FY2012

TOOELE ARMY DEPOT

Army Defense Environmental Restoration Program

Installation Action Plan

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Statement of Purpose

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

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), the Base Realignment and Closure (BRAC) Division, Installation Management Command (IMCOM), the Tooele Army Depot (TEAD), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and budgets for all major Army installation cleanup programs.

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

Acronyms

AED	Ammunition Equipment Directorate
AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
APE	Ammuntion Peculiar Equipment
BLDG	Building
BRAC	Base Realignment and Closure
CAMU	Corrective Action Management Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CMI	Corrective Measures Implementation
CMI(C)	Corrective Measures Implementation - Construction
CMI(O)	Corrective Measures Implementation - Operations
CMS	Corrective Measures Study
COC	Contaminant of Concern
CS	Confirmatory Sampling
CTT	Closed, Transferring and Transferered
CWM	Chemical Warfare Materials
CWP	Contaminated Waste Processor
DD	Decision Document
DERR	Division of Environmental Response and Remediation
DES	Design
DSERTS	Defense Site Environmental Restoration Tracking System
DSHW	Division of Solid and Hazardous Waste
EMS	Environmental Management System
EOD	Explosive Ordnance Disposal
ER,A	Environmental Restoration, Army
FRA	Final Remedial Action
FS	Feasibility Study
FY	Fiscal Year
HRR	Historical Records Review
ID	Identification
IM	Interim Measure
IMCOM	Installation Management Command
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ITR	Independent Technical Review
IWL	Industrial Waste Lagoon
K	thousand
LTM	Long-Term Management
LUC	Land Use Controls
MC	Munitions Constituent
MEC	Munitions and Explosives of Concern
MMRP	Military Munitions Response Program
MOC	Munitions of Concern
MR	Munitions Response

Acronyms

MRSPP	Munitions Response Site Prioritization Protocol
N/A	Not Applicable
NFA	No Further Action
NPL	National Priorities List
OB	Open Burning
OD	Open Detonation
ORAP	Operation Range Assessment Program
OU	Operable Unit
P&T	Pump and Treat
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PBA	Performance-Based Acquisition
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RC	Response Complete
RD	Remedial Design
RFA	RCRA Facility Assessment
RIP	Remedy-in-Place
RRSE	Relative Risk Site Evaluation
SVOC	Semi-Volatile Organic Compounds
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TEAD	Tooele Army Depot
TNT	Trinitrotoluene
TRC	Technical Review Committee
TSDF	Treatment, Storage and Disposal Facility
UDEQ	Utah Department of Environmental Quality
USACE	US Army Corps of Engineers
USATHAMA	US Army Toxic and Hazardous Materials Agency
USEPA	US Environmental Protection Agency
VOC	Volatile Organic Compounds

Acronym Translation Table

CERCLA		RCRA
Preliminary Assessment(PA)	=	RCRA Facility Assessment(RFA)
Site Inspection(SI)	=	Confirmation Sampling(CS)
Remedial Investigation/Feasibility Study(RI/FS)	=	RCRA Facility Investigation/Corrective Measures Study(RFI/CMS)
Remedial Design(RD)	=	Design(DES)
Remedial Action (Construction)(RA(C))	=	Corrective Measures Implementation (Construction)(CMI(C))
Remedial Action (Operation)(RA(O))	=	Corrective Measures Implementation (Operation)(CMI(O))
Long Term Management(LTM)	=	Long Term Management(LTM)
Interim Remedial Action(IRA)	=	Interim Measure(IM)

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
TEAD-001-R-01	SWMU 1
TEAD-004-R-01	SWMU 6
TEAD-005-R-01	SWMU 42
TEAD-006-R-01	
TEAD-007-R-01	
TEAD-008-R-01	
TEAD-01	SWMU-01
TEAD-05	SWMU-06
TEAD-06	SWMU-13
TEAD-09	SWMU-12/15
TEAD-10	SWMU-05
TEAD-11	SWMU-03
TEAD-12	SWMU-23
TEAD-13	SWMU-02
TEAD-15	SWMU-07
TEAD-16	SWMU-08
TEAD-18	SWMU-19
TEAD-27	SWMU-35
TEAD-28	SWMU-36
TEAD-29	SWMU-37
TEAD-31	SWMU-11
TEAD-34	SWMU-22
TEAD-35	SWMU-20
TEAD-36	SWMU-40
TEAD-37	SWMU-21
TEAD-50	SWMU-25
TEAD-54	SWMU-34
TEAD-58	SWMU-42
TEAD-81	SWMU-10
TEAD-83	SWMU 45
TEAD-84	SWMU-48

Installation Information

Installation Locale

Installation Size (Acreage): 24000
City: Tooele
County: Tooele
State: Utah
Other Locale Information

Tooele Army Depot is located approximately 35 miles southwest of Salt Lake City, in Tooele County, Utah, off of Utah State Highway 36, just southwest of the city of Tooele. The city of Grantsville is located just beyond the northwest boundary of the Depot. The installation originally included approximately 1,600 acres, which were excessed and transferred to the Redevelopment Agency of Tooele City in December 1998 under the 1993 BRAC action. The working population of the installation is approximately 500 civilians and approximately 100 tenants and contractors.

Installation Mission

In recent years Tooele Army Depot's mission has been twofold: first, supporting Department of Defense needs worldwide. On this level, Tooele Army Depot's capabilities include storage, inspection, maintenance and testing of training stocks as well as war reserve ammunition. Plus, Tooele has an extensive demilitarization capability for a variety of conventional ammunition.

The depot's second mission aspect has been to serve as a life cycle management installation wherein the Ammunition Logistics and Engineering Directorate provides the design, development, manufacture and fielding of ammunition-related equipment under the ammunition peculiar equipment (APE) program. This equipment is used in the maintenance and demilitarization of munitions throughout the world. Tooele Army Depot also serves as the national inventory control point for all APE.

Lead Organization

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE) Sacramento District - IRP/MMRP

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region 8, Federal Facilities Program, Office of Ecosystem Protection and Remediation
State	State of Utah, Department of Environmental Quality (UDEQ), Division of Solid and Hazardous Waste (DSHW) State of Utah, Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR)

National Priorities List (NPL) Status

A score of 54 was recorded on 01-AUG-90.

Date for RA(C) Completion: 201610

Date for NPL Deletion: TBD

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

RAB established 199404

Installation Information

Installation Program Summaries

IRP

Primary Contaminants of Concern: Dioxins/Dibenzofurans, Explosives, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC), Pesticides, Polychlorinated Biphenyls (PCB), Radionuclides, Semi-volatiles (SVOC), Volatiles (VOC)

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

MMRP

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

Affected Media of Concern: Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200702	200708	2007
Complete	199404	199404	1994
Complete	199904	200202	1999
Underway	201202	201303	2013

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
ROD for Operable Unit 4	TEAD-03, TEAD-25
ROD for Operable Unit 8	TEAD-006-R-01, TEAD-05, TEAD-06, TEAD-16, TEAD-28, TEAD-34
ROD for Operable Unit 9	TEAD-12, TEAD-15, TEAD-27, TEAD-36
ROD for Operable Units 5, 6, 7, and 10	TEAD-07, TEAD-08, TEAD-10, TEAD-19, TEAD-26, TEAD-38, TEAD-97

Results Remedies at soil Operating Units and SWMUs remain protective. The groundwater remedy implemented in 1993 at SWMU-2 is protective in the short-term, but not the long-term. An Interim groundwater remedy at SWMU-58 is protective in the short-term.

Actions Continue land use controls and maintenance at soil remedy sites. Develop final remedies for groundwater plume areas, including formal land use controls.

Plans Continue implementation of Site Management Plans for soil remedy sites. By the end of 2010, complete a corrective measures evaluation for SWMU-2, including formal LUCs for groundwater. Implement a CMIP utilizing SVE to remediate plume source areas.

Recommendations and Implementation Plans:
The groundwater pump-and-treat remedy implemented at SWMU-2 in 1993 has not reduced COC concentrations and may not be needed to control plume expansion. Re-evaluation of the 1993 remedy in the SWMU-58 (TEAD-101) Corrective Measures Study (CMS) has determined that a more appropriate remedy would be treatment at known source areas. Based on this CMS, Soil Vapor Extraction (SVE) and Air Sparging (AS) have been proposed as a new remedy and are currently being implemented. Until such time that SVE/AS prove to be effective, the pump-and-treat system will continue to be maintained under caretaker status.

Land Use Control (LUC) Summary

LUC Title: Group A LUCs

Site(s): TEAD-01, TEAD-29, TEAD-35, TEAD-37, TEAD-54, TEAD-58, TEAD-83, TEAD-84

ROD/DD Title: Group A Corrective Action

Location of LUC

All group A sites where risk based closures were completed.

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: 200506

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: Other

Contaminants: INORGANICS, METALS, ORGANICS, PESTICIDES, VOC

Additional Information

N/A

LUC Title: Group B LUCs

Site(s): TEAD-04, TEAD-18, TEAD-20, TEAD-23, TEAD-70A

ROD/DD Title: Group B Corrective Action

Location of LUC

All group B sites on excess BRAC parcel and active installation where risk based closures were completed.

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: 200506

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: FOSET, Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: Other

Contaminants: INORGANICS, METALS, ORGANICS, PAH, PETROLEUM HYDROCARBON, VOC

Additional Information

N/A

LUC Title: OU 8 LUCs

Site(s): TEAD-05, TEAD-06, TEAD-16, TEAD-28, TEAD-34

ROD/DD Title: ROD for Operable Unit 8

Land Use Control (LUC) Summary

Location of LUC

All OU 8 sites where risk based closures were implemented.

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: 200506

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: INORGANICS, METALS, ORGANICS

Additional Information

N/A

LUC Title: OU9 LUCs

Site(s): TEAD-12, TEAD-15, TEAD-27, TEAD-36

ROD/DD Title: ROD for Operable Unit 9

Location of LUC

All OU9 sites where risk based closures are to be completed.

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: 200609

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200609

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: INORGANICS, METALS, ORGANICS

Additional Information

N/A

LUC Title: SWMU 05 LUCs

Site(s): TEAD-07

ROD/DD Title: ROD for Operable Units 5, 6, 7, and 10

Location of LUC

PCB Spill Site - SWMU 05

Land Use Restriction: Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: None

Types of Institutional Controls: Restrictions on land use

Date in Place: 200506

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PCBs

Additional Information

N/A

LUC Title: SWMU 10 LUC

Site(s): TEAD-81

ROD/DD Title: Known Release SWMU 10

Location of LUC

TNT Washout Ponds - SWMU 10

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: 200506

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: Other

Contaminants: ORGANICS

Additional Information

N/A

LUC Title: SWMU 12/15 LUCs

Site(s): TEAD-09

ROD/DD Title: Known Release SWMU 12/15

Location of LUC

Old Sanitary Landfill and Pesticide Disposal Area - SWMU 12/15

Land Use Restriction: Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Restrict access to the site, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Restrictions on land use

Land Use Control (LUC) Summary

Date in Place: 200506
Modification Date: N/A
Date Terminated: N/A
Inspecting Organization: Installation
Record of LUC: Master Plan or Equivalent
Documentation Date: 200506
LUC Enforcement: Annual Inspections
Contaminants: INORGANICS, METALS, PESTICIDES, VOC
Additional Information
N/A

LUC Title: SWMU 3, 11, and 25 LUCs
Site(s): TEAD-11, TEAD-31, TEAD-50
ROD/DD Title: Known Release SWMUs 3, 11, 25, and 30
Location of LUC
X-Ray Lagoon, Laundry Effluent Ponds, and Battery Shop - SWMUs 3, 11, and 25.
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: 200506
Modification Date: N/A
Date Terminated: N/A
Inspecting Organization: Installation
Record of LUC: Master Plan or Equivalent
Documentation Date: 200506
LUC Enforcement: Other
Contaminants: INORGANICS, METALS, ORGANICS, VOC
Additional Information
N/A

Cleanup Program Summary

Installation Historic Activity

Tooele Army Depot (TEAD) is an active US Army IMCOM-Northwest Region Facility. TEAD is one of the major ammunition storage facilities in the United States and occupies approximately 24,000 acres. TEAD's past maintenance missions have included the repair of tactical wheeled vehicles and power generation equipment. This includes rebuilding secondary components of these items, including engine and power trains. In 1993 the TEAD's maintenance mission was placed on the BRAC list, and in September 1995 the realignment of the maintenance mission was completed. In December 1998, under the Section 334 Early Transfer Authority, the excess BRAC property (approximately 1700 acres and over 200 buildings) was transferred to the Tooele City Redevelopment Agency, which subsequently sold the property and facilities to a private commercial development group.

TEAD was established on April 7, 1942 as the Tooele Ordnance Depot. Construction of the facilities, including igloos, magazines, administration buildings, military and civilian housing, roads, hardstands for vehicle storage, and other allied appurtenances, was completed in January 1943. More than 1,625,000 tons of material were shipped and received by the Tooele Army Depot during World War II.

In March 1947 the installation was designated a sub-depot of the Ogden Arsenal. In November 1949, TEAD was redesignated as a full depot and the Ogden Arsenal was designated as a sub-depot under TEAD. In 1955 the Ogden facility was discontinued and its mission transferred to Tooele. On March 30, 1961 the guided missile rebuild, tires and tubes rebuild, and calibration of test equipment missions from Benicia Arsenal and Mt. Rainier Ordnance Depot were transferred to TEAD.

In June 1970 the maintenance mission responsibilities for topographic equipment, troop support items, construction equipment, power generators and serviceable assets were transferred from Granite City Army Depot. In the mid-1970s four depot activities were assigned to TEAD for administration: Umatilla, Navajo, Fort Wingate and Pueblo.

In 1993 TEAD's maintenance and supply functions were identified by the BRAC Commission for transfer to other installations. In 1995, because two of the remaining missions were ammunition logistics and the design/fabrication of ammunition equipment, TEAD was designated as a Tier 1 ammunition storage facility. This made it the primary depot for ammunition operations in the western United States.

The Army is implementing its environmental response authority under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act (SARA) and the Resource Conservation and Recovery Act (RCRA) to investigate and implement corrective action on areas of the installation potentially contaminated by these previous activities.

In September 1991 a federal facility agreement (FFA) between the UDEQ, the USEPA, Region VIII and the Army was signed. In this Agreement, 17 of the waste sites at TEAD were designated as CERCLA sites. In January 1991, TEAD was issued a RCRA post closure and corrective action permit. This permit basically serves the same purpose as the FFA. The corrective action portion of the permit addresses nine known releases at solid waste management units (SWMU) and 31 suspected releases of SWMUs. Thus, 17 sites are being handled under CERCLA/SARA with the USEPA as the lead regulatory agency and 40 are being addressed under RCRA with the state of Utah as the lead agency.

TEAD's restoration program is being executed under the RCRA and the CERCLA. TEAD's CERCLA response actions are being conducted in accordance with an FFA, with the USEPA as lead agency. In September 1991 the FFA was signed by the Army, the USEPA, and the state of Utah. Corrective measures being addressed under RCRA are being conducted in accordance with a RCRA corrective action permit, with the UDEQ DSHW as the lead agency. TEAD's RCRA corrective action permit was initially issued in January 1991. It was reissued in 2001, 2005 and 2011.

The primary issue affecting the scope and schedule for TEAD's restoration program is the presence of off-site groundwater contamination originating in the former TEAD industrial area.

Installation Program Cleanup Progress

IRP

Prior Year Progress: A CMS is being finalized which evaluates corrective measures for groundwater at TEAD-101. Corrective measures proposed consist of ICs within a groundwater management area, with air sparging of groundwater at several source areas. As a presumptive remedy, soil vapor extraction (SVE) system implementation at source areas is underway. The installation also continued evaluation of alternative corrective measures that could be implemented to replace the TEAD-13 groundwater

pump-and-treat system.

Future Plan of Action: During the next two fiscal years (FY), corrective measures are expected to be implemented for groundwater at TEAD-101. All planned SVE systems will be installed and operational. Alternative corrective measures are also expected to be implemented at TEAD-13, allowing for the closure of the current pump-and-treat system.

MMRP

Prior Year Progress: A Remedial Investigation at six sites was completed. Scoping is underway for a contract to complete a Feasibility Study of these sites. In addition to these activities, a Site Inspection is underway at an additional one site.

Future Plan of Action: During the next two FYs, a feasibility study (FS) and record of decision (ROD) is expected to be completed at all identified munitions response (MR) sites on the installation.

TOOELE ARMY DEPOT

Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 33/8

Installation Site Types with Future and/or Underway Phases

1 Burn Area
(TEAD-05)
1 Contaminated Buildings
(TEAD-12)
1 Contaminated Soil Piles
(TEAD-58)
3 Drainage Ditch
(TEAD-27, TEAD-83, TEAD-84)
1 Explosive Ordnance Disposal Area
(TEAD-15)
1 Firing Range
(TEAD-16)
4 Incinerator
(TEAD-18, TEAD-29, TEAD-35, TEAD-37)
1 Landfill
(TEAD-09)
1 Pesticide Shop
(TEAD-54)
1 Spill Site Area
(TEAD-10)
1 Storage Area
(TEAD-28)
2 Surface Disposal Area
(TEAD-06, TEAD-50)
5 Surface Impoundment/Lagoon
(TEAD-11, TEAD-13, TEAD-31, TEAD-34, TEAD-81)
2 Unexploded Munitions/Ordnance
(TEAD-01, TEAD-36)

Most Widespread Contaminants of Concern

Dioxins/Dibenzofurans, Explosives, Metals, Munitions and explosives of concern (MEC), Munitions constituents (MC), Pesticides, Polychlorinated Biphenyls (PCB), Radionuclides, 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
TEAD-81	TNT WASHOUT PONDS	IRA	CAPPING	1985
TEAD-13	IWL & DITCHES	IRA	CAPPING	1990
TEAD-81	TNT WASHOUT PONDS	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1990
TEAD-06	TIRE DISPOSAL SITE	IRA	WASTE REMOVAL - SOLIDS (NON-SOILS)	1993
TEAD-13	IWL & DITCHES	FRA	GROUND WATER TREATMENT	1994
TEAD-13	IWL & DITCHES	IRA	WASTE REMOVAL - SOILS	1994
TEAD-50	BATTERY RECHARGE OPS(BLDG 1252)	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1995
TEAD-58	BLDG 539 BOMB WASHOUT	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1995
TEAD-10	PCB SPILL SITE(POLE 184)	FRA	CAPPING	1996

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

Site ID	Site Name	Action	Remedy	FY
TEAD-10	PCB SPILL SITE(POLE 184)	FRA	INSTITUTIONAL CONTROLS	1996
TEAD-38	BOX ELDER WASH DRUM SITE	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
TEAD-81	TNT WASHOUT PONDS	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
TEAD-31	LAUNDRY POND	IRA	WASTE REMOVAL - SOILS	1997
TEAD-15	CHEMICAL RANGE	IRA	WASTE REMOVAL - SOLIDS (NON-SOILS)	1998
TEAD-34	BLDG 1303 WASHOUT POND	IRA	WASTE REMOVAL - SOILS	1998
TEAD-09	NORTH AREA SANITARY LANDFILL	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2000
TEAD-28	OLD BURN STAGING AREA	FRA	INSTITUTIONAL CONTROLS	2000
TEAD-34	BLDG 1303 WASHOUT POND	FRA	INSTITUTIONAL CONTROLS	2000
TEAD-01	OB/OD AREA	FRA	INSTITUTIONAL CONTROLS	2001
TEAD-18	AED DEMIL FACILITY (Test Site)	FRA	INSTITUTIONAL CONTROLS	2001
TEAD-29	CONT WASTE PROC (BLDG 1325)	FRA	INSTITUTIONAL CONTROLS	2001
TEAD-83	STORMWATER DISCHARGE	FRA	INSTITUTIONAL CONTROLS	2001
TEAD-84	OLD DISPENSARY	FRA	INSTITUTIONAL CONTROLS	2001
TEAD-15	CHEMICAL RANGE	FRA	INSTITUTIONAL CONTROLS	2002
TEAD-70	USED OIL DUMPSTERS	FRA	WASTE REMOVAL - SOILS	2002
TEAD-09	NORTH AREA SANITARY LANDFILL	IRA	WASTE REMOVAL - SOLIDS (NON-SOILS)	2003
TEAD-31	LAUNDRY POND	FRA	INSTITUTIONAL CONTROLS	2003
TEAD-31	LAUNDRY POND	FRA	WASTE REMOVAL - SOILS	2003
TEAD-06	TIRE DISPOSAL SITE	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-27	WASTEWATER SPREADING AREA	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-35	DEACT FURNACE (BLDG 1351)	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-35	DEACT FURNACE (BLDG 1351)	FRA	CAPPING	2004
TEAD-36	AED TEST RANGE	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-36	AED TEST RANGE	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2004
TEAD-37	DEACT FURNACE(BLDG 1320)	FRA	CAPPING	2004
TEAD-37	DEACT FURNACE(BLDG 1320)	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-50	BATTERY RECHARGE OPS(BLDG 1252)	FRA	WASTE REMOVAL - SOILS	2004
TEAD-50	BATTERY RECHARGE OPS(BLDG 1252)	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-54	PESTICIDE MIXING(BLDG 518)	IRA	WASTE REMOVAL - SOILS	2004
TEAD-54	PESTICIDE MIXING(BLDG 518)	FRA	INSTITUTIONAL CONTROLS	2004
TEAD-11	X-RAY LAGOON	FRA	INSTITUTIONAL CONTROLS	2005
TEAD-16	FIRING RANGE	FRA	SOLIDIFICATION/STABILIZATION	2005

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
TEAD-09	NORTH AREA SANITARY LANDFILL	FRA	CAPPING	2006
TEAD-58	BLDG 539 BOMB WASHOUT	FRA	INSTITUTIONAL CONTROLS	2006
TEAD-58	BLDG 539 BOMB WASHOUT	FRA	SOLIDIFICATION/STABILIZATION	2006
TEAD-81	TNT WASHOUT PONDS	FRA	INSTITUTIONAL CONTROLS	2007
TEAD-81	TNT WASHOUT PONDS	FRA	COMPOSTING	2007
TEAD-12	BOMB & SHELL RECOND BLDG	FRA	INSTITUTIONAL CONTROLS	2008
TEAD-12	BOMB & SHELL RECOND BLDG	FRA	WASTE REMOVAL - SOILS	2008

Duration of IRP

Date of IRP Inception: 197901

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 200809/201510

Date of IRP completion including Long Term Management (LTM): 204209

IRP Contamination Assessment

Contamination Assessment Overview

Past operations and related disposal practices at TEAD have resulted in the generation of various types of industrial wastes. Some of these have resulted in contamination of the environment. Chlorinated solvents, heavy metals (primarily lead), polychlorinated biphenyls (PCB), and explosives are the primary contaminants of concern (COC). Significant plumes of solvent contaminated groundwater have been identified, both on and off the installation. Additionally, unexploded ordnance (UXO), which can complicate both study and cleanup efforts, are present in substantial quantities at some locations.

In the early-1980s, investigations identified trichloroethylene (TCE) and other chlorinated solvents contamination from the industrial waste lagoon (IWL) in groundwater, as well as explosive compounds from the trinitrotoluene (TNT) washout facility in the soil and in the groundwater. Following the discovery of solvent contamination at the lagoon, the UDEQ issued the Tooele Army Depot a formal consent order to investigate and clean up the site. A groundwater pump and test (P&T) system has been operating at the site since 1993.

In October 1990, the USEPA placed the depot on its National Priorities List (NPL). Subsequently, in September 1991, an FFA regulating general investigation and cleanup terms and conditions, under the CERCLA, was signed with federal and state regulatory agencies. In January of that year the Tooele Army Depot was issued a RCRA corrective actions permit, addressing similar issues. This permit expired and was reissued in February 2001 and again in June 2005.

In September 2000, the TEAD restoration program underwent an independent technical review (ITR). Sites evaluated under this review included SWMU 10, TNT washout ponds, SWMUs 12/15, sanitary landfill, and groundwater investigation efforts associated with SWMUs two and 58. The report of findings from this review was published and discussions concerning the appropriateness of proposed remedies at SWMUs 10, and 12/15 were questioned. Concerns were also raised about the ongoing operations of the groundwater remediation system, as well as the concepts presented for further delineation and remediation of source areas. Based on the recommendations coming out of the ITR, additional site characterization was completed, alternatives were reevaluated, and cost estimates revised.

In 1993, TEAD was placed on the BRAC list. As a result, of the 67 Defense Site Environmental Restoration Tracking System (DSERTS) sites at TEAD, 33 are being addressed under the Army's Installation Restoration Program (IRP) for active facilities, and the others are under the BRAC environmental program. Likewise, both IRP and BRAC sites are further split between regulation under CERCLA and RCRA, as shown in the site list.

The IRP at TEAD (a total of 57 SWMUs) is divided into two programs, one operated under CERCLA and the other under RCRA corrective action. The 17 CERCLA SWMUs are listed in the FFA, and are divided into seven operable units (OU), numbered 4-10 (numbers 1-3 are used by the USEPA to track TEAD's RCRA corrective action-sites). RODs have been signed and all required response actions have been completed at OUs 4, 5, 6, 7, 8, 9 and 10.

There are 40 SWMUs addressed in the corrective action permit. These SWMUs are further divided into two primary categories by the permit; known releases (nine SWMUs) and suspected releases (31 SWMUs). Corrective Measures Studies (CMS)have been completed on all sites, with remedies implemented at all sites with the exception of TEAD-101. Remedies for TEAD-101 have been identified and will be implemented in FY11-12.

Cleanup Exit Strategy

All IRP site are RIP/RC. Long-Term Management (LTM) will continue as needed.

IRP Previous Studies

	Title	Author	Date
1979			
	Environmental Assessment of Tooele Army Depot, Report No. 141	USATHAMA	DEC-1979
1982			
	Installation Environmental Assessment	Inland Pacific Eng. Co	JUN-1982
	Investigation at the Open Burning/Open Detonation Areas	AEHA	NOV-1982
	Exploratory Environmental Contamination Assessment Report	ERTEC	NOV-1982
	Environmental Photographic Interpretation Center Report	USEPA and EPIC	NOV-1982
1983			
	Analysis of Existing Facilities/Environmental Assessment Report	TEAD Facilities Eng	MAY-1983
	Investigation at the Open Burning/Open Detonation Areas	AEHA	NOV-1983
1984			
	Investigation at the Open Burning/Open Detonation Areas	AEHA	DEC-1984
1985			
	Monitoring Activity and Waste Disposal Review and Evaluation	CH2M Hill	JAN-1985
	Performance of Remedial Response Activities at Uncontrolled Hazardous Waste Sites - Final Plan	CDM	MAR-1985
	A Study of Environmental Balance	Department of the Army	MAY-1985
	Interim Groundwater Quality Assessment Report	Woodward-Clyde	NOV-1985
	Analytical/Environmental Assessment Report	TEAD Facilities Engineering	NOV-1985
	Investigation at the Open Burning/Open Detonation Areas	AEHA	DEC-1985
1986			
	Industrial Wastewater Lagoon and Ditches - Groundwater Quality Assessment Report, Corrective Action Plan, and Record of Decision	James M. Montgomery (JMM)	JAN-1986
	Engineering Report for Closure of the Industrial Wastewater Lagoon	James M. Montgomery (JMM):	MAR-1986
	Environmental Photographic Interpretation Center Report Addendum	USEPA and EPIC	JUL-1986
1987			
	Draft Interim RCRA Facility Assessment	NUS Corporation	AUG-1987
1988			
	Groundwater Quality Assessment Engineering Report	JMM	MAY-1988
	Preliminary Assessment/Site Investigation Report	EA Engineering, Science and Technology	DEC-1988
1991			
	Final Remedial Investigation Report Groundwater Quality Assessment	ESE	FEB-1991
	RCRA RFI Phase I Summary Report for Known Release Units	ASI	DEC-1991
1992			

IRP Previous Studies

	Title	Author	Date
1992			
	Final Preliminary Baseline Risk Assessment for North Area	SEC Donohue	APR-1992
1993			
	Assembled Alternatives Screening Memorandum	RUST E&I	MAR-1993
	Memorandum of Remedial Action Objectives	RUST E&I	JUN-1993
	Memorandum on Detailed Analysis of Alternatives	RUST E&I	OCT-1993
	Phase I RCRA Facility Investigation Report, Suspected Releases SWMUs	Montgomery Watson	DEC-1993
1994			
	Remedial Investigation Report for Operable Units 4-10	RUST E&I	FEB-1994
	Feasibility Study Report for Operable Units 5, 6, 7,	RUST E&I	MAR-1994
	Record of Decision for Operable Units 5, 6, 7 and 10	RUST E&I	SEP-1994
1995			
	Remedial Action Workplan for CERCLA Sites	Davey	OCT-1995
	Remedial Design for Two CERCLA Sites in TEAD-North, Volume 1 & 2	Kleinfelder	NOV-1995
1996			
	Technical Memorandum, Target Soil Clean-up Goals, Box Elder Drum Wash Site (OU 10/SWMU 41), TEAD-North:	Kleinfelder	JAN-1996
	Remedial Design Support Field Activities Report for Box Elder Wash Drum Site in TEAD-North	Kleinfelder	FEB-1996
	Technical Evaluation of Groundwater Conditions Beneath Northeast Boundary	Kleinfelder	MAR-1996
	Phase II RFI Report for Known Releases SWMUs	RUST E&I	APR-1996
	Groundwater Monitoring Report	Geomatrix	APR-1996
	(OU 10/SWMU 41), TEAD-North	USACE	MAY-1996
	Group A Suspected Releases CMS Work plan Group A Suspected Releases CMS Work Plan	Dames and Moore	JUN-1996
	Known Releases CMS Work plan	Dames and Moore	JUL-1996
	Phase II RFI Report for Group A SWMUs	Montgomery Watson	SEP-1996
	Phase 2 RI Report for Operable Units 4, 8 and 9	RUST E&I	NOV-1996
	Groundwater Sampling & Analysis	Metcalf & Eddy	DEC-1996
1997			
	Remedial Investigation Addendum Report for OUs 4, 8, and 9	RUST E&I	FEB-1997
1998			
	Feasibility Study Report for OUs 4,8, and 9	Dames and Moore	JAN-1998
	Proposed Plan for OUs 4, 8, and 9	Dames and Moore	FEB-1998
	Technical Report for Soil Composting Treatability Study, TNT Washout Facility (SWMU 10)	Dames and Moore	FEB-1998
	Groundwater Treatment Plant Optimization Study	Kleinfelder:	AUG-1998

IRP Previous Studies

	Title	Author	Date
1999			
	Groundwater Treatment System Optimization Study	EPA	FEB-1999
	Groundwater Flow and Solute Transport Model	USAEC	FEB-1999
2001			
	Group A Decision Document	URS Dames &Moore	APR-2001
	Group A Corrective Measures Study Report	URS Dames &Moore	APR-2001
	CMS and Decision Document for SWMUs 3,11,25,30	URS Dames &Moore	DEC-2001
2002			
	1st Five Year Review	TEAD	SEP-2002
2003			
	Corrective Measures Work plan, SWMU 20, 21, 34	USACE	JAN-2003
	CMS for SWMUs 12-15	URS Dames & Moore	MAR-2003
	Corrective Measures Work plan, SWMU 25	USACE	JUL-2003
	CMS for SWMU-10	URS Dames & Moore	JUL-2003
	Decision Document for SWMU-10	URS Dames & Moore	OCT-2003
	Remedial Design Plan for IC's at OU-8	TEAD	DEC-2003
	Record of Decision for OU-8	URS Dames & Moore	DEC-2003
2004			
	Decision Document for SWMUs 12-15	URS Dames & Moore	JAN-2004
	SWMU 37 Site Management Plan	USAEC	MAR-2004
	Final Interim Action Report, SWMU 40	USAEC	MAY-2004
	Final Interim Action Report, SWMU 6	USAEC	MAY-2004
	SWMU 11 Corrective Measures Construction Completion Report	Northwind	MAY-2004
	SWMU 20 Corrective Measures Construction Completion Report	AEEC	JUL-2004
	SWMU 21 Corrective Measures Construction Completion Report	AEEC	JUL-2004
	SWMU 49 Corrective Measures Construction Report	Northwind	AUG-2004
	Corrective Measures Work plan, SWMU 42	MWH	SEP-2004
	SWMU 03 Site Closure Report	Kleinfelder	SEP-2004
2005			
	Remedial Design Plan for IC's at OU 7	TEAD	FEB-2005
	Corrective Measures Work Plan, SWMU 12/15	USACE	MAY-2005
	SWMU 34 Corrective Measures Construction Completion Report	AEEC	JUL-2005
	SWMU 52b, Corrective Measures Completion Report	USACE	AUG-2005
2006			

IRP Previous Studies

	Title	Author	Date
2006			
	SWMU 12/15, Corrective Measures Completion Report	Northwind	JAN-2006
	SWMU 42, Corrective Measures Completion Report	MWH	MAR-2006
	Historical Records Review for Tooele Army Depot	TLI Solutions	MAY-2006
	SWMU 10, Corrective Measures Implementation Work plan	MWH	MAY-2006
2007			
	Site Management Plan, SWMU 42	Montgomery, Watson & Harza	JUN-2007
	2007 Groundwater Flow and Contaminant Transport Model	Geotrans	JUL-2007
2008			
	Site Management Plan, SWMU 50	US Army Corps of Engineers	JAN-2008
	Site Management Plan, SWMU 51	US Army Corps of Engineers	JAN-2008
	Groundwater Flow and Transport Model	USACE/GeoTrans	JUL-2008
	2008 Groundwater Flow and Contaminant Transport Model	GeoTrans	SEP-2008
	SWMU 56 Corrective Measures Completion Report	Laguana Constructions	OCT-2008
	SWMU 58 RCRA Facility Investigation (RFI) Report	Parsons	DEC-2008
	Site Management Plan - SWMU 19	USACE	DEC-2008
2009			
	SWMU 58 CMS Work Plan	Parsons	JAN-2009
	2009 Groundwater Flow and Contaminant Transport Model	GeoTrans	SEP-2009
2010			
	Groundwater Management Plan, SWMU 58 and 2	Parsons	APR-2010
	CMIP for Soils, SWMU 58	Parsons	MAY-2010
	2010 Groundwater Flow and Contaminant Transport Model	GeoTrans	SEP-2010
	Remedial Action Completion Report, SWMU 6	Parsons	OCT-2010
2011			
	2011 Groundwater Flow and Contaminant Transport Model	GeoTetra Tech	SEP-2011

TOOELE ARMY DEPOT

Installation Restoration Program

Site Descriptions

Site ID: TEAD-01
Site Name: OB/OD AREA
Alias: SWMU-01

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200106
CMI(C)	200106	200109
LTM	200109	204209

RIP Date: N/A

RC Date: 200109

SITE DESCRIPTION

TEAD-01 (SWMU 1) is located on TEAD within the boundary of the active open burning (OB)/open detonation (OD) range. The site consists of four subareas identified as 1, 1b, 1c, and 1d. Subareas 1 and 1d are not Environmental Restoration, Army (ER,A) eligible, as they are RCRA permitted treatment units. Subareas 1b and 1c are historical demilitarization/disposal sites that are ER,A eligible. The burn pad (subarea 1b) is located in a small erosional valley, approximately 2,000 feet east of the main demolition area. Site activities at subarea 1b began prior to 1959, and reportedly were discontinued in 1977. The area has since been re-graded and revegetated, and is no longer used for demilitarization activities. Subarea 1b previously consisted of a 300 by 100 foot cleared pad, where propellant was burned in open trenches, and projectiles were flashed. Historical aerial photographs from 1959, 1966, and 1978 show five separate trenches located in the pad. No permanent structures were associated with operations at the burn pad. The trash burn pits (subarea 1c) are located in the southwest corner of the installation in a small erosional valley, 2,000 feet east of the main demolition area, and adjacent to the burn pad. The site is an open, graded, and vegetated area of approximately 45 acres, with no permanent structures. Disposal and waste burning activities occurred at subarea 1c from about 1959 to the 1980s. The disposal pits were reportedly several hundred feet long, eight to 10 feet wide, and four to six feet deep.

Site characterization and implementation of corrective measures have been completed at the site under the RCRA and the installation's post closure monitoring and corrective action permit. Residual levels of contamination that pose an unacceptable risk to future residential receptors remain on the site. Corrective measures at the site consist of land use controls (LUCs) prohibiting the residential use or development of the site. LUCs are documented and maintained in the installation's environmental management system (EMS). LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM will be required at the site to ensure that LUCs remain protective. The LTM consists of semiannual LUC inspections and reporting to regulatory agencies. In the event of installation closure, all RCRA closure requirements must be met. The LUC annual inspection will be performed by the TEAD staff and will not require IRP funds.

Site ID: TEAD-05
Site Name: OLD BURN AREA
Alias: SWMU-06

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives, Metals

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200002
RD	200101	200206
RA(C)	200403	200809
LTM	200809	204209

RIP Date: N/A

RC Date: 200809

SITE DESCRIPTION

TEAD-05 (SWMU-06) is located on the active portion of the installation. The old burn area was used for testing munitions and for burning boxes and wooden crates on the ground surface and in shallow trenches. These activities were discontinued in the 1970s. Although the trenches still contain metal debris and spent or destroyed munitions, they have been filled, graded, and revegetated. In addition to the trenches and burn pad, the site also includes a drainage ditch that runs to the northwest from the site.

Site characterization and implementation of a remedy were documented in the ROD for OU 8. Concentrations of lead and explosives were present at the site, which resulted in an unacceptable risk to construction worker and future residential receptors. The remedy selected at the site consisted of the excavation and off-site disposal of explosive contaminated soil, the stabilization/solidification of the lead contaminated soil, and the application of LUCs prohibiting future residential use of the site. The explosive contaminated soil was excavated and disposed of at a hazardous waste landfill in 2004. During implementation of the remedy, stabilization of the lead contaminated soil proved to be impracticable, due to large quantities of buried metal debris commingling with the lead contaminated soil and potential munitions and explosives of concern (MEC).

Due to the potential for MEC to be commingled with the lead contaminated soil and debris, completion of the removal action was transferred to the Military Munitions Response Program (MMRP). Excavation and off-site stabilization and disposal of the lead contaminated soil was completed under the installations MMRP in September 2010.

CLEANUP/EXIT STRATEGY

Removal and disposal of explosives contaminated soil along with implementing LUCs were completed in 2008. Removal of lead contaminated soil from the former burn trench was transferred to the MMRP in 2008, and was completed as a removal action as part of the TEAD-004-R-01 program. LTM at the site consists of annual LUC inspections and five-year reviews.

Site ID: TEAD-06
Site Name: TIRE DISPOSAL SITE
Alias: SWMU-13

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200002
IRA	199307	199309
RA(C)	200312	200312
LTM	200312	204209

RIP Date: N/A

RC Date: 200312

SITE DESCRIPTION

TEAD-06 (SWMU-13) is located on TEAD in the ammunition buffer area. The tire disposal area is an 11-acre pit that was used from 1965 to 1993 to dispose of vehicle and heavy equipment tires. In 1995 an interim action was completed by removing all of the tires from the site.

Site characterization and the implementation of a remedy have been completed under CERCLA, and the installation's FFA. An interim action was completed prior to selection of the remedy, and all of the tires disposed of at the site were removed. Residual contamination that results in an unacceptable risk to future residential receptors remains on the site. The remedy implemented at the site consists of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the EMS. LTM on the site consists of annual LUC inspections conducted by the installation's in-house staff and five-year reviews to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM consisting of five-year reviews and annual LUC inspections to ensure that the remedy remains protective will be required at the site.

Site ID: TEAD-09
Site Name: NORTH AREA SANITARY LANDFILL
Alias: SWMU-12/15

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200403
DES	200402	200506
IRA	200001	200303
CMI(C)	200508	200512
LTM	200607	204209

RIP Date: N/A

RC Date: 200512

SITE DESCRIPTION

TEAD-09 (SWMU-12/15) is located in the east portion of the installation, immediately southwest of the former industrial area, which is privately owned and operated as the Utah Industrial Depot. Beginning in 1942, approximately 67 acres of the 100-acre site was used to dispose of various wastes. Waste disposal occurred in three main areas: the pre-1960 landfill and inactive evaporation ponds, the post-1960 sanitary landfill, and the construction debris burial area. Disposed wastes reportedly included scrap metal, tires, paper, garbage, scrap wood, untreated paint sludge, grease and oil, metal plating waste, paint containers, empty paint thinner and stripper containers, battery acid containers, insecticide and herbicide containers, asbestos containing materials, and ethylene glycol. Initially, the waste was buried in trenches, but in later years it was placed in natural depressions and covered with soil from the surrounding area. The waste was located at depths ranging from a few inches below the ground surface to approximately 30 feet in some areas. No disposal of hazardous waste occurred after October 1980, when the Tooele Army Depot RCRA management plan was implemented. Disposal of domestic waste was halted in the spring of 1994. Disposal of construction debris, asphalt, and asbestos was halted in spring 1996.

Site characterization and the implementation of corrective measures at the site have been completed. Contaminants on the site (metals, semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs) resulted in an unacceptable risk to installation workers and future residential receptors. The remedy implemented at the site consisted of consolidating exposed debris, improving soil cover, improving vegetative cover, site fencing, signage, and LUCs prohibiting residential use of the site. The corrective measures implementation (CMI) only addresses exposure to contaminated soils. Contaminated groundwater underlying the site will be addressed in an overall management approach for contaminated groundwater originating from TEAD-09, TEAD-13, and TEAD-101.

CLEANUP/EXIT STRATEGY

LTM consisting of annual inspection, maintenance, and repair of the soil cover, vegetation, site fencing, and signage will be required at the site. Semiannual LUC inspections and reporting to regulatory agencies will also be required.

Site ID: TEAD-10
Site Name: PCB SPILL SITE(POLE 184)
Alias: SWMU-05

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Polychlorinated Biphenyls (PCB)

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	199409
RA(C)	199507	199608
LTM	200502	204209

RIP Date: N/A

RC Date: 199608

SITE DESCRIPTION

TEAD-10 (SWMU-05) is located on TEAD in the ammunition storage area. The pole transformer PCB spill site resulted in 1976 when a fire occurred in a pole mounted electrical transformer, releasing PCB contaminated oil to the surrounding soils beneath the transformer. At the time of the release, several drums of contaminated soil were removed from the site.

Site characterization and implementation of a remedy have been completed under CERCLA and the installation's FFA. Based on the results of the RI/FS residual levels of contamination on the site did not present a risk to any receptor groups. In 2002, the first five-year review indicated that LUCs would be required because residual contamination remaining on the site did not comply with risk rules adopted by the state of Utah, subsequent to the remedy selection, and that the contaminants remaining on the site pose an unacceptable risk to future residential receptors. Based on the five-year review, LUCs were applied to the site to prohibit future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM on the site consists of annual LUC inspections conducted by the installation's in-house staff, and five-year reviews to ensure that the remedy remains protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews and annual LUC inspections to ensure that the remedy-in-place (RIP) remains protective, is required.

Site ID: TEAD-11
Site Name: X-RAY LAGOON
Alias: SWMU-03

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200108
CMI(C)	200412	200506
LTM	200508	204209

RIP Date: N/A

RC Date: 200506

SITE DESCRIPTION

TEAD-11 (SWMU-13) is located on TEAD within the ammunition storage area. The site is a 75 by 35 foot by six foot deep lined lagoon. From 1974 through 1990 the lagoon received rinse water from film washing and diluted spent developer and fixer solutions from the film processing facility (Building 1223). Little information is available concerning the history of operations prior to 1974, although Building 1223 formerly was the site of the redeye missile rebuild facility.

Site characterization and the implementation of corrective measures at the site have been completed under the RCRA and the installation's post closure monitoring and corrective action permit. Residual contaminants (metals) that pose an unacceptable risk to future residential receptors remain in the pond's soils. Corrective measures at the site consist of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual land use inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of semiannual LUC inspections and reporting to regulatory agencies to ensure that the corrective measures remain protective, is required at the site. The LUC annual inspection will be performed by TEAD staff and will not require IRP funds.

Site ID: TEAD-12
Site Name: BOMB & SHELL RECOND BLDG
Alias: SWMU-23

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200609
RD	200509	200612
RA(C)	200612	200806
LTM	200806	204209

RIP Date: N/A

RC Date: 200806

SITE DESCRIPTION

TEAD-12 (SWMU-23) is located on TEAD in the ammunition demilitarization area. The site consists of a wastewater outfall and drainage area associated with Building 1345. Historical discharge to the outfall and drainage area consisted primarily of boiler blowdown water and floor drains in the building. Operations in Building 1345 began in the late-1950s and have consisted of external work on large munitions, primarily sandblasting and painting.

Site characterization and the implementation of a remedy have been completed under the requirements of CERCLA and the installation's FFA. The remedy implemented on the site included the excavation and off-site disposal of contaminated soil, along with the application of LUCs prohibiting future residential use or development of the site, as contaminant concentrations remaining on the site pose an unacceptable risk to future residential receptors. The excavation and off-site disposal of contaminated soil was completed in FY08. The LUCs are documented and maintained in the installation's EMS. LTM at the site will consist of annual LUC inspections and reporting to regulatory agencies, along with five-year reviews to ensure that the remedy remains protective. Annual LUC inspections are conducted by the installation's in-house staff as part of their program management responsibilities.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews and annual LUC inspections to ensure that the proposed remedy remains protective, will be required at the site.

Site ID: TEAD-13
Site Name: IWL & DITCHES
Alias: SWMU-02

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	197901	197912
CS	197901	197912
RFI/CMS	198210	198805
DES	198805	199103
IRA	198811	199312
CMI(C)	199103	199312
CMI(O)	199312	201510
LTM	201510	202209

RIP Date: 199312

RC Date: 201510

SITE DESCRIPTION

From the early-1960s to the early-1980s, TEAD-13 (SWMU-02), the IWL, received wastewater from the installation's remanufacturing and maintenance operations. The lagoon and associated collection ditches were unlined, providing a source of groundwater contamination with solvents and other VOCs.

In the mid-1980s the IWL and associated ditches were closed and capped. A wastewater treatment facility was constructed to treat and reuse the generated wastewater. Excess amounts of treated wastewater that could not be reused were discharged to the city of Tooele's publicly owned treatment works.

In 1985 a consent order was issued ordering the closure of the IWL and the ditches, along with the investigation of contaminated groundwater and implementation of corrective measures. In 1993, the installation began operation of a P&T system to treat groundwater contaminated with VOCs, with the primary contaminant being TCE. Current data indicates that the contamination extends significantly beyond the boundary of the installation. Although the treatment system has reduced contaminant mass, it has proven to be ineffective in reducing the size of the plume.

CLEANUP/EXIT STRATEGY

A Corrective Measures Study (CMS) for TEAD-101 is currently being finalized. This study also addresses alternative corrective measures for TEAD-13. The study proposes the implementation of Soil Vapor Extraction (SVE) and Air Sparging (AS) at several groundwater contaminant source areas in lieu of pump-and-treat. These corrective measures are currently being implemented. Until such time that these remedies demonstrate effective treatment and containment, the pump-and-treat system will be maintained under caretaker status.

Site ID: TEAD-15
Site Name: CHEMICAL RANGE
Alias: SWMU-07

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

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

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200205
IRA	199707	199712
RA(C)	200205	200208
LTM	200708	204209

RIP Date: N/A

RC Date: 200208

SITE DESCRIPTION

TEAD-15 (SWMU-07) is located on TEAD in the ammunition demilitarization area. The site is located on the south boundary of the installation, and east of the active OB/OD area. The site was used for the testing and demilitarization of riot control chemical and pyrotechnic munitions. This site potentially contains UXO and other ordnance and explosive wastes.

The chemical range covers 550 acres east and west along the southern installation boundary. A small wedge (nine acres) of this former range is off-post and has been identified as TEAD-003-R-01 under the MMRP site characterization and implementation of a remedy have been completed under CERCLA and the installation's FFA. Concentrations of metals identified on the site pose an unacceptable risk to future residential receptors. In 1997, an interim action was conducted consisting of debris and explosive residue removal from a disposal trench that was identified on the site during the RI phase. The remedy implemented on the site consists of LTM of the site. LTM consists of LUCs prohibiting residential use or development of the site. Five-year reviews and annual LUC inspections are required to ensure that the remedy remains protective. Annual LUC inspections are conducted by the installation in-house staff as part of their program management responsibilities.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews and annual LUC inspections to ensure that the proposed remedy remains protective, will be required at the site.

Site ID: TEAD-16
Site Name: FIRING RANGE
Alias: SWMU-08

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200002
RD	200101	200206
RA(C)	200403	200412
LTM	200412	204209

RIP Date: N/A

RC Date: 200412

SITE DESCRIPTION

TEAD-16 (SWMU-08) consists of approximately 19 acres located on TEAD in the ammunition demilitarization area. The small arms firing range was used through 1994 for weapons training by the National Guard, US Army Reserve, US Navy, and TEAD security personnel. The range contained 20 firing stations, with targets located at 25, 50, 100, and 200 meters from these stations. Bermed areas, just in front of and behind the furthermost set of targets, were used to stop the fired rounds.

Site characterization and implementation of a remedy have been completed in accordance with CERCLA and the installation's FFA. Several metals were identified in the soil at the site that resulted in an unacceptable risk for the future residential receptors. The ecological risk assessment identified adverse effects on plants and animals from lead in the soil. The remedy implemented at the site was the stabilization of lead-contaminated soil. The stabilized soil was placed in a corrective action management unit (CAMU), located within the boundaries of TEAD-09. In addition to the soil treatment, LUCs have been applied to the site prohibiting residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of annual LUC inspection conducted by the installation's in-house staff and five-year reviews to ensure that the remedy remains protective.

CLEANUP/EXIT STRATEGY

LTM consisting of five-year reviews and annual LUC inspections to ensure that the remedy implemented remains protective, will be required at the site.

Site ID: TEAD-18
Site Name: AED DEMIL FACILITY (Test Site)
Alias: SWMU-19

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200007
CMI(C)	200007	200010
LTM	200010	204209

RIP Date: N/A

RC Date: 200010

SITE DESCRIPTION

TEAD-18 (SWMU-19) is located on TEAD in the ammunition storage buffer area. The ammunition equipment directorate (AED) test site was constructed in 1973 and is located southwest of the ammunition storage area, in a remote and undeveloped area of the installation. It consists of six small buildings, two burning pans, and a series of protective earthen revetments. The site is used approximately 60 days per year. Operations at the site include experimental or pilot testing to determine if new design demilitarization equipment is functional and to develop operational procedures and techniques for APE designed and manufactured at the installation. Live ammunition and propellants are frequently used during testing, which has included propagation tests, barricade testing for explosive lines, and burning in pans.

Site characterization and implementation of required corrective measures have been completed at the site under RCRA and the installation's post closure monitoring and corrective action permit. Residual levels of contamination that pose an unacceptable risk to future residential receptors remain on-site. Corrective measures implemented at the site consist of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM of the site is required. LTM consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that controls remain in place and are protective. The LUC annual inspection will be performed by the Tooele Army Depot staff and will not require IRP funds.

Site ID: TEAD-27
Site Name: WASTEWATER SPREADING AREA
Alias: SWMU-35

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Pesticides

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200311
RA(C)	200311	200402
LTM	200810	204209

RIP Date: N/A

RC Date: 200402

SITE DESCRIPTION

TEAD-27 (SWMU-35) is located on TEAD in the administrative area of the installation. The site consists of several open and unlined ditches that were used for the discharge and collection of storm water and wastewater from an old installation housing area. The housing area was active from the 1940s through 1960s. In the late-1960s, the housing area was closed and all housing units were demolished.

Site characterization and the implementation of a remedy have been completed in accordance with the requirements of CERCLA and the installation's FFA. Concentrations of pesticides that pose an unacceptable risk to future residential receptors remain on the site. The remedy implemented at this site consists of LUCs prohibiting future residential use or development of the site. The LUCs are documented and maintained in the installation's EMS. LTM at the site consists of annual LUC inspections and reporting to regulatory agencies, along with five-year reviews to ensure that the remedy remains protective. The annual LUC inspections are conducted by the installation's in-house staff as part of their program management responsibilities.

CLEANUP/EXIT STRATEGY

Ongoing LTM at the site consists of annual LUC inspection and five-year reviews.

Site ID: TEAD-28
Site Name: OLD BURN STAGING AREA
Alias: SWMU-36

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200002
RA(C)	200002	200005
LTM	200312	204209

RIP Date: N/A

RC Date: 200005

SITE DESCRIPTION

TEAD-28 (SWMU-36) comprises about 5.3 acres located on TEAD in the ammunition storage buffer area of the installation. The old burn staging area is a small pit located immediately north of the old burn area. The staging area was used to store items that were to be burned or disposed of at the old burn area.

Site characterization and implementation of a remedy at the site have been completed in accordance with the requirements of CERCLA and the installation's FFA. Elevated concentrations of metals that result in an unacceptable risk to future residential receptors were detected in the surface soil. The remedy implemented at the site consists of LUCs prohibiting residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of annual LUCs inspections conducted by the installation's in-house staff and five-year reviews to ensure that the remedy remains protective.

CLEANUP/EXIT STRATEGY

LTM consisting of five-year reviews and annual LUC inspections to ensure that the remedy remains protective, is required at the site.

Site ID: TEAD-29
Site Name: CONT WASTE PROC (BLDG 1325)
Alias: SWMU-37

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200106
CMI(C)	200106	200109
LTM	200109	204209

RIP Date: N/A

RC Date: 200109

SITE DESCRIPTION

TEAD-29 (SWMU-37) is located on TEAD in the ammunition buffer area, The contaminated waste processor (CWP) site consists of the storage and staging areas surrounding Building 1325. The facility, including the building, storage, and staging areas is approximately 150 feet by 125 feet. A four-foot high barbed wire fence surrounds the facility. Since its construction around 1980, until it was closed in 1990, the facility was primarily used for flashing scrap metal and incinerating pentachlorophenol treated wooden crates, general packaging materials (dunnage), scrap resins, and fabric contaminated with explosives. The CWP was a batch type basket furnace that was not used for demilitarization of munitions. In early 2000, the furnace was removed from the building, and the facility was converted to an ammunition disassembly facility.

Site characterization and implementation of corrective measures have been completed at the site under RCRA and the installation's post closure monitoring and corrective action permit. Contaminant concentrations that pose a risk to future residential receptors remain on the site. Corrective measures implemented at the site consist of LUCs prohibiting the residential use or development of the site. Land use restrictions are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of semiannual LUC inspections to ensure that the corrective measures remain protective, is required at the site.

Site ID: TEAD-31
Site Name: LAUNDRY POND
Alias: SWMU-11

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals, Radionuclides, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200104
DES	200104	200109
IRA	199506	199708
CMI(C)	200109	200309
LTM	200309	204209

RIP Date: N/A

RC Date: 200309

SITE DESCRIPTION

TEAD-31 (SWMU-11) is located on TEAD in the ammunition storage area. This laundry effluent pond was constructed in 1947 for the collection of laundry and shower water from Building 1267, and boiler water from Building 1237. The site consists of the laundry pond, a sewage pond, a sand pit, a septic tank, a leach field, and a waste pile area located to the east. In 1990 discharge to the laundry effluent pond was discontinued; however, it continued to receive boiler water during the winter months until 1995. The bermed, unlined, pond is approximately 16 feet deep, 80 feet wide, and 100 feet long. The sewage pond, constructed between 1978 and 1990 for the collection of water from Building 1267, is bermed, unlined, and is eight feet deep, 120 feet wide, and 134 feet long. It was never used, and any water observed in the pond was likely the result of rain, snow melt, or infiltration from the adjacent septic system. A shallow sand pit is reported to have been excavated to provide cover material for capping the adjacent TEAD-81 site. The septic tank is located south of the sewage pond; the leach field is reported to have been beneath the pond. From 1948 through 1990, the septic tank and leach field are reported to have received waste from Buildings 1245, 1267, and 1254. The waste piles identified in the fall of 1992 contained wood fragments, metal debris, electrical wiring, metal shavings, and old discarded automotive parts.

A site characterization and implementation of corrective measures have been completed in accordance with RCRA and the installation's post closure monitoring and corrective action permit. Contaminants were present on the site at concentrations that presented an unacceptable risk to on-site workers and future residential receptors. The corrective measures implemented at the site consisted of the excavation and off-site disposal of contaminated soil from the laundry pond, and the excavation and disposal of the debris piles and underlying soils. In addition to the excavation work completed, LUCs have been placed on the site prohibiting residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUCs and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM consisting of semiannual LUC inspections to ensure that the corrective measures remain protective, is required at the site.

Site ID: TEAD-34
Site Name: BLDG 1303 WASHOUT POND
Alias: SWMU-22

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200002
IRA	199707	199710
RA(C)	200002	200005
LTM	200312	204209

RIP Date: N/A

RC Date: 200005

SITE DESCRIPTION

TEAD-34 (SWMU 22) is located on TEAD in the ammunition storage buffer area of the installation. The Building 1303 washout pond is a shallow depression which received wash water from Building 1303, where high explosive bombs and projectiles were dismantled and shell casings were washed for subsequent reuse or disposal. The wash water, which contained explosives, drained from the building, crossed a concrete pad, entered an unlined ditch, and flowed to the pond area.

Site characterization and implementation of a remedy have been completed at the site in accordance with CERCLA and the installation's FFA. Concentrations of metals and explosives that posed a risk to on-site depot workers and future resident receptors were detected in the soil of the ditch and pond. In 1998 an interim action was conducted consisting of the excavation of explosive-stained soil from the washout pond.

A risk assessment, conducted after the removal, indicated unacceptable risks for the future residential receptors. The final remedy implemented consisted of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of annual LUC inspections being conducted by the installation's in-house staff, along with five-year reviews to ensure that the remedy implemented remains protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews and annual LUC inspections to ensure that the remedy implemented remains protective, is required at the site.

Site ID: TEAD-35
Site Name: DEACT FURNACE (BLDG 1351)
Alias: SWMU-20

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200108
DES	200108	200208
CMI(C)	200305	200311
LTM	200311	204209

RIP Date: N/A

RC Date: 200311

SITE DESCRIPTION

TEAD-35 (SWMU-20) is located on TEAD in the ammunition storage buffer area. The site was used for the demilitarization of small arms, grenades, propellants and fuses and remains active and in use. In the early-1980s pollution abatement systems were installed on the furnace to prevent continued pollution of the environment. Site contamination being addressed under the IRP resulted on the site prior to the pollution abatement upgrades.

Site characterization and implementation of corrective measures at the site were completed in accordance with the installation's RCRA post closure monitoring and corrective action permit. Concentrations of metals detected on the site during characterization posed a threat to on-site workers and future residential receptors. The corrective measure implemented at the site consisted of the construction of an asphalt cap over areas of lead contaminated soil. In addition to the asphalt cap, LUCs have been applied to the site prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. Annual LUC inspections are conducted by the installation's in-house staff as part of their program management responsibilities. Inspection, maintenance, and repair of the asphalt cap are being conducted by the USACE. The corrective measures implemented were intended to address contamination present at the site prior to installation of the pollution abatement system. Because the facility is currently active, it will not be eligible for ER,A funding upon closure.

CLEANUP/EXIT STRATEGY

LTM, consisting of annual inspection and maintenance of the asphalt cap, and semiannual LUC inspections and reporting to regulatory agencies, are required. In the event of installation closure, all RCRA closure requirements must be met.

Site ID: TEAD-36
Site Name: AED TEST RANGE
Alias: SWMU-40

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

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

Media of Concern: Soil

Phases	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	200311
IRA	200309	200311
RA(C)	200311	200402
LTM	200810	204209

RIP Date: N/A

RC Date: 200402

SITE DESCRIPTION

TEAD-36 (SWMU-40) is located on TEAD in the ammunition demilitarization area. The site, which has been used to test munitions, bombs and rocket motors, consists of several revetments, a drop tower and an old deactivation furnace site. Explosive waste as well as UXO can be found at this site.

Site characterization and implementation of a remedy have been completed under the requirements of CERCLA and the installation's FFA. Soil contaminants at the site are at concentrations that pose an unacceptable risk to future residential receptors. The site is also known to contain munitions and munitions constituent (MC). In November 2003 the site was fenced as an interim measure. The remedy implemented at the site consists of LUCs prohibiting the residential use of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of annual LUC inspections and reporting to regulatory agencies, along with five-year reviews to ensure that the remedy remains protective. Annual LUC inspections are completed by the installation's in-house staff as part of their program management responsibilities.

CLEANUP/EXIT STRATEGY

LTM, consisting of five-year reviews and annual LUC inspections to ensure that the remedy remains protective, is required at the site.

Site ID: TEAD-37
Site Name: DEACT FURNACE(BLDG 1320)
Alias: SWMU-21

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Dioxins/Dibenzofurans, Explosives, Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200108
DES	200108	200208
CMI(C)	200305	200311
LTM	200311	204209

RIP Date: N/A

RC Date: 200311

SITE DESCRIPTION

TEAD-37 (SWMU-21) is located on TEAD in the ammunition storage buffer area. The site was used for the demilitarization of small arms, grenades, propellants and fuses and remains active and in use. In the early-1980s, pollution abatement equipment was installed to prevent continued pollution of the environment. Residual contamination being addressed under the installation IRP resulted from operations prior to the installation of the pollution abatement equipment.

Site characterization and implementation of corrective measures at the site were completed in accordance with the installation's RCRA post closure monitoring and corrective action permit. Concentrations of metals detected on the site during characterization posed a threat to on-site workers and future residential receptors. The corrective measures implemented at the site consisted of the construction of an asphalt cap over areas of lead contaminated soil. In addition to the asphalt cap, a fence, and signage, LUCs have been applied to the site prohibiting future residential use or development. The corrective measures were intended to address contamination present at the site prior to installation of the pollution abatement system. Because the facility is currently active, the site will not be eligible for ER,A funding upon closure. LUCs are documented and maintained in the installation's EMS. LUC inspections are conducted by the installation's in-house staff. Inspection and maintenance of the cap is being done by the USACE.

CLEANUP/EXIT STRATEGY

LTM, consisting of annual inspection and maintenance of the asphalt cap, and semiannual LUC inspections and reporting to regulatory agencies, are required. In the event of installation closure, all RCRA closure requirements must be met.

Site ID: TEAD-50
Site Name: BATTERY RECHARGE OPS(BLDG 1252)
Alias: SWMU-25

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200009
DES	200009	200110
IRA	199504	199508
CMI(C)	200308	200311
LTM	200311	204209

RIP Date: N/A

RC Date: 200311

SITE DESCRIPTION

TEAD-50 (SWMU-25) is located on TEAD in the ammunition storage area. The battery shop, located at Building 1252, was used for the maintenance and repair of vehicle and forklift batteries. Site features included two wash down pads (wooden and metal) located adjacent to the building. A discharge pipe from the building drain system, and the wash down pads, drained to an open, unlined drainage ditch located to the east of the building.

Site characterization and implementation of corrective measures have been completed at the site under the requirements of RCRA and the installation's post closure monitoring and corrective action permit. Investigation of the site determined that concentrations of metals that posed a risk to the on-site depot workers, as well as future residential receptors, were present. Corrective measures implemented at the site included the excavation and off-site disposal of contaminated soil, along with the application of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of semiannual LUC inspections to ensure that the corrective measures implemented remain protective, is required at the site. The LUC annual inspection and five-year reviews will be performed by the TEAD staff and will not require IRP funds.

Site ID: TEAD-54
Site Name: PESTICIDE MIXING(BLDG 518)
Alias: SWMU-34

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Metals, Pesticides

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200108
DES	200108	200208
IRA	200305	200311
CMI(C)	200305	200311
LTM	200311	204209

RIP Date: N/A

RC Date: 200311

SITE DESCRIPTION

TEAD-54 (SWMU-34) is located on the TEAD installation's support/public works facility complex. The pesticide mixing site consists of Building 518 and a concrete bermed pad located adjacent to the building. The facility is surrounded and secured by a chain-link fence. The 0.13 acre enclosed area is approximately 75 feet by 75 feet. Building 518 was used from 1942 until the mid-1990s for the storage and mixing of pesticides and herbicides. The bermed concrete pad was used to load sprayer trucks with these mixtures, and to rinse containers. From the early-1980s to 1989 pesticide waste from operational activities at the site was disposed of at an off-site treatment, storage and disposal facility (TSDF).

Site characterization and implementation of corrective measures at the site have been completed under the requirements of RCRA and the post closure monitoring and corrective action permit. Concentrations of pesticides that posed an unacceptable risk to site depot workers and future residential receptors were identified in soil on the site. Corrective measures implemented at the site consisted of the excavation and off-site disposal of contaminated soil, along with the application of LUCs prohibiting future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM consisting of semiannual LUC inspections to ensure that the corrective measures implemented remain protective, is required at the site. The LUC annual inspection and five-year reviews will be performed by the TEAD staff and will not require IRP funds.

Site ID: TEAD-58
Site Name: BLDG 539 BOMB WASHOUT
Alias: SWMU-42

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200108
DES	200108	200406
IRA	199506	199507
CMI(C)	200406	200510
LTM	200510	204209

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

The Building 539 Bomb Washout (SWMU-42) is located on the active installation. This site was used to burn small arms and recover lead. Wastewater from the site drained to an open ditch and was discharged into an unlined impoundment. In addition to the drainage ditch and impoundment, the site includes a number of areas where ash and burned materials were dumped on the ground in the general area of the facility.

Site characterization and implementation of corrective measures have been completed. These were done in accordance with the installation's RCRA post closure monitoring and corrective action permit. Concentrations of lead on the site posed an unacceptable risk to on-site workers and hypothetical future residential receptors. Corrective measures implemented at the site consisted of the excavation of lead contaminated soil from the open ditch and ash piles and placement of those soils in the impoundment. In addition, an impermeable membrane cap was constructed on the impoundment, the capped impoundment was fenced, and site warning signage was put in place. In addition to the engineering controls that were constructed, LUCs were applied to the site prohibiting the future residential use or development of the site.

CLEANUP/EXIT STRATEGY

LTM, consisting of the annual inspection and maintenance of the cap, fencing, and signage, along with semiannual LUC inspections to ensure that the corrective measures implemented remain protective, is required at the site.

Site ID: TEAD-81
Site Name: TNT WASHOUT PONDS
Alias: SWMU-10

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Explosives, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200206
DES	200403	200606
IRA	198410	199512
CMI(C)	200601	200709
CMI(O)	200709	200909
LTM	200909	204209

RIP Date: 200709

RC Date: 200909

SITE DESCRIPTION

TEAD-81 (SWMU-10), the TNT Washout Ponds, is located on TEAD in the ammunition storage area. The site consists of a series of impoundments that received wastewater from Building 1245, formerly a bomb washout facility. The ponds were unlined, resulting in the release of explosives contamination to the soils and the underlying groundwater.

In 1984 a removal action was conducted; it consisted of a liner being placed over four of the old ponds and clean soil being placed on top to help reduce infiltration of precipitation. In 1997 the settling tanks, located immediately to the north of Building 1245, were removed.

Site characterization and the implementation of corrective measures have been implemented at the site in accordance with RCRA and the installation's post closure monitoring and corrective action permit. In addition to soil contamination, the underlying groundwater has been impacted by explosive constituents. Groundwater monitoring has demonstrated that the contamination is localized to the site and that contaminants are degrading. Corrective measures implemented at the site consisted of the excavation and on-site treatment (composting) of approximately 10,000 cubic yards of soil contaminated with explosives, along with the application of LUCs prohibiting future residential use or development of the site as residual levels of contamination remain on the site that pose an unacceptable risk to future residential receptors. Soil treatment was completed in the fall 2008. LUCs are documented and maintained in the installation's EMS. LTM consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM is required at TEAD-81. The LTM, consisting of ongoing biannual groundwater monitoring, and semiannual LUC inspections to ensure that the corrective measures implemented, remain protective, is required. The LUC inspections will be performed by the TEAD staff and will not require IRP funds.

Site ID: TEAD-83
Site Name: STORMWATER DISCHARGE
Alias: SWMU 45

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals, Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200106
CMI(C)	200106	200109
LTM	200109	204209

RIP Date: N/A

RC Date: 200109

SITE DESCRIPTION

TEAD-83 (SWMU-45) is located on TEAD in a remote undeveloped area approximately 2,500 feet northwest of the installation's administration area. The storm water discharge area occupies about two acres. It consists of an unlined earthen basin and associated pipelines from the administration area's storm water collection system. Storm water has been discharged to this site since construction of the installation in 1942. The storm drain system consists of approximately 10,000 linear feet of subsurface pipelines. Although industrial operations have not been conducted on the site, the discharge area has historically received discharges from a carpenter shop, sign shop, motor pool, rail shop, and other such operations.

Site characterization and implementation of corrective measures at the storm water discharge site have been completed in accordance with RCRA and the installation's post closure monitoring and corrective action permit. Residual contaminant concentrations on the site pose an unacceptable risk to potential future residential receptors. Corrective measures implemented at the site consist of LUCs prohibiting the future residential use or development of the site. LUCs are documented and maintained in the installation's EMS. LTM at the site consists of semiannual LUC inspections and reporting to regulatory agencies to ensure that the LUCs remain protective.

CLEANUP/EXIT STRATEGY

LTM, consisting of semiannual LUC inspections to ensure that the corrective measures implemented remain protective, is required at the site. The LUC annual inspection and five-year reviews will be performed by the TEAD staff and will not require IRP funds.

Site ID: TEAD-84
Site Name: OLD DISPENSARY
Alias: SWMU-48

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Metals, Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198812	200106
CMI(C)	200106	200109
LTM	200109	204206

RIP Date: N/A

RC Date: 200109

SITE DESCRIPTION

This site (SWMU-48) consists of a wastewater discharge area associated with the old dispensary, Building 400, which was located on 8.2 acres approximately 300 feet northwest of the installation's medical clinic. Building 400 was demolished when the current medical facility was constructed in the early-1980s. Building 400 and other smaller buildings located on the site were constructed in 1945 and Building 400 originally served as the installation's administrative building. It was later converted to a dispensary (medical facility) and included operating rooms, a sterilization room, X-ray rooms, examination rooms, and a dental office. Reportedly, X-Ray development solutions were discharged to the storm water collection system located on the property.

Site characterization and implementation of corrective measures have been completed at the site in accordance with RCRA and the installation's post closure monitoring and corrective action permit. Contaminant concentrations that pose an unacceptable risk to hypothetical future residential receptors remain on-site. Corrective measures implemented at the site consist of LUCs prohibiting future residential use or development of the site.

CLEANUP/EXIT STRATEGY

LTM, consisting of semiannual LUC inspections to ensure that the corrective measures implemented remain protective, is required at the site. The LUC annual inspection and five-year reviews will be performed by the TEAD staff and will not require IRP funds.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
TEAD-14	BATTERY PIT	200106	Decision Document, Battery Shop Sump Removal, SWMU 24. 200106
TEAD-21	RCRA CONTAINER STORAGE	199604	Decision Document, Group A. 199604
TEAD-24A	OLD IWL (ACTIVE PARCEL)	200106	Decision Document, Known Release SWMUs 3, 11, 25 and 30. 200106
TEAD-33	SEPTIC TANKS	198812	Decision Document, Group A, No Action SWMUs. 198812
TEAD-38	BOX ELDER WASH DRUM SITE	199610	Record of Decision, Operable Units 5, 6, 7 and 10. 199610
TEAD-67	CONT. STORAGE AREAS FOR P999	199310	Decision Document, Group A, No action SWMUs. 199310
TEAD-70	USED OIL DUMPSTERS	200202	Decision Document, Group B, No Action SWMUs. 200202
TEAD-80	SEWAGE LAGOONS	199710	Decision Document, Group B, No Action SWMUs. 199710

IRP Schedule

Date of IRP Inception: 197901

Past Phase Completion Milestones

1980	
RFA	(TEAD-13 - IWL & DITCHES)
CS	(TEAD-13 - IWL & DITCHES)
1988	
RFI/CMS	(TEAD-13 - IWL & DITCHES)
1989	
CS	(TEAD-01 - OB/OD AREA , TEAD-09 - NORTH AREA SANITARY LANDFILL , TEAD-11 - X-RAY LAGOON, TEAD-14 - BATTERY PIT , TEAD-18 - AED DEMIL FACILITY (Test Site), TEAD-21 - RCRA CONTAINER STORAGE , TEAD-24A - OLD IWL (ACTIVE PARCEL), TEAD-29 - CONT WASTE PROC (BLDG 1325) , TEAD-31 - LAUNDRY POND , TEAD-35 - DEACT FURNACE (BLDG 1351), TEAD-37 - DEACT FURNACE(BLDG 1320) , TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-54 - PESTICIDE MIXING(BLDG 518) , TEAD-58 - BLDG 539 BOMB WASHOUT, TEAD-67 - CONT. STORAGE AREAS FOR P999 , TEAD-70 - USED OIL DUMPSTERS , TEAD-80 - SEWAGE LAGOONS, TEAD-81 - TNT WASHOUT PONDS , TEAD-83 - STORMWATER DISCHARGE , TEAD-84 - OLD DISPENSARY)
RFA	(TEAD-01 - OB/OD AREA , TEAD-09 - NORTH AREA SANITARY LANDFILL , TEAD-11 - X-RAY LAGOON, TEAD-14 - BATTERY PIT , TEAD-18 - AED DEMIL FACILITY (Test Site), TEAD-21 - RCRA CONTAINER STORAGE , TEAD-24A - OLD IWL (ACTIVE PARCEL), TEAD-29 - CONT WASTE PROC (BLDG 1325) , TEAD-31 - LAUNDRY POND , TEAD-35 - DEACT FURNACE (BLDG 1351), TEAD-37 - DEACT FURNACE(BLDG 1320) , TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-54 - PESTICIDE MIXING(BLDG 518) , TEAD-58 - BLDG 539 BOMB WASHOUT, TEAD-67 - CONT. STORAGE AREAS FOR P999 , TEAD-70 - USED OIL DUMPSTERS , TEAD-80 - SEWAGE LAGOONS, TEAD-81 - TNT WASHOUT PONDS , TEAD-83 - STORMWATER DISCHARGE , TEAD-84 - OLD DISPENSARY)
PA	(TEAD-05 - OLD BURN AREA , TEAD-06 - TIRE DISPOSAL SITE , TEAD-10 - PCB SPILL SITE(POLE 184) , TEAD-12 - BOMB & SHELL RECOND BLDG , TEAD-15 - CHEMICAL RANGE , TEAD-16 - FIRING RANGE , TEAD-27 - WASTEWATER SPREADING AREA, TEAD-28 - OLD BURN STAGING AREA , TEAD-33 - SEPTIC TANKS , TEAD-34 - BLDG 1303 WASHOUT POND , TEAD-36 - AED TEST RANGE , TEAD-38 - BOX ELDER WASH DRUM SITE)
SI	(TEAD-05 - OLD BURN AREA , TEAD-06 - TIRE DISPOSAL SITE , TEAD-10 - PCB SPILL SITE(POLE 184) , TEAD-12 - BOMB & SHELL RECOND BLDG , TEAD-15 - CHEMICAL RANGE , TEAD-16 - FIRING RANGE , TEAD-27 - WASTEWATER SPREADING AREA, TEAD-28 - OLD BURN STAGING AREA , TEAD-33 - SEPTIC TANKS , TEAD-34 - BLDG 1303 WASHOUT POND , TEAD-36 - AED TEST RANGE , TEAD-38 - BOX ELDER WASH DRUM SITE)
1991	
DES	(TEAD-13 - IWL & DITCHES)
1993	
IRA	(TEAD-06 - TIRE DISPOSAL SITE)
1994	
CMI(C)	(TEAD-13 - IWL & DITCHES)
RI/FS	(TEAD-10 - PCB SPILL SITE(POLE 184) , TEAD-38 - BOX ELDER WASH DRUM SITE)
IRA	(TEAD-13 - IWL & DITCHES)
RFI/CMS	(TEAD-67 - CONT. STORAGE AREAS FOR P999)
1995	
IRA	(TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-58 - BLDG 539 BOMB WASHOUT)
RD	(TEAD-38 - BOX ELDER WASH DRUM SITE)
1996	
RFI/CMS	(TEAD-21 - RCRA CONTAINER STORAGE)
IRA	(TEAD-81 - TNT WASHOUT PONDS)
RA(C)	(TEAD-10 - PCB SPILL SITE(POLE 184) , TEAD-38 - BOX ELDER WASH DRUM SITE)

IRP Schedule

1997	
IRA	(TEAD-14 - BATTERY PIT , TEAD-31 - LAUNDRY POND)
1998	
IRA	(TEAD-15 - CHEMICAL RANGE , TEAD-34 - BLDG 1303 WASHOUT POND)
RFI/CMS	(TEAD-80 - SEWAGE LAGOONS)
2000	
RA(C)	(TEAD-28 - OLD BURN STAGING AREA , TEAD-34 - BLDG 1303 WASHOUT POND)
RI/FS	(TEAD-05 - OLD BURN AREA , TEAD-06 - TIRE DISPOSAL SITE , TEAD-16 - FIRING RANGE , TEAD-28 - OLD BURN STAGING AREA , TEAD-34 - BLDG 1303 WASHOUT POND)
RFI/CMS	(TEAD-18 - AED DEMIL FACILITY (Test Site), TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-70 - USED OIL DUMPSTERS)
2001	
RFI/CMS	(TEAD-01 - OB/OD AREA , TEAD-11 - X-RAY LAGOON, TEAD-14 - BATTERY PIT , TEAD-24A - OLD IWL (ACTIVE PARCEL), TEAD-29 - CONT WASTE PROC (BLDG 1325) , TEAD-31 - LAUNDRY POND , TEAD-35 - DEACT FURNACE (BLDG 1351), TEAD-37 - DEACT FURNACE(BLDG 1320) , TEAD-54 - PESTICIDE MIXING(BLDG 518) , TEAD-58 - BLDG 539 BOMB WASHOUT, TEAD-83 - STORMWATER DISCHARGE , TEAD-84 - OLD DISPENSARY)
DES	(TEAD-31 - LAUNDRY POND , TEAD-70 - USED OIL DUMPSTERS)
CMI(C)	(TEAD-01 - OB/OD AREA , TEAD-18 - AED DEMIL FACILITY (Test Site), TEAD-29 - CONT WASTE PROC (BLDG 1325) , TEAD-83 - STORMWATER DISCHARGE , TEAD-84 - OLD DISPENSARY)
2002	
RI/FS	(TEAD-15 - CHEMICAL RANGE)
CMI(C)	(TEAD-70 - USED OIL DUMPSTERS)
RFI/CMS	(TEAD-81 - TNT WASHOUT PONDS)
RA(C)	(TEAD-15 - CHEMICAL RANGE)
RD	(TEAD-05 - OLD BURN AREA , TEAD-16 - FIRING RANGE)
DES	(TEAD-35 - DEACT FURNACE (BLDG 1351), TEAD-37 - DEACT FURNACE(BLDG 1320) , TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-54 - PESTICIDE MIXING(BLDG 518))
2003	
IRA	(TEAD-09 - NORTH AREA SANITARY LANDFILL)
CMI(C)	(TEAD-31 - LAUNDRY POND)
2004	
DES	(TEAD-58 - BLDG 539 BOMB WASHOUT)
IRA	(TEAD-36 - AED TEST RANGE , TEAD-54 - PESTICIDE MIXING(BLDG 518))
RA(C)	(TEAD-06 - TIRE DISPOSAL SITE , TEAD-27 - WASTEWATER SPREADING AREA, TEAD-36 - AED TEST RANGE)
RI/FS	(TEAD-27 - WASTEWATER SPREADING AREA, TEAD-36 - AED TEST RANGE)
CMI(C)	(TEAD-35 - DEACT FURNACE (BLDG 1351), TEAD-37 - DEACT FURNACE(BLDG 1320) , TEAD-50 - BATTERY RECHARGE OPS(BLDG 1252), TEAD-54 - PESTICIDE MIXING(BLDG 518))
RFI/CMS	(TEAD-09 - NORTH AREA SANITARY LANDFILL)
2005	
CMI(C)	(TEAD-11 - X-RAY LAGOON)
DES	(TEAD-09 - NORTH AREA SANITARY LANDFILL)
RA(C)	(TEAD-16 - FIRING RANGE)
2006	
DES	(TEAD-81 - TNT WASHOUT PONDS)
CMI(C)	(TEAD-09 - NORTH AREA SANITARY LANDFILL , TEAD-58 - BLDG 539 BOMB WASHOUT)

IRP Schedule

RI/FS	(TEAD-12 - BOMB & SHELL RECOND BLDG)
2007	
CMI(C)	(TEAD-81 - TNT WASHOUT PONDS)
RD	(TEAD-12 - BOMB & SHELL RECOND BLDG)
2008	
RA(C)	(TEAD-05 - OLD BURN AREA , TEAD-12 - BOMB & SHELL RECOND BLDG)
2009	
CMI(O)	(TEAD-81 - TNT WASHOUT PONDS)

Projected Phase Completion Milestones

See attached schedule

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

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

Final RA(C) Completion Date: 200809

Schedule for Next Five-Year Review: 2013

Estimated Completion Date of IRP at Installation (including LTM phase): 204209

TOOELE ARMY DEPOT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
TEAD-01	OB/OD AREA	LTM						
TEAD-05	OLD BURN AREA	LTM						
TEAD-06	TIRE DISPOSAL SITE	LTM						
TEAD-09	NORTH AREA SANITARY LANDFILL	LTM						
TEAD-10	PCB SPILL SITE(POLE 184)	LTM						
TEAD-11	X-RAY LAGOON	LTM						
TEAD-12	BOMB & SHELL RECOND BLDG	LTM						
TEAD-13	IWL & DITCHES	CMI(O)						
		LTM						
TEAD-15	CHEMICAL RANGE	LTM						
TEAD-16	FIRING RANGE	LTM						
TEAD-18	AED DEMIL FACILITY (Test Site)	LTM						
TEAD-27	WASTEWATER SPREADING AREA	LTM						
TEAD-28	OLD BURN STAGING AREA	LTM						
TEAD-29	CONT WASTE PROC (BLDG 1325)	LTM						
TEAD-31	LAUNDRY POND	LTM						
TEAD-34	BLDG 1303 WASHOUT POND	LTM						
TEAD-35	DEACT FURNACE (BLDG 1351)	LTM						
TEAD-36	AED TEST RANGE	LTM						
TEAD-37	DEACT FURNACE(BLDG 1320)	LTM						
TEAD-50	BATTERY RECHARGE OPS(BLDG 1252)	LTM						
TEAD-54	PESTICIDE MIXING(BLDG 518)	LTM						
TEAD-58	BLDG 539 BOMB WASHOUT	LTM						

TOOELE ARMY DEPOT IRP Schedule

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
TEAD-81	TNT WASHOUT PONDS	LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-83	STORMWATER DISCHARGE	LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-84	OLD DISPENSARY	LTM						

TOOELE 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: 9/3

Installation Site Types with Future and/or Underway Phases

1 Burn Area
(TEAD-004-R-01)
1 Incinerator
(TEAD-005-R-01)
1 Open Burn
(TEAD-001-R-01)
1 Training and Maneuver Area
(TEAD-008-R-01)
2 Unexploded Munitions/Ordnance
(TEAD-006-R-01, TEAD-007-R-01)

Most Widespread Contaminants of Concern

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

Media of Concern

Soil

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

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of MMRP

Date of MMRP Inception 200207

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201610/201610

Date of MMRP completion including Long Term Management (LTM): 202610

MMRP Contamination Assessment

Contamination Assessment Overview

The MMRP at TEAD was initiated in 2002. In February 2002, an inventory of the active/inactive ranges on the installation was completed. In November of the same year, the inventory of closed, transferring, and transferred (CTT) ranges was completed. Sites identified on the installation are being addressed under the MMRP program. Of the sites identified, two are located on privately owned property adjacent to the installation. In 1994 a partial UXO clearance of TEAD-001-R-01 was completed.

In 2011, a site investigation was initiated on one site which was identified subsequent to the range inventory.

Cleanup Exit Strategy

During the next two FYs an FS and a ROD are expected to be completed at all identified MR sites on the installation. Further actions will be defined and cost estimates will be developed after the FS is complete.

MMRP Previous Studies

	Title	Author	Date
1994			
	UXO Removal Action Final Report	Human Factors	DEC-1994
2002			
	Active/Inactive Range Inventory	Techlaw	FEB-2002
	CTT Range Inventory	Techlaw	NOV-2002
2007			
	Site Inspection	TLI Solutions	DEC-2007
2009			
	MMRP Project Management Plan	Parsons	OCT-2009
2010			
	Remedial Action Work plan, Former Burn Trench	Parsons	MAR-2010
	Remedial Investigation/Feasibility Study Work plan	Parsons	APR-2010

TOOELE ARMY DEPOT

Military Munitions Response Program

Site Descriptions

Site ID: TEAD-001-R-01
Site Name: OB/OD AREA
Alias: SWMU 1

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 03

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

Media of Concern: Soil

Phases	Start	End
PA	200207	200305
SI	200509	200712
RI/FS	200906	201310
RD	201310	201412
RA(C)	201403	201610
LTM	201610	202610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

This transferred disposal site, owned by private, county and federal parties, comprises 478 acres to the southwest of the installation. From 1942 to the mid-1990s munitions including rockets, bombs, grenades, medium and large caliber munitions, mortars, propellants, and small arms were burned or detonated in the OB/OD area within the installation. The OB/OD kickouts are the only known source of munitions contamination in this area. A portion, but not all, of this area near the installation boundary has been surveyed and cleared of UXO. The land is currently used for agricultural purposes or is undeveloped. A portion of this site was cleared in 1996.

CLEANUP/EXIT STRATEGY

In December 2007. the site inspection (SI) was completed. The SI recommended further investigation for MEC and no further action (NFA) for MC. In July 2009, a contract was awarded for the completion of a RI and FS. The RI fieldwork was completed in the summer of 2010. Upon completion of the RI/FS in FY13, it is assumed that a MEC removal action will be required, along with institutional controls and MEC monitoring.

Site ID: TEAD-004-R-01
Site Name: OLD BURN AREA
Alias: SWMU 6

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

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

Media of Concern: Soil

Phases	Start	End
PA	200207	200305
SI	200509	200712
RI/FS	200906	201310
RD	201310	201412
RA(C)	201403	201610
LTM	201610	202610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

This closed munitions site, comprising 58.14 acres in the east-central part of the installation is still owned by the Army. From 1942 to 1972 smokes, grenades, propellants, and small arms were demilitarized and disposed of at this area. The only activity currently occurring in this area is grazing. A removal action consisting of the remediation lead contaminated soil was completed under the MMRP in 2010. Work previously completed on the site under the IRP consisted of the removal and disposal of explosives contaminated soil. Only incidental UXO identified during the soil cleanup was removed. Future UXO response actions at this site will be carried out under the MR program.

CLEANUP/EXIT STRATEGY

In December 2007, the SI was completed. The SI recommended further investigation for MEC and NFA for MC. In July 2009, a contract was awarded for the completion of a RI. The RI fieldwork, along with the remediation of lead contaminated soil in a former burn trench was completed in the summer of 2010. In addition to the RI, the contract included a task for the remediation of lead contaminated soil from a former burn trench located on the site. The burn trench was identified and investigated under the IRP. The former burn trench is identified as TEAD-05 (SWMU 06). Upon completion of the RI and soil removal it is assumed that an FS will be required, followed by a MEC removal action will be required, along with institutional controls and MEC monitoring.

Site ID: TEAD-005-R-01
Site Name: BUILDING 539 DISPOSAL AREA
Alias: SWMU 42

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Soil

Phases	Start	End
PA	200207	200305
SI	200509	200712
RI/FS	200906	201310
RD	201310	201412
RA(C)	201403	201610
LTM	201610	202610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

This is a closed munitions site comprising 97 acres in the east-central part of the installation is still owned by the Army. From about 1942 to 1972 a variety of munitions, including bombs, smokes, grenades, land mines, medium and large caliber munitions, small arms, mortars, fuses, and secondary explosives, were demilitarized or disposed in the area around this site. The site is not currently being used except for grazing and remediation purposes. An IR project has been completed to address lead contaminated soil from a drainage ditch used as a ponding area. Only incidental UXO that was encountered during the soil remediation project were removed. Future UXO response actions will be undertaken under the MR program.

CLEANUP/EXIT STRATEGY

In December 2007, the SI was completed. The SI recommended further investigation for MEC and MC. In July 2009 a contract was awarded for the completion of an RI and FS. The RI fieldwork was completed in 2010. Upon completion of the RI, it is assumed that an FS will be required, followed by a MEC removal action, along with institutional controls and MEC monitoring.

Site ID: TEAD-006-R-01
Site Name: Old Burn Staging Area
Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

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

Media of Concern: Soil

Phases	Start	End
PA	200207	200305
SI	200509	200712
RI/FS	200906	201310
RD	201310	201412
RA(C)	201403	201610
LTM	201610	202610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

The old burn staging area (TEAD-006-R-01) is a closed munitions site comprised of 1.35 acres in the southern portion of the installation. The old burn staging area MR site overlaps SWMU 36, which is identified as AEDB-R site number TEAD-28. Under the IRP, institutional controls that include land use restrictions have been implemented for TEAD-28.

The old burn staging area is located immediately north of the old burn area in the south-central portion of the installation. The site consists of a gravel-lined pit that is approximately eight to 13 feet deep. The pit was used to stage materials for the old burn area during the same period that the old burn area was in operation, until the early-1970s. There are two cuts in the north bank of the pit with dirt roads leading into and away from the site. From about 1942 to 1972 a variety of conventional and other munitions were stored temporarily within this open, unlined, gravelly depression prior to their demilitarization in the old burn area. Presumably, the munitions stored in this area are the same as those listed above for the old burn area.

CLEANUP/EXIT STRATEGY

In December 2007, the SI was completed. The SI recommended further investigation for MEC and NFA for MC. In July 2009, a contract was awarded for the completion of an RI. The RI fieldwork was completed in 2010. Upon completion of the RI, it is assumed that an FS will be required, followed by a MEC removal action, along with institutional controls and MEC monitoring.

Site ID: TEAD-007-R-01
Site Name: On-Post Chemical Range
Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

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

Media of Concern: Soil

Phases	Start	End
PA	200207	200305
SI	200509	200712
RI/FS	200906	201310
RD	201310	201412
RA(C)	201403	201610
LTM	201610	202610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

TEAD-007-R-01, the on-post chemical range MR site, encompasses 129.16 acres within the installation boundaries. The site is adjacent to the operational chemical range, which is identified as SWMU 7 and AEDB-R site number TEAD-15. In addition, two sub-units of SWMU 1 (active OB/OD area) are located with the on-post chemical range MR site. These are SWMU 1b and 1c. There are no IRP activities occurring within the on-post chemical range MR site at this time.

This chemical range was used from about 1942 to the early-1970s. It consisted of a surveillance area, tracer range firing course, chemical test range, and disposal trenches. Munitions testing and disposal at the chemical range included items such as flares, smoke pots and grenades, incendiary devices, and riot control gases. Chemical warfare material (CWM) was not tested or disposed of at the range.

CLEANUP/EXIT STRATEGY

In December 2007, the SI was completed. The SI recommended further investigation for MEC and MC. In July 2009, a contract was awarded for the completion of a RI. The RI fieldwork was completed in 2010. Upon completion of the RI, it is assumed that an FS will be required, followed by a MEC removal action, along with institutional controls and MEC monitoring.

Site ID: TEAD-008-R-01
Site Name: EOD Training Area
Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Phases	Start	End
PA	201005	201008
SI	201103	201205
RI/FS	201205	201410
RD	201410	201512
RA(C)	201512	201609
LTM	201609	202609

RIP Date: N/A

RC Date: 201609

SITE DESCRIPTION

The explosive ordnance disposal (EOD) training area is located north and adjacent to Building 150. The site is approximately 1.5 acres. Within the area are three small revetments lined with railroad ties. It is assumed that the revetments were utilized for tool training, which involved small explosive charges.

CLEANUP/EXIT STRATEGY

This site was added to the MR program in February 2011. A SI is in progress and will continue through 2012. The COCs and munitions of concern (MOC) are unknown at this time. Upon completion of the SI and a subsequent RI/FS, it is assumed that a MEC removal action along with institutional controls and MEC monitoring will be required.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
PBA@MR Tooele	PBA@MR Tooele	201203	
TEAD-002-R-01	NE DEMIL AREA	200712	Final Site Inspection Report for Tooele Army Depot, TLI Solutions, 200801
TEAD-003-R-01	CHEMICAL RANGE	201203	

MMRP Schedule

Date of MMRP Inception 200207

Past Phase Completion Milestones

2003

PA	(PBA@MR Tooele - PBA@MR Tooele, TEAD-001-R-01 - OB/OD AREA, TEAD-002-R-01 - NE DEMIL AREA, TEAD-003-R-01 - CHEMICAL RANGE, TEAD-004-R-01 - OLD BURN AREA, TEAD-005-R-01 - BUILDING 539 DISPOSAL AREA, TEAD-006-R-01 - Old Burn Staging Area, TEAD-007-R-01 - On-Post Chemical Range)

2008

SI	(PBA@MR Tooele - PBA@MR Tooele, TEAD-001-R-01 - OB/OD AREA, TEAD-002-R-01 - NE DEMIL AREA, TEAD-003-R-01 - CHEMICAL RANGE, TEAD-004-R-01 - OLD BURN AREA, TEAD-005-R-01 - BUILDING 539 DISPOSAL AREA, TEAD-006-R-01 - Old Burn Staging Area, TEAD-007-R-01 - On-Post Chemical Range)

2010

PA	(TEAD-008-R-01 - EOD Training Area)

Projected Phase Completion Milestones

See attached schedule

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

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

Final RA(C) Completion Date: 201610

Schedule for Next Five-Year Review: 2013

Estimated Completion Date of MMRP at Installation (including LTM phase): 202610

TOOELE ARMY DEPOT MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
TEAD-001-R-01	OB/OD AREA	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-004-R-01	OLD BURN AREA	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-005-R-01	BUILDING 539 DISPOSAL AREA	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-006-R-01	Old Burn Staging Area	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-007-R-01	On-Post Chemical Range	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18+**
TEAD-008-R-01	EOD Training Area	RI/FS						
		RD						
		RA(C)						
		LTM						

Community Involvement

Technical Review Committee (TRC): 198802

Community Involvement Plan (Date Published): 200103

Restoration Advisory Board (RAB): RAB established 199404

RAB Adjournment Date: N/A
RAB Adjournment Reason: None

Additional Community Involvement Information

TEAD maintains an active community involvement program. Technical review committee (TRC) meetings are conducted to review activities associated with the ongoing IRP and MMRP. These meetings are public and are advertised in the local newspaper and notices are mailed to individuals on TEAD's mailing list. Even though the public is invited, there usually is minimal participation. Those who typically attend the meetings are from local, state, and federal agencies.

TEAD formed a restoration advisory board (RAB) to address issues relating to restoration efforts on excess property resulting from the BRAC 93 decision to realign TEAD's maintenance mission. This RAB was formed separately from the TRC and TEAD felt that it would be better to address BRAC and IRP issues separately. The BRAC RAB was formed in 1994 and included 18 members. These members represented local, state, and federal agencies, as well as the Army and the public. The RAB included 18 public members. In 1999 in an effort to stimulate more interest in the ongoing IRP, the BRAC RAB was combined with the TRC.

Administrative Record is located at

Environmental Management Division
JMTE-RMD-EM, Building 8
1 Tooele Army Depot
Tooele, Utah 84074-5003
(435) 833-3504

Information Repository is located at

Tooele City Public Library
Tooele, Utah
(435) 882-2182

Marriott Library
University of Utah
Salt Lake City, Utah
(801) 581-6594

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

TAPP Title: N/A

Potential TAPP: N/A