

# INSTALLATION ACTION PLAN

For

## SIERRA ARMY DEPOT



March 2001

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for  
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# PURPOSE

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

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

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change. Under current project funding, all remedies will be in place at the Sierra Army Depot by the end of 2002.

# CONTRIBUTORS TO THIS YEARS IAP

## NAME

## ORGANIZATION

**SUSAN HOLLIDAY**

SIAD Restoration Program Manager

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SIAD Director of Public Works

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CA Department of Toxic Substances Control

**ANNE SUTHERLAND**

CA Region Water Quality Control Board, Lahontan Region

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IRP Support, Engineering & Environment

# SIERRA ARMY DEPOT

## PREPARED BY

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## APPROVAL

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MOSES WHITEHURST  
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Commanding

## REVIEWED BY

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Sierra Army Depot

# OPERATIONS SUPPORT COMMAND

## CONCURRENCE

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BRAD WRIGHT

MSC Environmental Restoration  
Program Manager, OSC

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TOM JACKSON

Environmental Counsel, OSC

# ARMY MATERIEL COMMAND

## APPROVAL

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MS. JEWEL SIMMONS  
Environmental Restoration Program Manager



# INFORMATION SHARING

AMC, as well as MSCs and installations believe that it should make its environmental restoration information available openly. This Installation Action Plan was forwarded to the following people:

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RAB Co-chair (document provided to  
all RAB members)

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State Regulator

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EPA Regulator

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Installation RPM

# ACRONYMS & ABBREVIATIONS

<b>ALF</b>	Abandoned Landfill
<b>ADRA</b>	Ammunition Demilitarization and Renovation Area
<b>BRAC</b>	Base Realignment and Closure Action
<b>B1003</b>	Building 1003 Area
<b>B210</b>	Building 210 Area
<b>BLDG</b>	Building
<b>Cal-EPA</b>	California Environmental Protection Agency
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CRWQCB</b>	California Regional Water Quality Control Board
<b>Cu</b>	Copper
<b>DERA</b>	Defense Environmental Restoration Account
<b>DMA</b>	Demolition Area
<b>DRMO</b>	Defense Reutilization and Marketing Office
<b>DSA</b>	Diesel Spill Area
<b>DSERTS</b>	Defense Site Environmental Restoration Tracking System
<b>DTSC</b>	Department of Toxic Substances Control
<b>EE/CA</b>	Engineering Evaluation / Cost Analysis
<b>EFFTF</b>	Existing Fire-Fighting Training Facility
<b>ER,A</b>	Environmental Restoration, Army (formally called DERA)
<b>FDA</b>	Fuel Disposal Site A
<b>FDB</b>	Fuel Disposal Site B
<b>FFSRA</b>	Federal Facility Site Remediation Agreement
<b>FS</b>	Feasibility Study
<b>FY</b>	Fiscal Year
<b>IAP</b>	Installation Action Plan
<b>IRA</b>	Interim Remedial Action
<b>IRP</b>	Installation Restoration Program
<b>LBG</b>	Lower Burning Ground
<b>LSTP</b>	Large Sewage Treatment Ponds
<b>LTM</b>	Long Term Monitoring
<b>MCL</b>	Maximum Contaminant Level
<b>MEP</b>	Master Environmental Plan
<b>MACOM</b>	Major Army COMmand
<b>MSC</b>	Major Subordinate Command
<b>NE</b>	Not Evaluated
<b>NFA</b>	No Further Action
<b>NPL</b>	National Priorities List
<b>OFFTF</b>	Old Fire-Fighting Training Facility
<b>PA</b>	Preliminary Assessment
<b>Pb</b>	Lead
<b>POL</b>	Petroleum, Oil & Lubricants
<b>PP</b>	Proposed Plan
<b>PS</b>	Paint Shop Subsite
<b>RA</b>	Remedial Action
<b>RA(C)</b>	Remedial Action - Construction
<b>RA(O)</b>	Remedial Action - Operation
<b>RAB</b>	Restoration Advisory Board

# ACRONYMS & ABBREVIATIONS

<b>RC</b>	Response Complete
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RD</b>	Remedial Design
<b>REM</b>	Removal
<b>RI</b>	Remedial Investigation
<b>RIP</b>	Remedy in Place
<b>ROD</b>	Record of Decision
<b>RRSE</b>	Relative Risk Site Evaluation
<b>Sb</b>	Antimony
<b>SI</b>	Site Inspection
<b>SIAD</b>	Sierra Army Depot
<b>SSA</b>	Southern Sites Area
<b>SVE</b>	Soil Vapor Extraction
<b>SVOC</b>	Semi-Volatile Organic Compounds
<b>TCE</b>	Trichloroethylene
<b>TLB</b>	TNT Leaching Beds
<b>TNB</b>	Trinitrobenzene
<b>TNT</b>	Trinitrotoluene
<b>TPH</b>	Total Petroleum Hydrocarbons
<b>TSA</b>	Toxic Storage Area
<b>TPH</b>	Total Petroleum Hydrocarbons
<b>UBG</b>	Upper Burning Ground
<b>UDP</b>	Unidentified Pit
<b>USACHPPM</b>	United States Army Center for Health Promotion and Preventive Medicine
<b>USAEC</b>	United States Army Environmental Center
<b>USAEHA</b>	United States Army Environmental Hygiene Agency (replaced by CHPPM)
<b>USATHMA</b>	United States Army Toxic and Hazardous Material Agency (replaced by AEC)
<b>UXO</b>	Unexploded Ordnance
<b>VOC</b>	Volatile Organic Compounds

# SUMMARY

<b>STATUS</b>	No NPL sites have been identified at the Sierra Army Depot.	
<b>NUMBER OF DSERTS SITES:</b>	51 DSERTS sites	
	8	Active ER,A Eligible Sites
	39	Response Complete ER,A Eligible
	5	Response Complete Non-ER,A Eligible Sites
	9	BRAC
<b>DIFFERENT DSERTS SITE TYPES:</b>	8	Landfills/ Burial Areas/ Pits/ Trenches
	3	Popping Furnace/ Demil Areas
	2	Fire-Fighting Training Areas
	3	Sewage Treatment Pond Area
	7	Chemical Spill Area
	8	Demolition UXO Areas
	4	Fuel/ Diesel/ Spill Areas
	3	Burning Pits
	12	Maintenance Spill Area
	1	Explosive Leaching Bed Area
<b>CONTAMINANTS OF CONCERN:</b>	Trichloroethylene; Petroleum/ diesel; 1,3,5-TNB, Lead; Unexploded ordnance (UXO)	
<b>MEDIA OF CONCERN:</b>	Soil, Groundwater, Sediment	
<b>COMPLETED REM/IRA/RA:</b>	<ul style="list-style-type: none"> <li>• SIAD-015: Soil removal</li> <li>• SIAD-012: Soil removal</li> <li>• SIAD-011: Soil removal</li> <li>• SIAD-001(A): Soil composting</li> <li>• SIAD-001(B): Soil removal</li> <li>• SIAD-007: Soil removal and bio-venting</li> <li>• SIAD-002, Soil Removal</li> </ul>	
<b>CURRENT IRP PHASES: (DSERTS SITES ONLY)</b>	RI/FS (5 site)	RD/RA (4 sites) RAO (1 site)
	LTM (1 site)	
	43 of 51 IRP sites to ROD	
	2 UXO sites with access restrictions	
	8 Active RCRA sites	
<b>PROJECTED IRP PHASES: (DSERTS SITES ONLY)</b>	RI/FS (1 sites)	RD (1 site)
	RA ( 2 sites)	RAO (I site) LTM ( 3 sites)
	2 Active RCRA sites	
	3 UXO sites with access restrictions	
<b>IDENTIFIED POSSIBLE REM/IRA/RA:</b>	<ul style="list-style-type: none"> <li>• SIAD-002, Soil Vapor Extraction</li> <li>• SIAD-003, Soil Cover</li> <li>• SIAD-003, Soil Treatment</li> <li>• SIAD-010, Soil Removal</li> <li>• SIAD-022, Hot Spot Removal</li> <li>• SIAD-022, In-Situ Soil Treatment</li> </ul>	
<b>FUNDING:</b>	PRIOR YEAR THROUGH 2000:	\$ 37,805,000
	FY 2001	\$ 2,512,000
	FUTURE FUNDING:	\$ 13,286,000
	TOTAL:	\$ 53,603,000
<b>DURATION:</b>	YEAR OF IRP INCEPTION:	1989
	YEAR OF IRP COMPLETION EXCLUDING LTM:	2002
	YEAR OF IRP COMPLETION INCLUDING LTM:	2033

# INSTALLATION INFORMATION

## LOCALE

SIAD is located in Honey Lake Valley of Lassen County in northeast California, approximately 4 miles west of the California-Nevada state border and 5 miles east of U.S. Highway 395.

## COMMAND ORGANIZATION

**MAJOR COMMAND:** U.S. Army Materiel Command, Engineering, Housing and Installation Logistics, Environmental Quality

**SUBCOMMAND:** U.S. Army, Operations Support Command

**INSTALLATION:** Sierra Army Depot, Directorate of Public Works

**INSTALLATION:** Environmental Management Division

## INSTALLATION RESTORATION PROGRAM (IRP) EXECUTING AGENCY

- Investigation Phase Executing Agency: Sierra Army Depot, Environmental Management Division
- Remedial Design/ Action Phase Executing Agency: Sierra Army Depot, Environmental Management Division; U.S. Army Corps of Engineers, Sacramento District

## REGULATOR PARTICIPATION

**STATE:** California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

**STATE:** California Regional Water Quality Control Board, Lahonton Region (CRWQCB)

## REGULATORY STATUS

- Non-NPL, off-post contamination
- Interagency Agreement, Two Party (State and Army) (FFSRA)

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

- Design for SVE, SAID-002
- Operating Biovent, SAID-011

# INSTALLATION DESCRIPTION

## LOCATION

SIAD is located in Honey Lake Valley of Lassen County in northeast California, approximately 4 miles west of the California-Nevada state border and 5 miles east of U.S. Highway 395. The two largest communities near SIAD are Susanville, California (county seat of Lassen County, located 40 miles northwest of SIAD) and Reno, Nevada (located 55 miles southeast of SIAD). Other neighboring communities, all in California, include Doyle (located 8 miles south of SIAD), Herlong and the Sage Flats Area, located near the southern entrance to the main depot.

The total area of SIAD is approximately 96,000 acres. The depot is composed of two areas and Honey Lake. The areas are the main depot (32,220 acres), and the Upper Burning Ground (4,030 acres), located 1 mile northeast of the main depot boundary. Honey Lake (60,108 acres) which was acquired in 1933, is located adjacent to the main depot's northwest border. Mountain ranges bordering SIAD are the Amedee and Skedaddle Mountains to the north, the Fort Sage Mountains to the south, and the Diamond Mountains to the southwest.

## HISTORY

In 1942, SIAD began operations involving reserve storage of supplies and inert materials belonging to the Treasury Department. The missions of receipt, storage, and issue of explosives were assigned to the depot upon completion of the large igloo Storage Area. In 1954, the missions of receipt, storage, and issue of guided missiles and propellant fuels were added.

Activity at the site has fluctuated with the involvement of the United States in active military conflicts. The work force at the site was at an all-time high of 2,327 during the Korean conflict. The work force rose from a low of 974 to a high of 1,577 in 1967 during the Vietnamese conflict.

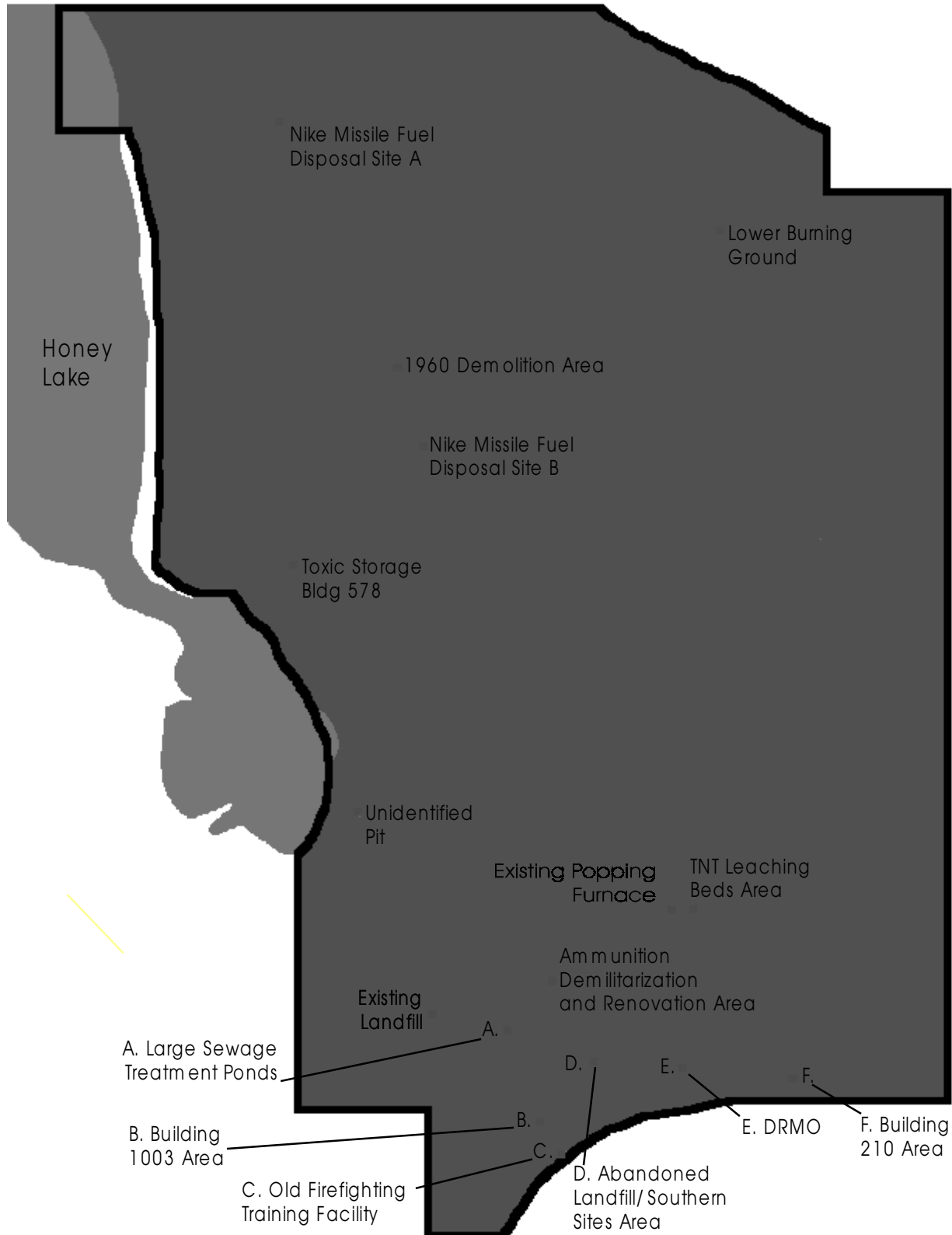
On 30 May 1991 the Federal Facility Site Remediation Agreement (FFSRA) was signed between the Army; the State of California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC); and Cal-EPA, Regional Water Quality Control Board (CRWQCB). The FFSRA identified and prioritized 22 sites at SIAD and placed them into three different groups. A 23<sup>rd</sup> site was later added to the investigation schedule. Group I contains the sites with the highest contamination potential while Group II, and Group III have progressively lower contamination potential. The FFSRA places tight schedules on the start date of investigations and the delivery date of primary documents for each group of sites.

The RAB was established in November 1996 and meets three times annually.

## MISSION

The present mission of SIAD is to provide our customers with economical (best value) logistical support of operational stocks and war reserves to sustain power projection and demilitarization of (conventional) munitions.

# SIERRA ARMY DEPOT



# CONTAMINATION ASSESSMENT

Past operations at SIAD have resulted in the generation and disposal of various types of contaminants across the installation. Solvents, heavy metals, and explosives are the primary contaminants. There is groundwater contamination above MCLs at SIAD-001, 002, 003, 014. Off Post groundwater contamination (TCE) above the MCL was found at SIAD-014. Sites requiring significant soil remediation are SIAD-001, 002, 003, 007, 011, 012, 015, 022. The table on the following page lists the previous environmental studies conducted for SIAD.

The Master Environmental Plan (MEP) identified 22 sites with contamination potential. For the FFSRA the 22 sites were separated into three Groups (Group I, Group II, and Group III). In response to the MEP, and the anticipated signing of the FFSRA, investigations began in September 1989 for the first five highest priority sites named Group I (formerly named Phase I).

## Group I

- TNT Leaching Bed Area (SIAD-001)
- DRMO Trench Area (SIAD-002)
- Abandoned Landfill (SIAD-003)
- Construction Debris Landfill (SIAD-004)
- Chemical Burial Site (SIAD-005)
- Honey Lake (SIAD-006)

## Group II

- EFFTF (SIAD-007)
- Active Sanitary Landfill (SIAD-008) – not eligible for ER,A funds
- ADRA (SIAD-009)
- Upper Burning Ground (SIAD-010)
- Diesel Spill Area (SIAD-011)
- Building 1003 Area (SIAD-012)

## Group III

- Old Fire Fighting Training Area (SIAD-013)
- Building 210 Area (SIAD-014)
- Large Sewage Treatment Ponds (SIAD-015)
- Lower Burning Ground (SIAD-016)
- Nike Missile Fuel Disposal Site A (SIAD-017)
- Nike Missile Fuel Disposal Site B (SIAD-018)
- Toxic Storage Building at Building 578 (SIAD-019)
- 1960 Demolition Area (SIAD-020)
- Open Popping Furnace (SIAD-022)
- The Unidentified Pit (SIAD-059)

Eight sites require future action; 2 sites are BRAC. Eighteen sites have signed RODs. Five sites have RIP.



# PREVIOUS STUDIES

Year	Full Title		Author	Issuing Agency	Date (mm/yy)
1983 - 1	Reassessment of Sierra Army Depot, Herlong, California. Report No. 149R		Environmental Science and Engineering, Inc.	USATHAMA (Aberdeen)	Sep-83
1988 - 1	Master Environmental Plan for the Sierra Army Depot		Energy and Environmental Systems Division, Argonne National Laboratory	USATHAMA (Aberdeen)	Oct-88
1989 - 1	Public Involvement and Response Plan	Sierra Army Depot, Herlong, California	Hunter/ESE, Inc	USATHAMA (Aberdeen)	Apr-89
1990 - 1	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Sampling Design Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90 a
1990 - 2	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Quality Assurance/Quality Control Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90 b
1990 - 3	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Health and Safety Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90 c
1990 - 4	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Remedial Investigation, Appendices A - F	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Sep-90
1990 - 5	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Draft Final Interim Remedial Measures Evaluation	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-90
1991 - 1	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California	Final Health and Safety Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Mar-91
1991 - 2	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California	Final Sampling Design Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Apr-91 a
1991 - 3	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California	Final Quality Assurance/Quality Control Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Apr-91 b
1991 - 4	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-91 a
1991 - 5	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation, Appendices G-Q	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-91 b
1992 - 1	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California	Final Sampling Design Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92 a
1992 - 2	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California	Final Quality Assurance/Quality Control Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92 b
1992 - 3	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California	Final Health and Safety Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92 c
1992 - 4	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Jul-92 a
1992 - 5	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation, Appendices	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Jul-92 b
1992 - 6	Final Work Plan	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92 a
1992 - 7	Final Health and Safety Plan	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92 b
1992 - 8	Final Quality Assurance Project Plan	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92 c
1992 - 9	Total Environmental Program Support Final Quality Assurance Project Plan (Rev. No. 1)	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA	Oct-92
1992 - 10	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California	Final Feasibility Study, Existing Fire-Fighting Training Facility	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Dec-92
1993 - 1	Sierra Army Depot, Group I Remedial Investigation/Feasibility Study, Lassen County, California	Draft Final Feasibility Study, TNT Leaching Beds Area and Diesel Spill Area Groundwater Contamination Assessment	Montgomery Watson	USATHAMA (Aberdeen)	Apr-93

# PREVIOUS STUDIES

1993 - 2	Sierra Army Depot, Group I Remedial Investigation/Feasibility Study, Lassen County, California	Draft Final Feasibility Study, TNT Leaching Beds Area and Diesel Spill Area Soils	Montgomery Watson	USATHAMA (Aberdeen)	May-93 a
1993 - 3	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation	Montgomery Watson	USATHAMA (Aberdeen)	May-93 b
1993 - 4	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Appendices Volume 1	Montgomery Watson	AEC (Aberdeen)	May-93 c
1993 - 5	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study	Remedial Investigation, Appendices Volume II	Montgomery Watson	AEC (Aberdeen)	May-93 d
1993 - 6	Sierra Army Depot, Installation Restoration Program	Proposed Plan for Existing Fire Fighting Training Facility	Sierra Army Depot		Jun-93
1993 - 7	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study	Draft Final Sampling Design Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93 a
1993 - 8	Sierra Army Depot, Proposed Remedial Plan	Existing Fire Fighting Training Facility	USAEC (Aberdeen)		Jul-93
1993 - 9	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study	Draft Final Quality Assurance/Quality Control Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93 b
1993 - 10	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study	Draft Final Health and Safety Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93 c
1993 - 11	Final Interim Remedial Measures Evaluation	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Dec-93
1994 - 1	Sierra Army Depot, Lassen County, California	Record of Decision/Remedial Action Plan, Final, Existing Fire-Fighting Training Facility	Montgomery Watson	AEC (Aberdeen)	Feb-94
1994 - 2	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study	Final Work Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94 a
1994 - 3	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study	Final Chemical Data Acquisition Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94 b
1994 - 4	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study	Final Site Safety and Health Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94 c
1994 - 5	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study	Permeability and Respiration Test Report	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	May-94 a
1994 - 6	Sierra Army Depot, Lassen County, California	Proposed Plan, Seven Sites, Final	Montgomery Watson	AEC (Aberdeen)	May-94 b
1994 - 7	Final Remedial Investigation, Volume I of II	Sierra Army Depot - Group III A Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94 a
1994 - 8	Final Remedial Investigation, Volume II of II, Appendices	Sierra Army Depot - Group III A Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94 b
1994 - 9	Final Remedial Investigation, Volume I of II	Sierra Army Depot - Group III B Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94 c
1994 - 10	Final Remedial Investigation, Volume II of II, Appendices	Sierra Army Depot - Group III B Sites, Lassen County, California	Harding Lawson Associates		Jun-94 d
1994 - 11	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jul-94 a
1994 - 12	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Chemical Data Acquisition Plan	Montgomery Watson	USACOE (Sacramento)	Jul-94 b
1994 - 13	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Site Safety and Health Plan	Montgomery Watson	USACOE (Sacramento)	Jul-94 c
1994 - 14	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Health and Safety Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jul-94 d
1994 - 15	Final Investigation-Derived Waste Management Plan	Groups I, II, and III Remedial Investigation and Feasibility Studies, Sierra Army Depot, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jul-94 e
1994 - 16	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation	Montgomery Watson	AEC (Aberdeen)	Dec-94 a
1994 - 17	Technical Memorandum Regarding Building 210 Area Extraciton Well Installation and Development and Non-Usability	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates		Dec-94 b

# PREVIOUS STUDIES

1995 - 1	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jan-95 a
1995 - 2	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Specification No. 94-45	Montgomery Watson	USACOE (Sacramento)	Jan-95 b
1995 - 3	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Sampling Plan Addendum	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-95
1995 - 4	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Apr-95
1995 - 5	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study	Final Treatability Study Report	Montgomery Watson	USACOE (Sacramento)	May-95 b
1995 - 6	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Specification No. 9545	Montgomery Watson	USACOE (Sacramento)	May-95 c
1995 - 7	Sierra Army Depot Group III Stage 3 Remedial Investigation-Derived Waste		Harding Lawson Associates		May-95 a
1995 - 8	Sierra Army Depot, Lassen County, California	Record of Decision/Remedial Action Plan, Seven Sites, Final	Montgomery Watson	AEC (Aberdeen)	Sep-95
1995 - 9	Final Field Sampling Design Plan	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Oct-95
1995 - 10	Final Building 210 Area Follow-On Remedial Investigation	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Dec-95
1996 - 1	Draft Final Feasibility Study Report	Sierra Army Depot Group III B Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jan-96
1996 - 2	Proposed Plan for Nine Sites at Sierra Army Depot	Sierra Army Depot Installation Restoration Program	Harding Lawson Associates		Feb-96 a
1996 - 3	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Initial Monitoring Report, Volume I of II	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-96 b
1996 - 4	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Initial Monitoring Report, Volume II of II, Appendices	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-96 c
1996 - 5	Sierra Army Depot, Lassen County, California	Focused Feasibility Study, Draft Final, Building 1003 Area	Montgomery Watson	AEC (Aberdeen)	Feb-96 d
1996 - 6	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Final Work Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96 e
1996 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Final Site Safety and Health Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96 f
1996 - 8	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Final Chemical Data Acquisition Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96 g
1996 - 9	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Quarterly Groundwater Monitoring Report, First Quarter	Montgomery Watson	AEC (Aberdeen)	Mar-96
1996 - 10	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Technical Memorandum, Respiration Test No. 1	Montgomery Watson	USACOE (Sacramento)	May-96
1996 - 11	Sierra Army Depot, Lassen County California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Sampling Plan	Montgomery Watson	AEC (Aberdeen)	Jun-96 a
1996 - 12	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation	Montgomery Watson	AEC (Aberdeen)	Jun-96 b
1996 - 13	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation Report, Volume II of II	Montgomery Watson	AEC (Aberdeen)	Jun-96 c
1996 - 14	Draft Final, Delivery Order (PRAC) Diesel Spill Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Jul-96
1996 - 15	Draft Final Delivery Order (PRAC) TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Jul-96
1996 - 16	Project Work Plan for Herlong Reuse Parcel	Sierra Army Depot	Weiss Associates (for USACOE)	USACOE (Sacramento)	Aug-96

# PREVIOUS STUDIES

1996 - 17	Final Record of Decision/Remedial Action Plan, Nine Sites, Sierra Army Depot, Lassen County, California	Total Environmental Program Support	Harding Lawson Associates		Oct-96
1996 - 18	Safety and Health Phase-Out Report	Sewer Line Repair, Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Nov-96
1996 - 19	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Technical Memorandum, Soil Gas Monitoring Event No. 2	Montgomery Watson	USACOE (Sacramento)	Dec-96 a
1996 - 20	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Letter Report, Surface and Near-Surface Soil Sampling	Montgomery Watson	USACOE (Sacramento)	Dec-96 b
1997 - 1	Sierra Army Depot, Lassen County, California; DRMO Trench Area Remedial Investigation/Feasibility Study	Draft Final Feasibility Study	Montgomery Watson	AEC (Aberdeen)	Jan-97
1997 - 2	Final Report, Subsurface Soil Sampling Results, Underground Storage Tank Locations	Herlong Reuse Parcel at Sierra Army Depot, Herlong, California. Vol. II of II	The Weiss Associates Team (for USACOE)	USACOE (Sacramento)	Jan-97
1997 - 3	Draft Final Phase I Field Operations Plan	Building 210 Area Engineering Evaluation and Cost Analysis Predesign Study, Sierra Army Depot, Lassen County, California	Harding Lawson Associates		Mar-97
1997 - 4	Revised Final Task Order (PRAC) TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Apr-97
1997 - 5	Revised Final Task Order (PRAC) Diesel Spill Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Apr-97
1997 - 6	Task Order (SmART) Building 1003 Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	May-97
1997 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Technical Memorandum, Respiration Test No. 2	Montgomery Watson	USACOE (Sacramento)	Jun-97
1997 - 8	Sierra Army Depot, Installation Restoration Program	Proposed Plan for DRMO Trench Area at Sierra Army Depot	Sierra Army Depot		Jul-97
1997 - 9	Sampling and Analysis Plan, Large Sewage Treatment Ponds and Building 1003 Area Soil Remediation Projects	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Jul-97
1997 - 10	Investigation-Derived Waste Management, Phase I Field Operations	Building 210 Area Engineering Evaluation and Cost Analysis Predesign Study	Harding Lawson Associates		Jul-97
1997 - 11	Final Field Sampling Design Plan	Sierra Army Depot Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-97
1997 - 12	Final Project Work Plan, TNT Leaching Beds Area Remediation	Sierra Army Depot, California	Kvaerner Environmental	USACOE (Sacramento)	Oct-97
1997 - 13	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume I of III	Montgomery Watson	AEC (Aberdeen)	Dec-97 a
1997 - 14	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume II of III	Montgomery Watson	AEC (Aberdeen)	Dec-97 b
1997 - 15	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume III of III, Appendices I-P	Montgomery Watson	AEC (Aberdeen)	Dec-97 c
1998 - 1	TNT Leaching Beds Area Remediation, Treatability Phase Report	Sierra Army Depot, Lassen County, California	Kvaerner Environmental	USACOE (Sacramento)	Jan-98
1998 - 2	Environmental Assessment for the Disposal and Reuse of the BRAC Parcels	Sierra Army Depot, California	USACOE (Mobile)	US Army Materiel Command	Feb-98
1998 - 3	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Final Record of Decision/Remedial Action Plan	Montgomery Watson	AEC (Aberdeen)	Mar-98
1998 - 4	Final Site Soil Closure Report, Building 1003	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Apr-98
1998 - 5	Close-Out Report, Existing Fire-Fighting Training Facility Debris Removal	Sierra Army Depot, Lassen County, California	PSC Associates, Inc.	USACOE (Sacramento)	Apr-98
1998 - 6	Final Project Work Plan, Firing Range Berm	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	May-98

# PREVIOUS STUDIES

1998 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Technical Memorandum, Respiration Test No. 3	Montgomery Watson	USACOE (Sacramento)	Jun-98 b
1998 - 8	Field Sampling Plan	Old Popping Furnace, Sierra Army Depot, Lassen County, California	Harding Lawson Associates		Jun-98 a
1998 - 9	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Annual Groundwater Monitoring Report, 1997	Montgomery Watson	AEC (Aberdeen)	Jul-98
1998 - 10	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Closure Report, Paint Shop Subsite	Kvaerner Environmental (for USACOE)	USACOE (Sacramento)	Aug-98
1998 - 11	Draft Final DRMO Trench Area (Soils)	Sierra Army Depot, Herlong, California	USACOE, Sacramento	USACOE (Sacramento)	Oct-98
1998 - 12	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support	Technical Memorandum, Confirmation Soil Sampling	Montgomery Watson	USACOE (Sacramento)	Nov-98 a
1998 - 13	Sierra Army Depot, Lassen County, California	Record of Decision/Remedial Action Plan, Seven Sites, Final, Explanation of Significant Difference	Montgomery Watson	AEC (Aberdeen)	Nov-98 b
1998 - 14	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area 1999 Follow-Up Remedial Investigation/Feasibility Study	Draft Final Sampling Plan	Montgomery Watson	AEC (Aberdeen)	Dec-98
1999 - 1	Pre-Excavation Field Sampling Analysis Results, DRMO Trench Area (Soils) Phase I	Sierra Army Depot, Herlong, California	USACOE, Sacramento	USACOE (Sacramento)	Jan-99
1999 - 2	Draft Final Report, Four Preliminary Sites	Sierra Army Depot, Herlong, Lassen County, California Vol I of II	USACOE, Sacramento	USACOE (Sacramento)	Feb-99
1999 - 3	Draft Final Report, Four Preliminary Sites	Sierra Army Depot, Herlong, Lassen County, California Vol II of II	USACOE, Sacramento	USACOE (Sacramento)	Feb-99
1999 - 4	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Clousre Report, Vol. I of II	Kvaerner Environmental	USACOE (Sacramento)	Mar-99
1999 - 5	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Clousre Report, Vol. II of II	Kvaerner Environmental	USACOE (Sacramento)	Mar-99
1999 - 6	DRMO Trench Area (Soils)	Sierra Army Depot, Herlong, California, Final Submittal	USACOE Sacramento	USACOE (Sacramento)	Jun-99
1999 - 7	Draft Final Field Sampling Design Plan	Upper Burning Ground Follow-On Remedial Investigation, Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USACOE (Baltimore)	Sep-99
1999 - 8	Draft Final	Building 210 Area Engineering Evaluation and Cost Analysis, Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USACOE (Baltimore)	Oct-99
2000 - 1	Sierra Army Depot, Lassen County, California	Existing Fire-Fighting Training Facility, Final Site Closure Report	Montgomery Watson and Innovatice Technical Solutions, Inc.	USACOE (Sacramento)	Jan-00

**ER, A ELIGIBLE  
ACTIVE DSERTS SITES**

# SIAD-001(A) TNT LEACHING BEDS AREA

## SITE DESCRIPTION

DSERTS SIAD-001 is the TNT Leaching Beds Area, comprised of the TNT Leaching Beds Subsite (SIAD-001A) and the Paint Shop Subsite (SIAD-001B).

The TNT Leaching Beds Subsite (TLB) consists of two former TNT leaching beds used for disposal of wastewater from the ammunition shell dismantling and washout facility. The two leaching beds were unlined shallow depressions approximately 50 feet by 50 feet and 50 feet by 100 feet in size. The water used to flush out explosives was transported through a concrete trench leading to the TNT leaching beds where it was allowed to evaporate and infiltrate the soils. The washout facility was in operation from 1940 to 1949 and at maximum capacity could process and reclaim TNT from 800 105mm shells per day.

The RI/FS was completed in 1993, and identified contamination in the soil and groundwater. The ROD was signed in September, 1995. The selected remedy includes composting of explosives contaminated soils, institutional controls and natural attenuation for the groundwater contamination.

LTM started in 1996.

The composting action was started in December 1997 and was completed in December 1998. Final site soil closure report was approved by State regulators in FY99.

## PROPOSED PLAN

Continue LTM to assess the progress of natural attenuation. CERCLA five year reviews will be started in 2001.

## IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**

Explosives (2, 4, 6 TNT; 1, 3, 5 TNB), VOCs

**MEDIA OF CONCERN:**

Soil, Groundwater

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD, RD, RA

**CURRENT IRP PHASE:**

LTM

**FUTURE IRP PHASE:**

LTM



## CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
IRA							
RD							
RA(C)							
RA(O)							
LTM	70	70	70	70	70	70	1851

**PROJECTED TOTAL: \$2,271,000**

# SIAD-002 DEFENSE REUTILIZATION AND MARKETING OFFICE TRENCH AREA

## SITE DESCRIPTION

The Defense Reutilization and Marketing Office (DRMO) Trench Area consists of an open trench approximately 290 feet long by 40 feet wide by 10 feet deep, the Burn and Debris Area and the Active DRMO Yard.

The trench was used for the disposal of wood pallets, cardboard tubing, waste oil, sludge, and solvents. The site was used extensively from 1942 to 1973 and in limited capacity from 1973 to 1987. Between 1942 and 1973, approximately 190 liters per day of waste oils, sludge, solvents, and cleaning fluids from the vehicle maintenance activities were disposed and burned in the DRMO Trench Area.

The RI/FS was completed in February 1997. The ROD was signed in March 1998.

The selected remedy for the trench area will utilize a soil vapor extraction (SVE) and bioventing.

The Burn and Debris area will have soil removed for off site disposal.

Groundwater contamination will be monitored to assess natural attenuation.

The Active Yard will have a localized SVE system.

Soil removal from the Burn and Debris Area was completed in FY99. The SVE for the Trench Area and Active Yard began operation in FY00.

## PROPOSED PLAN

Operate SVE for soils. LTM began in FY00, including the installation of 5 additional wells.

## IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**  
SVOCs, VOCs/TCE, POL, Sb, Cu, Pb

**MEDIA OF CONCERN:**  
Soil, Groundwater

**COMPLETED IRP PHASE:**  
PA/SI, RI/FS, PP, ROD, RD

**CURRENT IRP PHASE:**  
RA,(O) LTM

**FUTURE IRP PHASE:**  
RA(O), LTM



## CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
IRA							
RD							
RA(C)							
RA(O)	251	241	241				
LTM				64	64	64	1152

**PROJECTED TOTAL: \$2,077,000**



# SIAD-003

## ABANDONED LANDFILL AND SOUTHERN SITES AREA

### SITE DESCRIPTION

SIAD-003 is made up of the Abandoned Landfill and the Southern Sites Area.

The Abandoned Landfill (ALF) was used as the main disposal area for SIAD domestic wastes from the early 1940s to 1965. The primary method of disposal was waste burning followed by spreading and burning of the resulting residue. The ALF is a trench type landfill with no liner or leachate collection system. The dimensions of this site are approximately 1,600 by 1,500 feet (approximately 55 acres).

The Southern Sites Area (SSA) is located south of the ALF and north of the potable supply wells PSW-02 and PSW-08. This area includes the Equipment Yard, Equipment Maintenance Yard, Fuel Sump Area, Former Officer's Club Pool and Wash Rack Area. Some of these areas are still active, however; the contamination is from past activities.

The RI/FS began in 1990. Groundwater under the ALF and the SSA is contaminated with TCE and TPH.

### PROPOSED PLAN

With the preliminary RI information, at the ALF a soil cap is the expected RA. Natural attenuation may be acceptable for the groundwater contamination associated with the ALF.

At the SSA, additional RI money is necessary due to the following: revisions to the SAP, old gas station discovered, resampling wells, additional background calculations required due to DTSC (CAL-EPA) updated guidance, waste characterization and disposal, and additional sampling. This RI/FS will provide additional data necessary for assessing contaminate fate and transport.

Possible RAs may include source removal, bioventing and 'guard wells' around potable supply wells.

The proposed actions are to identify actions necessary to protect the primary potable supply wells. LTM includes groundwater and landfill cap maintenance.

### IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**

SVOCs, VOCs, Pesticides (DDT, DDE, DDD), TPH

**MEDIA OF CONCERN:**

Soil, Groundwater

**COMPLETED IRP PHASE:**

PA/SI

**CURRENT IRP PHASE:**

RI/FS

**FUTURE IRP PHASE:**

RD, RA, LTM



### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	250						
IRA							
RD		110					
RA(C)		2357					
RA(O)							
LTM			140	140	140	140	1260

**PROJECTED TOTAL: \$4,537,000**

# SIAD-006 HONEY LAKE

## SITE DESCRIPTION

Honey Lake was acquired by the Army in 1933 for use as a bombing range. From 1933 to 1940, Honey Lake was used for aerial training with small-arms ammunition. During the 1940s, the site was used as a surveillance test site and for demolition of munitions. From February through May 1946, a weekly shipment of about 265 tons of ammunition, mainly 105mm shells, was detonated at the site using TNT. Aerial photographs taken in 1954 show areas of heavy cratering in approximately 1,300 acres of the easternmost portion of the lake bed. Due to the past demolition and training activities, unexploded ordnance are present at this site.

The RI was completed in May 1993. A BRAC funded geophysical survey of the east shore began in 1996.

## IRP STATUS

**RRSE RATING:** Not Evaluated  
**CONTAMINANTS OF CONCERN:**  
 UXO  
**MEDIA OF CONCERN:**  
 Soil  
**COMPLETED IRP PHASE:**  
 PA/SI, RI  
**CURRENT IRP PHASE:**  
 FS  
**FUTURE IRP PHASE:**  
 RC

## PROPOSED PLAN

Additional funding has been assumed to account for uncertainty at Honey Lake. Future action is to revert lake to state of California.

## CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	100						
IRA							
RD							
RA(C)							
RA(O)							
LTM							

**PROJECTED TOTAL: \$100,000**

# SIAD-010

## UPPER BURNING GROUND HANSEN'S HOLE AND AREAS

### SITE DESCRIPTION

The Upper Burning Ground (UBG) is a 3,896 acre area located north of the main depot. The site was used to burn primers, fuses, propellants, pyrotechnics, flare materials, and high explosives that could not be detonated. The site was also used as an open demolition area for small detonations.

Six, past activity sub-areas comprise the UBG site. These sub-areas are: Hansen's Hole; Old Demolition Area; Open Trenches, Ash Pile; and the north and south extension and lowest burning area.

The RI work at these four sub-sites began in 1990. Additional RI work will be completed in FY99.

Ongoing activities at two active areas (the Demolition Area and Lower Burning Area) within the UBG, currently under RCRA Interim Status, are being permitted as a treatment facility under a RCRA Part B Permit.

### PROPOSED PLAN

Complete the FS in FY01. Possible RAs may include limited soil removal at the Ash Pile and Open Trenches and institutional controls.

### IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**

Explosives, Metals

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI

**CURRENT IRP PHASE:**

RI/FS, RD

**FUTURE IRP PHASE:**

RC



### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	5						
IRA							
RD	41						
RA(C)	159						
RA(O)							
LTM							

**PROJECTED TOTAL: \$205,000**

# SIAD-011

## DIESEL SPILL AREA

### SITE DESCRIPTION

A diesel oil spill was discovered at the southwest corner of Building 403 in March 1987. The spill was the result of a leak in a pipe that led from the underground storage tank located directly south of Boiler Plant No. 3 to a small boiler in Building 403. During 1987, the spill area was excavated to 30 feet deep and backfilled with clean soil. The amount of diesel oil spilled is estimated at 5,000 gallons.

The underground storage tanks were removed August 1990.

The recommended remedial alternative in the Seven Sites ROD (Sept 1995) was in-situ bioventing for soils and a dual phase extraction technique for contaminated groundwater. After the ROD was signed, additional information revealed that the initial investigation overstated the extent of the groundwater contamination.

An Explanation of Significant Difference was completed in December 1998 which eliminated the requirement for groundwater remediation.

Bioventing system was completed in FY00.

### PROPOSED PLAN

Estimates reduced for long term monitoring. RC is expected in 2001.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

TPH-Diesel, SVOCs

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD, RD, RA

**CURRENT IRP PHASE:**

RA

**FUTURE IRP PHASE:**

LTM



### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
IRA							
RD							
RA(C)	26						
RA(O)							
LTM							

**PROJECTED TOTAL: \$26,000**

# SIAD-014

## BUILDING 210 AREA

### SITE DESCRIPTION

The Building 210 Area is located near the southeast corner of SIAD and includes the areas adjacent to Buildings 208, 209, and 210. Building 210 was used as a vehicle maintenance facility from 1942 until 1949. A popping furnace was installed in 1949 and was used for the demilitarization of small-arms ammunition during the 1950s and 1960s and was deactivated by 1979. Additional activities included sand blasting, spray painting, steam cleaning, powder packaging, and tank engine fogging. Wastes generated at this site included degreasing solvents, oils, sludge, and residues from the popping operations. Buildings adjacent to Building 210 were used for vehicle maintenance from the 1940s until 1973.

RI was completed in 1995 and indicated TCE contamination in groundwater that has migrated off post to the south.

An EE/CA recommending completion of a groundwater treatment study was completed in FY00.

### PROPOSED PLAN

The FS will incorporate data from the groundwater treatment study and should be completed in FY02.

Additional funding for Bld 210 O&M, well rehabilitation and enhanced biodegradation treatment was necessary for this site. The treatment system is funded for two years only, though it may require longer operation.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

TCE, Freon-11

**MEDIA OF CONCERN:**

Groundwater

**COMPLETED IRP PHASE:**

PA/SI

**CURRENT IRP PHASE:**

FS, IRA

**FUTURE IRP PHASE:**

LTM

### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
IRA	1300	1150					
RD							
RA(C)							
RA(O)							
LTM			70	70	70	70	1155

**PROJECTED TOTAL: \$3,885,000**

# SIAD-020

## 1960 DEMOLITION AREA

### SITE DESCRIPTION

The 1960 Demolition Area is located in the northern portion of SIAD. The site is approximately 1700 feet by 2000 feet (approximately 80 acres). This area was developed during the 1960s when the UBG demolition area was closed for construction. During 1960-1961, a group event of 36, 500-pound bombs were detonated at a rate of 12 groups per day (432 bombs per day). Some of the metal fragments from this activity remain on the surface today. CS tear gas grenades were also detonated at a rate of 200 to 248 pounds per day for a 3 month period in 1961. During the 1970s, NIKE Hercules XM-30 motors were fired in silos on the site. The solid-based propellant was burned in the silos during the firings. Approximately 24 surface depressions (trenches) created by detonated bombs are located at the 1960 Demolition Area. A review of aerial photographs indicate that the trenches are 300 to 500 feet long, 150 feet wide and up to 20 feet deep.

The RI/FS was completed in 1996. This site was included in the Nine Sites ROD signed in October 1996.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

UXO, Metals, Explosives, CS Tear Gas

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI, ROD

**CURRENT IRP PHASE:**

none

**FUTURE IRP PHASE:**

RD, RA



### PROPOSED PLAN

The selected action will be access restrictions through adding institutional controls and signage to the Installation Master Plan.

### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS							
IRA							
RD							
RA(C)	10	10					
RA(O)							
LTM							

**PROJECTED TOTAL: \$20,000**

# SIAD-022 OLD POPPING FURNACE

## SITE DESCRIPTION

The Old Popping Furnace was located in the northeast corner of the Main Depot and encompassed a small area just west of the entrance of the Lower Burning Ground (SIAD-010). The site is approximately 1000 feet by 1000 feet (23 acres). This area was used during the 1950's for the demilitarization of small-arm ammunition. Some of the metal fragments from this activity remain on the surface today. This furnace was operated without air emission controls, allowing contaminants to spread over approximately a 5 acre area.

RI work was started in 1992. Additional RI work to include treatability studies for soil stabilization will be completed in FY00.

## IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

Metals, Explosives

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI

**CURRENT IRP PHASE:**

RI/FS

**FUTURE IRP PHASE:**

RA



## PROPOSED PLAN

The RI will continue to further characterize groundwater and soil and to revise the RI/FS based on new data (Arsenic). With current RI data the possible remedy will be capping and possible groundwater remediation.

## CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
RI/FS	300						
IRA							
RD							
RA(C)		1700					
RA(O)							
LTM							

**PROJECTED TOTAL: \$2,000,000**

# SIAD-058

## SAID SPILL AREAS (FINAL ROD SITES)

### SITE DESCRIPTION

The state of California requires a sitewide ROD. This site includes all previously identified sites.

### IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**

Metals, Explosives

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI

**CURRENT IRP PHASE:**

R/FS

**FUTURE IRP PHASE:**

RC

### PROPOSED PLAN

This site will cover an installation wide ROD that will close out all sites at SAID.

### CONSTRAINED COST TO COMPLETE

PHASE	2001	2002	2003	2004	2005	2006	2007+
R/FS		500					
IRA							
RD							
RA(C)							
RA(O)							
LTM							

**PROJECTED TOTAL: \$500,000**



**ER, A ELIGIBLE RESPONSE  
COMPLETE DSERTS SITES**

# SIAD-001(B) PAINT SHOP SUBSITE

## SITE DESCRIPTION

DSERTS SIAD-001 is the TNT Leaching Beds Area, comprised of the TNT Leaching Beds Subside (SIAD-001A) and the Paint Shop Subsite (SIAD-001B).

The Paint Shop Subsite (PS) is within the western portion of the TNT Leaching Beds Area (SIAD-001). A building near the subsite was used as a paint shop from the 1940s to the mid-1950s. Liquids typically used for painting such as paint sludges, and solvents were discharged to the soils in the immediate area. A concrete trough that extends eastward from the building foundation likely carried wastes to a dry well about 200 feet east of the concrete pad.

The RI/FS was completed in 1993, and identified contamination in the soil and groundwater. The ROD was signed in September, 1995. The selected remedy includes soil removal with off post disposal, institutional controls and natural attenuation for the groundwater contamination.

LTM started in 1996.

## PROPOSED PLAN

Final site soil closure report was approved by State regulators in FY99.

Continue LTM to assess the progress of natural attenuation. CERCLA five year reviews will be started in 2001.

All funding for this site will be addressed under SIAD-001(A).

## IRP STATUS

**RRSE RATING:** High Risk

**CONTAMINANTS OF CONCERN:**

SVOCs, TCE, Carbon Tetrachloride;  
1, 2-dichloroethane; chloroform

**MEDIA OF CONCERN:**

Soil, Groundwater

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD, RD, RA

**CURRENT IRP PHASE:**

LTM

**FUTURE IRP PHASE:** LTM



# SIAD-004

## CONSTRUCTION DEBRIS LANDFILL

### SITE DESCRIPTION

The Construction Debris Landfill is an area that has been used for dumping of concrete, asphalt and construction rubble. This site was in operation from the early 1940s until closure in 1988. Because this site is within close proximity to the ALF and the landfill trenching procedures at both sites are similar, these sites were grouped together for investigation purposes.

The Nine Sites ROD (Oct 1996) identified NFA.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

None

**COMPLETED IRP PHASE:**

PA/SI, RI, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



# SIAD-005

## CHEMICAL BURIAL SITE

### SITE DESCRIPTION

The Chemical Burial Site is a 100 by 600-foot area located within the Construction Debris Landfill. The site was used from January 1971 to October 1972 for trench burial of retrograde drummed chemicals. In 1974 the drums were excavated and removed and the trench was backfilled. During removal and excavation, all drums were observed to be intact. Based on this observation, the chemicals were believed to be completely contained within the drums and the area was believed to be uncontaminated. Because the Chemical Burial Site is located within the Construction Debris Landfill and in close proximity to the ALF, these sites were grouped together for the purposes of investigation. The site has not demonstrated any contamination and is identified as a NFA site in the Nine Sites ROD (Oct 96).

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

None

**COMPLETED IRP PHASE:**

PA/SI, RI, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC

# SIAD-009

## AMMUNITION DEMILITARIZATION AND RENOVATION AREA

### SITE DESCRIPTION

Operations carried out at the Ammunition Demilitarization and Renovation Area (ADRA) included ammunition pull-apart, repacking, and painting. Wastes generated were primers, charges, waste rags, paints, and solvents. Each platform located at the ADRA contained a floor drain that led to a below-ground drainage pipe, septic tank, and leach field south of the platforms. It is possible that small quantities of munitions compounds were washed down the drains.

### PROPOSED PLAN

The Nine Sites ROD (Oct 1996) for this site recommends no further action due to the very low levels of contaminants detected.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

TCE, Explosives in low levels

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, RO

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC

# SIAD-012

## BUILDING 1003 AREA

### SITE DESCRIPTION

Waste oil spilled at a Texaco gas station (Building 1003) was transported through a storm drain to an area north of Susanville Road. The waste oil spill was discovered in January 1988. The spill, which is estimated to have occurred over a 20 to 24-month period, is estimated at 900 gallons of waste oil. The spill was the result of a clogged oil-water separator that diverted waste oil from the underground storage tank to the storm drain. Waste oil flowed north under Susanville Road and discharged into a gentle sloping drainage area.

The Nine Sites ROD (Oct 1996) recommended soil removal and recycling which was completed in April 1998. The final closure report was approved in June 1998.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

TPH, Lead

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, ROD, RD, RA

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



# SIAD-013

## OLD FIRE-FIGHTING TRAINING AREA

### SITE DESCRIPTION

The Old Fire-Fighting Training Facility is located at the southern boundary of SIAD. The site was originally a paved and bermed ice skating rink with an aerial extent of approximately 2200 square yards. The site was also used as a tennis court. The site may have been used as fire-fighting training facility in the early 1960s; however, this is speculative because there is no documentation to support this contention.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** None

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

None

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



# SIAD-015

## LARGE SEWAGE TREATMENT PONDS

### SITE DESCRIPTION

The Large Sewage Treatment Ponds are located in the south-central portion of SIAD. The site contains four unlined and two lined ponds used for sewage treatment. The unlined ponds occupy an area 600 feet by 600 feet, and the two polyethylene lined ponds occupy an area 500 feet by 1000 feet. Three of the unlined ponds were used from 1941 to 1971, and the lined ponds have been in use from 1971 to the present. Also, one unlined pond is in use for effluent overflow. Sewage treatment ponds receive primarily sanitary sewage, although small quantities of industrial wastes from wash sinks and shop floor drains are received occasionally. Sewage treatment in the unlined ponds was by evaporation and percolation into the underlying soil.

The Nine Sites ROD (Oct 1996) recommended removal of PCB contaminated soil with off site disposal at a permitted facility. The final closure report was approved in June 1998.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

Metals, PCB

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

RI, FS, PP, ROD, RD/RA

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC





# SIAD-016

## LOWER BURNING GROUND

### SITE DESCRIPTION

The Lower Burning Ground (LBG) is located near the northeast corner of SIAD. The LBG was used from 1946 to the late 1980s for burning munitions and various pyrotechnics, both in pits and on the ground surface. Interim Burning Area A, located in the southern portion of the LBG area, was used in 1960 and 1961 and may have been used until 1974. Materials such as explosives, waste products generated during demolition operations, primers, charges, waste rags, paint sludge, solvents, powder projectiles, and other munitions are reported to have been dumped at the LBG. Most of the burning at the LBG was done in the pits which have been backfilled and covered. The LBG contains a trench 200 feet long by 35 feet wide by 10 feet deep where demilitarization and industrial wastes have been burned or dumped.

The RI/FS was completed in 1996. This site was included in the Nine Sites ROD signed in October 1996.

### PROPOSED PLAN

The selected action will be access restrictions through adding institutional controls to the Installation Master Plan. This action is expected to be completed in FY01.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

UXO, Explosives, Metals, TPH, Organics

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

RI/FS, PP, ROD

**CURRENT IRP PHASE:**

RC with institutional controls

**FUTURE IRP PHASE:**

RC with institutional controls

# SIAD-017 & SIAD-018

## NIKE MISSILE FUEL DISPOSAL SITE A & B

### SITE DESCRIPTION

The Nike Missile Fuel Disposal Site A and Nike Missile Fuel Disposal Site B are located in the northwest portion and west-central portion of SIAD respectively. These sites cover an area of approximately 900 feet by 900 feet each and were used for disposal of fuel components from Nike Ajax Missiles. The fuel disposal activities at this site included the burning of aviation gasoline (JP-4) in shallow pits measuring 10 feet by 10 feet by 1.6 feet deep and the evaporation of inhibited red-fuming nitric acid in small aluminum dishes adjacent to the burning pits.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

None

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



# SIAD-019

## TOXICS STORAGE BUILDING AT BUILDING 578

### SITE DESCRIPTION

The Toxic Storage Building 578 is located in the west-central portion of SIAD. The site includes the area surrounding the building. Buildings 578 and 577 (also included in this site) are small, one-story warehouses, with concrete slab floors. The floors of these buildings contain drains that extend beneath the buildings and to outside gravel covered drainage areas. It was reported that titanium tetrachloride was stored in Building 578 at one time. In addition two pallets of cyanide in glass bottles were being stored in Building 577. During transfer and storage, a one quart spill of cyanide may have occurred at Building 578.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

### PROPOSED PLAN

No future action is required under the IRP.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC

# SIAD-059

## THE UNIDENTIFIED PIT

### SITE DESCRIPTION

The Unidentified Pit is located in the southwest portion of the installation outside the installation access control fence. This pit, approximately 100 feet in diameter, was observed during a helicopter flight in 1989. The pit was probably used as a stock tank to supply cattle with water. A shallow trench leads from the pit to Honey Lake.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

### PROPOSED PLAN

The selected remedy is to collapse surrounding berms into the pit followed by no further action.

Action is funded but unable to complete action until water level decreases.

### IRP STATUS

**RRSE RATING:** Low Risk

**CONTAMINANTS OF CONCERN:**

None

**MEDIA OF CONCERN:**

Soil, Groundwater

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



# BRAC DSERTS SITES

DSERTS #	SITE NAME	BRAC DATE
SIAD-007	Existing Fire Fighting Training Facility	1995
SIAD-013	Old Fire-Fighting Training Facility	1995
SIAD-023	Comp Surveillance Test Range	1995
SIAD-030	Rifle/ Pistol Range	1995
SIAD-041	Compliance DU Igloos	1995
SIAD-044	Range Lead/Debris Airstrip Area	1995
SIAD-045	Airstrip Diesel Spill	1995
SIAD-046	Compliance DU Storage Areas	1995
SIAD-051	Compliance Asbestos BRAC Parcel	1995

# SIAD-007

## EXISTING FIRE-FIGHTING TRAINING FACILITY

### SITE DESCRIPTION

The Existing Fire-Fighting Training Facility (EFFTF) is located at an old auto racetrack in the southwest portion of SIAD. The site was used to train SIAD fire control personnel and was in operation from 1968 to mid-1987. Once or twice per year, about 400 gallons of diesel fuel were burned on site during training sessions. The fuel used for training was distributed to the EFFTF through metal pipes from an above ground storage tank. Diesel fuel was the predominant fuel burned; however, gasoline and waste oil may also have been used.

The FS was completed in 1992 and the ROD was signed in 1994. A bioventing system was constructed in April 1994 and was operated until January 1999.

This site was moved to the BRAC list in 1997.

### PROPOSED PLAN

The bioventing system was decommissioned in February 1999. Following removal of surface soil in FY99, site remediation was completed.

These actions and any future actions will be funded under BRAC.

### IRP STATUS

**RRSE RATING:** Medium Risk

**CONTAMINANTS OF CONCERN:**

TPH

**MEDIA OF CONCERN:**

Soil

**COMPLETED IRP PHASE:**

PA/SI, RI/FS, PP, ROD, RD, RA

**CURRENT IRP PHASE:**

RC

**FUTURE IRP PHASE:**

RC



*This site is listed in the IRP due to public interest.*

# SCHEDULE

## PAST MILESTONES

### 1988

MEP

October

### 1989

IRP Public Participation Plan

April

### 1991

RI Group I

Federal Facility Site Remediation Agreement

September

September

### 1992

RI Group II

FS Group II EFFTf (SIAD-007)

July

December

### 1993

RI Group I Follow-up

FS Group II EFFTf (SIAD-007)

FS TNT Leaching Beds Area and Diesel Spill Area- Soil (SIAD-001, 011)

PP Group II EFFTf (SIAD-007)

FS TNT Leaching Beds Area and Diesel Spill Area- Groundwater

April

April

May

July

April

### 1994

Diesel Still Area FS (SIAD-011)

RIP for EFFTf (SIAD-007)

PP Group I & III A Sites "Seven Sites" (TNT, DSA, & Group IIA Sites)

RI Group III A Sites (OFT, FDA, FBA, TSA, UDP)

RI Group III B Sites (STP, LBG, DMA)

ROD Group II EFFTf (SIAD-007)

RI Group I & II Follow-up (ADRA & B1003)

March

April

May

June

June

September

December

### 1995

FS Group III B Sites

FS Group I & II Follow-up Sites

RI Group I Follow-up Continuation (DRMO & ALF)

PP (ADRA)

RI Group III C Site (B210)

ROD "Seven Sites"

April

April

May

May

September

September

# SCHEDULE

## PAST MILESTONES

### 1996

FS Building 1003 (SIAD-012)	February
RIP for TNT Leaching Beds Area - Groundwater (SIAD-001)	February
DRMO Trench Area Follow-Up RI (SIAD-002)	June
Nine Sites ROD	October

### 1997

DRMO Trench Area FS	January
RI/FS Old Popping Furnance (SIAD-022)	February
PP for DRMO (SIAD-002)	July
RIP for TNT Leaching Beds Area - Soil (SIAD-001)	December

### 1998

ROD for DRMO Trench (SIAD-002)	March
Large Sewage Treatment Pond Closure Report (SIAD-015)	June
Building 1003 Closure Report (SIAD-012)	June
Building 210 Pilot Study (SIAD-014)	August
RIP for Paint Shop Subsite (SIAD-001B)	September
Explanation of Significant Difference for DSA (SIAD-011)	December

### 1999

SIAD-002, Soil Removal

### 2000

SIAD-002, Soil Removal

## PROJECTED MILESTONES

SIAD-002, Soil Vapor Extraction  
SIAD-022, Hot Spot Removal  
SIAD-003, RA(C)  
SIAD-014, IRA  
SIAD-020, RA(C)



# SCHEDULE

## RESPONSE COMPLETE SITES

The following sites currently require no further action under the ER,A program:

SIAD-004	CONSTRUCTION DEBRIS LANDFILL
SIAD-005	CHEMICAL BURIAL SITE
SIAD-008	HONEY LAKE (BRAC)
SIAD-009	AMMUNITION DEMILITARIZATION AND RENOVATION AREA
SIAD-012	BUILDING 1003 AREA
SIAD-015	LARGE SEWAGE TREATMENT PONDS
SIAD-016	LOWER BURNING GROUND
SIAD-017	NIKE MISSILE FUEL DISPOSAL SITE A
SIAD-018	NIKE MISSILE FUEL DISPOSAL SITE B
SIAD-019	TOXICS STORAGE BUILDING AT BUILDING 578
SIAD-021	EXISTING POPPING FURNANCE
SIAD-024	AMMONITION HAZARD TEST SITE
SIAD-025	“K” BLOCK AREA
SIAD-026	AMMO MAINTENANCE (BLDG 640) (NON-ELIGIBLE)
SIAD-027	ABANDONED LANDFILL
SIAD-028	TRANSFORMER-250 (NON-ELIGIBLE)
SIAD-029	HOSPITAL (BLDG 150) (NON-ELIGIBLE)
SIAD-031	STORAGE SILOS
SIAD-032	BUILDING T-79
SIAD-033	POSSIBLE BURIAL SITE
SIAD-034	SEPTIC TANKS/ LEACH FIELDS
SIAD-035	STORAGE IGLOOS (8)
SIAD-036	BLDG 75 & 79 AREA
SIAD-037	DIESEL SUMP AREA
SIAD-038	NORTHWEST WAREHOUSE AREA
SIAD-039	SMALL SEWAGE TREATMENT PONDS
SIAD-040	PIT AT SOUTHEAST EDGE OF HONEY LAKE
SIAD-042	SW-AREA
SIAD-043	AIR STRIP REFUEL APRON
SIAD-056	STATEGIC ORE PILE
SIAD-057	INSTALLATION WIDE GW PLUME

# SCHEDULE

## NO FURTHER ACTION SITES (but not RC yet)

SIAD-007	EXISTING FIRE-FIGHTING TRAINING FACILITY (BRAC)
SIAD-013	OLD FIRE-FIGHTING TRAINING FACILITY (BRAC)
SIAD-023	COMP SURVEILLANCE TEST RANGE (BRAC)
SIAD-030	RIFLE/ PISTOL RANGE
SIAD-041	COMPLIANCE DU IGLOOS (BRAC)
SIAD-044	RANGE LEAD/ DEBRIS AIRSTRIP AREA (BRAC)
SIAD-045	AIRSTRIP DIESEL SPILL (BRAC)
SIAD-046	COMPLIANCE DU STORAGE AREAS (BRAC)
SIAD-051	COMPLIANCE ASBESTOS BRAC PARCEL
SIAD-056	STATEGIC ORE PILE
SIAD-057	INSTALLATION WIDE GW PLUME

# Sierra Army Depot IRP Schedule

(Based on current funding constraints)

Current Phase

Future Phase

DSERTS #	PHASE	FY01	FY02	FY03	FY04	FY05	FY06	FY07+
SIAD-001A	LTM							
SIAD-002	RAO							
	LTM							
SIAD -003	RI/FS							
	RD							
	RAC							
	LTM							
SAID-006	RI/FS							
SIAD-010	RI/FS							
	RD							
	RA							
SIAD-011	RA							
SIAD-014	RI/FS							
	LTO							
	LTM							
SIAD-020	RD							
	RA							
	LTM							
SIAD-022	RI/FS							
	RAC							
SAID-058	RI/FS							

# DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM

## Site, 4. Installation Phase Summary Report

**Installation:** SIERRA ARMY DEPOT  
**Programs:** BRAC I, BRAC II, BRAC III, BRAC IV, IRP  
**Subprograms:** Compliance, Restoration, UXO  
**Installation count for Programs:** 1  
**NPL Options:** Delisted, No, Proposed, Yes  
**Installations count for Programs and NPL:** 1  
**Site count for Programs and NPL:** 50

### Phase / Status / Sites

PA				SI			
C	U	F	RC	C	U	F	RC
50	0	0	4	44	2	0	19
RI / FS				RD			
C	U	F	RC	C	U	F	RC
19	6	0	11	6	0	3	3
RA(C)				RA(O)			
C	U	F	RC	C	U	F	RC
7	0	6	5	0	2	0	0
LTM				N			
C				U	F	N	
0				1	4	44	

### Remedy / Status / Sites (Actions)

IRA			
C	U		F
0 (0)	1 (1)		0 (0)
FRA			
C	U		F
7 (12)	0 (0)		6 (7)

**RIP Total:** 2  
**RC Total:** 39

**Reporting Period End Date:**

DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM

Site, 9. RISK INSTALLATION ACTION PLAN REPORT

03/27/2001

Installation: SIERRA ARMY DEPOT  
 Major Command: AMC  
 SubCommand: OSC  
 Program Options: IRP, BRAC I, BRAC II, BRAC III, BRAC IV

Subprogram Options: Compliance, Restoration, UXO

Site	RRSE	Media Evaluated	Phase (s) Completed	Phase (s) Underway	Phase (s) Future	#IRA Completed	#IRA Underway	#IRA Future	LTM Status	RIP Date	RC Date
SIAD-001	1A	GW SL	PA RAC RD RI SI						U		199812
SIAD-002	1A	GW SL	PA RAC RD RI SI	RAO					F	200010	200509
SIAD-003	1A	GW SL	PA SI	RI	RAC RD				F		200209
SIAD-004	3A	GW SL	PA RI SI						N		199511
SIAD-005	3A	GW SL	PA RI SI						N		199511
SIAD-006	NE		PA SI	RI	RAC				F		200309
SIAD-007	3A	SL	PA RAC RD RI SI						N		200002
SIAD-008	3A	GW	PA SI						N		198810
SIAD-009	2A	GW SL	PA RI SI						N		199511
SIAD-010	1A	GW SEM SL	PA SI	RI	RAC RD				N		200209
SIAD-011	3A	SL	PA RAC RD RI SI	RAO						200005	200105
SIAD-012	2A	GW SL	PA RI SI						N		199511
SIAD-013	NE		PA RI SI						N		199501
SIAD-014	2A	GW SL	PA SI	RI	RAC		1		F		200205
SIAD-015	3A	SL	PA RAC RD RI SI						N		199806
SIAD-016	2A	SL	PA RAC RI SI						N		199909
SIAD-017	NE		PA RI SI						N		199501
SIAD-018	NE		PA RI SI						N		199501
SIAD-019	NE		PA RI SI						N		199501

Site	RRSE	Media Evaluated	Phase (s) Completed	Phase (s) Underway	Phase (s) Future	#IRA Completed	#IRA Underway	#IRA Future	LTM Status	RIP Date	RC Date
SIAD-020	2A	GW SL	PA RI SI		RAC				N		200209
SIAD-021	NE		PA SI						N		198810
SIAD-022	1A	SEM SL	PA SI	RI	RAC RD				N		200209
SIAD-023	NE		PA RI SI						N		200002
SIAD-024	NE		PA SI						N		199008
SIAD-025	NE		PA SI						N		199008
SIAD-026	NE		PA SI						N		199008
SIAD-027	NE		PA SI						N		199008
SIAD-028	NE		PA SI						N		199008
SIAD-029	3B	SL	PA SI						N		199806
SIAD-030	2B	SL	PA RAC RD RI SI						N		199902
SIAD-031	NE		PA SI						N		199008
SIAD-032	NE		PA SI						N		199008
SIAD-033	NE		PA SI						N		199008
SIAD-034	3B	SL	PA SI						N		199008
SIAD-035	NE		PA SI						N		199008
SIAD-036	NE		PA						N		199008
SIAD-037	NE		PA						N		199611
SIAD-038	3A	SL	PA SI						N		199902
SIAD-039	3A	SL	PA SI						N		199908
SIAD-040	NE		PA RI SI						N		199501
SIAD-041	NE		PA	SI					N		200111
SIAD-042	3B	SL	PA SI						N		199903
SIAD-043	NE		PA SI						N		199902
SIAD-044	3B	SEF	PA SI						N		199808
SIAD-045	NE		PA SI						N		199902
SIAD-046	NE		PA	SI					N		200111
SIAD-051	NE		PA						N		199703
SIAD-056	3A	SL	PA						N		199902
SIAD-057	3A	GW	PA RI SI						N		199911
SIAD-058	1A	GW SEF SL	PA SI	RI					N		200209

# REM/IRA/RA ASSESSMENT

## PAST REM/IRA/RA

SIAD-001, TNT-Leaching Beds, Remedial action, soil composting and removal, groundwater natural degradation FY96.

SIAD-002, DRMO Trench Area, Soil Removal.

SIAD-012, Building 1003 area, Remedial action, soil removal.

SIAD-015, Large Sewage Treatment Ponds, Remedial action, soil treatment.

SIAD-016, Lower Burning Ground, Remedial action, post and fence for UXO.

## CURRENT REM/IRA/RA

SIAD-002, DRMO Trench Area, Remedial action, soil treatment, and groundwater remediation.

SIAD-011, Diesel Spill Area, Remedial action, bio-vent soil.

SIAD-014, Building 210 area, Remedial action, pump and treat groundwater.

SAID-010, Upper Burning Grounds, Soil removal.

## FUTURE REM/IRA/RA

SIAD-002, DRMO Trench Area, Remedial action, soil vapor extraction system, and groundwater remediation.

SIAD-003, Abandoned Landfill Area, Remedial action, soil cap, and groundwater remediation.

SIAD-014, Building 210 Area, Interim Remedial action, pump and treat.

SIAD-020, 1960 Demolition Area, Remedial action, sinage.

SIAD-022, Old Popping Furnace, Remedial action, Hot spot removal.

SIAD-022, Old Popping Furnace, Remedial action, In-situ soil treatment.

SIAD-022, Old Popping Furnace, RA, Groundwater remediation.

# PRIOR YEAR FUNDING

<b>FY80</b>			
Record Search	\$	50,000	
<b>FY83</b>			
Reassessment	\$	50,000	
<b>FY87</b>			
Master Environmental Plan	\$	162,000	
<b>FY89</b>			
RI/FS Group I Units	\$	3,374,700	
<b>FY90</b>			
UST Study (CE)	\$	23,100	
RI/FS Group II Units	\$	2,315,200	2,338,300
<b>FY91</b>			
RI/FS Group II Units	\$	263,900	
RI/FS Follow-Up Units	\$	2,720,500	
EOD Support	\$	30,000	3,014,400
<b>FY92</b>			
RI/FS Group II Units	\$	95,000	
RI/FS Group III units	\$	3,343,000	
RI/FS Group I Follow-up	\$	149,000	
EOD Support	\$	20,000	
Phase I CE	\$	250,000	
Phase II CE	\$	10,000	3,867,000
<b>FY93</b>			
RI/FS Group I	\$	2,720,000	
RD/RA Group II	\$	300,000	
EOD Support	\$	200,000	3,220,000
<b>FY94</b>			
Off-Site Contamination	\$	900,000	
Instalation Groundwater Gradient Analysis	\$	160,000	
RI/FS Group I & II	\$	1,239,000	
RD/RA Group II	\$	60,000	2,359,000



# PRIOR YEAR FUNDING

## FY95

RD/RA Group I	\$	30,000	
RD/RA Group II	\$	60,000	
RI/FS Group I & II	\$	39,800	
Installation Groundwater Gradient/ Trend	\$	391,000	
Off-Site Contamination	\$	33,500	554,300

## FY96

RD/RA Group I	\$	400,000	
RD/RA Group II	\$	510,000	
RI/FS Group I & II	\$	1,890,000	
Installation Groundwater	\$	420,000	3,220,000

## FY97

RD/RA Group I	\$	5,280,000	
RD/RA Group II	\$	77,000	
RI/FS Group I & II	\$	1,495,000	
All Monitoring	\$	380,000	
RA Ops Group I, II & III	\$	376,000	
RI/FS for 10 SWMUs	\$	140,000	7,748,000

## FY98

LTM TNT	\$	350,000	
RD DRMO	\$	341,000	
RA DRMO	\$	1,000,000	
RI/FS ALF	\$	1,100,000	
LTM DSA	\$	60,000	
RA 1003	\$	20,000	
RA 210	\$	992,000	
Well Closures	\$	400,000	
ROD Depot Wide	\$	20,000	
RA EFF	\$	200,000	
RA STP	\$	30,000	
IRA Unidentifird Pit	\$	50,000	4,513,000

# PRIOR YEAR FUNDING

## FY99

RA TNT	\$	60,000	
LTM TNT	\$	70,000	
RD DRMO	\$	118,000	
RA DRMO	\$	473,000	
LTM DRMO	\$	40,000	
RA(O) Diesel Spill	\$	90,000	
RA 210	\$	5,000	
IRA OP7	\$	50,000	
IRA Unidentified Pit	\$	5,000	911,000

## FY00

LTM TNT	\$	70,000	
RA DRMO	\$	950,000	
LTM DRMO	\$	64,000	
RI/FS UBG	\$	5,000	
RD UBG	\$	41,000	
RA UBG	\$	160,000	
RD 1960'S	\$	97,000	
RI/FS OPF	\$	49,000	
RD OPF	\$	20,000	
RA G/W	\$	597,000	2,424,000

**Total Prior Year Funds** **\$ 37,805,000**

# SIERRA ARMY DEPOT CONSTRAINED CTC

DSERTS #	SITE TITLE	RRSE	PHASE	FY01	FY02	FY03	FY04	FY05	FY06	FY07+	PHASE TOTAL	SITE TOTAL
SIAD-001A	Leaching Beds Areas	HIGH	LTM	70	70	70	70	70	70	1851	2271	2271
SIAD-002	Defense Reutilization and Marketing Office	HIGH	RAO	251	241	241	241				974	
			LTM					64	64	1152	1280	2254
SIAD -003	Abandoned Landfill	HIGH	RI/FS	250							250	
			RD		110						110	
			RAC		2357						2357	
			LTM			140	140	140	140	1260	1820	4537
SAID-006			RI/FS	100						100	100	
SIAD-010	Upper Burning Ground Hansen's Hole and Areas	HIGH	RI/FS	5							5	
			RD	41							41	
			RA	159							159	205
SIAD-011	Diesel Spill Area	LOW	RA	26						26	26	
SIAD-014	Building 210 Area	MED	RI/FS	1300	1150						2450	
			LTM			70	70	70	70	1155	1435	3885
SIAD-020	Old Popping Furnance		RA	10	10						20	20
SIAD-022			RI/FS	300							300	
			RAC		1700						1700	2000
SAID-058			RI/FS		500						500	500
<b>FISCAL YEAR TOTALS IN THOUSANDS OF</b>				\$ 2,512	\$ 6,138	\$ 521	\$ 521	\$ 344	\$ 344	\$ 5,418	\$ 15,798	\$ 15,798
POM		SIERRA	ALL	\$ 2,819	\$ 5,624	\$ 484	\$ 589	\$ 412	\$ 412	\$ 6,802		\$ 17,142
Difference				\$ 307	\$ (514)	\$ (37)	\$ 68	\$ 68	\$ 68	\$ 1,384		\$ 1,344

# COMMUNITY INVOLVEMENT

The Restoration Program at Sierra Army Depot started in 1987. A Federal Facilities Site Remediation Agreement was signed in 1991. Community input was received through a Technical Review Committee (TRC) which had intermittent community attendance from 1993-1996.

In an effort to provide better communication with interested community members, a Restoration Advisory Board (RAB) was unofficially formed in December of 1996. There were a total of eight meetings held in 1997, with the signing of the RAB Charter in October 1997. The RAB includes 12 community members. Meetings are held quarterly, in accordance with the RAB Charter.

Sierra holds a annual Installation Action Plan Workshop where participants from the Installation, Major Command, State regulatory agencies, Army Corp, and Consultants to write the annual IAP.

The IAP is in the public repositories.

# DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM

Installation, 7. RAB REPORT

03/27/2001

**Command:** AMC

**SubCommand:** OSC

**Installation:** SIERRA ARMY DEPOT

**RAB Established Date:** 199611 **Reason RAB Not Establish:**

**RAB Adjourned Date:** 200209 **Reason RAB Adjourned:**

**TRC Date:** 199005

**RAB Community Members:**

Local Environmental Groups/Activists

**Total RAB Community Members:**

9

**RAB Government Members:**

Environmental Protection Agency

**Total RAB Government Members:**

3

**RAB Activities:**

Advice On Scope/Sch Studies/Cleanup

**RAB Advice**

Remedy Selection

**TAPP Application Approval Date:**

**TAPP Project Title:**

03/31/2001

**TAPP Project Description:**

**Purchase Order**

**Award Number**

**Award Date**

**Completion Date**