Progress

IRP

Prior Year Progress: -Continued corrective measures implementation (operations) [CMI(O)] at sites RRAD-33, 34, 44, and 48 (BRAC) and 35, 36, 37, 43, 56, 60, and 71 (IRP).
-Continued long-term management (LTM) at RRAD-55 and RRAD-99.

Future Plan of Action: -Continuance of CMI(O) for sites RRAD-33, 34, 44, and 48 (BRAC) and 35, 36, 37, 43, 56, 60, and 71 (IRP).
-Continuance of LTM at RRAD-55 and RRAD-99.

MMRP

Prior Year Progress: -Completed the second annual land use control (LUC) inspections of the Vulcan Range and the D-Area Y-Site in January 2016.
-RRAD-011-R-01, 02, and 03 continued contract work to prepare a proposed plan (PP) and decision document (DD).
-Began future funding tracking of RRAD-011-R-01, 02, and 03 sites under just the larger RRAD-

Cleanup Program Summary

011-R-03 site.

- Future Plan of Action:**
- Continue to do annual inspections of UXO warning signs at the Vulcan Range and the D-Area Y-Site and annual inspections of the protective gravel cap at the Vulcan Range.
 - During FY17, award a remedial activity contract for sites RRAD-011-R-01, 02, 03, and CC-002-RR.
 - Continue tracking of funding for remedial activities for the RRAD-011-R-01, 02, and 03 sites under just the larger RRAD-011-R-03 site.

RED RIVER ARMY DEPOT
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 48/36

Installation Site Types with Future and/or Underway Phases

- 1 POL (Petroleum/Lubricants) Lines
(RRAD-56)
- 9 Spill Site Area
(RRAD-35, RRAD-36, RRAD-37, RRAD-43, RRAD-60, RRAD-62, RRAD-63, RRAD-71, RRAD-73)
- 1 Storage Area
(RRAD-99)
- 1 Surface Impoundment/Lagoon
(RRAD-55)

Most Widespread Contaminants of Concern

Dense nonaqueous phase liquid (DNAPL), Light non-aqueous phase liquids (LNAPL), Metals, Perchlorate, Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Sediment, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
RRAD-41	SOILS NEAR BLDG 430	FRA	WASTE REMOVAL - SOILS	1989
RRAD-55	CHROMATE EQUALIZATION LAGOON	FRA	WASTE REMOVAL - SOILS	1990
RRAD-54	SOILS AT BLDG 420	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
RRAD-56	BUILDING 315 TRANSFER STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
RRAD-28	WOODYARD LANDFILL	IRA	CAPPING	1994
RRAD-30	POPPING FURNACE BLDG #1025	IRA	WASTE REMOVAL - SOILS	1995
RRAD-40	RAW PHOSPHATE DETENTION LAGOON, IWTP	IRA	WASTE REMOVAL - SOILS	1995
RRAD-39	FINAL LAGOON, IWTP	IRA	WASTE REMOVAL - SOILS	1997
RRAD-83	COMP BUILDING 413	FRA	REMOVAL	1997
RRAD-71	BLDG 350, FORMER NI-CAD BATTERY SHO	IRA	DUAL-PHASE EXTRACTION	2004
RRAD-62	POPPING FURNACE BLDG# 722	FRA	WASTE REMOVAL - SOILS	2005
RRAD-56	BUILDING 315 TRANSFER STATION	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	2006
PBC Red River	PBC	FRA	OTHER	2007
RRAD-35	SOIL UNDERLYING BLDG 345, NORTH WASHRACK	FRA	OTHER	2007
RRAD-36	BLDG 371 (BATTERY SHOP) SOILS	FRA	OTHER	2007
RRAD-37	SOILS UNDERLYING BLDG 373(DYNAMOMET	FRA	OTHER	2007
RRAD-43	SOILS NEAR TRANSFER PUMPS, BLDG 473	FRA	REMOVAL	2007
RRAD-56	BUILDING 315 TRANSFER STATION	FRA	OTHER	2007
RRAD-71	BLDG 350, FORMER NI-CAD BATTERY SHO	FRA	OTHER	2007

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
RRAD-63	POPPING FURNACE BLDG #1027	FRA	INSTITUTIONAL CONTROLS	2008
RRAD-63	POPPING FURNACE BLDG #1027	FRA	REMOVAL	2009
RRAD-60	BLDG 433, FORMER RUBBER PRODUCTS BL	FRA	REMOVAL	2011
RRAD-99	DRMO Scrap Yard	FRA	WASTE REMOVAL - SOILS	2012

Duration of IRP

Date of IRP Inception: 197803

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201207/203709

Date of IRP completion including Long Term Management (LTM): 204609

IRP Contamination Assessment

Contamination Assessment Overview

The major concerns for releases to the environment have occurred in the WIA, the surrounding industrial areas, and the used oil/antifreeze POL site. The primary contaminants of concern (COC) are chlorinated solvents that were used in degreasing, paint, and fuel operations. The solvents used include TCE and TCA. Solvents and their degradation compounds have been found in sediments, soils, groundwater, and surface water around the maintenance area. The other contaminants of concern are heavy metals that include cadmium, chromium, lead (Pb), and nickel which are commonly found in metal finishing processes.

Solvents have contaminated the groundwater under the WIA. The contamination at the WIA has the potential to migrate off-post. Contamination and future activities at WIA are being conducted under both the Environmental Restoration, Army (ER,A) and BRAC programs. Studies have been completed that determine rate and extent of groundwater contamination.

The RRAD conducted a pilot study at RRAD-71 Bldg 350 to test solvent remediation technologies. Dual phase extraction was the technology chosen by the Army to best study the practicality of removing solvents in relatively impermeable clay shale.

Due to the economic impracticability of a full scale dual phase extraction project, the planned alternatives to address DNAPL are a PMZ and PRB walls. The PRB walls were installed in 2007 and funded under the BRAC 1995 program.

Solvent contamination of surface water in Panther Creek is addressed through monitoring of the two PRB walls. Installation of PRB monitoring wells occurred after the TCEQ agreement with the monitoring network design for the PRB walls.

A long-term remediation project involving extraction of spilled or leaked fuel underneath Bldg 373 (site RRAD-37) will continue. In FY10, TCEQ approved a recommendation of NFA for Panther Creek sediments, based upon a screening level ecological risk assessment study and report for Panther Creek and the WIA.

CMI(O) phases for sites RRAD-35, RRAD-36, RRAD-37, RRAD-43, RRAD-56, RRAD-60, and RRAD-71 are continuing under a multiyear contract, which was awarded May 6, 2015.

The LTM phase for site RRAD-55 is continuing under a multiyear contract which was awarded May 6, 2015. LTM phase for site RRAD-99 is continuing under service agreements with the Fort Worth District US Army Corps of Engineers.

Five-year periodic reviews, as required for IRP sites, have costs tracked under site RRAD-35.

Cleanup Exit Strategy

The installation reached initial IRP remedy-in-place (RIP) in FY07 through having a performance-based acquisition (PBA). Groundwater monitoring of PMZs or permitted sites, LUC inspections, and five-year reviews are all future planned requirements.

Site RRAD-99 Defense Reutilization and Marketing Office (DRMO) Scrap Yard was separate from the 2006 PBA contract. The RFI/corrective measures study (CMS) was completed in 2010. Removal of stockpiled metal contaminated soil was completed in FY11, and annual inspections of a protective parking lot cap is the current and planned future LTM.

IRP Previous Studies

Year	Title	Author	Date
1972	Texas Water Development Board No. 157, Survey of The Subsurface Saline Water of Texas, Vol. #7, Geologic Well Data-East Texas	Texas Water Development Board	SEP-1972
1984	Groundwater Quality Assessment OTC Area for The Army Corps of Engineers	Dames & Moore	AUG-1984
	Groundwater Quality Assessment WWT Area for The Army Corps of Engineers	Dames & Moore	AUG-1984
1987	Contaminated Soil Investigation Beneath Building #348, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	NOV-1987
1988	Remedial Investigation of Hayes Batch Treatment Plant, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUN-1988
1990	Site Assessment for Subsurface Release of Diesel Fuel at Building #333, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUN-1990
	RCRA Facility Investigation, Ordnance Training Center (OTC), Interim Status Report	US Army Corps of Engineers, Fort Worth District	JUN-1990
	Site Assessment for Sub-Surface Release of Gasoline and Diesel, Building #162 F, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUL-1990
	Environmental Noise Consultation No. 52-34-624-90 Noise Contours, Red River Army Depot	US Army Corps of Engineers	JUL-1990
	Site Assessment For Subsurface Release of Gasoline And Diesel Addendum, Building #162	US Army Corps of Engineers, Fort Worth District	AUG-1990
	Site Assessment Addendum for Subsurface Release of Diesel Fuel at Building #333	US Army Corps of Engineers, Fort Worth District	SEP-1990
1992	Soil Gas Survey- Building #345	US Army Corps of Engineers, Fort Worth District	MAR-1992
	Volumes I & II-RCRA Facility Investigation, Final Report, Includes: Buildings #430, Big Creek, Sludge Drying Beds, WWT Area, POL Pump Site, OTC Area, Panther Creek, and Pesticide Pit, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	APR-1992
	Water Quality Survey No. 31-62-GM2-92, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	APR-1992
	Building #420, Soil Investigation (Two Phases), Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-1992
	Geologic Siting-Industrial Waste Landfill, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	DEC-1992
1993			

IRP Previous Studies

1993

Title	Author	Date
Building #345, Interim RFI Report	US Army Corps of Engineers, Fort Worth District	APR-1993
RCRA Facility Investigation Amended Report, Sludge Drying Beds, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-1993
RCRA Facility Investigation Amended Report, SWMU-WWT Area, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUN-1993
RCRA Facility Investigation Amended Report, Panther Creek, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUL-1993
Interim Removal Building #265, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-1993
RCRA Facility Investigation Amended Report, POL Pump Site, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-1993
Current Status and Observation Report, Building #162, First Quarter (Jul-Sep 1993), Red River Army Depot	US Army Corps of Engineers	OCT-1993
RCRA Facility Investigation Amended Report, OTC Area, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	NOV-1993
RCRA Facility Investigation Amended Report, Pesticide Pit, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	DEC-1993

1994

RCRA Facility Investigation Addendum To the Amended Report, Pesticide Pit, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	FEB-1994
RCRA Facility Investigation for SWMU Building #333, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAR-1994
RCRA Facility Investigation For Building #333, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	APR-1994
RCRA Facility Soil Investigation, Building #1025, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	APR-1994
RCRA Facility Investigation, Building #345, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	APR-1994
Baseline Risk Assessment, Maintenance Salvage Yard, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	AUG-1994
RCRA Facility Investigation for SWMU-Building #348, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-1994
RCRA Facility Investigation, Building #348, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-1994
RCRA Facility Investigation, BB-15 Area, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	OCT-1994

IRP Previous Studies

1994	Title	Author	Date
	Report of Findings, Soil Investigation North East of Building #1025, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	NOV-1994
	Soil Investigation at Building #1027, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	NOV-1994
	Closure Report Building #1025, Demolition and Soil Excavation, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	NOV-1994
1996			
	RCRA Facility Investigation-Hayes Plant, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAR-1996
	BRAC 95 Program- Environmental Baseline Survey, Final Report, Red River Army Depot	US Army Corps of Engineers	DEC-1996
	Report of Findings-Soil Stock Pile Sampling, Building #1025, Red River Army Depot	US Army Corps of Engineers	DEC-1996
1997			
	Closure Report for Industrial Wastewater Treatment Lagoons, Building #356, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JAN-1997
	Closure Reports for Building #1025, Demolition and Soil Excavation, Volumes # I and II, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	FEB-1997
	Closure Report for the Industrial and Final Industrial Wastewater Treatment Lagoons, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-1997
	Data Compilation Package, Volumes #I, II, and III, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	OCT-1997
1998			
	Soil Background Investigation Report, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUN-1998
	RCRA Facility Assessment, Advanced Consolidated Footprint, Volumes # I & # II, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUL-1998
	Groundwater Background Investigation Report, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-1998
2000			
	RCRA Facility Investigation Report for Building #350, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-2000
	RCRA Facility Investigation Report for Building #414, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-2000
	RCRA Facility Investigation Report for Building #433, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	MAY-2000
	Final Background Characterization of Groundwater Investigation Report, Red River Army Depot	US Army Corps of Engineers	MAY-2000
	Natural Attenuation Study, Western Industrial Area	US Army Corps of	JUN-2000

IRP Previous Studies

Year	Title	Author	Date
2000	(WIA), Red River Army Depot	Engineers, Fort Worth District	
	Closure Report for Excavation of Contaminated Soil at the Water Tower, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JUN-2000
	Remediation Report for Building #265 and Adjacent Storm Water Ditches, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	SEP-2000
	RCRA Facility Investigation Report for X-1 Sewage Treatment Plant, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	OCT-2000
2001	Natural Attenuation Study for Ordnance Training Center (OTC), Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JAN-2001
	Ordnance Training Center (OTC) Area, Semiannual Report, Red River Army Depot	US Army Corps of Engineers, Fort Worth District	JAN-2001
	Findings of Suitability to Transfer Buildings #133, 150, 154, 167, 184, 281, 286, 290, the Water Tower, the Directorate of Public Works, Storage Yard and Housing Area, Buildings #10, 20, 28, & 30	US Army Corps of Engineers, Fort Worth District	MAR-2001
	Remedial Action Completion Report for North and South Storm water Lagoons	US Army Corps of Engineers, Fort Worth District	MAY-2001
	Response Action Completion Report (2 Volumes) North and South Storm water Lagoons and UST at Building 334A	US Army Corps of Engineers, Fort Worth District	MAY-2001
	Monitored Natural Attenuation Evaluation, OTC (Ordnance Training Center) Landfill	US Army Corps of Engineers, Fort Worth District	NOV-2001
2002	2001 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2002
2003	2002 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2003
2004	2003 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2004
	Building 172 Release Investigation Report	Installation	MAR-2004
	Industrial Wastewater Treatment Plant Release Investigation Report	Installation	APR-2004
2005	2004 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2005
	Response Action Completion Report Bldg 722	Cape	JUL-2005

IRP Previous Studies

Year	Title	Author	Date
2005	Corrective Measures Implementation Plan for the OTC Area	Parsons / US Army Corps of Engineers, Fort Worth District	DEC-2005
2006	2005 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2006
	Amended Affected Property Assessment Report 1313 Landfill	Installation	JAN-2006
	Draft Final Supplemental Affected Property Assessment Report for Bldg 1027 Area	Kemron / US Army Corps of Engineers, Fort Worth District	MAR-2006
	Draft Final Response Action Plan for Bldg 1027 Area	Kemron / US Army Corps of Engineers, Fort Worth District	JUN-2006
	Final Project Summary Report - Removal of Above Ground Storage Tank #319	Toltest Inc.	JUN-2006
	Semi-Annual Report for OTC Area	US Army Corps of Engineers, Fort Worth District	JUL-2006
	Draft Final Response Action Plan Bldg 371	Kemron / US Army Corps of Engineers, Fort Worth District	AUG-2006
	Draft Final Response Action Plan for Bldg 473	Kemron / US Army Corps of Engineers, Fort Worth District	AUG-2006
	Final Affected Property Assessment Report for Bldg 473	Kemron / US Army Corps of Engineers, Fort Worth District	AUG-2006
	Final Affected Property Assessment Report Bldg 371	Kemron / US Army Corps of Engineers, Fort Worth District	AUG-2006
	Final Affected Property Assessment Report for Bldg 373	Kemron / US Army Corps of Engineers, Fort Worth District	SEP-2006
	Draft Final Response Action Plan for Bldg 373	Kemron / US Army Corps of Engineers, Fort Worth District	SEP-2006
	Response Action Plan for WIA and Panther Creek	Kemron / US Army Corps of Engineers, Fort Worth District	DEC-2006
2007	2006 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2007
	Draft Final Affected Property Assessment Report for Bldg 433	Kemron / US Army Corps of Engineers, Fort Worth District	FEB-2007
	Semiannual Report for OTC Area	US Army Corps of Engineers, Fort Worth District	JUL-2007
	Affected Property Assessment Report for WIA	Kemron / US Army Corps of Engineers, Fort Worth District	DEC-2007

IRP Previous Studies

2008	Title	Author	Date
	2007 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2008
	Response Action Completion Report Bldg 1027	Kemron / US Army Corps of Engineers, Fort Worth District	FEB-2008
	Semi-Annual Report for OTC and Sludge Drying Beds Areas	Fort Worth District US Army Corps of Engineers	JUL-2008
	Response Action Plan for Bldg 371	Kemron / US Army Corps of Engineers, Fort Worth District	AUG-2008
	Draft Response Action Completion Report Bldg 473	Kemron / US Army Corps of Engineers, Fort Worth District	OCT-2008
2009			
	2008 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2009
	2009 Semi-Annual Report for OTC Landfill and Sludge Drying Beds	US Army Corps of Engineers, Fort Worth District	JUL-2009
	Final Ecological Reference Location Field Evaluation and Comparison Report for the Western Industrial Area and Panther Creek	Kemron Environmental Services	NOV-2009
2010			
	2009 Annual Report for OTC Landfill, Sludge Drying Beds, Chromate Equalization Lagoon, and OB/OD Areas	US Army Corps of Engineers, Fort Worth District	JAN-2010
	1st Year Data Summary Report Bldgs 371, 373, 433, 473	Kemron Environmental Services, Marietta Ohio	APR-2010
	1st Year Data Summary Report Western Industrial Area (WIA)	Kemron Environmental Services, Marietta Ohio	MAY-2010
	2010 Semi-Annual Report for OTC Landfill and Sludge Drying Beds	US Army Corps of Engineers, Fort Worth District	JUL-2010
	Response Action Completion Report for Building 433	Kemron Environmental Services, Marietta Ohio	JUL-2010
	Final Response Action Plan Closed DRMO Area	Tetra Tech NUS Inc, Houston, TX	OCT-2010
	Corrected Final Affected Property Assessment Report Closed DRMO Area	Tetra Tech NUS Inc, Houston, TX	OCT-2010
2011			
	2010 Annual Report for OTC Landfill, Sludge Drying Beds, Chromate Equalization Lagoon, and OB/OD Areas	US Army Corps of Engineers, Fort Worth District	JAN-2011
	Response Action Effectiveness Report, Western Industrial Area	Kemron Environmental Services, Marietta Ohio	MAY-2011
	Response Action Effectiveness Report, Buildings 371, 373, 433, and 473-POL	Kemron Environmental Services, Marietta Ohio	MAY-2011
	2011 Semi-Annual Report	US Army Corps of Engineers, Fort Worth District	JUL-2011
2012			

IRP Previous Studies

Year	Title	Author	Date
2012	2011 Annual Report	US Army Corps of Engineers, Fort Worth District	JAN-2012
	2011 Annual Report for WIA, and Bldgs 371, 373, 433, and 473	Kemron Environmental Services	APR-2012
	Final Response Action Completion Report, Removal of Stockpiled Soil North of Bldg 421N (DRMO Scrap Yard)	Cape	APR-2012
2013	2012 Annual Report for OTC, OB/OD, CEL, Sludge Drying Beds	Kemron Environmental Services	JAN-2013
	2012 Annual Report for WIA, and Bldgs 371, 373, 433, and 473	Kemron Environmental Services	JAN-2013
	Post Response Action Care Report for Closed DRMO Area	US Army Corps of Engineers, Fort Worth District	APR-2013
	2013 Annual Report for OTC, OB/OD, CEL, and Sludge Drying Beds	Kemron	OCT-2013
	2013 Annual Report for Western Industrial Area, Buildings 371, 373, 433, and 473	Kemron	OCT-2013
2014	Post-Response Action Care Report for Closed DRMO Scrap Yard	Ft. Worth District US Army Corps of Engineers	MAR-2014
2015	2014 Annual Report for OTC, OBOD, CEL, and Sludge Drying Beds	OTIE	JAN-2015
	2014 Annual Report for WIA, Bldgs 371, 373, 433, and 473	OTIE	JAN-2015
	Monitor Well Survey Report	OTIE	JAN-2015
	Well Plugging and Abandonment Report	OTIE	JAN-2015
	Response Action Effectiveness Report for Buildings 371, 373, 433, and 473-POL	OTIE	JAN-2015
	Response Action Effectiveness Report for Western Industrial Area	OTIE	JAN-2015
	Draft Final Feasibility Study for Demolition Area Creeks MRS, Demolition Area Wash Rack / Storage/ Trails MRS, and Unpermitted Demolition Areas MRS	Parsons	JAN-2015
	Post-Response Action Care Report for Closed DRMO Scrap Yard	US Army Corps of Engineers - Fort Worth District	MAR-2015
2016	2015 Annual Report for Western Industrial Area, Buildings 371, 373, 433, 473, Ordnance Training Center, Open Burn / Open Detonation, Chromate Equalization Lagoon, and Sludge Drying Bed Areas	OTIE	JAN-2016

RED RIVER ARMY DEPOT
Installation Restoration Program
Site Descriptions

Site Name: SOIL UNDERLYING BLDG 345, NORTH WASHRACK

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Dense nonaqueous phase liquid (DNAPL), Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	197803.....	197807
RFI/CMS.....	199109.....	200709
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709
LTM.....	203710.....	204609

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

Bldg 345 is located in the center of the WIA. This two-story building of approximately 300,000 square feet was built in 1942 and accommodates mechanical tear-down, metal finishing, and re-build of military vehicles. There were an unknown number of solvent (TCE, TCA) spills during the 1950s and 1960s. This site is still active; however, TCE and TCA are no longer being used at the depot. Chlorinated solvents have been detected in the groundwater since 1991. These solvents are potentially causing a threat of exposure in surface water (Panther Creek).

The contaminated soil is covered by the building and is, in part, covered by the building or asphalt/concrete, and is on top of a several hundred feet thick layer of dense clay shale.

A building vapor intrusion (ambient air) study was conducted from August 2000 to May 2001, and vapors were detected. RRAD-35 is one of three non-BRAC sites within the WIA solid waste management unit (SWMU). RRAD-35 has solvents contaminating groundwater in a PMZ.

In August 2005, a PBA was awarded to Kemron Environmental Services Inc. to bring the site to RIP/response complete (RC) and perform monitoring. Requirements for the corrective measures implementation (construction) [CMI(C)] and CMI(O) were funded under the AEDB-R site PBA Red River into 2013.

Following completion of the CMI(O) phase there will be an eight-year duration LTM phase from FY38 through FY45. The LTM phase is necessary because there is a deed notice associated with the PMZ and commercial/industrial use only LUC. Department of Defense Manual (DoDM) 4715.20 limits the total future duration of CMI(O) plus LTM phases to 30 years. Since there is a LUC restricting the site only to commercial/industrial usage, it has been determined per a USAEC strategy meeting in 2011 that a five-year review is necessary to monitor the LUC during LTM.

Five-year periodic reviews and associated costs for several RRAD sites are consolidated and tracked under site RRAD-35 beginning with the spring FY15 data call. Sites included under the RRAD-35 five-year review are IRP sites RRAD-35, 36, 37, 43, 55, 56, 60, 62, 63, 71, 73, and 99; and MMRP sites RRAD-001-R-01 and RRAD-006-R-01.

A new contract was awarded for CMI(O) to Oneida Total Integrated Enterprises, LLC (OTIE) on May 6, 2015. The new multiyear contract includes FY15 plus four additional option years.

CLEANUP/EXIT STRATEGY

CMI(O) is expected through FY37. Following completion of the CMI(O) phase, there will be an eight-year duration LTM phase from FY38 through FY45.

Site Name: BLDG 371 (BATTERY SHOP) SOILS

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	199207.....	199207
RFI/CMS.....	199811.....	200709
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

Bldg 371 is used as a battery shop where large, wet cell, pb-acid forklift batteries are recharged and stored. The building was formerly used for dynamometer testing and had solvent cleaning vats.

TCE contamination has been present in monitoring wells around Bldg 371. Groundwater TCE has exceeded protective concentration levels (PCL). Soil PCLs have not been exceeded.

A revised affected property assessment report (APAR) and a response action plan (RAP) have been completed and approved by TCEQ.

The process for incorporation of the RAP approved PMZ for the site into the RRAD permit LTM began in FY10 and was completed with issuance of Permit No. 50178 renewal on Dec. 14, 2012.

In 2009, a 1.17-acre PMZ was established; the recorded deed had a restriction for commercial/industrial usage, a response action effectiveness report every three years, and annual groundwater monitoring reports. The CMI(O) phase comprised of groundwater monitoring and reporting was under site PBC Red River through FY14, then funded under site RRAD-36 from FY15 through FY37.

The periodic reviews for this site are tracked under site RRAD-35. Five-year periodic reviews are required for RRAD-36 because of a deed notice associated with a PMZ LUC.

CLEANUP/EXIT STRATEGY

The response action of groundwater monitoring of the solvent contamination to measure effectiveness of the PMZ is expected through FY37 followed by LTM from FY38 through FY43.

Site Name: SOILS UNDERLYING BLDG 373(DYNAMOMET

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Light non-aqueous phase liquids (LNAPL), Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	197803.....	197807
CS.....	199712.....	199805
RFI/CMS.....	199811.....	200709
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

RRAD-37 has releases of petroleum products contaminating the groundwater, for which monitoring began in 2008. Bldg 373 was originally a 39,478-square-foot building constructed in 1947, which has since had several expansions. The primary use of the facility has been for work on engines and transmission, including dynamometer testing. The historical source for gasoline, diesel, and jet propellant-8 fuels used in Bldg 373 was underground fuel lines from the adjacent fuel station associated with Bldg 393. An APAR and RAP were finalized in September 2006; a deed recordation of a PMC and commercial/industrial land usage restriction was completed in 2009; a first year data summary report was completed in April 2010; and a response action effectiveness report was completed May 2011. Vacuum extraction of petroleum product contaminated groundwater from under Bldg 373 has been occurring quarterly since 2008 and currently continues semiannually until remediation can be determined to be effectively complete. Regardless of vacuum extraction results, there will continue to be a long-term requirement for groundwater monitoring of a PMZ and LUC (commercial/industrial use only) that was documented in a deed notice and DD.

This site's PMZ was formally incorporated into the installation compliance plan permit monitoring program through a major amendment to RRAD Permit CP-50178 that was issued Dec. 14, 2012.

The CMI(O) phase is the permit-required groundwater monitoring that will end in FY37. The LTM phase is tracked under site RRAD-35 and will begin in FY38 and end in FY43, so there will have been a total of 30 years of combined CMI(O) and LTM programmed in the cost-to-complete (CTC) database, as per USAEC strategy review recommendations as in accordance with DoDM 4715.20.

The LUCs for the RRAD-37 site are a deed notice for the PMZ and restriction to commercial/industrial usage only, and will require periodic five-year reviews.

A new contract for CMI(O) was awarded to OTIE on May 6, 2015 for FY15 plus four additional option years.

CLEANUP/EXIT STRATEGY

The response actions are groundwater monitoring of the PMZ and groundwater vacuum extraction remediation through FY37, followed by LTM from FY38 through FY43.

Site Name: SOILS NEAR TRANSFER PUMPS, BLDG 473

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198812.....	198812
RFI/CMS.....	199012.....	200709
DES.....	200508.....	200709
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

This site is located in the northeast portion of RRAD and south of nonassociated Bldg 473. This site is also called the POL pump site; it has four aboveground storage tanks (AST) that contain used POL and used antifreeze. The soil is contaminated from past activities with hydrocarbons, solvents, and antifreeze spills at the transfer pump site. IRP eligibility is due to historic release of solvents from either product lines, pumping/storage operations, or from one of the four storage tanks.

RRAD-43 is a former fuel station constructed in 1976 which is located across Texas Avenue from Bldg 473. The site has three 10,000-gallon ASTs and one 20,000-gallon tank inside concrete berm No. 454. One of the storage tanks was formerly used for storing used solvents, which apparently was a source for spills or leaks to soil and groundwater that occurred before the gravel floor berm was retrofitted with a concrete floor. In 2008, an RA was completed on soils contaminated with vinyl chloride, 1,1-dichloroethene and TCA, which completed removal of the pump island. The storage tanks are currently used for storage of used process water from power washers, used antifreeze, and used oil and fuel. A PMZ for solvents contaminating the groundwater was established in 2009, along with a deed recordation of LUCs for contaminants remaining in place that do not meet Texas residential protective concentration standards.

Groundwater has been impacted with solvents. Soil has been impacted with total petroleum hydrocarbons. The primary concern for this site is the use of volatile organic compounds (VOC), which occurred prior to 1987. Solvents are no longer being used. A concrete liner was added to the bermed floor several years ago. An APAR was submitted to TCEQ in 2004 and 2005. The state's comments on the APAR were received in January 2006. A revised APAR and RAP were submitted to TCEQ. Additional TCEQ comments were received, and new wells were installed in order to address comments. The APAR and RAP were approved by TCEQ in November 2008.

A soil removal action of the site's abandoned pump island and investigation of underground piping were carried out in late 2007. The removal included sampling subsurface pipelines and removal of the pump island and contaminated soils not under storage tank-related berm structures.

The response action completion report (RACR) for this remediation was approved by TCEQ in February 2009. The PMZ and the soil remediation area have been deed recorded. Incorporation of the site into the RRAD permit for groundwater monitoring was completed in December 2012. The RRAD permit requires annual monitoring and reporting. The TCEQ-approved RAP requires 30 years of monitoring. Since there is an LUC of restriction to commercial/industrial use and a PMZ, there is a requirement for a five-year periodic review for this RCRA site after the CMI(O) period ends and within remaining thirty years of monitoring, as per an USAEC strategy review meeting at RRAD in 2011.

A PMZ and commercial/industrial restricting LUC was established through a Nov. 2, 2009 deed notice. Five-year reviews are planned. A RCRA permit amendment formally incorporating this site's PMZ into the installation compliance plan permit monitoring program was issued Dec. 14, 2012.

The LTM phase five-year periodic reviews are tracked under site RRAD-35.

Site ID: RRAD-43

Site Name: SOILS NEAR TRANSFER PUMPS, BLDG 473

In FY14, a new contract for CMI(O) was awarded to OTIE. On May 6, 2015, a new multiyear contract for CMI(O) (FY15 plus four additional option years) was awarded to OTIE.

CLEANUP/EXIT STRATEGY

The site requires continuing monitoring of the remaining solvent contaminated groundwater through FY37, following LTM from FY38 through FY43.

Site ID: RRAD-55

Site Name: CHROMATE EQUALIZATION LAGOON

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA.....	197803.....	197807
CS.....	198105.....	198105
DES.....	198805.....	198808
CMI(C).....	198812.....	198912
LTM.....	198912.....	202009

RIP Date: N/A

RC Date: 198912

SITE DESCRIPTION

The Chromate Equalization Lagoon (CEL) area was located at the industrial waste treatment facility and served as the raw collection point for electroplating rinse water. The lagoon was about 65 feet wide by 95 feet long and operated from 1978 to 1989. The area was excavated upon closure, and now part of the former lagoon is covered with industrial wastewater storage tanks and associated concrete containment berms.

In June 2001 this site was incorporated into the compliance plan.

In 2005 and 2006, arsenic and 1,1-dichloroethylene detections exceeded groundwater practical quantitation levels. In November 2006 a Class III permit modification application was submitted to establish alternate groundwater protection standards. The modification was approved in February 2008.

The RRAD RCRA permit currently requires RRAD-55 annual groundwater monitoring and annual reporting through 2019, but the site could need extended monitoring as groundwater protection standards were exceeded in 2003, 2008, 2010, 2013, and 2014 at this site. The parameter Pb has been occasionally exceeding groundwater protection standards in unfiltered samples.

RRAD-55 was separate from the PBA awarded in 2005 for most other ER,A program sites.

The RRAD-55 property, as part of the industrial wastewater treatment plant (IWTP) site, was subject to the utility privatization initiative funded by BRAC 2005.

The five-year periodic review cost is tracked under site RRAD-35.

In FY14 a new contract for LTM was awarded to OTIE. On May 6, 2015, a new multiyear contract for LTM (FY15 plus up to four additional option years) was awarded to OTIE.

CLEANUP/EXIT STRATEGY

Groundwater sampling will continue at least through 2019 under the RRAD compliance plan permit.

Site Name: BUILDING 315 TRANSFER STATION

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198606.....	198701
CS.....	198606.....	198701
RFI/CMS.....	199712.....	200709
IRA.....	199306.....	200606
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

This transfer station is located at the north end of Bldg 315 within the WIA. The site was used to transfer diesel fuel to an AST. An abandoned 420,000-gallon storage tank (No. 319) was a past remnant of the station.

TCE and degradation products are detected in the groundwater in the vicinity of the transfer station. The source of the contamination is thought to be solvent spills or releases into a former drainage ditch located on the western portion of the site.

Bldg 315, which is part of the WIA, is part of RRAD compliance plan SWMU No. 14.

From June through August 1993 an underground storage tank (UST) that was part of the transfer station was removed. This was done as part of a contract that removed all the remaining formerly active USTs at RRAD.

In May 2006, the heating fuel (No. 2) AST No. 319 was cleaned, demolished and removed by Iseler Demolition, Inc. under subcontract to Toltest, Inc. The tank's slab was not removed as part of this project. In June 2006 a final project summary report for the tank removal was received. Tank removal was accomplished to free the property for parking and storage lots, but this plan was superseded by a need to construct administrative buildings.

The LUC for the WIA is the established PMZ.

The WIA groundwater monitoring requirement was incorporated into the installation compliance plan as part of a permit renewal/major modification issuance dated Dec. 14, 2012.

Five-year periodic review costs are tracked under site RRAD-35.

In FY14, a new contract for groundwater monitoring was awarded to OTIE.

On May 6, 2015 another new multiyear contract for groundwater monitoring (FY15 plus four additional option years) was awarded to OTIE.

CLEANUP/EXIT STRATEGY

The CMI(O) phase will consist of PMZ groundwater monitoring for solvents and degradation products and five-year periodic reviews, and a five-year periodic review of the LUC continuing under LTM phase.

Site Name: BLDG 433, FORMER RUBBER PRODUCTS BL

STATUS

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

Table with 3 columns: Phases, Start, End. Rows include RFA, CS, RFI/CMS, DES, CMI(C), CMI(O), RIP Date, and RC Date.

SITE DESCRIPTION

RRAD-60 Bldg 433 is a formerly 32,906-square foot building constructed in 1942 which was used for removing and replacing rubber on vehicle tracks and road wheels.

Solvent contamination of groundwater and remaining contaminated soil exceeding Texas residential protective concentration limits required the establishment of a 12.962-acre area surrounding Bldg 433 with a LUC of a PMZ and deed notice recordation in 2010.

Bldg 433 is located east of Bldg 443, south of Bldg 431, and west of new Maneuver Systems Sustainment Center facilities at the northeast portion of the RRAD maintenance area.

There were releases of solvents from vats located in the north end of Bldg 433. Historically, samples collected from the soil and groundwater indicated contamination above PCLs.

TCA and TCE degradation products have been detected in groundwater and soil. The groundwater plume appears to extend northwest from Bldg 433 up to Bldg 441.

Bldg 433 is listed in the RRAD compliance plan as SWMU No. 9.

In FY10, TCEQ concurred that this site had Class III groundwater based upon an additional monitoring well that was emplaced/tested and, as a result, gave final approval of the APAR and RAP.

A soil RA of pb-contaminated soil not under roads/driveways/buildings to establish commercial/industrial (not residential) protective standards was conducted by Kemron Environmental Services, Inc. in May 2010 at the north end of Bldg 433 with a report dated July 2010.

TCEQ approved a RCRA permit renewal application major amendment on Dec. 14, 2012 to formally incorporate this site's PMZ into the installation compliance plan groundwater monitoring program.

In FY14 a new contract for groundwater monitoring was awarded to OTIE.

On May 6, 2015, a new multiyear contract for groundwater monitoring (FY15 plus four additional option years) was also awarded to OTIE.

Site ID: RRAD-60

Site Name: BLDG 433, FORMER RUBBER PRODUCTS BL

Five-year periodic review costs are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

The CMI(O) phase, comprised of groundwater monitoring and professional labor management is expected to run through FY37 in order to meet state requirements for 30 years of monitoring. Monitoring began in 2008. In addition, since there is a LUC with both soil and groundwater contamination left in place, there will be another eight years of LTM phase (FY38 through FY43) to consist of a five-year periodic review in FY43. There is currently a limit of 30 years of combined CMI(O) plus LTM per DoDM 4715.20. Five-year periodic reviews of the PMZ LUC effectiveness are planned.

Site ID: RRAD-62

Site Name: POPPING FURNACE BLDG# 722

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA.....	197803.....	197807
CS.....	198105.....	198105
RFI/CMS.....	199712.....	200304
DES.....	200305.....	200406
CMI(C).....	200407.....	200507
LTM.....	201302.....	204309

RIP Date: N/A

RC Date: 200507

SITE DESCRIPTION

From 1956 through 1978, Bldg 722 was used for ammunition incineration. The building pad at the site is currently used for a metal and paper recycling center, and in 2000 through 2010 the area was formerly used for vehicle storage or training for National Guard or Army Reserve.

Bldg 722 was a building that formerly contained two small ammunition item incinerators (popping furnaces) and associated equipment inside and outside the main building for performing ammunition demilitarization. A remediation project of metal and explosive contaminated soil occurred in 2004 through 2005, and TCEQ approved the completed RACR in July 2005. Remediation (soil removal) was only to commercial/industrial PCLs and not residential cleanup levels, so a deed notice was filed with the county and RRAD Master Planning. The installation Commander signed the deed notice on Aug. 22, 2006, and TCEQ acknowledged and approved the deed notice Oct. 6, 2006. Since there is a LUC restricting the site only to commercial/industrial usage, it has been determined per a USAEC strategy review in 2011 that five-year reviews are necessary to monitor the LUC.

Beginning with the spring FY15 data call, the five-year periodic reviews for this site are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews, will be performed since the site does not have unrestricted usage, due to the 8.231-acre deed notice concerning metals left in place that do not meet TCEQ Texas Risk Reduction Program residential clean-up standards.

Site ID: RRAD-63

Site Name: POPPING FURNACE BLDG #1027

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA.....	197803.....	197807
CS.....	198105.....	198105
RFI/CMS.....	199006.....	200409
DES.....	200410.....	200709
CMI(C).....	200508.....	200810
LTM.....	201302.....	204309

RIP Date: N/A

RC Date: 200810

SITE DESCRIPTION

Bldgs 1027 and 1025 were located just north of the OB/OD grounds. Bldg 1025 ceased operation in the mid-1980s and was removed in the mid-1990s. Bldg 1027 was in operation from 1956 through 1976, with some failed trial burns after that period. Bldg 1027 was partially dismantled in the late-1990s (two walls and the foundation remain) and is an interim status RCRA-regulated unit. An IRA was completed in FY95 and FY96 which addressed the bulk of the source contamination. Bldg 1025 was totally removed. The floor, two walls, and auxiliary shed remain at Bldg 1027. These incinerators were used to thermally treat obsolete or off-specification munitions. Cadmium and pb had been detected in the soil. In some areas, the contaminants exceeded the human health risk levels. In addition to soil contamination, munitions debris was visible on the site. Munitions debris is material which was processed in the incinerator and fell onto the ground.

Groundwater monitoring wells were plugged in early 2007, as there was no groundwater contamination.

A soil and sediment FRA under the PBA contract was completed in August 2007 by MKM Engineers, Inc. under subcontract to Kemron Environmental Services, Inc. A RACR was submitted to TCEQ in February 2008.

A deed notice was signed on Aug. 2, 2008 notifying that the affected area surrounding former Bldgs 1025 and 1027 was not remediated to residential usage soil standards.

Bldg 1027 was a building that formerly contained an ammunition item incinerator (popping furnace) and associated equipment inside and outside the main building for ammunition demilitarization. A final RACR on soil remediation of metal contaminated soil was approved by TCEQ on Oct. 6, 2008. Remediation (soil removal) was only to commercial/industrial PCLs and not residential cleanup levels, so a deed notice was filed with the county and RRAD Master Planning. The installation Commander signed the deed notice on Aug. 2, 2008, and TCEQ acknowledged and approved the deed notice on Sept. 24, 2008. Since there is a LUC restricting the site only to commercial/industrial usage, it has been determined per a USAEC strategy meeting in 2011 that five-year reviews are necessary to monitor the LUC.

The current CTC is for beginning five-year reviews for the LTM phase in FY16, for completion by January 2017. There will be five-year reviews for 30 years consisting of six five-year reviews.

Beginning with the spring FY15 data call, the five-year periodic reviews for this site are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews, will be performed since the site does not have unrestricted usage, due to a 65.415-acre deed notice concerning metals left in place that do not meet Texas residential cleanup standards.

Site Name: BLDG 350, FORMER NI-CAD BATTERY SHO

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	199610.....	199701
CS.....	199802.....	199806
RFI/CMS.....	199811.....	200709
IRA.....	200305.....	200409
CMI(C).....	200508.....	200709
CMI(O).....	200508.....	203709

RIP Date: 200709

RC Date: 203709

SITE DESCRIPTION

Bldg 350, within the WIA, was used for the maintenance of nickel-cadmium (ni-cad) batteries. A floor drain that led to a concrete pit outside the building is suspected of having leaked. This site initially was identified as a BRAC site but was changed to IRP in 1997.

Historical spills of VOCs into the drainage ditch east of Bldg 350 are a probable source of the majority of contamination at this site. High levels (690 parts per million) of solvents were detected in the groundwater. No contamination was detected in air samples. From Nov. 18, 2003 to April 8, 2004, the US Army performed a dual phase extraction pilot study of solvent extraction from groundwater at Bldg 350 and concluded that it was not economically practical to address DNAPL recovery. TCEQ disagreed and requested completion of a non-aqueous phase liquids (NAPL) assessment at the WIA and implementation of an effective NAPL recovery system to satisfy NAPL response action triggers for the purpose of protecting Panther Creek from additional exposure to dissolved and/or NAPL COCs.

A PMZ, monitored natural attenuation, and PRB walls to protect Panther Creek were the actual actions implemented.

A deed notice was recorded in Bowie County courthouse records on Nov. 2, 2009. This deed notice identified COCs, restricted area to commercial-industrial usage, restricted usage of groundwater, and identified in a survey map and coordinates the PMZ area for the WIA. The WIA groundwater monitoring requirement was formalized on Dec. 14, 2012 with TCEQ issuance of a major amendment to the renewed compliance plan permit.

In FY14 a new contract for groundwater monitoring was awarded to OTIE.

On May 6, 2015, a new multiyear contract for groundwater monitoring (FY15 plus four additional option years) was awarded to OTIE.

Beginning with the spring FY15 data call, the five-year periodic reviews for this site are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

This site is part of the WIA PMZ, along with IRP sites RRAD-35 and RRAD-56, and BRAC sites RRAD-33, RRAD-34, RRAD-44, and RRAD-48. Future actions consist of continued groundwater monitoring of the solvent contamination and five-year periodic review of the PMZ LUC.

Site Name: BLDG 414, GEN STORAGE BLDG, DIRT FLOOR

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
RFA.....	199610.....	199701
CS.....	199802.....	199903
RFI/CMS.....	199908.....	199909
LTM.....	201302.....	204309

RIP Date: N/A

RC Date: 199909

SITE DESCRIPTION

Bldg 414 formerly was a multi-purpose dirt floored general warehouse building that was investigated as it was originally planned that the building would be transferred as part of BRAC 1995. The transfer never occurred, but the BRAC environmental investigation found soil inside the building that had benzo(a)pyrene above TCEQ soil-air ingestion level that would allow residential usage. Since the soil only met commercial/industrial PCLs and not residential levels, a deed notice was filed with the county and RRAD Master Planning. The installation Commander signed the deed notice July 1, 2003, and TCEQ acknowledged and approved the deed notice Aug. 28, 2003. TCEQ said in a letter dated June 10, 2003 that no post-closure care or engineering controls are required.

Bldg 414 was demolished in 2008 through 2009 for construction of parts of the new Maneuver Systems Sustainment Center, and most of the contaminated soil was excavated and removed to the new Boston municipal landfill. The deed notice remains because it is uncertain if the soil excavation was made to sufficient depth to address all the contamination.

Since there is a LUC restricting the site only to commercial/industrial usage, it has been determined per a USAEC strategy review in 2011 that five-year reviews are necessary to monitor the LUC.

Five-year review costs are tracked under site RRAD-35. The five-year review cost is derived from an Anniston Army Depot historic cost. The Anniston Army Depot installation site complexity, contaminants, and number of sites are similar to RRAD.

The current RRAD-35 tracked CTC is for beginning five-year reviews for the LTM phase in FY16 for completion by Jan. 17, 2017. There will be five-year reviews for 30 years consisting of six five-year reviews.

CLEANUP/EXIT STRATEGY

LTM consists of five-year reviews, since the site does not have unrestricted land usage due to the deed notice that the benzo(a)pyrene concentration of 1.74 milligrams/kilogram (mg/kg) in soil met the Texas soil risk reduction standard No. 2 for commercial use, but does not meet the standard for residential use.

Site ID: RRAD-99
Site Name: DRMO Scrap Yard

STATUS

Regulatory Driver: RCRA
RRSE: LOW
Contaminants of Concern: Metals
Media of Concern: Soil

Phases	Start	End
RFA.....	200301.....	200803
RFI/CMS.....	200810.....	201103
CMI(C).....	201112.....	201207
LTM.....	201210.....	204209

RIP Date: N/A
RC Date: 201207

SITE DESCRIPTION

This site was a largely an open dirt field area of about 6 acres that was in use for several decades to store junk metal material prior to sale for metal recycling. It is adjacent to another area of about 6 acres with dirt floor buildings where scrap material was formerly stored. The total acreage of both areas is about 12.

An APAR was completed in October 2010, and that and the RAP were granted TCEQ regulator concurrence on Feb. 8, 2011. The approved RAP actions are annual inspections/maintenance of a parking lot cap that prevents soil exposure to metal contamination. The inspections began in FY12. The soil under the cap (i.e. parking lot No. 57B) does not meet Texas residential standards for the metal pb. The soil at the portion of the former DRMO Scrap Yard not under the cap only meets commercial/industrial and not residential protective levels. Due to metal contamination, the site was subject to a deed notice for a LUC.

In FY12 monitoring wells were plugged.

Disposal of stockpiled soil from grading/redevelopment of part of the eastern half of the site into a new gravel storage lot was funded and occurred in FY12. The report on stabilization and landfill disposal of the stockpiled soil was approved by TCEQ in FY12.

Five-year periodic review costs are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

Remaining actions are annual inspections/reporting of the condition of the parking lot (LUC cap). The parking lot cap prevents human exposure to an area of subsurface metal contaminated soil that exceeds PCLs. Reports on the annual cap inspection began in FY12 and will occur annually before March 31.

Periodic five-year reviews of the effectiveness of the protective cap are planned.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
PBC Red River	PBC	201309	This contract expired in 2013.
RRAD-07	OTC HOSPITAL	198105	USACHPPM Hazardous and Medical Waste Study No. 37-EF-5698-97, Dec 1996
RRAD-08	OTC RIFLE RANGE	198105	NFA because found not eligible for IRP, as this is a FUDS site, site #K06TX013901, Red River Archives Search Report, Huntsville Corps of Engineers, March 1995
RRAD-09	SURVEILLANCE AREA	199802	This site is addressed under MMRP site RRAD-009-R-01.
RRAD-10	SURVEILLANCE AREA (1953)	199802	This site is addressed under MMRP site RRAD-008-R-01.
RRAD-11	SURVEILLANCE AREA (PISTOL RANGE)	199802	This site is addressed under MMRP site RRAD-001-R-01 and RRAD-002-R-01
RRAD-14	BUILDING 311 (X-RAY FACILITY)	198701	USACHPPM Hazardous and Medical Waste Study No. 37-EF-5698-97, Dec '96
RRAD-15	RAD STGE (BLDGS B12-3,G5-6,G-14-7,E13-5)	197807	These are still active sites, and are addressed in the RCRA Permit for closure..
RRAD-16	RAD STG(F14-1,A14-5,C3-5,C6-1,C9-7,E4-1)	197807	These are still active sites, and are addressed in the RCRA Permit for closure.
RRAD-17	RAD FIRE BUILDING S-661 (OLD T-6)	197807	USACHPPM Hazardous and Medical Waste Study No. 37-EF-5698-97, Dec 1996
RRAD-18	RAD FIRE BUILDING 421	197807	Duplicate RRAD-76
RRAD-19	RAD WASTE STORAGE	197807	The last site update person was 1st BRAC 1995 BEC, so site was probably a BRAC 1995 footprint site that was later transferred out of the BRAC footprint. Site location and details are unknown.
RRAD-21	FLM MATL STG (S-257,327,329,S-402)	197807	USACHPPM Hazardous and Medical Waste Study No. 37-EF-5698-97, Dec 1996
RRAD-22	FLM MAT STG (S-547,S-648,T-1190)	197807	USACHPPM Hazardous and Medical Waste Study No. 37-EF-5698-97, Dec 1996
RRAD-26	AERATION LAGOONS (4) IN AREA K	199404	Not eligible for IRP, this is an active industrial category wastewater treatment site
RRAD-28	WOODYARD LANDFILL	200609	Cap maintenance will be conducted as part of the installation's best management practices in accordance with the RRAD Master Plan.
RRAD-30	POPPING FURNACE BLDG #1025	200101	Consolidated administratively into adjacent contaminant commingled site RRAD-63
RRAD-38	WASTE PILES	199310	Determined as not eligible for IRP as this is an active site
RRAD-39	FINAL LAGOON, IWTP	199704	US Army Corps of Engineers, Fort Worth District, Closure Report for Industrial Wastewater Treatment Lagoons, Red

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			River Army Depot, February 1997
RRAD-40	RAW PHOSPHATE DETENTION LAGOON,IWTP	199412	Determined as not eligible for IRP as this is an active site. Transferred under utility privatization to the local redevelopment authority.
RRAD-41	SOILS NEAR BLDG 430	198901	US Army Corps of Engineers, Fort Worth District, Volumes I & II-RCRA Facility Investigation, Final Report, Includes: Buildings #430, Big Creek, Sludge Drying Beds, WWT Area, POL Pump Site, OTC Area, Panther Creek, and Pesticide Pit, Red River Army Depot, April 22, 1992
RRAD-45	SOILS UNDER BLDG 341	200209	RCRA Facility Investigation Final Report, FWACOE, April 1992. Consolidated under adjacent site RRAD-35.
RRAD-46	BIG CREEK	199206	Texas Commission on Environmental Quality agreed with our statement in a permit revision issuance dated May 18, 2004, the "sampling results at Big Creek have indicated no impact to the stream from the OTC Landfill". NFA Letter dated May 27, 2004.
RRAD-49	TNT WASHOUT FACILITY SOILS	199307	USAEHA Geohydrologic Study No. 38-26-KV-49-93 10 Sep 1993
RRAD-50	OB/OD AREA	199303	This is an active site and is addressed in the RCRA Permit for closure.
RRAD-54	SOILS AT BLDG 420	199310	Building 420 Soils Investigation, Fort Worth COE, May 1992
RRAD-57	MAINTENANCE SALVAGE YARD	199907	Baseline Risk Assessment for Maintenance Salvage Yard, Fort Worth Corps of Engineers, August 1995
RRAD-59	D-AREA Y-SITE	198105	NFA because found not eligible for IRP, this is MMRP site RRAD-006-R-01.
RRAD-69	BLDG 319 PIPELINE	199703	UST Removals and Contaminated Soil, Laidlaw, January 1994
RRAD-70	BLDG 388, DISCHARGE LINE (SINK)	199909	RCRA Facility Assessment Building 388, Fort Worth Corps, Dec 1998. Study complete - not eligible for IRP.
RRAD-74	BLDG 411, ANNEALING VATS UNDER FLOOR	199701	This is an active site not eligible for IRP. Was in original BRAC 1995 footprint, BRAC study canceled when footprint was changed and made a non-BRAC site.
RRAD-76	BLDG 421, RAD EMMITTING SOURCES PRESENT	199609	This is an active site not eligible for IRP. Was in original BRAC 1995 footprint, BRAC study canceled when footprint was changed and made a non-BRAC site.
RRAD-78	BLDG 443, RADIOLOGICAL SOURCE PRESENT	199609	This is an active site not eligible for IRP. Was in original BRAC 1995 footprint, BRAC study canceled when footprint was changed and made a non-BRAC site.
RRAD-81	AMMUNITION SURVEILLANCE TRACER TEST RNG	199705	This site is addressed under MMRP site RRAD-010-R-01.
RRAD-83	COMP BUILDING 413	199707	This is an active site not eligible for IRP. Was in original BRAC 1995 footprint, BRAC study canceled when footprint was

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
RRAD77	BLDG 431, RADIOLOGICAL SOURCE PRESENT	199609	<p>changed and made a non-BRAC site.</p> <p>This is an active site not eligible for IRP. Was in original BRAC 1995 footprint, BRAC study canceled when footprint was changed and made a non-BRAC site.</p>

IRP Schedule

Date of IRP Inception: 197803

Past Phase Completion Milestones

1978

PA (RRAD-22 - FLM MAT STG (S-547,S-648,T-1190), RRAD-59 - D-AREA Y-SITE)
CS (RRAD-15 - RAD STGE (BLDGS B12-3,G5-6,G-14-7,E13-5), RRAD-16 - RAD STG(F14-1,A14-5,C3-5,C6-1,C9-7,E4-1), RRAD-17 - RAD FIRE BUILDING S-661 (OLD T-6), RRAD-18 - RAD FIRE BUILDING 421, RRAD-19 - RAD WASTE STORAGE, RRAD-21 - FLM MATL STG (S-257,327,329,S-402), RRAD-28 - WOODYARD LANDFILL, RRAD-39 - FINAL LAGOON, IWTP)
SI (RRAD-22 - FLM MAT STG (S-547,S-648,T-1190))
RFA (RRAD-07 - OTC HOSPITAL, RRAD-08 - OTC RIFLE RANGE, RRAD-09 - SURVEILLANCE AREA, RRAD-10 - SURVEILLANCE AREA (1953), RRAD-11 - SURVEILLANCE AREA (PISTOL RANGE), RRAD-15 - RAD STGE (BLDGS B12-3,G5-6,G-14-7,E13-5), RRAD-16 - RAD STG(F14-1,A14-5,C3-5,C6-1,C9-7,E4-1), RRAD-17 - RAD FIRE BUILDING S-661 (OLD T-6), RRAD-18 - RAD FIRE BUILDING 421, RRAD-19 - RAD WASTE STORAGE, RRAD-21 - FLM MATL STG (S-257,327,329,S-402), RRAD-26 - AERATION LAGOONS (4) IN AREA K, RRAD-28 - WOODYARD LANDFILL, RRAD-30 - POPPING FURNACE BLDG #1025, RRAD-35 - SOIL UNDERLYING BLDG 345, NORTH WASHRACK, RRAD-37 - SOILS UNDERLYING BLDG 373(DYNAMOMET, RRAD-38 - WASTE PILES, RRAD-39 - FINAL LAGOON, IWTP, RRAD-40 - RAW PHOSPHATE DETENTION LAGOON,IWTP, RRAD-41 - SOILS NEAR BLDG 430, RRAD-55 - CHROMATE EQUALIZATION LAGOON, RRAD-62 - POPPING FURNACE BLDG# 722, RRAD-63 - POPPING FURNACE BLDG #1027)

1981

CS (RRAD-07 - OTC HOSPITAL, RRAD-08 - OTC RIFLE RANGE, RRAD-09 - SURVEILLANCE AREA, RRAD-10 - SURVEILLANCE AREA (1953), RRAD-11 - SURVEILLANCE AREA (PISTOL RANGE), RRAD-30 - POPPING FURNACE BLDG #1025, RRAD-38 - WASTE PILES, RRAD-40 - RAW PHOSPHATE DETENTION LAGOON,IWTP, RRAD-41 - SOILS NEAR BLDG 430, RRAD-55 - CHROMATE EQUALIZATION LAGOON, RRAD-62 - POPPING FURNACE BLDG# 722, RRAD-63 - POPPING FURNACE BLDG #1027)
SI (RRAD-59 - D-AREA Y-SITE)

1987

INV (RRAD-54 - SOILS AT BLDG 420)
PA (RRAD-45 - SOILS UNDER BLDG 341)
CS (RRAD-14 - BUILDING 311 (X-RAY FACILITY), RRAD-46 - BIG CREEK, RRAD-56 - BUILDING 315 TRANSFER STATION)
SI (RRAD-45 - SOILS UNDER BLDG 341)
ISC (RRAD-54 - SOILS AT BLDG 420)
RFA (RRAD-14 - BUILDING 311 (X-RAY FACILITY), RRAD-46 - BIG CREEK, RRAD-49 - TNT WASHOUT FACILITY SOILS, RRAD-50 - OB/OD AREA, RRAD-56 - BUILDING 315 TRANSFER STATION)

1988

DES (RRAD-55 - CHROMATE EQUALIZATION LAGOON)

1989

RFA (RRAD-43 - SOILS NEAR TRANSFER PUMPS, BLDG 473)
DES (RRAD-41 - SOILS NEAR BLDG 430)
RFI/CMS (RRAD-41 - SOILS NEAR BLDG 430)
CMI(C) (RRAD-41 - SOILS NEAR BLDG 430)

1990

CMI(C) (RRAD-55 - CHROMATE EQUALIZATION LAGOON)

1992

RFA (RRAD-36 - BLDG 371 (BATTERY SHOP) SOILS)
CAP (RRAD-54 - SOILS AT BLDG 420)
RFI/CMS (RRAD-46 - BIG CREEK)

1993

CS (RRAD-49 - TNT WASHOUT FACILITY SOILS, RRAD-50 - OB/OD AREA)

IRP Schedule

IMP(C)	(RRAD-54 - SOILS AT BLDG 420)
1994	
CS	(RRAD-26 - AERATION LAGOONS (4) IN AREA K)
RFA	(RRAD-57 - MAINTENANCE SALVAGE YARD, RRAD-60 - BLDG 433, FORMER RUBBER PRODUCTS BL)
IRA	(RRAD-28 - WOODYARD LANDFILL)
RFI/CMS	(RRAD-38 - WASTE PILES)
1995	
CS	(RRAD-60 - BLDG 433, FORMER RUBBER PRODUCTS BL)
IRA	(RRAD-30 - POPPING FURNACE BLDG #1025, RRAD-40 - RAW PHOSPHATE DETENTION LAGOON,IWTP)
1996	
PA	(RRAD-76 - BLDG 421, RAD EMMITTING SOURCES PRESENT, RRAD-78 - BLDG 443, RADIOLOGICAL SOURCE PRESENT, RRAD77 - BLDG 431, RADIOLOGICAL SOURCE PRESENT)
1997	
RD	(RRAD-83 - COMP BUILDING 413)
IRA	(RRAD-39 - FINAL LAGOON, IWTP)
RFA	(RRAD-69 - BLDG 319 PIPELINE, RRAD-70 - BLDG 388, DISCHARGE LINE (SINK), RRAD-71 - BLDG 350, FORMER NI-CAD BATTERY SHO, RRAD-73 - BLDG 414, GEN STORAGE BLDG, DIRT FLOOR, RRAD-74 - BLDG 411, ANNEALING VATS UNDER FLOOR, RRAD-81 - AMMUNITION SURVEILLANCE TRACER TEST RNG)
PA	(RRAD-83 - COMP BUILDING 413)
RA(C)	(RRAD-83 - COMP BUILDING 413)
1998	
CS	(RRAD-37 - SOILS UNDERLYING BLDG 373(DYNAMOMET, RRAD-70 - BLDG 388, DISCHARGE LINE (SINK), RRAD-71 - BLDG 350, FORMER NI-CAD BATTERY SHO)
1999	
RFI/CMS	(RRAD-57 - MAINTENANCE SALVAGE YARD, RRAD-70 - BLDG 388, DISCHARGE LINE (SINK), RRAD-73 - BLDG 414, GEN STORAGE BLDG, DIRT FLOOR)
CS	(RRAD-73 - BLDG 414, GEN STORAGE BLDG, DIRT FLOOR)
2001	
RFI/CMS	(RRAD-30 - POPPING FURNACE BLDG #1025)
RFA	(PBC Red River - PBC)
2002	
RI/FS	(RRAD-45 - SOILS UNDER BLDG 341)
2003	
RFI/CMS	(RRAD-28 - WOODYARD LANDFILL, RRAD-62 - POPPING FURNACE BLDG# 722)
2004	
DES	(RRAD-62 - POPPING FURNACE BLDG# 722)
IRA	(RRAD-71 - BLDG 350, FORMER NI-CAD BATTERY SHO)
RFI/CMS	(RRAD-63 - POPPING FURNACE BLDG #1027)
2005	
CM(C)	(RRAD-62 - POPPING FURNACE BLDG# 722)
2006	
IRA	(RRAD-56 - BUILDING 315 TRANSFER STATION)
LTM	(RRAD-28 - WOODYARD LANDFILL)

2007

- CMI(C) (PBC Red River - PBC, RRAD-35 - SOIL UNDERLYING BLDG 345, NORTH WASHRACK, RRAD-36 - BLDG 371 (BATTERY SHOP) SOILS, RRAD-37 - SOILS UNDERLYING BLDG 373(DYNAMOMET, RRAD-43 - SOILS NEAR TRANSFER PUMPS, BLDG 473, RRAD-56 - BUILDING 315 TRANSFER STATION, RRAD-71 - BLDG 350, FORMER NI-CAD BATTERY SHO)
- DES (RRAD-43 - SOILS NEAR TRANSFER PUMPS, BLDG 473, RRAD-60 - BLDG 433, FORMER RUBBER PRODUCTS BL, RRAD-63 - POPPING FURNACE BLDG #1027)
- RFI/CMS (RRAD-35 - SOIL UNDERLYING BLDG 345, NORTH WASHRACK, RRAD-36 - BLDG 371 (BATTERY SHOP) SOILS, RRAD-37 - SOILS UNDERLYING BLDG 373(DYNAMOMET, RRAD-43 - SOILS NEAR TRANSFER PUMPS, BLDG 473, RRAD-56 - BUILDING 315 TRANSFER STATION, RRAD-60 - BLDG 433, FORMER RUBBER PRODUCTS BL, RRAD-71 - BLDG 350, FORMER NI-CAD BATTERY SHO)

2008

- RFA (RRAD-99 - DRMO Scrap Yard)

2009

- CMI(C) (RRAD-63 - POPPING FURNACE BLDG #1027)

2011

- RFI/CMS (RRAD-99 - DRMO Scrap Yard)
- CMI(C) (RRAD-60 - BLDG 433, FORMER RUBBER PRODUCTS BL)

2012

- CMI(C) (RRAD-99 - DRMO Scrap Yard)

2013

- CMI(O) (PBC Red River - PBC)

Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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Final RA(C) Completion Date: 201207

Schedule for Next Five-Year Review: 2017

Estimated Completion Date of IRP at Installation (including LTM phase): 204609

RED RIVER ARMY DEPOT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-35	SOIL UNDERLYING BLDG 345, NORTH WASHRACK	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-36	BLDG 371 (BATTERY SHOP) SOILS	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-37	SOILS UNDERLYING BLDG 373(DYNAMOMET)	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-43	SOILS NEAR TRANSFER PUMPS, BLDG 473	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-55	CHROMATE EQUALIZATION LAGOON	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-56	BUILDING 315 TRANSFER STATION	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-60	BLDG 433, FORMER RUBBER PRODUCTS BL	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-62	POPPING FURNACE BLDG# 722	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-63	POPPING FURNACE BLDG #1027	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-71	BLDG 350, FORMER NI-CAD BATTERY SHO	CMI(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-73	BLDG 414, GEN STORAGE BLDG, DIRT FLOOR	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-99	DRMO Scrap Yard	LTM						

RED RIVER ARMY DEPOT
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 11/6

Installation Site Types with Future and/or Underway Phases

- 1 Drainage Ditch
(RRAD-011-R-01)
- 1 Firing Range
(RRAD-001-R-01)
- 1 Open Burning/Open Detonation (OB/OD)
(RRAD-011-R-03)
- 1 Unexploded Munitions/Ordnance
(RRAD-006-R-01)
- 1 Washrack
(RRAD-011-R-02)

Most Widespread Contaminants of Concern

Explosives, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC), Perchlorate, White Phosphorous

Media of Concern

Building Decontamination, Groundwater, Sediment, Soil

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

Site ID	Site Name	Action	Remedy	FY
RRAD-001-R-01	VULCAN RANGE	FRA	WASTE REMOVAL - SOILS	2014
RRAD-001-R-01	VULCAN RANGE	FRA	UXO CLEARANCE	2014
RRAD-006-R-01	D-AREA Y-SITE D060201	FRA	UXO CLEARANCE	2014
RRAD-010-R-01	TRACER TEST RANGE	FRA	WASTE REMOVAL - SOILS	2014
RRAD-001-R-01	VULCAN RANGE	FRA	INSTITUTIONAL CONTROLS	2015
RRAD-006-R-01	D-AREA Y-SITE D060201	FRA	INSTITUTIONAL CONTROLS	2015

Duration of MMRP

Date of MMRP Inception 199911

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202009/202009

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

MMRP Contamination Assessment

Contamination Assessment Overview

In FY02, preliminary assessments (PA) were conducted for MMRP sites. Site inspections (SI) were conducted from FY02 through FY05. In May 2005, fieldwork occurred to determine the potential presence of MEC. In November 2005, a draft SI report was submitted to the TCEQ in November 2005 and the SI was concurred with in 2006.

In November 2010, final RI reports were submitted to TCEQ for the Vulcan Range [transferred (TD)] site RRAD-002-R-01 and Grenade Range (RRAD-007-R-01) sites. The recommendation of the November 2010 RI reports indicated NFA would be necessary for the Vulcan Range-TD and Grenade Range sites, and TCEQ concurred with NFA.

In November 2010, the RI/FS reports for three MMRP sites were sent to TCEQ with recommendations that RAs were necessary. The Vulcan Range (RRAD-001-R-01) and Y-Site (D-Area Y-Site: RRAD-006-R-01) were later remediated (soil and MEC respectively) and institutional controls were established. The Tracer Test Range (RRAD-010-R-01) had all MC contaminated soil removed.

In FY13, soil remediation occurred at the Tracer Test Range (RRAD-010-R-01) and Vulcan Range (RRAD-001-R-01). Clean closure was achieved at RRAD-010-R-01. At RRAD-001-R-01 LUCs were established for contamination left in place warning signs were installed, and a deed notice was filed.

In FY13, remediation activities occurred at the Y-Site Munitions Response Site (MRS) (RRAD-006-R-01). Warning signs for MEC hazards were installed, and a deed notice was recorded.

In FY14 a RI occurred at the RRAD-011-R-01, 02, and 03 sites outside and surrounding the formerly permitted OB/OD areas (site CC-002-RR).

On March 11, 2014, TCEQ approved the site-specific final report for RIP/RC at the Tracer Test Range MRS. No further actions nor any LUC is required as a result of the soil remediation cleanup that occurred at that site during October and November 2012.

Beginning in FY15 the sites RRAD-011-R-01, 02, and 03 were combined for tracking purposes into site RRAD-011-R-03. The contamination for the 3 sites is more or less continuous or adjacent, so the larger and surrounding site RRAD-011-R-03 Unpermitted Demolition Areas was appropriate for future remediation tracking.

The combined site RRAD-011-R-03 has contaminated soil and sediment, 256 acres with a high-density MEC hazard, and approximately 430 acres with lower MEC risk hazards.

Site RRAD-011-R-03 had separate MEC, soil, and sediment remedial alternatives outlined in a draft final feasibility study (FS) dated January 2015. Due to USAEC issues with a soil remedial alternative listed in the FS, which involves a compensatory set-aside for a 17 acre soil area exceeding protective concentration limits for heavy metals, funding of a remedial contract has been delayed and will not occur in FY16.

In 2015 annual LUC inspections began at the RRAD-001-R-01 and RRAD-006-R-01 sites.

Cleanup Exit Strategy

Data results from the RI indicated that no further action was necessary for the Vulcan Range-TD and Grenade Range sites.

RAs occurred at the Vulcan Range, Tracer Test Range, and D-Area Y-Site in FY13. LUCs, five-year reviews, and LTM construction support will be necessary for the Vulcan Range and D-Area Y-Site.

MMRP Previous Studies

Year	Title	Author	Date
2001	US Army Active/Inactive Range Inventory, Red River Army Depot	USAEC	AUG-2001
2002	Final Closed, Transferred, and Transferring Range (CTT)/Site Inventory Report, Red River Army Depot, Texas, Camp Stanley Storage Activity, US Army Materiel Command	e2M Inc.	MAR-2002
2004	Historical Records Review For Other Than Operational Ranges	US Army Corps of Engineers -Omaha District	AUG-2004
	Draft Conceptual Site Model Military Munitions Response Program Site Inspection, Red River Army Depot, Texas	e2M Inc.	DEC-2004
2005	Final Historical Records Review for Other Than Operational Ranges	US Army Corps of Engineers	JAN-2005
2006	Final Site Inspection Report, MMRP	e2M/US Army Corps of Engineers, Omaha District	AUG-2006
2010	Final Remedial Investigation Report - Grenade Range	Parsons	NOV-2010
	Final Remedial Investigation Report - Vulcan Range TD	Parsons	NOV-2010
	Final Remedial Investigation Report and Feasibility Study - Vulcan Range	Parsons	NOV-2010
	Final Remedial Investigation Report and Feasibility Study - Tracer Test Range	Parsons	NOV-2010
	Final Remedial Investigation Report and Feasibility Study - Y-Site (RRAD-006-R-01)	Parsons	NOV-2010
2011	Proposed Plan Grenade Range, Tracer Test Range, Vulcan Range, Vulcan Range-TD, and Y Site	Parsons	APR-2011
	Final Decision Document Vulcan Range-TD MRS	Parsons, Austin Texas	JUN-2011
	Final Decision Document Grenade Range MRS	Parsons, Austin Texas	JUL-2011
	Final Decision Document Tracer Test Range MRS	Parsons, Austin Texas	JUL-2011
	Final Decision Document Vulcan Range MRS	Parsons, Austin Texas	JUL-2011
	Final Decision Document Y-Site MRS	Parsons, Austin Texas	JUL-2011
2012	Final Historical Records Review for the Unpermitted Demolition Areas and Associated Munitions Response Sites	Parsons - Austin Texas	JAN-2012
	Site Inspection at the Unpermitted Demolition Areas and Associated Munitions Response Sites	Parsons	OCT-2012
2013	Operational Range Assessment Program Phase II Quantitative Assessment Report for Red River Army Depot	EA Engineering, Science, and Technology, Inc.	APR-2013
	Final Site-Specific Final Report Remedy in Place /	Parsons	DEC-2013

MMRP Previous Studies

	Title	Author	Date
2013	Response Complete at the Tracer Test Range Munitions Response Site		
2014	Final RCRA Facility Investigation at the Permitted Open Burning/Open Detonation Areas	Parsons	JAN-2014
	Response Action Completion Report Remedy in Place / Response Complete at the Y-Site MRS	Parsons	FEB-2014
	Draft Final Site-Specific Final Report for Remedy in Place / Response Complete at Vulcan Range MRS	Parsons	FEB-2014
	Response Action Completion Report - Vulcan Range Munitions Response Site	Parsons	FEB-2014
	Final Remedial Investigation for Demolition Area Creeks MRS, the Demolition Area Wash Rack/Storage/Trails MRS, and the Unpermitted Demolition Areas MRS	Parsons	NOV-2014
2015	Draft Final Feasibility Study for Demolition Area Creeks MRS, the Demolition Area Wash Rack/Storage/Trails MRS, and the Unpermitted Demolition Areas MRS	Parsons	JAN-2015
	Final Corrective Measures Study Permitted Open Burning / Open Detonation Areas	Parsons	FEB-2015

RED RIVER ARMY DEPOT
Military Munitions Response Program
Site Descriptions

Site ID: RRAD-001-R-01
Site Name: VULCAN RANGE

STATUS

Regulatory Driver: CERCLA
MRSPP Score: No known or suspected hazard
Contaminants of Concern: Metals, Munitions and explosives of concern (MEC)
Media of Concern: Soil

Phases	Start	End
PA.....	200202.....	200305
SI.....	200309.....	200608
RI/FS.....	200803.....	201102
RA(C).....	201112.....	201506
LTM.....	201510.....	204509

RIP Date: N/A
RC Date: 201506

SITE DESCRIPTION

The Vulcan Test Range was located in the southeast portion of the installation and was used from 1969 until the 1990s. The Vulcan Test Range was used for annual qualifying with small-caliber handguns and surveillance testing of pistol ammunition and rebuilt weapons testing of 7.62 millimeter (mm), 20mm, 40mm rounds, 155mm systems, and possibly 105mm cannons. This range consists of a range fan from the Vulcan Test Range. Maps identifying the firing point and range fans for these munitions were located, but target locations and impact areas were not shown in these maps and, therefore, are unknown. A portion of the Vulcan Test Range lies in an area that is classified as an operational range. The Vulcan Test Range is 480 acres. The Vulcan Test Range is classified as a closed range. Industrial and production facilities are currently located in this former range area. Pb sample measurements range from 141 to 1,930 mg/kg, and toxic characteristic leaching procedure pb sample measurements range from 5.7 to 21.8 mg/kg. Sediment sampling detected pb concentrations ranging from 251 to 1,010 mg/kg.

In July 2005, a change to the footprint and size of the inactive Vulcan Range and the adjacent active 25mm Weapons Test Range was requested and was approved by all parties by November 2005.

In 2006, the SI was finalized.

The recommendations for RAs and institutional controls are detailed in the FS. The PP was made available for public comment beginning Feb. 6, 2011, but no public comments were received. TCEQ approved the RI/FS Feb. 24, 2011.

A contract for RAs was awarded Sept. 21, 2011. A DD was signed on Jan. 17, 2012.

The fieldwork for the RAs was completed May through August 2013. 854 cubic yards of soil exceeding human health commercial/industrial Tier I PCLs for pb were removed, stabilized, and disposed of at a landfill. 4,600 cubic yards of soil exceeding Tier II ecological PCLs for pb were consolidated and covered by a 0.37-acre ecological barrier within the site. 30 signs warning of potential MEC hazards were installed around the MRS perimeter. TCEQ and USEPA approvals of the RA report were received.

Per the FS, the LTM will consist of inspection of the warning signs annually for the first five years, then every five years, for up to thirty years. It is planned that five-year reviews will occur. It is planned that funding for any construction support could be available.

A deed notice with LUCs was recorded in county records on Feb. 27 2015.

A deed notice LUC was established for the ecological gravel protective cap barrier installed on an area of the MRS and for other areas with soil remediated in May through August 2013 to commercial/industrial but not Texas residential protective standards.

30 signs warning of potential explosive hazard were installed around the site perimeter in 2013. Annual signage and cap inspections have occurred with some deficiencies in signage being noted and soon corrected.

Five-year periodic reviews are tracked under site RRAD-35.

Site ID: RRAD-001-R-01
Site Name: VULCAN RANGE

CLEANUP/EXIT STRATEGY

There are funding plans for education and institutional controls and long-term construction support for the LUCs, including five-year reviews which will be implemented as part of LTM phase.

Annual signage and cap inspections will continue along with future periodic five-year reviews.

Site ID: RRAD-006-R-01
Site Name: D-AREA Y-SITE D060201

STATUS

Regulatory Driver: CERCLA
MRSPP Score: No longer required
 Contaminants of Concern: Metals, Munitions and explosives of concern (MEC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200202.....	200305
SI.....	200309.....	200608
RI/FS.....	200803.....	201102
RA(C).....	201112.....	201506
LTM.....	201510.....	204509
RIP Date:	N/A	
RC Date:	201506	

SITE DESCRIPTION

This site is a former ammunition storage area. An explosion occurred here in 1954, apparently as a result of a lightning strike. The Y-Site area was used for storage of cluster bombs at the time of the explosion. The final SI report states the site is 411.8 acres. This is based upon a drawing showing maximum distribution of debris found after the bomb site explosion. The site was part of the RRMC, which was a tenant activity that has since mission-transferred from RRAD under BRAC 2005. The property was retained by RRAD after the BRAC 2005 action for military vehicle and parts storage.

In 2006, the SI was finalized. The RI/FS report was completed in November 2010. An RA was contracted and funded in FY11/FY12. The FS recommendation (alternative no.4a) was for LUCs (signage and public education), partial MEC removal in the explosion site (surface MEC removal for 73 acres and removal to depth of detection for 10 acres), construction support for 73 acres of the explosion site and buffer with on-call construction support in 10 acres of the explosion site and five-year reviews.

The RI/FS report was approved by on TCEQ Feb. 24, 2011. No public comments were received on the January 2011 PP through the public comment period.

Surface (70 acres) and subsurface (6 acres) removal of MEC occurred along with the installation of 17 warning signs between November 2012 and February 2013. 22 MEC items were found and disposed of by demolitions, and 3,900 pounds of metal were recovered and processed. TCEQ and USEPA approvals of the response action reports were received.

A deed notice with LUCs was recorded in county records on Feb. 27, 2015. There was TCEQ acknowledgement of the filing of the deed notice.

Per the FS, the LTM will consist of inspection of the warning signs annually for the first five years, then every five years, up to a total of thirty years. Sign inspections to date noted one fallen down sign, which was soon corrected. Five-year reviews are planned, and funding for construction support could be available.

17 signs warning of explosive hazards were installed following the limited MEC removal actions. Five-year periodic reviews are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

Due to technology limitations, the RA could have possibly left some munitions on-site. To address munitions debris and/or possible unexploded cluster bombs the future LTM actions will include institutional controls that include maintaining warning signs, education, and long-term construction support and five-year reviews.

Annual warning signage inspections will continue.

Site ID: RRAD-011-R-01
Site Name: DEMOLITION AREA CREEKS

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	199911.....	200001
RI/FS.....	201301.....	201612

RIP Date: N/A

RC Date: 201612

SITE DESCRIPTION

Intermittent drainage creeks around the OB/OD area have been the subject of storm water sampling since the mid-1990s, and perchlorate was commonly detected during analysis. Shrapnel and other metallic debris are commonly observed in creeks. The OB/OD areas ceased permitted operations in March 2011. The OB/OD is possibly the source of creek contamination as a result of decades of demolition of obsolete, off-specification, or unneeded ammunition and ammunition components.

A contracted SI report was completed dated October 2012 and stated that there was detection of contaminants of potential concern (COPC) in surface water for cadmium, copper, pb, and perchlorate, and in sediment the COPCs detected with an unacceptable risk to ecological receptors were barium, cadmium, copper, pb, and mercury. Per the SI report areas of the intermittent drainage creeks were of such high density of MEC that it is classified as saturated. A contract was awarded in FY11 with options for performing an RI and an FS. RI fieldwork was completed in January 2014. Based upon analytical results in the RI report, exposure to perchlorate in surface water in the creeks inside the surrounding site RRAD-011-R-03 Human Health Exceedance Area may pose an unacceptable risk to human health. Exposure to barium, cadmium, copper, pb and mercury in sediment, and exposure to cadmium, copper, and pb in surface water at the creeks inside the Ecological Exceedance Area also associated with surrounding site RRAD-011-R-03 may pose an unacceptable risk to ecological receptors. A draft final FS dated January 2015 is currently under review.

Due to the difficulty in differentiating areas with associated risks and hazards, beginning in FY16 the RRAD-011-R-01 and RRAD-011-R-02 sites began to have planned funding and phase status identified under the larger surrounding or adjacent RRAD-011-R-03 site.

CLEANUP/EXIT STRATEGY

RAs are planned for contract funding in FY17, for which pre-award funding was requested in FY15.

Underway and future costs for sites RRAD-011-R-01 and RRAD-011-R-02 are combined into RRAD-011-R-03.

Site ID: RRAD-011-R-02

Site Name: DEMO. AREA WASHRACK/STORAGE/TRAILS

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 03

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC), Perchlorate, Petroleum, Oil and Lubricants (POL)

Media of Concern: Building Decontamination, Soil

Phases	Start	End
PA.....	200603.....	200604
RI/FS.....	201110.....	201612

RIP Date: N/A

RC Date: 201612

SITE DESCRIPTION

This site consists of an inactive washrack, a bulldozer parking area, and dirt trails for bulldozers and other vehicles leading from the permitted OD and two OB areas (which ceased operating in March 2011) to the washrack and adjacent parking area. A washrack (structure No. 1056) is approximately 1,000 feet from the permitted areas and was used to clean bulldozers and other mobile equipment utilized for OB/OD operations. Potentially contaminated vehicles were typically driven on dirt trails to the washrack and adjacent parking areas. The OB/OD areas were used for several decades of demolition of obsolete, off-specification, or unneeded ammunition and ammunition components.

An SI report dated October 2012 stated that an unacceptable risk to ecological receptors is possible due to exposure to copper, pb, and mercury in surface soil, and a human health risk is possible due to exposure to nitroglycerine in surface soil.

An RI was funded, and fieldwork began in FY13 and was completed in January 2014. OB/OD operations in the nearby CC-002-RR Permitted OB/OD Areas site ended in March 2011. This site is separate from inactive OB/OD Areas (permitted) site CC-002-RR, and also separate from Demolition Area Creeks site RRAD-011-R-01 and Unpermitted Demolition Areas site RRAD-011-R-03, all of which are separate adjacent sites.

The SI report identified contamination of risk to ecological receptors and human health, so an RI has been funded. The SI sampling was not of sufficient extent to exactly determine the areas of the site that could require RAs or LUCs. The SI did identify and concurrence was given for a 3.9-acre northern portion that would not require any further actions (NFA area).

Fieldwork for an RI was completed in January 2014. This site was part of a draft final FS dated January 2015.

Beginning in FY16, due to the difficulty of differentiating areas with associated risks and hazards, the RRAD-011-R-01 and RRAD-011-R-02 sites began to have planned funding and phase status identified under the larger surrounding or adjacent RRAD-011-R-03 site.

CLEANUP/EXIT STRATEGY

RAs are planned for contract funding in FY17.

Underway and future costs for sites RRAD-011-R-01 and RRAD-011-R-02 are combined into RRAD-011-R-03.

Site ID: RRAD-011-R-03

Site Name: UNPERMITTED DEMOLITION AREAS

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 03

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200304.....	200305
RI/FS.....	201009.....	201612
RA(C).....	201612.....	202009
LTM.....	202010.....	202910

RIP Date: N/A

RC Date: 202009

SITE DESCRIPTION

This is an inactive unpermitted portion surrounding the formally permitted OB/OD areas and includes possible ammunition trench or pit burning areas, a white phosphorus burning area, debris storage areas, and areas affected by permitted OB/OD fragmentation and kick-out. The areas are a mixture of pine-forested and grassy/brushy fields. The OB/OD demilitarization mission was identified as excess to Army requirements, and the permitted portion ceased operations in March 2011 due to BRAC 2005.

The permitted acreage of the OB/OD area is 30.54 acres, but the area observed affected within explosive fragmentation distance along with adjacent areas suspected of having similar demilitarization operations has been estimated at 590.7 acres per the Final SI Report, Unpermitted Demolition Areas and Associated MRSs, dated Oct. 24, 2012. The site does not include storm water drainage channels and equipment trails associated with a washrack, both of which have been split into separate sites.

Before the SI, this site was estimated as 251.46 acres. The historical records review estimated the area as 609 acres. The SI report estimates the size from approximately 590.7 acres to 600.8 acres.

From sampling conducted during the SI, there was determined to be an unacceptable risk to human health from 2,4-dinitrotoluene and pb in surface soil, and to ecological receptors in surface soil from 2,4-dinitrotoluene, chromium, copper, pb and mercury.

A "Final SI Report, Unpermitted Demolition Areas and Associated MRSs" was completed dated Oct. 24 2012, which determined for this MRS, based upon limited sampling, that there were possibly concentrations of dinitrotoluene and metals of possible unacceptable risk, and further RI was warranted.

Several bomb live unit-91/B sub-munitions/improved conventional munitions have been found on the surface near the permitted OD area after permitted detonation operations stopped in March 2011. These are sensitive and dangerous munitions. Those found were detonated by Army or Air Force Explosive Ordnance Disposal units, or by Parsons subcontracted UXO Technicians during RIs.

The SI report dated October 2012 was submitted to TCEQ for review and received approval. An RI phase that included a full investigation for both MEC and MC contamination was funded in FY13.

Fieldwork for an RI report was completed in January 2014. For the adjacent RRAD-011-R-01, 02, and 03 sites, the RI determined that hazards to human health from potential exposure to MEC in soil on the surface and in subsurface exist throughout the sites, and particularly in a high density area; that there are risks to human health from exposure to MC in soil in the northern part under an unrestricted land use scenario; and that there are risks to ecological receptors from exposure to MC in soil in the northern part of the RRAD-011-R-03 site. An FS is currently under contract. An ecological services analysis is under consideration, and a draft PP and DD are being developed under contract.

Beginning with the spring 2015 data call, the future funding for adjacent site RRAD-011-R-02 and interior site RRAD-011-R-01 will be tracked under the larger RRAD-011-R-03 site. It is not possible to distinguish remedial alternatives for the comingled hazards between individual sites RRAD-011-R-01, 02, and 03.

Site ID: RRAD-011-R-03
Site Name: UNPERMITTED DEMOLITION AREAS

Five-year periodic reviews are tracked under site RRAD-35.

CLEANUP/EXIT STRATEGY

RAs are planned for contract funding in FY17, for which pre-award funding was requested in FY15. Underway and future costs for sites RRAD-011-R-01 and RRAD-011-R-02 are combined into RRAD-011-R-03.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
RRAD-002-R-01	VULCAN RANGE - TD	201109	The Texas Commission on Environmental Quality concurred with the November 2010 Vulcan Range-TD Remedial Investigation Report recommendation of No Further Action per a letter dated February 24, 2011.
RRAD-003-R-01	POPPING FURNACE, BLDG 722	200305	Covered under IRP site RRAD-62
RRAD-004-R-01	POPPING FURNACE, BLDG 1027	200305	Covered under IRP site RRAD-63
RRAD-005-R-01	POPPING FURNACE, BLDG 1025	200305	Covered under IRP site RRAD-63
RRAD-007-R-01	GRENADE RANGE	201109	The Texas Commission on Environmental Quality concurred with the November 2010 Grenade Range Remedial Investigation Report recommendation of No Further Action per a letter dated February 24, 2011.
RRAD-010-R-01	TRACER TEST RANGE	201403	The TCEQ approved the Final Site Specific Report for Remedy in Place / Response Complete for the Tracer Test Range MRS in a letter dated March 11 2014.

MMRP Schedule

Date of MMRP Inception 199911

Past Phase Completion Milestones

2000

PA (RRAD-011-R-01 - DEMOLITION AREA CREEKS)

2003

PA (RRAD-001-R-01 - VULCAN RANGE, RRAD-002-R-01 - VULCAN RANGE - TD, RRAD-003-R-01 - POPPING FURNACE, BLDG 722, RRAD-004-R-01 - POPPING FURNACE, BLDG 1027, RRAD-005-R-01 - POPPING FURNACE, BLDG 1025, RRAD-006-R-01 - D-AREA Y-SITE D060201, RRAD-007-R-01 - GRENADE RANGE, RRAD-010-R-01 - TRACER TEST RANGE, RRAD-011-R-03 - UNPERMITTED DEMOLITION AREAS)

2006

SI (RRAD-001-R-01 - VULCAN RANGE, RRAD-002-R-01 - VULCAN RANGE - TD, RRAD-006-R-01 - D-AREA Y-SITE D060201, RRAD-007-R-01 - GRENADE RANGE, RRAD-010-R-01 - TRACER TEST RANGE)
 PA (RRAD-011-R-02 - DEMO. AREA WASHRACK/STORAGE/TRAILS)

2011

RI/FS (RRAD-001-R-01 - VULCAN RANGE, RRAD-002-R-01 - VULCAN RANGE - TD, RRAD-006-R-01 - D-AREA Y-SITE D060201, RRAD-007-R-01 - GRENADE RANGE)

2012

RI/FS (RRAD-010-R-01 - TRACER TEST RANGE)

2014

RA(C) (RRAD-010-R-01 - TRACER TEST RANGE)

2015

RA(C) (RRAD-001-R-01 - VULCAN RANGE, RRAD-006-R-01 - D-AREA Y-SITE D060201)

Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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Final RA(C) Completion Date: 202009

Schedule for Next Five-Year Review: 2017

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

RED RIVER ARMY DEPOT MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-001-R-01	VULCAN RANGE	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-006-R-01	D-AREA Y-SITE D060201	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-011-R-01	DEMOLITION AREA CREEKS	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-011-R-02	DEMO. AREA WASHRACK/STORAGE/TRAILS	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
RRAD-011-R-03	UNPERMITTED DEMOLITION AREAS	RI/FS						
		RA(C)						
		LTM						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201211

Restoration Advisory Board (RAB): RAB established 199602

RAB Adjournment Date: N/A

RAB Adjournment Reason: None

Additional Community Involvement Information

RRAD established an active RAB on Feb. 2, 1996 for BRAC 1995. Although it has not been officially adjourned, the RAB has not been active through the BRAC 2005 process due to a lack of public interest. New community interest is gauged through newspaper legal notices and public meetings on environmental issues and there has not been any public response; thus RRAD has not re-established a RAB for BRAC 2005 or the active side. There has not been any public response to any legal notices in the last several years.

A community involvement plan (CIP) was prepared for RRAD dated November 2012. Community interviews were conducted in September 2012 as part of the CIP preparation.

Outreach has included public comment periods for PPs, legal notices requesting public comments and input, and major amendments to the RRAD hazardous/solid waste permit and compliance plan. Newspaper advertisements also were placed soliciting public interest for permit changes, NEPA notices, or other environmental issues. These were published on Dec. 19, 2005, Jan. 2, 2007, Oct. 5, 2007, Dec. 21, 2007, March 26, 2009, Dec. 9, 2010, Feb. 6, 2011, June 8, 2011, Oct. 18, 2012, March 22, 2014, Aug. 22, 2014, Feb. 20, 2015, March 30, 2015, April 17, 2015, and Nov. 30 2015. Public meetings for environmental permit changes were held on Jan. 25, 2006 and Jan. 29, 2007. The most recent efforts to involve the public include a notice for renewal of air quality permit no. 47373, for which the legal notice was placed in the Texarkana Gazette on Nov. 30 2015. There continued to be no public response to the latest notice.

Administrative Record is located at

Red River Army Depot
Environmental Division
ATTN: TARR-OL
Texarkana, TX 75507-5000
Phone (903)-334-4984

Information Repository is located at

Texarkana College
Palmer Memorial Library
2500 N. Robison Road (library parking is off of Tucker St.)
Texarkana, TX 75599
Phone (903)-334-4984

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

TAPP Title: N/A

Potential TAPP: N/A

