

FY2016

**DEFENSE DIST DEPOT SAN JOAQUIN, SHARPE
FACILITY**

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, 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 installation, the executing agencies, the regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and tentative budgets for 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

ACL	Alternate Concentration Limit
AEDB-R	Army Environmental Database-Restoration
CCl4	Carbon tetrachloride
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
CPT	Cone Penetrometer Test
CRWQCB	California Regional Water Quality Board
CVWB	Central Valley Water Board
DD	Decision Document
EE/CA	Engineering Evaluation/Cost Analysis
ESD	Explanation of Significant Differences
FFA	Federal Facilities Agreement
FS	Feasibility Study
FY	Fiscal Year
IAP	Installation Action Plan
IC	Institutional Control
LUC	Land Use Control
MCL	Maximum Contaminant Level
MNA	Monitored Natural Attenuation
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbons
PCE	Tetrachloroethene
RA	Remedial Action
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RCP	Response Completion Plant
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
RSL	Residential Screening Level
SVE	Soil Vapor Extraction
SVOC	Semi-volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
UE	Unrestricted Exposure
USAEC	US Army Environmental Command
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UU	Unlimited Use

VOC Volatile Organic Compound

Acronym Translation Table

CERCLA

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

RCRA

= RCRA Facility Assessment(RFA)
= Confirmation Sampling(CS)
= RCRA Facility Investigation/Corrective Measures Study(RFI/CMS)
= Design(DES)
= Corrective Measures Implementation (Construction)(CMI(C))
= Corrective Measures Implementation (Operation)(CMI(O))
= Long Term Management(LTM)
= Interim Measure(IM)

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
SHAD-001 (P1)	001
SHAD-002 (P2)	002
SHAD-003 (P3)	003
SHAD-004 (P4)	004
SHAD-005 (P5)	005
SHAD-006 (P6)	006
SHAD-007 (P7)	007
SHAD-008 (P8)	008
SHAD-011 (S3)	011
SHAD-034 (S26)	034
SHAD-036 (S28)	036
SHAD-038 (S30)	038
SHAD-041 (S33)	041
SHAD-042 (S34)	042
SHAD-044 (S36)	044
SHAD-136 UST12	136
SHAD-148 S-148	148
SHAD-153 P-1H	153

Installation Information

Installation Locale

Installation Size (Acreage): 720

City: Lathrop

County: San Joaquin

State: California

Other Locale Information

Sharpe Facility is approximately 65 miles south of Sacramento with access from Interstate 5 and Highway 99 and is located in California's primarily agricultural San Joaquin Valley. The installation lies within the limits of the City of Lathrop, a community incorporated in 1989. The unincorporated community of French Camp borders Lathrop to the northwest, and the City of Manteca borders Lathrop to the east. Nearby large urban communities include the City of Stockton, approximately 9 miles to the north, and the City of Modesto, approximately 20 miles south of the depot.

Installation Mission

The San Joaquin Depot maintains a Consolidation and Containerization Point that operates much like a cross-docking, freight forwarding business. Items from other depots, independent vendors and other government agencies are shipped to a warehouse at the Lathrop facility where they are consolidated into vans or on special air pallets for shipment to the customer overseas. On a monthly average 490 sea-going vans and 360 air pallets are shipped from the Consolidation and Containerization Point.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

USAEC

Regulator Participation

Federal US Environmental Protection Agency (USEPA)

National Priorities List (NPL) Status

DEFENSE DIST DEPOT SAN JOAQUIN, SHARPE FACILITY is not on the NPL

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

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

Installation Program Summaries

IRP

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

Affected Media of Concern: Groundwater, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201401	201409	2014
Planned	201901	201909	2019

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
OU 1 ESD	SHAD-001 (P1) , SHAD-002 (P2), SHAD-003 (P3) , SHAD-004 (P4) , SHAD-005 (P5), SHAD-006 (P6) , SHAD-007 (P7) , SHAD-008 (P8)
OU 1 ROD	SHAD-001 (P1) , SHAD-002 (P2), SHAD-003 (P3) , SHAD-004 (P4) , SHAD-005 (P5), SHAD-006 (P6) , SHAD-007 (P7) , SHAD-008 (P8)

Results This is the third five-year review report for RAs performed at the Sharpe facility pursuant to the Operable Unit (OU) 1 record of decision (ROD) and OU 2 ROD, as modified by an amendment and a memorandum to the site file.

Actions The remedies for OU 1 and OU2 were determined to protect human health and the environment in the short term. Recommendations were made for long-term protection.

Plans A fourth five year review will be conducted in 2019.

Recommendations and Implementation Plans:

OU-1:

The remedy for OU-1 protects human health and the environment in the short term. For the OU-1 remedy to be protective in the long term, the following action needs to be taken: establish land use controls (LUC) for groundwater use and potential vapor intrusion from groundwater in the OU-1 explanation of significant differences (ESD).

OU-2:

The remedy for OU-2 protects human health and the environment in the short term. For the OU-2 remedies to be protective in the long term, the following actions need to be taken: delineate the extent of trichloroethylene (TCE) concentrations in the vadose zone greater than the soil vapor cleanup standard and evaluate the need and feasibility for remedial action [soil vapor extraction (SVE)] at sites P-1A, P-1B, and P-1C; collect additional soil vapor samples in the MW326 cluster area to determine whether remedial action is warranted and establish this area as a new OU-2 site with LUCs. Furthermore, the area of potential radiological concern at Site S-33/29 needs to be investigated to determine whether an RA is necessary and feasible.

Land Use Control (LUC) Summary

LUC Title: GW Use LUCs

Site(s): SHAD-001 (P1) , SHAD-002 (P2), SHAD-003 (P3) , SHAD-004 (P4) , SHAD-005 (P5), SHAD-006 (P6) , SHAD-007 (P7) , SHAD-008 (P8)

ROD/DD Title: OU 1 ESD

Location of LUC

ACL plume boundary on post.

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes

Types of Engineering Controls: None

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

Date in Place: 201409

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: VOC

Additional Information

N/A

LUC Title: OU 2 LUC Soils

Site(s): SHAD-011 (S3)

ROD/DD Title: OU 2 ROD AMENDMENT

Location of LUC

On Installation, sites SHAD-011, 034, 036, 038, 041, 042, 043, 044, 052, & SHAD-060

Land Use Restriction: Media specific - Prohibit activities that results in contact with contaminated sediments, Restrict land use
- No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Markers, Signs

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

Date in Place: 201109

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 201109

LUC Enforcement: Annual Inspections, 5 Year Reviews, Markers

Contaminants: METALS, VOC

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

The installation forms an approximate rectangle 0.5 mile wide (east-west) and 2 miles long (north-south). It encompasses approximately 720 acres and ranges in elevation from 15 to 23 feet above mean sea level. Roth Road borders the northern boundary of the depot, Lathrop Road borders the southern boundary, and the Union Pacific Railroad runs parallel and adjacent to the installation's west and east boundaries. The South San Joaquin Irrigation District Canal also parallels the eastern boundary, and the Union Pacific Inter-Modal Facility borders the installation to the northeast.

The installation is divided into four major areas: the Administration and Housing Area, located at the northern end of the installation; the North Balloon, located just south of the Administration and Housing Area; the South Balloon, located at the southern end of the installation; and the Central Area, located between the North and South Balloon areas. The North and South Balloons are named after the shapes of areas enclosed by railroad tracks, which in map view look like hot-air balloons.

The distribution depot known as the Sharpe Site opened in 1941. The construction of major facilities at the Sharpe Site began during World War II and continued into the post war period. Additional facilities were constructed during the Korean and Vietnam conflicts. Two large warehouse facilities and various improvements were constructed during the last two decades. Land use at the Sharpe Site is light industrial. For most of its existence, the installation carried both supply and maintenance missions. The supply mission remains active today; it includes storage, handling, preservation, packaging, and shipment of general supplies and equipment. The maintenance mission included the repair and reconditioning of heavy equipment and aircraft; major waste-generating activities included paint stripping, metal finishing, and painting. After 1976, the maintenance mission was reduced to the maintenance of installation facilities and vehicles used in performing the supply mission.

Installation Program Cleanup Progress

IRP

- Prior Year Progress:** Remedial action (operation) [RA(O)] continued for the three pump and treat systems related to the OU-1 groundwater plumes. Quarterly and annual well monitoring and reporting as well as annual groundwater modeling and groundwater depth reporting occurred. LUC's were monitored for OU-1 and OU-2 sites.
- Future Plan of Action:** Work to optimize the groundwater treatment at the plumes by adding additional wells and deleting wells which are no longer useful based on the groundwater modeling. Continue to monitor LUCs for OU-1 and OU-2 sites.

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Installation Restoration Program**

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 153/135

Installation Site Types with Future and/or Underway Phases

2	Burn Area (SHAD-038 (S30), SHAD-041 (S33))
4	Contaminated Fill (SHAD-034 (S26), SHAD-036 (S28), SHAD-042 (S34), SHAD-044 (S36))
8	Contaminated Ground Water (SHAD-001 (P1) , SHAD-002 (P2), SHAD-003 (P3) , SHAD-004 (P4) , SHAD-005 (P5), SHAD-006 (P6) , SHAD-007 (P7) , SHAD-008 (P8))
2	Contaminated Sediments (SHAD-011 (S3) , SHAD-153 P-1H)
1	Spill Site Area (SHAD-148 S-148)
1	Underground Storage Tank (SHAD-136 UST12)

Most Widespread Contaminants of Concern

Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Soil

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

Site ID	Site Name	Action	Remedy	FY
SHAD-047 (PS1)	Bldg S-49 Pest Control Shop	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-088 (A28)	Bldg T199 Wash Rack Area	FRA	WASTE REMOVAL - SOILS	1990
SHAD-136 UST12	RA of Former UST Site by Bldg S-108	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-137 UST5	RA Former UST Site by Bldg S-42	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-138 UST15	RA Former UST Site by Bldg 116 & 12	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-139 UST17	RA of Former UST Site by Bldg 119	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-140 UST18	RA of Former USTs by Bldg 118	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-141 UST34	RA of Former UST Site by Bldg 308	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-143 UST49	RA of Former UST Site by Bldg 649	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-144 UST55	RA of Former UST by Bldg 649	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
SHAD-035 (S27)	North Balloon Area Oil Dumping	FRA	REMOVAL	1994
SHAD-142 UST73	RA of Former UST Site by Bldg 508	IRA	WASTE REMOVAL - SOILS	1994
SHAD-142 UST73	RA of Former UST Site by Bldg 508	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SHAD-009 (S1)	Bldg TS-47 Pest Control Storage,S1	FRA	WASTE REMOVAL - SOILS	1995
SHAD-136 UST12	RA of Former UST Site by Bldg S-108	IRA	WASTE REMOVAL - SOILS	1995

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
SHAD-137 UST5	RA Former UST Site by Bldg S-42	IRA	WASTE REMOVAL - SOILS	1995
SHAD-138 UST15	RA Former UST Site by Bldg 116 & 12	IRA	WASTE REMOVAL - SOILS	1995
SHAD-139 UST17	RA of Former UST Site by Bldg 119	IRA	WASTE REMOVAL - SOILS	1995
SHAD-140 UST18	RA of Former USTs by Bldg 118	IRA	WASTE REMOVAL - SOILS	1995
SHAD-141 UST34	RA of Former UST Site by Bldg 308	IRA	WASTE REMOVAL - SOILS	1995
SHAD-143 UST49	RA of Former UST Site by Bldg 649	FRA	WASTE REMOVAL - SOILS	1995
SHAD-144 UST55	RA of Former UST by Bldg 649	IRA	WASTE REMOVAL - SOILS	1995
SHAD-015 (S7)	Bldg 173 Area Sandblast Booth	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
SHAD-020 (S12)	Holding/oxi Ponds(FAC 400)S-12	FRA	WASTE REMOVAL - SOILS	1997
SHAD-042 (S34)	Rundway Ponds (P-5A)	FRA	INSTITUTIONAL CONTROLS	1997
SHAD-043 (S35)	FMR WSTE Storage Area Grid A4, P-2A	FRA	INSTITUTIONAL CONTROLS	1997
SHAD-050 (PS4)	Bldg 404 Sump, (UST 46)	FRA	NATURAL ATTENUATION	1997
SHAD-084 (A24)	Bldg 186 Engine Test Sump (UST 16)	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997
SHAD-139 UST17	RA of Former UST Site by Bldg 119	IRA	BIOVENTING	1997
SHAD-145 B162	Bldg 162 VOC	FRA	INSTITUTIONAL CONTROLS	1997
SHAD-145 B162	Bldg 162 VOC	IRA	SOIL VAPOR EXTRACTION	1997
SHAD-150 UST89	O/W Separator Sump in Bldg 101	FRA	SOIL VAPOR TREATMENT	1997
SHAD-011 (S3)	Bldg S-119 Paint Booth, S-12	FRA	WASTE REMOVAL - SOILS	1998
SHAD-021 (S13)	Bldg 391 Fire Tng Area, P-6A	FRA	SOIL VAPOR EXTRACTION	1998
SHAD-036 (S28)	S. Balloon sludge DispArea,P-1A,B,C	FRA	SOIL VAPOR EXTRACTION	1998
SHAD-052 (PS6)	Bldg 649 Care/Pres Area P-1D,E,F,G	FRA	SOIL VAPOR EXTRACTION	1998
SHAD-149 UST69	O/W Separator Sump by Bldg 649	FRA	WASTE REMOVAL - LIQUIDS	1998
SHAD-038 (S30)	SBA Burn Pits Grid S3, S-30	FRA	INSTITUTIONAL CONTROLS	2000
SHAD-044 (S36)	SBA Sludge disposal LF Area	FRA	INSTITUTIONAL CONTROLS	2000
SHAD-060 PS14	Open Storage AS37-163,P-2B,4B,4C	FRA	INSTITUTIONAL CONTROLS	2000
SHAD-152 B-199	Soil Contamination No.side Bldg 199	IRA	WASTE REMOVAL - SOILS	2000

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
SHAD-137 UST5	RA Former UST Site by Bldg S-42	FRA	OTHER	2002
SHAD-138 UST15	RA Former UST Site by Bldg 116 & 12	FRA	OTHER	2002
SHAD-139 UST17	RA of Former UST Site by Bldg 119	FRA	OTHER	2002
SHAD-140 UST18	RA of Former USTs by Bldg 118	FRA	OTHER	2002
SHAD-141 UST34	RA of Former UST Site by Bldg 308	FRA	OTHER	2002
SHAD-142 UST73	RA of Former UST Site by Bldg 508	FRA	OTHER	2002
SHAD-144 UST55	RA of Former UST by Bldg 649	FRA	OTHER	2002
SHAD-146 S-146	Old Spill Area Between Bldg199&171	FRA	OTHER	2002
SHAD-148 S-148	Spill Site South of Bldg 271	FRA	OTHER	2002
SHAD-148 S-148	Spill Site South of Bldg 271	FRA	REMOVAL	2002
SHAD-151 F-137	Sharpe Well #2, Facility #137	FRA	OTHER	2002
SHAD-152 B-199	Soil Contamination No.side Bldg 199	FRA	OTHER	2002
SHAD-136 UST12	RA of Former UST Site by Bldg S-108	FRA	NATURAL ATTENUATION	2003
SHAD-139 UST17	RA of Former UST Site by Bldg 119	FRA	NATURAL ATTENUATION	2003
SHAD-140 UST18	RA of Former USTs by Bldg 118	FRA	NATURAL ATTENUATION	2003
SHAD-141 UST34	RA of Former UST Site by Bldg 308	FRA	NATURAL ATTENUATION	2003
SHAD-142 UST73	RA of Former UST Site by Bldg 508	FRA	NATURAL ATTENUATION	2003
SHAD-147 B-613	Former AST by 613 & UST by 350 FS	FRA	OTHER	2003
SHAD-152 B-199	Soil Contamination No.side Bldg 199	FRA	NATURAL ATTENUATION	2003
SHAD-034 (S26)	Open Dump for Bldg 170-184 NBA,S-26	FRA	WASTE REMOVAL - SOILS	2007
SHAD-042 (S34)	Rundway Ponds (P-5A)	FRA	SOIL VAPOR EXTRACTION	2010

Duration of IRP

Date of IRP Inception: 197901

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 209509/209509

Date of IRP completion including Long Term Management (LTM): 209509

IRP Contamination Assessment

Contamination Assessment Overview

Wastes generated at the Sharpe Site were primarily a result of former maintenance operations such as paint stripping, metal finishing, and painting. Other waste-generating activities included engine overhauls; hydraulic and electrical repairs; airframe and bodywork; and component repair and reconditioning. These tasks required the use of petroleum hydrocarbon fuels and a variety of other industrial chemicals (e.g., chlorinated solvents). Releases of these chemicals contaminated installation soil and groundwater through multiple mechanisms.

VOC contamination in groundwater appears to have originated from chlorinated solvents used in industrial and vehicle maintenance activities being discharged or released into soil. VOCs may have migrated downward through the soil column via direct infiltration or through leaching (i.e., dissolving in percolating surface water). Contaminants dissolved in groundwater have migrated beyond the western and northern property boundaries of the Sharpe Site.

Non-VOC contaminants detected in soil at the Sharpe Site include metals, total petroleum hydrocarbons (TPH), and pesticides. Metals (lead and total chromium) contamination of soils occurred as a result of various activities, including the disposal of paints, paint solvents, and sandblasting wastes. TPH contamination of soils occurred as a result of leaking underground storage tanks. In addition, pesticides present in surface soil were the result of pesticide mixing and container rinsing operations. Metals (arsenic, selenium, chromium, and lead), the herbicide bromacil (used by the Sharpe Site to control weed growth until 1996), nitrate, and TPH have also been detected in groundwater samples. Among the non-VOCs detected in groundwater, only bromacil, TPH, lead, and chromium may have originated at source areas on the Sharpe Site.

Environmental studies have been underway at the Sharpe Site since 1980 when groundwater contamination was first detected at the Sharpe Site. VOCs, metals, and pesticides were identified as groundwater contaminants. In 1982, the US Army Environmental Center, formerly the US Army Toxic and Hazardous Materials Agency, initiated an RI at the Sharpe Site.

Results of the RI led to the Sharpe Site being added to the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) NPL as a Superfund site in 1987. In 1989, the Army, USEPA, Central Valley Water Board, and Department of Toxic Substances Control co-signed the federal facility agreement (FFA) for the Sharpe Site. The FFA established two OUs to facilitate environmental cleanup at the Sharpe Site. OU-1 encompasses groundwater in four (A, B, C, and D) monitoring zones contaminated primarily with VOCs released from activities on the installation. OU-2 consists of contaminated soil and soil vapor above the water table.

Groundwater:

An interim groundwater extraction and treatment system was put into operation in March 1987 to control migration of VOC-contaminated groundwater from the South Balloon. Separate investigations were conducted to identify and evaluate interim RA alternatives in the North Balloon. These investigations led to the design and placement of a second interim groundwater extraction and treatment system, which began operation in October 1990.

The groundwater remedy selected in the OU-1 ROD was extraction and treatment of VOC-contaminated groundwater by air stripping, with treated groundwater being used for industrial purposes or being discharged to surface water, percolation ponds, or injection wells. The two interim groundwater extraction and treatment systems constructed in the North and South Balloons were incorporated into the OU-1 remedy. Construction of a third groundwater treatment plant, located in the Central Area, was completed and operation began in May 1995. Construction completion of the OU-1 remedy was signified by the start of groundwater extraction from extraction well EWCC3 in March 1998.

Soil:

Soil in several areas of the Sharpe Site was found to be contaminated with TCE, lead, total chromium, and pesticides. As part of the feasibility study (FS) for soil, pilot-scale SVE studies were conducted in 1991, 1992, and 1995 to determine whether SVE was a feasible remedial technology for the treatment of TCE-contaminated soils at the Sharpe Site. In November 1994 and April 1995, excavation and off-site disposal of pesticide-contaminated soils from the former Pesticide Mix Area in the North Balloon was performed.

In February 1996, the OU-2 ROD was signed. The OU-2 ROD designated 111 solid waste management units (SWMU) for no further action (NFA) (including underground storage sites that are not remediated under CERCLA). In addition, because pesticide-contaminated soil at the former Pesticide Mix Area had been removed prior to the signing of the OU-2 ROD, the ROD stated that NFA would be required for the Pesticide Mix Area. The OU-2 ROD identified 14 TCE sites requiring further investigation and/or remediation using in situ volatilization (now more commonly referred to as SVE), and 14 areas with lead and/or chromium concentrations that required further investigation and/or remediation by excavation and off-site disposal. These

IRP Contamination Assessment

Contamination Assessment Overview

14 metals areas were consolidated into five metals sites.

Cleanup Exit Strategy

Continue RA(O) for the three pump and treat systems related to the OU-1 groundwater plumes. Continue quarterly and annual well monitoring and reporting as well as annual groundwater modeling and groundwater depth reporting. Work to better optimize the groundwater treatment at the plumes by adding addition wells and deleting wells which are no longer useful based on the groundwater modeling.

Continue to monitor LUCs for OU-2 sites. Conduct SVE rebound sampling on site P-1A, -1B, and -1C. Conduct a remedial investigation (RI)/FS for sites P-1H (SHAD 153). Prepare waste characterization work plan to include radiological contamination for site S-33/39 (SHAD-041). Prepare either decision document (DD) or engineering evaluation/cost analysis (EE/CA) and implement remedy and response action completion report (RACR).

IRP Previous Studies

Year	Title	Author	Date
1989	Federal Facility Agreement for Sharpe Army Depot, Docket No. 89-17. Effective Date: March 16	United States Department of the Army	MAR-1989
1992	Substantive Waste Discharge Requirements for Land Disposal, DDRW-Sharpe (ROD Addendum, Attachment 2)	CVWB	JAN-1992
1993	Remedial Investigation/Feasibility Study at DDRW-Sharpe Site Record of Decision, Operable Unit 1	ESE	JAN-1993
1996	Record of Decision, Basewide Remedy for DDRW-Sharpe Site	ESE	JAN-1996
2001	DDJC-Sharpe Operation and Maintenance Manual for the Central Area Groundwater Treatment System	URS	JAN-2001
2003	DDJC-Sharpe Operation and Maintenance Manual for the North Balloon Groundwater Treatment System	URS	JAN-2003
	DDJC-Sharpe Operation and Maintenance Manual for the South Balloon Groundwater Treatment System	URS	JAN-2003
2005	DDJC-Sharpe Response Completion Plan	URS	JAN-2005
2008	Groundwater Treatment Plant Monthly Performance Monitoring Reports	URS	JAN-2008
2009	DDJC-Sharpe Second Five-Year Review Report	URS	JAN-2009
	Defense Distribution Depot San Joaquin Real Property Master Plan Digest	R&K Engineering	JAN-2009
	Technical Memorandum: DDJC-Sharpe Alternate Discharge Location for Treated Groundwater	URS	JAN-2009
	OU 1 (Groundwater) FFA Annual Progress Reports	URS	JAN-2009
	FFA Annual Progress Reports	URS	JAN-2009
	Technical Memorandum: Evaluation of the Optimized Extraction Well Test, DDJC-Sharpe	URS	JAN-2009
	DDJC-Sharpe Comprehensive Cone Penetrometer Testing Investigation Results Report	URS	JAN-2009
	DDJC-Sharpe Potable Well Evaluation	URS	JAN-2009
	FFA Annual Progress Reports	URS	JAN-2009
	Technical Memorandum: Defense Distribution Depot, San Joaquin California Sharpe Site, Three Dimensional Groundwater Model Update to Third Quarter 2008	URS	JAN-2009
2010	DDJC-Sharpe Site P-5A Soil Vapor Extraction Remedial Design/Remedial Action Work Plan	URS	JAN-2010
	Technical Memorandum: Defense Distribution Depot San Joaquin, Sharpe Site, Percolation Test Results for Alternate Discharge Location for Treated Groundwater	URS	JAN-2010

IRP Previous Studies

2010	Title	Author	Date
	Update and Results of Simulation of Third Quarter Conditions with the Sharpe Site Groundwater Flow and Transport Model, included as an attachment or appendix to the FFA Annual Progress Reports	URS	JAN-2010
	Memorandum: Results of Testing Extraction Wells (EW) NB1 and EWNB2 Operation to Reduce Supply Well Hydraulic Effects, North Balloon Area, DDJC-Sharpe	DLA	JAN-2010
	DDJC-Sharpe Off-Depot Potable Well Contingency Plan	URS	JAN-2010
	DDJC-Sharpe Potassium Permanganate Pilot Study Results Report	URS	JAN-2010
	DDJC-Sharpe Enhanced Reductive Dechlorination Technology Emulsified Oil Pilot Study Results Report	URS	JAN-2010
2011	Operable Unit 1 Remedy Enhancement Focused Feasibility Study, Defense Distribution Depot San Joaquin, Sharpe Site	URS	JAN-2011
	Amendment to the Record of Decision Basewide Remedy for Defense Distribution Depot San Joaquin, Sharpe Site (Operable Unit 2, Soils)	URS	JAN-2011
	Addendum to the Real Property Master Plan Digest, included as Appendix C in the OU 2 ROD Amendment	URS	JAN-2011
	FFA Annual Progress Reports	URS	JAN-2011
	Community Relations Plan, Defense Distribution Depot San Joaquin, Sharpe Site	URS	JAN-2011
2012	Memorandum to the Site File: Termination of Land Use Controls and Documentation of No Further Action at Operable Unit 2 Trichloroethene Sites P-2A, P-2B, and P-4B	DLA	JAN-2012
	Building 404 Percolation Pond Expansion Pilot Test Report	URS	JAN-2012
	Technical Memorandum: Site P-5A SVE Rebound Testing and Optimization Strategy, Sharpe Site	URS	JAN-2012
	Land Use Controls Sites Inspections and Burrowing Owl Monitoring, included as an appendix to the FFA Annual Progress Reports	URS	JAN-2012
	CPT Field Sampling Results Report for PW020, MW532A, and North Balloon Supply Well Areas, Defense Distribution Depot San Joaquin, Sharpe Site	URS	JAN-2012
	Field Sampling Results and Risk Assessment Report Operable Unit 2 TCE Sites P-1A, P-1B, P-1C, P-1G, P-2A, P-2B, and P-4B, Defense Distribution Depot San Joaquin, Sharpe Site	URS	JAN-2012
2013	Groundwater Well Installation Report for MW327, MW328, MW329, MW330, MW447, MW539, EWB4, and EWCB6, Defense Distribution Depot San Joaquin, Sharpe Site	URS	JAN-2013
2014	Defense Distribution Depot San Joaquin, Sharpe Site Third Five-year Review Report Final	URS	SEP-2014

IRP Previous Studies

2014

Title	Author	Date
Explanation of Significant Differences to the Record of Decision Operable Unit 1, Defense Distribution Depot San Joaquin, Sharpe Site	URS	SEP-2014

**DEFENSE DIST DEPOT SAN JOAQUIN, SHARPE
FACILITY**

Installation Restoration Program

Site Descriptions

Site ID: SHAD-001 (P1)
Site Name: South Balloon Area, GW Plume 1
Alias: 001

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	198703
RD.....	198406.....	198703
RA(C).....	198703.....	209509
RA(O).....	198703.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

The South Balloon groundwater treatment system (VOC air stripping) started full time operation in March 1987. In 1993, the OU-1 ROD was signed. Long-term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the National Pollutant Discharge Elimination System (NPDES) permit. In 2008, cone penetrometer test (CPT) investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address contaminants of concern (COC) in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the South Balloon. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-002 (P2)
Site Name: S. Runway Area GW
Alias: 002

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199111
RD.....	199301.....	199307
RA(C).....	199307.....	209509
RA(O).....	199401.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

The South Balloon groundwater treatment system (VOC air stripping) started full time operation in March 1987. In 1993, the OU-1 ROD was signed. Long-term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the South Balloon. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-003 (P3)
Site Name: W. of Bldg 508 GW
Alias: 003

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199111
RD.....	199301.....	199307
RA(C).....	198703.....	209509
RA(O).....	199401.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

The South Balloon groundwater treatment system (VOC air stripping) started full time operation in March 1987. In 1993, the OU-1 ROD was signed. Long-term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the South Balloon. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-004 (P4)
Site Name: Central Area 1 (GW)- West Side
Alias: 004

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199111
RD.....	199301.....	199402
RA(C).....	199402.....	209509
RA(O).....	199506.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

Central Area groundwater treatment system (VOC air stripping) started full time operation in June 1995. In 1993, the OU-1 ROD was signed. Long term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES Permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the Central Area. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-005 (P5)
Site Name: Central Area 2 GW - West Plume
Alias: 005

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199111
RD.....	199301.....	199402
RA(C).....	199402.....	209509
RA(O).....	199506.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

Central Area groundwater treatment system (VOC air stripping) started full time operation in June 1995. In 1993, the OU-1 ROD was signed. Long term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES Permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the Central Area. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-006 (P6)
Site Name: N. Runway Area GW Plume 6
Alias: 006

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199111
RD.....	199301.....	199402
RA(C).....	199402.....	209509
RA(O).....	199506.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

Central Area groundwater treatment system (VOC air stripping) started full time operation in June 1995. In 1993, the OU-1 ROD was signed. Long term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES Permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. In 2015, a full-scale in situ remedial action (hydraulic fracturing and potassium permanganate injection) was conducted in the Central Area. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-007 (P7)
Site Name: N. Balloon Area Plume 7 Westside
Alias: 007

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199010
RD.....	198806.....	199010
RA(C).....	198903.....	209509
RA(O).....	199010.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

North Balloon groundwater treatment system (VOC air stripping) started full-time operation in October 1990. In 1993 the OU-1 ROD was signed. Long-term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES Permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-008 (P8)
Site Name: N. Balloon Area Plume 8 Eastside
Alias: 008

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199010
RD.....	198806.....	199010
RA(C).....	198903.....	209509
RA(O).....	199010.....	209509
RIP Date:	209509	
RC Date:	209509	

SITE DESCRIPTION

North Balloon groundwater treatment system (VOC air stripping) started full-time operation in October 1990. In 1993 the OU-1 ROD was signed. Long-term operations and remedial optimization continue. In 2002, a CERCLA preliminary site closeout report was completed. In 2005, a decision was made to discontinue off-site discharge and not renew the NPDES Permit. In 2008, CPT investigations were conducted to collect and analyze soil vapor and groundwater data in the North Balloon, Central, and South Balloon areas. These investigations were performed to support remedial decisions to address COC in the vadose zone, and to provide data to support optimization and enhancement of the remedy for COCs in groundwater beneath and downgradient from the installation. The investigation identified elevated TCE concentrations in an aquitard between the A and B hydrogeologic zones that will not be effectively remediated with the pump and treat system. In 2009, in situ pilot studies were conducted. In 2014, a final OU-1 ESD was signed that enhanced the pump and treat remedy by adding in situ remediation to target VOC concentrations in fine grained soils and also added LUCs. Annual LUC inspections were performed through 2015.

The RA(C) and RA(O) phase end dates extend to FY95 based on documented groundwater modeling.

CLEANUP/EXIT STRATEGY

Continue groundwater pump and treat/optimization as required by OU-1 ROD.

Site ID: SHAD-011 (S3)
Site Name: Bldg S-119 Paint Booth, S-12
Alias: 011

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199411
RD.....	199604.....	199708
RA(C).....	199708.....	199807
LTM.....	199912.....	204609
RIP Date:	N/A	
RC Date:	199911	

SITE DESCRIPTION

This site contained lead and chromium contaminated soil from painting operations. In July 1998, a soil removal was completed. On Sept. 29, 1999, a draft final remedial action report was submitted. The regulatory agencies concurred and the document became final.

LUCs (signs) were posted in December 1999. This signage of possible hazards in areas of potential contamination represents institutional controls (IC) that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. In 2011 the OU-2 ROD Amendment formally instituted the LUC's and Burrowing Owl monitoring at this site. Annual LUC inspections were completed through FY15.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-034 (S26)
Site Name: Open Dump for Bldg 170-184 NBA,S-26

Alias: 034

STATUS

Regulatory Driver: CERCLA

RRSE:

Media of Concern: Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199411
RD.....	199601.....	199708
RA(C).....	199708.....	200701
RA(O).....	200509.....	200701
LTM.....	201109.....	204609
RIP Date:	200701	
RC Date:	201109	

SITE DESCRIPTION

A soil removal per the OU-02 ROD was completed and a draft final remedial action report was submitted in September 1999. That report became final in September 2000. In 2005, based on recommendations in the five-year review report and draft response completion plan (RCP), a decision was made to re-open this site to perform a RA on contamination remaining under the railroad track, eliminating the need for ICs at this site. In FY07, a soil removal action was completed. On Oct. 26, 2007, a RA report was submitted to FFA agencies.

In 2011 the OU-2 ROD Amendment formally instituted the LUC's and Burrowing Owl monitoring at this site. Annual LUC inspections were completed through FY15.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-036 (S28)
Site Name: S. Balloon sludge DispArea,P-1A,B,C
Alias: 036

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Light non-aqueous phase liquids (LNAPL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199411
RD.....	199509.....	199708
RA(C).....	199708.....	199807
RA(O).....	199808.....	201908
RIP Date:	199808	
RC Date:	201908	

SITE DESCRIPTION

A Final Underground Storage Tank (UST) Alternatives Report, dated September 2003, was submitted to the California Regional Water Quality Control Board (CRWQCB). Monitored natural attenuation (MNA) is the selected remedy. Monitoring well MW459A and MW483A were being monitored through 2015. In fiscal year (FY) 14 and FY15, an investigation was conducted and results did not meet the low threat closure policy for TPH contamination due to residual light non-aqueous phase liquid (LNAPL). In FY16, LUCs will be implemented at the site.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-038 (S30)
Site Name: SBA Burn Pits Grid S3, S-30
Alias: 038

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199603
RD.....	199604.....	199708
RA(C).....	199708.....	199912
LTM.....	200001.....	204609

RIP Date: N/A

RC Date: 199912

SITE DESCRIPTION

This site was designated as a metals (lead and chromium) site in the OU-2 ROD. Fieldwork during the remedial design (RD) phase determined that the quantities of metals contamination was very low and did not warrant removal.

LUCs (signs) were posted in December 1999. This signage of possible hazards in areas of potential contamination represents ICs that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. In 2011 the OU-2 ROD Amendment formally instituted the LUC's at this site. Annual LUC inspections were completed through FY15.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-041 (S33)
Site Name: Burn Pits Grid AC-W5, SBA, S-33/29
Alias: 041

STATUS

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

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	201908
RIP Date:	N/A	
RC Date:	201908	

SITE DESCRIPTION

This site was designated as a metals (lead and chromium) site in the OU-2 ROD. Field investigation during the RD phase determined that site quantities were so small that they didn't warrant removal. LUCs (signs) were posted in December 1999. This signage of possible hazards in areas of potential contamination represents ICs that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. In 2011 the OU-2 ROD Amendment formally instituted the LUCs at this site. Annual LUC inspections were completed through FY15.

In 2012 low level radiation was detected at this site. In 2016, the Army plans to do a waste characterization study to determine nature and extent of the radiological contamination .

CLEANUP/EXIT STRATEGY

A draft characterization work plan will be prepared to address radiological contamination. The Army will then develop an EE/CA or ESD, remediate the radiological issue and submit a RACR for closure.

Site ID: SHAD-042 (S34)
Site Name: Rundway Ponds (P-5A)
Alias: 042

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199603
RD.....	199604.....	201001
RA(C).....	199708.....	201004
RA(O).....	201006.....	201709
RIP Date:	201006	
RC Date:	201709	

SITE DESCRIPTION

Site P-5A was originally designated as a TCE SVE site. During the RD phase, it was determined that the amount of TCE in the soil did not pose a risk to the groundwater, so NFA was recommended. This was documented in the NFA sites RA report.

In 2006, increasing groundwater monitoring concentrations and soil vapor exceeding 350 parts per billion by volume determined that additional source mass delineation was required and probably SVE or other RA. The magnitude of TCE concentrations present in the soil and groundwater made Site P-5A a top priority for implementing source-control measures.

Construction of a SVE system was completed in FY10. The system operated from April 2010 through March 2014 and was shut down for rebound. Based on rebound sampling results, a draft RACR was prepared in FY15 that recommended site closure for UU/UE; however, EPA did not accept the risk assessment and would only evaluate unlimited use/unrestricted exposure (UU/UE) status using screening levels. In FY16, the RACR will be finalized to document the remedy has met ROD cleanup standards for groundwater protection.

In 2011 the OU-2 ROD Amendment formally instituted the LUCs at this site. Annual LUC inspections were completed through FY15.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-044 (S36)
Site Name: SBA Sludge disposal LF Area
Alias: 044

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199603
RD.....	199604.....	199708
RA(C).....	199708.....	199912
LTM.....	200001.....	204609

RIP Date: N/A

RC Date: 199912

SITE DESCRIPTION

This site was designated as an OU-2 metals site. Fieldwork was conducted during the RD phase. This site was documented in NFA RA report.

CLEANUP/EXIT STRATEGY

This site currently has a LUC to control exposure to contamination.

Site ID: SHAD-136 UST12
Site Name: RA of Former UST Site by Bldg S-108
Alias: 136

STATUS

Regulatory Driver: CERCLA

RRSE:

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197901.....	198001
SI.....	198002.....	198302
RI/FS.....	198302.....	199411
RD.....	199701.....	200206
IRA.....	199001.....	199503
RA(C).....	200206.....	200210
RA(O).....	200210.....	200409
LTM.....	201301.....	204609

RIP Date: 200210

RC Date: 200409

SITE DESCRIPTION

A Final UST Alternatives Report, dated September 2003, was submitted to the CRWQCB. MNA is the selected remedy. Monitoring well MW459A and MW483A are being monitored. MNA sampling was conducted in 2008.

CLEANUP/EXIT STRATEGY

Prepare a work plan for soil excavation, conduct confirmation sampling, provide analysis/validation and prepare an NFA report to close the site.

Site ID: SHAD-148 S-148
Site Name: Spill Site South of Bldg 271
Alias: 148

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	197901.....	198010
SI.....	198002.....	198302
RI/FS.....	198302.....	199411
RD.....	199703.....	200206
RA(C).....	200206.....	200209
LTM.....	201301.....	201812

RIP Date: N/A

RC Date: 200209

SITE DESCRIPTION

NFA was recommended in a Draft Alternatives Report dated May 2002 which was submitted to the CRWQCB; but, it was not accepted. In FY14 and 15, an investigation was conducted and results met the low threat closure policy for TPH contamination; Central Valley Water Board (CVWB) concurred. However, polycyclic aromatic hydrocarbons (PAH) contamination was detected in soil above the USEPA residential screening levels (RSL) and in groundwater above the maximum contaminant level (MCL); contamination was not delineated. In FY16, a waste characterization study is planned to confirm contamination and determine if a response action is necessary.

CLEANUP/EXIT STRATEGY

Currently waiting on regulatory concurrence for site closure.

Site ID: SHAD-153 P-1H
Site Name: SHAD-153 Carbon Tetrachloride Site
Alias: 153

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	200703.....	200803
SI.....	201203.....	201403
RI/FS.....	201404.....	201809

RIP Date: N/A

RC Date: 202201

SITE DESCRIPTION

During a 2007-2008 CPT investigation, groundwater samples collected from extraction well C4 indicated the presence of a VOC plume. HydroPunch sampling at CP1174 and CP1354 indicated that carbon tetrachloride (CCl4), tetrachloroethene (PCE), and TCE exceeded their respective aquifer cleanup levels. The uniqueness of these findings (contaminants and concentrations) suggested this was a possible source area; however, no A Zone groundwater samples or vadose zone vapor samples had been collected to confirm this possibility.

In 2009, the monitoring well MW326 cluster was installed to monitor CCl4, PCE, and TCE in the A, B, C, and D groundwater zones. All contaminants have continued to exceed alternate concentration limits (ACL) in the B and C zones, while none are present at elevated levels in the D zone; however, only CCl4 is consistently present at elevated levels in the A zone. Furthermore, when groundwater levels are high and reach the vadose zone, the CCl4 concentrations are also elevated, and decrease as groundwater levels lower. This trend suggested contamination in the vadose zone acting as a secondary source.

In 2013, a preliminary CCl4 investigation found elevated concentrations in both shallow groundwater and soil vapor in the MW326 well cluster area. The soil vapor results suggested a possible residual CCl4 source in the vadose zone. Although this investigation confirmed the presence of CCl4 in the vadose zone, the plume has not been fully delineated (lacking delineation to east and north). In FY16, a remedial investigation is planned to fully characterize the contamination at the site.

CLEANUP/EXIT STRATEGY

Conduct RI/FS and then prepare a DD or ESD/EE/CA as appropriate.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SHAD-009 (S1)	Bldg TS-47 Pest Control Storage,S1	200004	
SHAD-010 (S2)	Bldg T-50 Pesticide Storage	199002	
SHAD-012 (S4)	Bldg S-197 Area Paint Booth	199002	
SHAD-013 (S5)	Bldg T-36 Paint Booth PS#2	199002	
SHAD-014 (S6)	Bldg 170 Area	199002	
SHAD-015 (S7)	Bldg 173 Area Sandblast Booth	199609	
SHAD-016 (S8)	Bldg 174 Area	199106	
SHAD-017 (S9)	Bldg 669 Area Wash Rack	199409	
SHAD-018 (S10)	Bldg T-184, ABV GRD DIP TNKS	199409	
SHAD-019 (S11)	Bldg 211 & 205 Paint Stripping area	199106	
SHAD-020 (S12)	Holding/oxi Ponds(FAC 400)S-12	199903	
SHAD-021 (S13)	Bldg 391 Fire Tng Area, P-6A	201109	
SHAD-022 (S14)	Bldg 442 Area Sump/Pump STA	199002	
SHAD-023 (S15)	Bldg 483, 482 HM Storage	199002	
SHAD-024 (S16)	Bldg 484 HAZMAT Storage	199002	
SHAD-025 (S17)	Bldg 485 HAZMAT Storage	199002	
SHAD-026 (S18)	Burning Pits Grid S18 SBA	199411	
SHAD-027 (S19)	Bldg 488 Area Wash Apron	199002	
SHAD-028 (S20)	Bldg 635 Flammable Storage	199002	
SHAD-029 (S21)	Bldg 642 Flammable Storage	199002	
SHAD-030 (S22)	Bldg 647, 643 Flammable Storage	199002	
SHAD-031 (S23)	Bldg 657 Area	199106	
SHAD-032 (S24)	Bldg 659 Area Wash Rack	199106	
SHAD-033 (S25)	Bldg 691 HAZMAT Storage	199002	
SHAD-035 (S27)	North Balloon Area Oil Dumping	199409	
SHAD-037 (S29)	SBA Burn Pits A	199509	
SHAD-039 (S31)	Bldg 179 Ground Stains	201312	
SHAD-040	Solvent Storage Yard T-402 Shed	201312	

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
(S32)			
SHAD-043 (S35)	FMR WSTE Storage Area Grid A4, P-2A	201312	
SHAD-045 (S37)	Buried Helicopter Grid BM20	199002	
SHAD-046 (S38)	Buried Boxcar of Rations Grid BM13	199002	
SHAD-047 (PS1)	Bldg S-49 Pest Control Shop	199409	
SHAD-048 (PS2)	Bldg T-53/T-36 Paint Shop Storage	199002	
SHAD-049 (PS3)	Bldg 171 Heavy Equip. Maint Area	199002	
SHAD-050 (PS4)	Bldg 404 Sump, (UST 46)	200509	
SHAD-051 (PS5)	Bldg 655 Care & Maint Facility	199509	
SHAD-052 (PS6)	Bldg 649 Care/Pres Area P-1D,E,F,G	201312	
SHAD-053 (PS7)	Acid Neutral. (LS)Pit Bldg T-661	199409	
SHAD-054 (PS8)	SBA Sand Blast Waste Area	199409	
SHAD-055 (PS9)	Storm Drain Lines (OLD) TV Survey	199106	
SHAD-056 PS10	Open Storage Area Grid E37 - E62	199409	
SHAD-057 PS11	Open Storage Area by IWTP	199002	
SHAD-058 PS12	Open Storage Area Grid BA 187	199002	
SHAD-059 PS13	Open Storage Area Grid BC2 - BC14	199409	
SHAD-060 PS14	Open Storage AS37-163,P-2B,4B,4C	201209	
SHAD-061 (A1)	Bldg T-9 Photo Shop	199002	
SHAD-062 (A2)	Bldg T-9 Photo Shop	199002	
SHAD-063 (A3)	Bldg T-24E Blacksmith Shop	199002	
SHAD-064 (A4)	Bldg S-41 Metal, Plumb & Paint Shop	199002	
SHAD-065 (A5)	Bldg S-42 Carpentry & Metal Shop	199002	
SHAD-066 (A6)	Bldg S-44 Metal & Welding Shop	199002	
SHAD-067 (A7)	Bldg T-54 Sign Shop	199002	
SHAD-068 (A8)	Bldg 100 Reproduction	199002	
SHAD-069 (A9)	Bldg 308 Repro Sec	199002	
SHAD-070 (A10)	Bldg T-101 Rail Car Maintenance	199106	

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SHAD-071 (A11)	Bldg 103 Duplicating Shop	199002	
SHAD-072 (A12)	Bldg T-113/112 Wash Rack	199106	
SHAD-073 (A13)	Bldg T-115 Metal Shop and Wash Rack	199002	
SHAD-074 (A14)	Bldg T-116/T-118 Vehicle Maint Shop	199106	
SHAD-075 (A15)	Bldg 121,245 Pumphouse & Water Lab	199002	
SHAD-076 (A16)	Bldg T127 Area Vehicle Maintenance	199106	
SHAD-077 (A17)	Bldg 646/647 Area	199106	
SHAD-078 (A18)	Bldg S135 Fire Station	201312	
SHAD-079 (A19)	Bldg 172 Heavy Equip. ENGR Shop	199002	
SHAD-080 (A20)	Bldg 178 Heavy Equip. Maint Shop	199002	
SHAD-081 (A21)	Bldg 179 Heavy Equip. Maintenance	199002	
SHAD-082 (A22)	Bldg 180 Radiator Repair Shop	199106	
SHAD-083 (A23)	Bldg 181 Area	199002	
SHAD-084 (A24)	Bldg 186 Engine Test Sump (UST 16)	199703	
SHAD-085 (A25)	Bldg 197 Area	199002	
SHAD-086 (A26)	Bldg 198 Area	199002	
SHAD-087 (A27)	Bldg 646 Electrical Hydraulic Shop	199409	
SHAD-088 (A28)	Bldg T199 Wash Rack Area	201312	
SHAD-089 (A29)	Bldg 217 / 210 Wash Racks	199002	
SHAD-090 (A30)	Bldg 219 Cocooning Shed	199002	
SHAD-091 (A31)	Bldg 227 Vehicle Maintenance	199106	
SHAD-092 (A32)	Bldg 281/282 Low Level Rad Mat Stor	199002	
SHAD-093 (A33)	Bldg 283 Low Level Rad Matl Storage	199002	
SHAD-094 (A34)	Bldg 284 Low Level Rad Matl Storage	199002	
SHAD-095 (A35)	Bldg 286 Area Print Shop	199002	
SHAD-096 (S36)	Bldg 211 Area	199002	
SHAD-097 (S37)	Bldg 218 Area	199002	
SHAD-098	Bldg 305 Area	199002	

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
(S38)			
SHAD-099 (S39)	Bldg 308 Area	199002	
SHAD-100 (A40)	Bldg 370-380 Gas Station	199603	
SHAD-101 (A41)	Bldg 386 Parts Cleaning	199002	
SHAD-102 (A42)	Bldg 389 Area North of Gas Station	199409	
SHAD-103 (A43)	Bldg 403 Area	199409	
SHAD-104 (A44)	Bldg 408 Low Level Rad Matl Storage	199002	
SHAD-105 (A45)	Bldg 411 Low Level Rad Matl Storage	199002	
SHAD-106 (A46)	Bldg 486 Area	199002	
SHAD-107 (A47)	Bldg 508 Area	199002	
SHAD-108 (A48)	Bldg 585 Area	199002	
SHAD-109 (S49)	Bldg 586 Area	199002	
SHAD-110 (A50)	Bldg 611 Area Non-Destruct Testing	199002	
SHAD-111 (A51)	Bldg 612/614 Area	199002	
SHAD-112 (A52)	Bldg 613 Engine Test Facility	199002	
SHAD-113 (A53)	Container Next to Bldg 649	199002	
SHAD-114 (A54)	Catch Basins Grid BO65-BM212	199002	
SHAD-115 (A55)	Shed Equip Maint (SO Bldg 110)	199002	
SHAD-116 (A56)	Runway Extension Waste Ponds	199002	
SHAD-117 (A57)	Bldg 649 Ground Stain A57	199409	
SHAD-118 (A58)	Bldg 649 Ground Stain A58	199409	
SHAD-119 (A59)	Bldg 649 Ground Stain A59	199409	
SHAD-120 (A60)	Bldg 649 Ground Stain A60	199409	
SHAD-121 (A61)	Bldg 649 Ground Stain A61	199409	
SHAD-122 (A62)	Bldg 649 Ground Stain A62	199409	
SHAD-123 (A63)	Bldg 649 Ground Stain A63	199409	
SHAD-124 (A64)	Bldg 649 Ground Stain A64	199106	
SHAD-125 (A65)	Bldg 649 Ground Stain A65	199106	

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SHAD-126 (A66)	Bldg 649 Ground Stain A66	199106	
SHAD-127 (A67)	Bldg 649 Ground Stain A67	199106	
SHAD-128 (A68)	Bldg 649 Ground Stain A68	199106	
SHAD-129 (A69)	Bldg 649 Ground Stain A69	199106	
SHAD-130 (A70)	Bldg 649 Ground Stain A70	199106	
SHAD-131 (A71)	Bldg 649 Ground Stain A71	199106	
SHAD-132 (A72)	Bldg 649 Ground Stain A72	199106	
SHAD-133 (A73)	Bldg 649 Ground Stain A73	199106	
SHAD-134 (A74)	Bldg 649 Ground Stain A74	199106	
SHAD-135 (A75)	Bldg 649 Ground Stain A75	199106	
SHAD-137 UST5	RA Former UST Site by Bldg S-42	200209	
SHAD-138 UST15	RA Former UST Site by Bldg 116 & 12	200209	
SHAD-139 UST17	RA of Former UST Site by Bldg 119	200403	
SHAD-140 UST18	RA of Former USTs by Bldg 118	200403	
SHAD-141 UST34	RA of Former UST Site by Bldg 308	200403	
SHAD-142 UST73	RA of Former UST Site by Bldg 508	200403	
SHAD-143 UST49	RA of Former UST Site by Bldg 649	199901	
SHAD-144 UST55	RA of Former UST by Bldg 649	200209	
SHAD-145 B162	Bldg 162 VOC	200008	
SHAD-146 S- 146	Old Spill Area Between Bldg199&171	200209	
SHAD-147 B- 613	Former AST by 613 & UST by 350 FS	201508	
SHAD-149 UST69	O/W Separator Sump by Bldg 649	199804	
SHAD-150 UST89	O/W Separator Sump in Bldg 101	199709	
SHAD-151 F- 137	Sharpe Well #2, Facility #137	200203	
SHAD-152 B- 199	Soil Contamination No.side Bldg 199	200403	

IRP Schedule

Date of IRP Inception: 197901

Past Phase Completion Milestones

1980

PA (SHAD-001 (P1) - South Balloon Area, GW Plume 1, SHAD-002 (P2) - S. Runway Area GW, SHAD-003 (P3) - W. of Bldg 508 GW, SHAD-004 (P4) - Central Area 1 (GW)- West Side, SHAD-005 (P5) - Central Area 2 GW - West Plume, SHAD-006 (P6) - N. Runway Area GW Plume 6, SHAD-007 (P7) - N. Balloon Area Plume 7 Westside, SHAD-008 (P8) - N. Balloon Area Plume 8 Eastside, SHAD-009 (S1) - Bldg TS-47 Pest Control Storage, S1, SHAD-010 (S2) - Bldg T-50 Pesticide Storage, SHAD-011 (S3) - Bldg S-119 Paint Booth, S-12, SHAD-012 (S4) - Bldg S-197 Area Paint Booth, SHAD-013 (S5) - Bldg T-36 Paint Booth PS#2, SHAD-014 (S6) - Bldg 170 Area, SHAD-015 (S7) - Bldg 173 Area Sandblast Booth, SHAD-016 (S8) - Bldg 174 Area, SHAD-017 (S9) - Bldg 669 Area Wash Rack, SHAD-018 (S10) - Bldg T-184, ABV GRD DIP TNKS, SHAD-019 (S11) - Bldg 211 & 205 Paint Stripping area, SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12, SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A, SHAD-022 (S14) - Bldg 442 Area Sump/Pump STA, SHAD-023 (S15) - Bldg 483, 482 HM Storage, SHAD-024 (S16) - Bldg 484 HAZMAT Storage, SHAD-025 (S17) - Bldg 485 HAZMAT Storage, SHAD-026 (S18) - Burning Pits Grid S18 SBA, SHAD-027 (S19) - Bldg 488 Area Wash Apron, SHAD-028 (S20) - Bldg 635 Flammable Storage, SHAD-029 (S21) - Bldg 642 Flammable Storage, SHAD-030 (S22) - Bldg 647, 643 Flammable Storage, SHAD-031 (S23) - Bldg 657 Area, SHAD-032 (S24) - Bldg 659 Area Wash Rack, SHAD-033 (S25) - Bldg 691 HAZMAT Storage, SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA, S-26, SHAD-035 (S27) - North Balloon Area Oil Dumping, SHAD-036 (S28) - S. Balloon sludge DispArea, P-1A, B, C, SHAD-037 (S29) - SBA Burn Pits A, SHAD-038 (S30) - SBA Burn Pits Grid S3, S-30, SHAD-039 (S31) - Bldg 179 Ground Stains, SHAD-040 (S32) - Solvent Storage Yard T-402 Shed, SHAD-041 (S33) - Burn Pits Grid AC-W5, SBA, S-33/29, SHAD-042 (S34) - Rundway Ponds (P-5A), SHAD-043 (S35) - FMR WASTE Storage Area Grid A4, P-2A, SHAD-044 (S36) - SBA Sludge disposal LF Area, SHAD-045 (S37) - Buried Helicopter Grid BM20, SHAD-046 (S38) - Buried Boxcar of Rations Grid BM13, SHAD-048 (PS2) - Bldg T-53/T-36 Paint Shop Storage, SHAD-049 (PS3) - Bldg 171 Heavy Equip. Maint Area, SHAD-050 (PS4) - Bldg 404 Sump, (UST 46), SHAD-051 (PS5) - Bldg 655 Care & Maint Facility, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D, E, F, G, SHAD-053 (PS7) - Acid Neutral. (LS) Pit Bldg T-661, SHAD-054 (PS8) - SBA Sand Blast Waste Area, SHAD-055 (PS9) - Storm Drain Lines (OLD) TV Survey, SHAD-056 PS10 - Open Storage Area Grid E37 - E62, SHAD-057 PS11 - Open Storage Area by IWTP, SHAD-058 PS12 - Open Storage Area Grid BA 187, SHAD-059 PS13 - Open Storage Area Grid BC2 - BC14, SHAD-060 PS14 - Open Storage AS37-163, P-2B, 4B, 4C, SHAD-061 (A1) - Bldg T-9 Photo Shop, SHAD-062 (A2) - Bldg T-9 Photo Shop, SHAD-063 (A3) - Bldg T-24E Blacksmith Shop, SHAD-064 (A4) - Bldg S-41 Metal, Plumb & Paint Shop, SHAD-065 (A5) - Bldg S-42 Carpentry & Metal Shop, SHAD-066 (A6) - Bldg S-44 Metal & Welding Shop, SHAD-067 (A7) - Bldg T-54 Sign Shop, SHAD-068 (A8) - Bldg 100 Reproduction, SHAD-069 (A9) - Bldg 308 Repro Sec, SHAD-070 (A10) - Bldg T-101 Rail Car Maintenance, SHAD-071 (A11) - Bldg 103 Duplicating Shop, SHAD-072 (A12) - Bldg T-113/112 Wash Rack, SHAD-073 (A13) - Bldg T-115 Metal Shop and Wash Rack, SHAD-074 (A14) - Bldg T-116/T-118 Vehicle Maint Shop, SHAD-075 (A15) - Bldg 121, 245 Pumphouse & Water Lab, SHAD-076 (A16) - Bldg T127 Area Vehicle Maintenance, SHAD-077 (A17) - Bldg 646/647 Area, SHAD-078 (A18) - Bldg S135 Fire Station, SHAD-079 (A19) - Bldg 172 Heavy Equip. ENGR Shop, SHAD-080 (A20) - Bldg 178 Heavy Equip. Maint Shop, SHAD-081 (A21) - Bldg 179 Heavy Equip. Maintenance, SHAD-082 (A22) - Bldg 180 Radiator Repair Shop, SHAD-083 (A23) - Bldg 181 Area, SHAD-084 (A24) - Bldg 186 Engine Test Sump (UST 16), SHAD-085 (A25) - Bldg 197 Area, SHAD-086 (A26) - Bldg 198 Area, SHAD-087 (A27) - Bldg 646 Electrical Hydraulic Shop, SHAD-088 (A28) - Bldg T199 Wash Rack Area, SHAD-089 (A29) - Bldg 217 / 210 Wash Racks, SHAD-090 (A30) - Bldg 219 Cocooning Shed, SHAD-091 (A31) - Bldg 227 Vehicle Maintenance, SHAD-092 (A32) - Bldg 281/282 Low Level Rad Mat Stor, SHAD-093 (A33) - Bldg 283 Low Level Rad Matl Storage, SHAD-094 (A34) - Bldg 284 Low Level Rad Matl Storage, SHAD-095 (A35) - Bldg 286 Area Print Shop, SHAD-096 (S36) - Bldg 211 Area, SHAD-097 (S37) - Bldg 218 Area, SHAD-098 (S38) - Bldg 305 Area, SHAD-099 (S39) - Bldg 308 Area, SHAD-100 (A40) - Bldg 370-380 Gas Station, SHAD-101 (A41) - Bldg 386 Parts Cleaning, SHAD-102 (A42) - Bldg 389 Area North of Gas Station, SHAD-103 (A43) - Bldg 403 Area, SHAD-104 (A44) - Bldg 408 Low Level Rad Matl Storage, SHAD-105 (A45) - Bldg 411 Low Level Rad Matl Storage, SHAD-106 (A46) - Bldg 486 Area, SHAD-107 (A47) - Bldg 508 Area, SHAD-108 (A48) - Bldg 585 Area, SHAD-109 (S49) - Bldg 586 Area, SHAD-110 (A50) - Bldg 611 Area Non-Destruct Testing, SHAD-111 (A51) - Bldg 612/614 Area, SHAD-112 (A52) - Bldg 613 Engine Test Facility, SHAD-113 (A53) - Container Next to Bldg 649, SHAD-114 (A54) - Catch Basins Grid BO65-BM212, SHAD-115 (A55) - Shed Equip Maint (SO Bldg 110), SHAD-116 (A56) - Runway Extension Waste Ponds, SHAD-117 (A57) - Bldg 649 Ground Stain A57, SHAD-118 (A58) - Bldg 649 Ground Stain A58, SHAD-119 (A59) - Bldg 649 Ground Stain A59, SHAD-

120 (A60) - Bldg 649 Ground Stain A60, SHAD-121 (A61) - Bldg 649 Ground Stain A61, SHAD-122 (A62) - Bldg 649 Ground Stain A62, SHAD-123 (A63) - Bldg 649 Ground Stain A63, SHAD-124 (A64) - Bldg 649 Ground Stain A64, SHAD-125 (A65) - Bldg 649 Ground Stain A65, SHAD-126 (A66) - Bldg 649 Ground Stain A66, SHAD-127 (A67) - Bldg 649 Ground Stain A67, SHAD-128 (A68) - Bldg 649 Ground Stain A68, SHAD-129 (A69) - Bldg 649 Ground Stain A69, SHAD-130 (A70) - Bldg 649 Ground Stain A70, SHAD-131 (A71) - Bldg 649 Ground Stain A71, SHAD-132 (A72) - Bldg 649 Ground Stain A72, SHAD-133 (A73) - Bldg 649 Ground Stain A73, SHAD-134 (A74) - Bldg 649 Ground Stain A74, SHAD-135 (A75) - Bldg 649 Ground Stain A75, SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12, SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-143 UST49 - RA of Former UST Site by Bldg 649, SHAD-144 UST55 - RA of Former UST by Bldg 649, SHAD-146 S-146 - Old Spill Area Between Bldg199&171, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS, SHAD-149 UST69 - O/W Separator Sump by Bldg 649, SHAD-150 UST89 - O/W Separator Sump in Bldg 101)

1981

PA

1983

SI

(SHAD-148 S-148 - Spill Site South of Bldg 271, SHAD-151 F-137 - Sharpe Well #2, Facility #137)

(SHAD-001 (P1) - South Balloon Area, GW Plume 1, SHAD-002 (P2) - S. Runway Area GW , SHAD-003 (P3) - W. of Bldg 508 GW, SHAD-004 (P4) - Central Area 1 (GW)- West Side, SHAD-005 (P5) - Central Area 2 GW - West Plume, SHAD-006 (P6) - N. Runway Area GW Plume 6, SHAD-007 (P7) - N. Balloon Area Plume 7 Westside, SHAD-008 (P8) - N. Balloon Area Plume 8 Eastside, SHAD-009 (S1) - Bldg TS-47 Pest Control Storage,S1, SHAD-010 (S2) - Bldg T-50 Pesticide Storage, SHAD-011 (S3) - Bldg S-119 Paint Booth, S-12, SHAD-012 (S4) - Bldg S-197 Area Paint Booth, SHAD-013 (S5) - Bldg T-36 Paint Booth PS#2, SHAD-014 (S6) - Bldg 170 Area, SHAD-015 (S7) - Bldg 173 Area Sandblast Booth, SHAD-016 (S8) - Bldg 174 Area, SHAD-017 (S9) - Bldg 669 Area Wash Rack, SHAD-018 (S10) - Bldg T-184, ABV GRD DIP TNKS, SHAD-019 (S11) - Bldg 211 & 205 Paint Stripping area, SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12, SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A, SHAD-022 (S14) - Bldg 442 Area Sump/Pump STA, SHAD-023 (S15) - Bldg 483, 482 HM Storage, SHAD-024 (S16) - Bldg 484 HAZMAT Storage, SHAD-025 (S17) - Bldg 485 HAZMAT Storage, SHAD-026 (S18) - Burning Pits Grid S18 SBA, SHAD-027 (S19) - Bldg 488 Area Wash Apron, SHAD-028 (S20) - Bldg 635 Flammable Storage, SHAD-029 (S21) - Bldg 642 Flammable Storage, SHAD-030 (S22) - Bldg 647, 643 Flammable Storage, SHAD-031 (S23) - Bldg 657 Area, SHAD-032 (S24) - Bldg 659 Area Wash Rack, SHAD-033 (S25) - Bldg 691 HAZMAT Storage, SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA,S-26, SHAD-035 (S27) - North Balloon Area Oil Dumping, SHAD-036 (S28) - S. Balloon sludge DispArea,P-1A,B,C, SHAD-037 (S29) - SBA Burn Pits A, SHAD-038 (S30) - SBA Burn Pits Grid S3, S-30, SHAD-039 (S31) - Bldg 179 Ground Stains, SHAD-040 (S32) - Solvent Storage Yard T-402 Shed, SHAD-041 (S33) - Burn Pits Grid AC-W5, SBA, S-33/29, SHAD-042 (S34) - Rundway Ponds (P-5A), SHAD-043 (S35) - FMR WSTE Storage Area Grid A4, P-2A, SHAD-044 (S36) - SBA Sludge disposal LF Area, SHAD-045 (S37) - Buried Helicopter Grid BM20, SHAD-046 (S38) - Buried Boxcar of Rations Grid BM13, SHAD-048 (PS2) - Bldg T-53/T-36 Paint Shop Storage, SHAD-049 (PS3) - Bldg 171 Heavy Equip. Maint Area, SHAD-050 (PS4) - Bldg 404 Sump, (UST 46), SHAD-051 (PS5) - Bldg 655 Care & Maint Facility, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G, SHAD-053 (PS7) - Acid Neutral. (LS)Pit Bldg T-661 , SHAD-054 (PS8) - SBA Sand Blast Waste Area, SHAD-055 (PS9) - Storm Drain Lines (OLD) TV Survey, SHAD-056 PS10 - Open Storage Area Grid E37 - E62, SHAD-057 PS11 - Open Storage Area by IWTP, SHAD-058 PS12 - Open Storage Area Grid BA 187, SHAD-059 PS13 - Open Storage Area Grid BC2 - BC14, SHAD-060 PS14 - Open Storage AS37-163,P-2B,4B,4C, SHAD-061 (A1) - Bldg T-9 Photo Shop, SHAD-062 (A2) - Bldg T-9 Photo Shop, SHAD-063 (A3) - Bldg T-24E Blacksmith Shop, SHAD-064 (A4) - Bldg S-41 Metal, Plumb & Paint Shop, SHAD-065 (A5) - Bldg S-42 Carpentry & Metal Shop, SHAD-066 (A6) - Bldg S-44 Metal & Welding Shop, SHAD-067 (A7) - Bldg T-54 Sign Shop, SHAD-068 (A8) - Bldg 100 Reproduction, SHAD-069 (A9) - Bldg 308 Repro Sec, SHAD-070 (A10) - Bldg T-101 Rail Car Maintenance, SHAD-071 (A11) - Bldg 103 Duplicating Shop, SHAD-072 (A12) - Bldg T-113/112 Wash Rack, SHAD-073 (A13) - Bldg T-115 Metal Shop and Wash Rack, SHAD-074 (A14) - Bldg T-116/T-118 Vehicle Maint Shop, SHAD-075 (A15) - Bldg 121,245 Pumphouse & Water Lab, SHAD-076 (A16) - Bldg T127 Area Vehicle Maintenance, SHAD-077 (A17) - Bldg 646/647 Area,

IRP Schedule

	SHAD-078 (A18) - Bldg S135 Fire Station, SHAD-079 (A19) - Bldg 172 Heavy Equip. ENGR Shop, SHAD-080 (A20) - Bldg 178 Heavy Equip. Maint Shop, SHAD-081 (A21) - Bldg 179 Heavy Equip. Maintenance, SHAD-082 (A22) - Bldg 180 Radiator Repair Shop, SHAD-083 (A23) - Bldg 181 Area, SHAD-084 (A24) - Bldg 186 Engine Test Sump (UST 16), SHAD-085 (A25) - Bldg 197 Area, SHAD-086 (A26) - Bldg 198 Area, SHAD-087 (A27) - Bldg 646 Electrical Hydraulic Shop, SHAD-088 (A28) - Bldg T199 Wash Rack Area, SHAD-089 (A29) - Bldg 217 / 210 Wash Racks, SHAD-090 (A30) - Bldg 219 Cocooning Shed, SHAD-091 (A31) - Bldg 227 Vehicle Maintenance, SHAD-092 (A32) - Bldg 281/282 Low Level Rad Mat Stor, SHAD-093 (A33) - Bldg 283 Low Level Rad Matl Storage, SHAD-094 (A34) - Bldg 284 Low Level Rad Matl Storage, SHAD-095 (A35) - Bldg 286 Area Print Shop, SHAD-096 (S36) - Bldg 211 Area, SHAD-097 (S37) - Bldg 218 Area, SHAD-098 (S38) - Bldg 305 Area, SHAD-099 (S39) - Bldg 308 Area, SHAD-100 (A40) - Bldg 370-380 Gas Station, SHAD-101 (A41) - Bldg 386 Parts Cleaning, SHAD-102 (A42) - Bldg 389 Area North of Gas Station, SHAD-103 (A43) - Bldg 403 Area, SHAD-104 (A44) - Bldg 408 Low Level Rad Matl Storage, SHAD-105 (A45) - Bldg 411 Low Level Rad Matl Storage, SHAD-106 (A46) - Bldg 486 Area, SHAD-107 (A47) - Bldg 508 Area, SHAD-108 (A48) - Bldg 585 Area, SHAD-109 (S49) - Bldg 586 Area, SHAD-110 (A50) - Bldg 611 Area Non-Destruct Testing, SHAD-111 (A51) - Bldg 612/614 Area, SHAD-112 (A52) - Bldg 613 Engine Test Facility, SHAD-113 (A53) - Container Next to Bldg 649, SHAD-114 (A54) - Catch Basins Grid BO65-BM212, SHAD-115 (A55) - Shed Equip Maint (SO Bldg 110), SHAD-116 (A56) - Runway Extension Waste Ponds, SHAD-117 (A57) - Bldg 649 Ground Stain A57, SHAD-118 (A58) - Bldg 649 Ground Stain A58, SHAD-119 (A59) - Bldg 649 Ground Stain A59, SHAD-120 (A60) - Bldg 649 Ground Stain A60, SHAD-121 (A61) - Bldg 649 Ground Stain A61, SHAD-122 (A62) - Bldg 649 Ground Stain A62, SHAD-123 (A63) - Bldg 649 Ground Stain A63, SHAD-124 (A64) - Bldg 649 Ground Stain A64, SHAD-125 (A65) - Bldg 649 Ground Stain A65, SHAD-126 (A66) - Bldg 649 Ground Stain A66, SHAD-127 (A67) - Bldg 649 Ground Stain A67, SHAD-128 (A68) - Bldg 649 Ground Stain A68, SHAD-129 (A69) - Bldg 649 Ground Stain A69, SHAD-130 (A70) - Bldg 649 Ground Stain A70, SHAD-131 (A71) - Bldg 649 Ground Stain A71, SHAD-132 (A72) - Bldg 649 Ground Stain A72, SHAD-133 (A73) - Bldg 649 Ground Stain A73, SHAD-134 (A74) - Bldg 649 Ground Stain A74, SHAD-135 (A75) - Bldg 649 Ground Stain A75, SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12, SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-143 UST49 - RA of Former UST Site by Bldg 649, SHAD-144 UST55 - RA of Former UST by Bldg 649, SHAD-146 S-146 - Old Spill Area Between Bldg199&171, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS, SHAD-148 S-148 - Spill Site South of Bldg 271, SHAD-149 UST69 - O/W Separator Sump by Bldg 649, SHAD-150 UST89 - O/W Separator Sump in Bldg 101)
PA	(SHAD-047 (PS1) - Bldg S-49 Pest Control Shop)
1984	
SI	(SHAD-151 F-137 - Sharpe Well #2, Facility #137)
1987	
RD	(SHAD-001 (P1) - South Balloon Area, GW Plume 1)
RI/FS	(SHAD-001 (P1) - South Balloon Area, GW Plume 1)
1989	
RI/FS	(SHAD-047 (PS1) - Bldg S-49 Pest Control Shop, SHAD-088 (A28) - Bldg T199 Wash Rack Area)
SI	(SHAD-047 (PS1) - Bldg S-49 Pest Control Shop)
RD	(SHAD-047 (PS1) - Bldg S-49 Pest Control Shop, SHAD-088 (A28) - Bldg T199 Wash Rack Area)
1990	
RA(C)	(SHAD-047 (PS1) - Bldg S-49 Pest Control Shop, SHAD-088 (A28) - Bldg T199 Wash Rack Area)
IRA	(SHAD-143 UST49 - RA of Former UST Site by Bldg 649)
RI/FS	(SHAD-010 (S2) - Bldg T-50 Pesticide Storage, SHAD-012 (S4) - Bldg S-197 Area Paint Booth, SHAD-013 (S5) - Bldg T-36 Paint Booth PS#2, SHAD-014 (S6) - Bldg 170 Area, SHAD-015 (S7) - Bldg 173 Area Sandblast Booth, SHAD-022 (S14) - Bldg 442 Area Sump/Pump STA, SHAD-023 (S15) - Bldg 483, 482 HM Storage, SHAD-024 (S16) - Bldg 484 HAZMAT Storage, SHAD-025 (S17) - Bldg 485 HAZMAT Storage,

SHAD-027 (S19) - Bldg 488 Area Wash Apron, SHAD-028 (S20) - Bldg 635 Flammable Storage, SHAD-029 (S21) - Bldg 642 Flammable Storage, SHAD-030 (S22) - Bldg 647, 643 Flammable Storage, SHAD-033 (S25) - Bldg 691 HAZMAT Storage, SHAD-045 (S37) - Buried Helicopter Grid BM20, SHAD-046 (S38) - Buried Boxcar of Rations Grid BM13, SHAD-048 (PS2) - Bldg T-53/T-36 Paint Shop Storage, SHAD-049 (PS3) - Bldg 171 Heavy Equip. Maint Area, SHAD-057 PS11 - Open Storage Area by IWTP, SHAD-058 PS12 - Open Storage Area Grid BA 187, SHAD-061 (A1) - Bldg T-9 Photo Shop, SHAD-062 (A2) - Bldg T-9 Photo Shop, SHAD-063 (A3) - Bldg T-24E Blacksmith Shop, SHAD-064 (A4) - Bldg S-41 Metal, Plumb & Paint Shop, SHAD-065 (A5) - Bldg S-42 Carpentry & Metal Shop, SHAD-066 (A6) - Bldg S-44 Metal & Welding Shop, SHAD-067 (A7) - Bldg T-54 Sign Shop, SHAD-068 (A8) - Bldg 100 Reproduction, SHAD-069 (A9) - Bldg 308 Repro Sec, SHAD-071 (A11) - Bldg 103 Duplicating Shop, SHAD-073 (A13) - Bldg T-115 Metal Shop and Wash Rack, SHAD-075 (A15) - Bldg 121,245 Pumphouse & Water Lab, SHAD-078 (A18) - Bldg S135 Fire Station, SHAD-079 (A19) - Bldg 172 Heavy Equip. ENGR Shop, SHAD-080 (A20) - Bldg 178 Heavy Equip. Maint Shop, SHAD-081 (A21) - Bldg 179 Heavy Equip. Maintenance, SHAD-083 (A23) - Bldg 181 Area, SHAD-085 (A25) - Bldg 197 Area, SHAD-086 (A26) - Bldg 198 Area, SHAD-089 (A29) - Bldg 217 / 210 Wash Racks, SHAD-090 (A30) - Bldg 219 Cocooning Shed, SHAD-092 (A32) - Bldg 281/282 Low Level Rad Mat Stor, SHAD-093 (A33) - Bldg 283 Low Level Rad Matl Storage, SHAD-094 (A34) - Bldg 284 Low Level Rad Matl Storage, SHAD-095 (A35) - Bldg 286 Area Print Shop, SHAD-096 (S36) - Bldg 211 Area, SHAD-097 (S37) - Bldg 218 Area, SHAD-098 (S38) - Bldg 305 Area, SHAD-099 (S39) - Bldg 308 Area, SHAD-101 (A41) - Bldg 386 Parts Cleaning, SHAD-104 (A44) - Bldg 408 Low Level Rad Matl Storage, SHAD-105 (A45) - Bldg 411 Low Level Rad Matl Storage, SHAD-106 (A46) - Bldg 486 Area, SHAD-107 (A47) - Bldg 508 Area, SHAD-108 (A48) - Bldg 585 Area, SHAD-109 (S49) - Bldg 586 Area, SHAD-110 (A50) - Bldg 611 Area Non-Destruct Testing, SHAD-111 (A51) - Bldg 612/614 Area, SHAD-112 (A52) - Bldg 613 Engine Test Facility, SHAD-113 (A53) - Container Next to Bldg 649, SHAD-114 (A54) - Catch Basins Grid BO65-BM212, SHAD-115 (A55) - Shed Equip Maint (SO Bldg 110), SHAD-116 (A56) - Runway Extension Waste Ponds)

1991

RD (SHAD-007 (P7) - N. Balloon Area Plume 7 Westside, SHAD-008 (P8) - N. Balloon Area Plume 8 Eastside)
 RI/FS (SHAD-007 (P7) - N. Balloon Area Plume 7 Westside, SHAD-008 (P8) - N. Balloon Area Plume 8 Eastside, SHAD-016 (S8) - Bldg 174 Area, SHAD-019 (S11) - Bldg 211 & 205 Paint Stripping area, SHAD-031 (S23) - Bldg 657 Area, SHAD-032 (S24) - Bldg 659 Area Wash Rack, SHAD-039 (S31) - Bldg 179 Ground Stains, SHAD-040 (S32) - Solvent Storage Yard T-402 Shed, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G, SHAD-055 (PS9) - Storm Drain Lines (OLD) TV Survey, SHAD-070 (A10) - Bldg T-101 Rail Car Maintenance, SHAD-072 (A12) - Bldg T-113/112 Wash Rack, SHAD-074 (A14) - Bldg T-116/T-118 Vehicle Maint Shop, SHAD-076 (A16) - Bldg T127 Area Vehicle Maintenance, SHAD-077 (A17) - Bldg 646/647 Area, SHAD-082 (A22) - Bldg 180 Radiator Repair Shop, SHAD-091 (A31) - Bldg 227 Vehicle Maintenance, SHAD-124 (A64) - Bldg 649 Ground Stain A64, SHAD-125 (A65) - Bldg 649 Ground Stain A65, SHAD-126 (A66) - Bldg 649 Ground Stain A66, SHAD-127 (A67) - Bldg 649 Ground Stain A67, SHAD-128 (A68) - Bldg 649 Ground Stain A68, SHAD-129 (A69) - Bldg 649 Ground Stain A69, SHAD-130 (A70) - Bldg 649 Ground Stain A70, SHAD-131 (A71) - Bldg 649 Ground Stain A71, SHAD-132 (A72) - Bldg 649 Ground Stain A72, SHAD-133 (A73) - Bldg 649 Ground Stain A73, SHAD-134 (A74) - Bldg 649 Ground Stain A74, SHAD-135 (A75) - Bldg 649 Ground Stain A75)

1992

RI/FS (SHAD-002 (P2) - S. Runway Area GW , SHAD-003 (P3) - W. of Bldg 508 GW, SHAD-004 (P4) - Central Area 1 (GW)- West Side, SHAD-005 (P5) - Central Area 2 GW - West Plume, SHAD-006 (P6) - N. Runway Area GW Plume 6, SHAD-035 (S27) - North Balloon Area Oil Dumping)
 SI (SHAD-145 B162 - Bldg 162 VOC)
 PA (SHAD-145 B162 - Bldg 162 VOC)
 RD (SHAD-035 (S27) - North Balloon Area Oil Dumping)

1993

RD (SHAD-002 (P2) - S. Runway Area GW , SHAD-003 (P3) - W. of Bldg 508 GW)

1994

IRA (SHAD-142 UST73 - RA of Former UST Site by Bldg 508)

IRP Schedule

RA(C)	(SHAD-035 (S27) - North Balloon Area Oil Dumping)
RD	(SHAD-004 (P4) - Central Area 1 (GW)- West Side, SHAD-005 (P5) - Central Area 2 GW - West Plume, SHAD-006 (P6) - N. Runway Area GW Plume 6)
RI/FS	(SHAD-009 (S1) - Bldg TS-47 Pest Control Storage,S1, SHAD-017 (S9) - Bldg 669 Area Wash Rack, SHAD-018 (S10) - Bldg T-184, ABV GRD DIP TNKS, SHAD-053 (PS7) - Acid Neutral. (LS)Pit Bldg T-661 , SHAD-054 (PS8) - SBA Sand Blast Waste Area, SHAD-056 PS10 - Open Storage Area Grid E37 - E62, SHAD-059 PS13 - Open Storage Area Grid BC2 - BC14, SHAD-087 (A27) - Bldg 646 Electrical Hydraulic Shop, SHAD-102 (A42) - Bldg 389 Area North of Gas Station, SHAD-103 (A43) - Bldg 403 Area, SHAD-117 (A57) - Bldg 649 Ground Stain A57, SHAD-118 (A58) - Bldg 649 Ground Stain A58, SHAD-119 (A59) - Bldg 649 Ground Stain A59, SHAD-120 (A60) - Bldg 649 Ground Stain A60, SHAD-121 (A61) - Bldg 649 Ground Stain A61, SHAD-122 (A62) - Bldg 649 Ground Stain A62, SHAD-123 (A63) - Bldg 649 Ground Stain A63, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12)
1995	
IRA	(SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-144 UST55 - RA of Former UST by Bldg 649)
RI/FS	(SHAD-011 (S3) - Bldg S-119 Paint Booth, S-12, SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12, SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A, SHAD-026 (S18) - Burning Pits Grid S18 SBA, SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA,S-26, SHAD-036 (S28) - S. Balloon sludge DispArea,P-1A,B,C, SHAD-037 (S29) - SBA Burn Pits A, SHAD-043 (S35) - FMR WSTE Storage Area Grid A4, P-2A, SHAD-050 (PS4) - Bldg 404 Sump, (UST 46), SHAD-051 (PS5) - Bldg 655 Care & Maint Facility, SHAD-084 (A24) - Bldg 186 Engine Test Sump (UST 16), SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-143 UST49 - RA of Former UST Site by Bldg 649, SHAD-144 UST55 - RA of Former UST by Bldg 649, SHAD-145 B162 - Bldg 162 VOC, SHAD-146 S-146 - Old Spill Area Between Bldg199&171, SHAD-148 S-148 - Spill Site South of Bldg 271, SHAD-149 UST69 - O/W Separator Sump by Bldg 649, SHAD-150 UST89 - O/W Separator Sump in Bldg 101, SHAD-151 F-137 - Sharpe Well #2, Facility #137)
RA(C)	(SHAD-009 (S1) - Bldg TS-47 Pest Control Storage,S1, SHAD-143 UST49 - RA of Former UST Site by Bldg 649)
RD	(SHAD-009 (S1) - Bldg TS-47 Pest Control Storage,S1, SHAD-143 UST49 - RA of Former UST Site by Bldg 649)
1996	
RI/FS	(SHAD-038 (S30) - SBA Burn Pits Grid S3, S-30, SHAD-042 (S34) - Rundway Ponds (P-5A), SHAD-044 (S36) - SBA Sludge disposal LF Area, SHAD-060 PS14 - Open Storage AS37-163,P-2B,4B,4C, SHAD-100 (A40) - Bldg 370-380 Gas Station, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS)
RA(C)	(SHAD-015 (S7) - Bldg 173 Area Sandblast Booth)
RD	(SHAD-015 (S7) - Bldg 173 Area Sandblast Booth, SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12, SHAD-050 (PS4) - Bldg 404 Sump, (UST 46), SHAD-084 (A24) - Bldg 186 Engine Test Sump (UST 16), SHAD-150 UST89 - O/W Separator Sump in Bldg 101)
1997	
RA(C)	(SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12, SHAD-043 (S35) - FMR WSTE Storage Area Grid A4, P-2A, SHAD-050 (PS4) - Bldg 404 Sump, (UST 46), SHAD-084 (A24) - Bldg 186 Engine Test Sump (UST 16), SHAD-145 B162 - Bldg 162 VOC, SHAD-150 UST89 - O/W Separator Sump in Bldg 101)
IRA	(SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-145 B162 - Bldg 162 VOC)
RD	(SHAD-011 (S3) - Bldg S-119 Paint Booth, S-12, SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A, SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA, S-26, SHAD-036 (S28) - S. Balloon sludge DispArea,P-1A,B,C, SHAD-038 (S30) - SBA Burn Pits Grid S3, S-30, SHAD-043 (S35) - FMR WSTE Storage Area Grid A4, P-2A, SHAD-044 (S36) - SBA Sludge disposal LF Area, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G, SHAD-060 PS14 - Open Storage AS37-163,P-2B,4B,4C, SHAD-145 B162 - Bldg 162 VOC)

IRP Schedule

1998

RD (SHAD-149 UST69 - O/W Separator Sump by Bldg 649)
RA(C) (SHAD-011 (S3) - Bldg S-119 Paint Booth, S-12, SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A, SHAD-036 (S28) - S. Balloon sludge DispArea,P-1A,B,C, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G, SHAD-149 UST69 - O/W Separator Sump by Bldg 649)

1999

RD (SHAD-151 F-137 - Sharpe Well #2, Facility #137)
LTM (SHAD-020 (S12) - Holding/oxi Ponds(FAC 400)S-12)
PA (SHAD-152 B-199 - Soil Contamination No.side Bldg 199)
SI (SHAD-152 B-199 - Soil Contamination No.side Bldg 199)
RI/FS (SHAD-152 B-199 - Soil Contamination No.side Bldg 199)

2000

LTM (SHAD-009 (S1) - Bldg TS-47 Pest Control Storage,S1)
RA(C) (SHAD-038 (S30) - SBA Burn Pits Grid S3, S-30, SHAD-044 (S36) - SBA Sludge disposal LF Area, SHAD-060 PS14 - Open Storage AS37-163,P-2B,4B,4C)
IRA (SHAD-152 B-199 - Soil Contamination No.side Bldg 199)

2002

RA(O) (SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G)
RD (SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12, SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-144 UST55 - RA of Former UST by Bldg 649, SHAD-146 S-146 - Old Spill Area Between Bldg199&171, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS, SHAD-148 S-148 - Spill Site South of Bldg 271, SHAD-152 B-199 - Soil Contamination No.side Bldg 199)
RA(C) (SHAD-137 UST5 - RA Former UST Site by Bldg S-42, SHAD-138 UST15 - RA Former UST Site by Bldg 116 & 12, SHAD-144 UST55 - RA of Former UST by Bldg 649, SHAD-146 S-146 - Old Spill Area Between Bldg199&171, SHAD-148 S-148 - Spill Site South of Bldg 271, SHAD-151 F-137 - Sharpe Well #2, Facility #137)

2003

RA(C) (SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS, SHAD-152 B-199 - Soil Contamination No.side Bldg 199)
RA(O) (SHAD-139 UST17 - RA of Former UST Site by Bldg 119, SHAD-140 UST18 - RA of Former USTs by Bldg 118, SHAD-141 UST34 - RA of Former UST Site by Bldg 308, SHAD-142 UST73 - RA of Former UST Site by Bldg 508, SHAD-152 B-199 - Soil Contamination No.side Bldg 199)

2004

RA(O) (SHAD-136 UST12 - RA of Former UST Site by Bldg S-108, SHAD-147 B-613 - Former AST by 613 & UST by 350 FS)

2005

LTM (SHAD-050 (PS4) - Bldg 404 Sump, (UST 46))

2007

RA(O) (SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA,S-26)
RA(C) (SHAD-034 (S26) - Open Dump for Bldg 170-184 NBA,S-26)

2008

PA (SHAD-153 P-1H - SHAD-153 Carbon Tetrachloride Site)

2010

RA(C) (SHAD-042 (S34) - Rundway Ponds (P-5A))

IRP Schedule

RD 2011	(SHAD-042 (S34) - Rundway Ponds (P-5A))
RA(O) 2012	(SHAD-021 (S13) - Bldg 391 Fire Tng Area, P-6A)
LTM 2014	(SHAD-060 PS14 - Open Storage AS37-163,P-2B,4B,4C)
LTM	(SHAD-039 (S31) - Bldg 179 Ground Stains, SHAD-040 (S32) - Solvent Storage Yard T-402 Shed, SHAD-043 (S35) - FMR WSTE Storage Area Grid A4, P-2A, SHAD-052 (PS6) - Bldg 649 Care/Pres Area P-1D,E,F,G, SHAD-078 (A18) - Bldg S135 Fire Station, SHAD-088 (A28) - Bldg T199 Wash Rack Area)
SI 2015	(SHAD-153 P-1H - SHAD-153 Carbon Tetrachloride Site)
LTM	(SHAD-147 B-613 - Former AST by 613 & UST by 350 FS)

Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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Final RA(C) Completion Date: 209509

Schedule for Next Five-Year Review: 2019

Estimated Completion Date of IRP at Installation (including LTM phase): 209509

DEFENSE DIST DEPOT SAN JOAQUIN, SHARPE FACILITY IRP Schedule

[Green Box] = phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-001 (P1)	South Balloon Area, GW Plume 1	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-002 (P2)	S. Runway Area GW	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-003 (P3)	W. of Bldg 508 GW	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-004 (P4)	Central Area 1 (GW)- West Side	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-005 (P5)	Central Area 2 GW - West Plume	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-006 (P6)	N. Runway Area GW Plume 6	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-007 (P7)	N. Balloon Area Plume 7 Westside	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-008 (P8)	N. Balloon Area Plume 8 Eastside	RA(C)						
		RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-011 (S3)	Bldg S-119 Paint Booth, S-12	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-034 (S26)	Open Dump for Bldg 170-184 NBA,S-26	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-036 (S28)	S. Balloon sludge DispArea,P-1A,B,C	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-038 (S30)	SBA Burn Pits Grid S3, S-30	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-041 (S33)	Burn Pits Grid AC-W5, SBA, S-33/29	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-042 (S34)	Rundway Ponds (P-5A)	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-044 (S36)	SBA Sludge disposal LF Area	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-136 UST12	RA of Former UST Site by Bldg S-108	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-148 S-148	Spill Site South of Bldg 271	LTM						

**DEFENSE DIST DEPOT SAN JOAQUIN, SHARPE
FACILITY IRP Schedule**

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
SHAD-153 P-1H	SHAD-153 Carbon Tetrachloride Site	RI/FS						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201101

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: TBD

Efforts Taken to Determine Interest

Results

Follow-up Procedures

Additional Community Involvement Information

The community has expressed no interest in sustaining a RAB. The next RAB solicitation will take place in 2016. The community involvement plan is being updated.

Administrative Record is located at

Sharpe Army Depot
700 E. Roth Road
Bldg. 404
French Camp, CA 95231
210-466-1699

Information Repository is located at

Sharpe Army Depot
700 E. Roth Road
Bldg. 404
French Camp, CA 95231
210-466-1699

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

TAPP Title: N/A

Potential TAPP: N/A

