

FY2012

HAWTHORNE ARMY DEPOT
Army Defense Environmental Restoration Program
Installation Action Plan

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Statement of Purpose

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

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), the Hawthorne Army Depot (HWAD), the executing agencies, 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

AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AGPR	Airborne Ground Penetrating Radar
AMC	Army Materiel Command
ARRCOM	US Army Armament Material Readiness Command
ASROC	Anti-submarine Rocket
AST	Aboveground Storage Tank
bgs	below ground surface
Bldg	Building
BRA	Baseline Risk Assessment
CA	Corrective Action
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operation)
CMS	Corrective Measures Study
COC	Contaminant of Concern
CPT	Cone Penetrometer Test
CR	Compliance Restoration
CS	Confirmation Sampling
CTT	Closed, Transferred and Transferring
cy	cubic yards
DD	Decision Document
DDT	Dichlorodiphenyltrichloroethane
DES	Design
DNT	Dinitrotoluene
DZB	Day and Zimmermann/Basil Corporation
DZHC	Day and Zimmermann Hawthorne Corporation
EOD	Explosive Ordnance Disposal
ER,A	Environmental Restoration, Army
FRA	Final Remedial Action
FS	Feasibility Study
FUDS	Formerly Used Defense Site
FY	Fiscal Year
GO/CO	Government Owned/Contractor Operated
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GWM	Groundwater Monitoring
HE	High Explosive
HMX	High Melting Point Explosive
HRS	Hazard Ranking System
HWAAP	Hawthorne Army Ammunition Plant
HWAD	Hawthorne Army Depot
IPE	Industrial Plant Equipment
IRP	Installation Restoration Program
ISO	International Standards Organization
IT	International Technology Corporation

Acronyms

K	thousand
kg	kilogram
lb	pound
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituents
MCPO	Marine Corps Programs Office
MEC	Munitions and Explosives of Concern
mg	milligram
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MMRP	Military Munitions Response Program
MR	Munitions Response
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
MW	Monitoring Well
N/A	Not Applicable
NDEP	Nevada Division of Environmental Protection
NFA	No Further Action
NIOTC	Naval Inshore Operations Training Center
NPL	National Priorities List
NV	Nevada
OB	Open Burning
OD	Open Detonation
ODUSD(I&E)	Office of the Deputy Under Secretary of Defense for Installations and Environment
PA	Preliminary Assessment
PBC	Performance-Based Contract
PCB	Polychlorinated biphenyl
PEP	Pyrotechnic, Explosives, and Propellants
PMCDIR	Project Manager for Chemical Demilitarization and Installation Restoration
POL	Petroleum, Oil, and Lubricants
PRG	Preliminary Remediation Goal
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	triazacyclohexane
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision

Acronyms

RRSE	Relative Risk Site Evaluation
SI	Site Inspection
SVE	Soil Vapor Extraction
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TD	Transferred
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TPH	Total Petroleum Hydrocarbons
TPH-d	Total Petroleum Hydrocarbons-diesel
TRC	Technical Review Committee
UIC	Underground Injection Control
USACE	US Army Corps of Engineers
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAEC	US Army Environmental Command
USAEHA	US Army Environmental Hygiene Agency (now USACHPPM)
USATHAMA	US Army Toxic and Hazardous Materials Agency (now USAEC)
USEPA	US Environmental Protection Agency
USGS	US Geological Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWII	World War II

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)

Installation Information

Installation Locale

Installation Size (Acreage): 147236

City: Hawthorne

County: Mineral

State: Nevada

Other Locale Information

The Hawthorne Army Depot (HWAD) is located in Mineral County, Nevada (NV), approximately 135 miles southeast of Reno, NV. The depot covers an area of 147,236 acres and encloses three sides of the town of Hawthorne, which has a population of approximately 4,500 people. The installation is bounded by the Wassuk Mountain Range on the west, the Gillis Range on the east, and the Excelsior Mountains on the south. Walker Lake bounds the depot on the north.

Installation Mission

The mission of the HWAD is to:

- provide for the receipt, storage, rerehousing, preservation, packaging, surveillance, renovating, demilitarization/disposal, and issue of conventional ammunition, including response to Department of Defense (DoD) shipping contingency/wartime requirements as identified by higher headquarters to meet all operational munitions movement;
- provide US-wide depot redistribution for demilitarization and maintenance/renovation projects identified by the single manager for conventional ammunition;
- insure capability to ship/receive containerized munitions;
- operate the calibration laboratory;
- maintain an International Standards Organization (ISO) container maintenance/repair facility;
- maintain an ammunition maintenance capability; and
- provide high desert training facilities for DoD conventional forces and Special Forces military personnel.

The installation is the designated site for long-term storage of reused industrial plant equipment (IPE) and will receive, store, and be accountable for all IPE. The installation will perform special mission assignments as required.

Lead Organization

Army Materiel Command (AMC)

Lead Executing Agencies for Installation

USAEC

Regulator Participation

State Nevada Division of Environmental Protection (NDEP)

National Priorities List (NPL) Status

HAWTHORNE ARMY DEPOT 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 Information

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Metals, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

MMRP

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

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

CR

Primary Contaminants of Concern:

Affected Media of Concern:

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201003	201104	2011
Complete	200108	200109	2001
Planned	201503	201604	2016

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
HWAAP-B05 101-15 Impoundment	HWAAP-B05
HWAAP-B06 101-13 Surface Impoundment	HWAAP-B06
HWAAP-B07 101-1 Catchment Pit	HWAAP-B07
HWAAP-B08 101-1 Catchment Pit	HWAAP-B08
HWAAP-B09 101-32 Catchment Pit	HWAAP-B09
HWAAP-B10 101-3 Catchment Pit	HWAAP-B10
HWAAP-B11A 101-31 Catchment Pit	HWAAP-B11A
HWAAP-B11B 101-34 Catchment Pit	HWAAP-B11B
HWAAP-B12 101-10 Catchment Pit	HWAAP-B12
HWAAP-B13 101-29/36 Catchment Pit	HWAAP-B13
HWAAP-B16 101-18 Catchment Pit	HWAAP-B16
HWAAP-B17A 101-20 Catchment Pit	HWAAP-B17A
HWAAP-B17B Bldg 101-20 Catchment Pit	HWAAP-B17B
HWAAP-B18 101-62 Catchment Pit	HWAAP-B18
HWAAP-B19 101-11 Catchment Pit	HWAAP-B19
HWAAP-B20 101-41 Catchment Pit	HWAAP-B20
HWAAP-B21 101-41/42 Catchment Pit	HWAAP-B21
HWAAP-B23 103-30 Catchment Pit	HWAAP-B23
HWAAP-B30 Building 101-16 Catchment Pit	HWAAP-B30
HWAAP-B31 101-65 Catchment Pit	HWAAP-B31
HWAAP-K05 Lust Site @ Bldg 117-3 UST	HWAAP-K05

Results Five Year Review completed on Schedule.

Actions None

Plans None

Recommendations and Implementation Plans:

N/A

Land Use Control (LUC) Summary

LUC Title: 101-1 Catchment Pit

Site(s): HWAAP-B08

ROD/DD Title: HWAAP-B08 101-1 Catchment Pit

Location of LUC

Building 101-1 located in the 101 Area.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards, Markers

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-1 Surface Impoundment

Site(s): HWAAP-B07

ROD/DD Title: HWAAP-B07 101-1 Catchment Pit

Location of LUC

Building 101-1 in the 101 Area.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-10 Catchment Pit

Site(s): HWAAP-B12

ROD/DD Title: HWAAP-B12 101-10 Catchment Pit

Land Use Control (LUC) Summary

Location of LUC

Catchment Pit is located east of Bldg. 101-10.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-13 surfaceimpoundment

Site(s): HWAAP-B06

ROD/DD Title: HWAAP-B06 101-13 Surface Impoundment

Location of LUC

This LUC is near Bldg. 101-13, in an area where bio was performed.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-15 Impoundment

Site(s): HWAAP-B05

ROD/DD Title: HWAAP-B05 101-15 Impoundment

Location of LUC

LUC is at the 101-15 impoundment located in the 101 Area.

Land Use Restriction: Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-18 Catchment Pit

Site(s): HWAAP-B16

ROD/DD Title: HWAAP-B16 101-18 Catchment Pit

Location of LUC

LUC is located northwest of the conveyor ramp for bldg. 101-18.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-20 Catchment Pit

Site(s): HWAAP-B17A

ROD/DD Title: HWAAP-B17A 101-20 Catchment Pit

Location of LUC

LUC is located five feet south of Bldg. 101-20 connected with HWAAP-B17B.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

Land Use Control (LUC) Summary

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-29/36 Catchment Pit

Site(s): HWAAP-B13

ROD/DD Title: HWAAP-B13 101-29/36 Catchment Pit

Location of LUC

LUC is located between Bldgs 101-29 and 101-36 and south of Bldg 101-56.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-3 Catchment Pit

Site(s): HWAAP-B10

ROD/DD Title: HWAAP-B10 101-3 Catchment Pit

Location of LUC

101-3 Catchment Pit is located north of building 101-3

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Land Use Control (LUC) Summary

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-31 Catchment Pit

Site(s): HWAAP-B11A

ROD/DD Title: HWAAP-B11A 101-31 Catchment Pit

Location of LUC

Catchment pit is located on the north side of building 101-31.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-32 Catchment Pit

Site(s): HWAAP-B09

ROD/DD Title: HWAAP-B09 101-32 Catchment Pit

Location of LUC

The location is east of Building 101-2 and measures approximately 100 by 155 feet. This pit is up to eight feet deep.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Land Use Control (LUC) Summary

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-34 Catchment Pit

Site(s): HWAAP-B11B

ROD/DD Title: HWAAP-B11B 101-34 Catchment Pit

Location of LUC

Surface impoundment is located 40 feet north of building 101-34.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-41 Catchment Pit

Site(s): HWAAP-B20

ROD/DD Title: HWAAP-B20 101-41 Catchment Pit

Location of LUC

HWAAP-B20 consists of three inactive unlined surface impoundments located southwest of bldg 101-41.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

Land Use Control (LUC) Summary

LUC Title: 101-41/42 Catchment Pit

Site(s): HWAAP-B21

ROD/DD Title: HWAAP-B21 101-41/42 Catchment Pit

Location of LUC

HWAAP-B21 is located between bldgs 101-41 and 101-44.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-44 Catchment Pit

Site(s): HWAAP-B22A

ROD/DD Title: HWAAP-B22A 101-44 Catchment Pit

Location of LUC

HWAAP-B22A is an inactive unlined surface impoundment pit located west of bldg 101-44 and northwest of HWAAP-B22B.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: 101-65 Catchment Pit

Site(s): HWAAP-B31

ROD/DD Title: HWAAP-B31 101-65 Catchment Pit

Land Use Control (LUC) Summary

Location of LUC

HWAAP-B31 is an inactive unlined surface impoundment pit located south of bldg 101-65.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICIS

Additional Information

N/A

LUC Title: 103-30 Catchment Pit

Site(s): HWAAP-B23

ROD/DD Title: HWAAP-B23 103-30 Catchment Pit

Location of LUC

103-30 Catchment Pit is located south of bldg 103-30.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Dig Permits, Education programs, Notations in Master Plan

Date in Place: 199908

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, Markers

Contaminants: NITROAROMATICIS

Additional Information

N/A

LUC Title: H03 Road/Grounds Waste OB

Site(s): HWAAP-H03

ROD/DD Title: HWAAP-H03 Road/Grounds Waste OB Pit

Location of LUC

This site is located east of Hwy 95 in close proximity to the Main Gate at HWAD.

Land Use Restriction: Restrict land use - No residential use

Land Use Control (LUC) Summary

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Notations in Master Plan

Date in Place: 199812

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

Contaminants: PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: HWAAP-A05 Mustard Gas

Site(s): HWAAP-A05

ROD/DD Title: HWAAP-A05 Mustard Gas Disposal Area

Location of LUC

A05 is located in the eastern portion of HWAD's south magazine area, approximately two miles south of US Highway 95 at the foot of the Garfield Hills. A05 has a perimeter fence along the north, west, and south sides to prevent access by on-site personnel. The east side access is limited by Garfield Hills.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences

Types of Institutional Controls: Construction Permit, Dig Permits, Notations in Master Plan

Date in Place: 200111

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

Contaminants: NITROAROMATICS

Additional Information

N/A

LUC Title: HWAAP-B24 102-52 Acid Pit

Site(s): HWAAP-B24

ROD/DD Title: HWAAP-B24 102-52 Acid Pit

Location of LUC

The open pit is located adjacent to Building 102-52.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Land Use Control (LUC) Summary

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

Date in Place: 200607

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200506

LUC Enforcement: 5 Year Reviews

Contaminants: PCBs, PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: HWAAP-C01a/b

Site(s): HWAAP-C01A

ROD/DD Title: HWAAP-C01a/b 102-31 Rotary Deact Furnace

Location of LUC

HWAAP-C01a/b is located at 102-31. This area is fenced.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Dig Permits, Notations in Master Plan

Date in Place: 200009

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS

Additional Information

N/A

LUC Title: HWAAP-I11 Bldg 49-9

Site(s): HWAAP-I11

ROD/DD Title: HWAAP-I11 Bldg 49-9 Pit/Landfill

Location of LUC

SWMU-I11 is in the southern part of HWAD's central magazine in the Building 49 group, approximately 4,000 feet north of US Highway 95.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: Fences, Guards

Types of Institutional Controls: Construction Permit, Notations in Master Plan

Date in Place: 200106

Land Use Control (LUC) Summary

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: METALS, VOC

Additional Information

N/A

LUC Title: J12 Landscape Landfill

Site(s): HWAAP-J12

ROD/DD Title: HWAAP-J12 Landscape Landfill

Location of LUC

HWAAP-J12 is an inactive landfill used to dispose of landscape debris such as branches, brush and trees.

Land Use Restriction: Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Notations in Master Plan

Date in Place: 199812

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

Contaminants: ORGANICS

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

The HWAD was originally constructed in 1928 as a US Naval Ammunition Depot. The early mission of the depot was to store, service, and issue ammunition to the Pacific area. Following World War II (WWII), the depot was actively involved in the demolition of various types of allied and enemy ammunition. The role of the depot was also expanded to include receiving, renovating, loading, maintaining, storing, and issuing ammunition, explosives, expendable ordnance items, and/or weapons and technical ordnance materials. The depot was also used to test weapons and dispose of unserviceable and/or dangerous ammunition and explosives. In 1977, the depot was transferred to the US Army and renamed Hawthorne Army Ammunition Plant (HWAAP). After the transfer, in 1980, HWAAP was re-designated as a government owned/contractor operated (GO/CO) plant operating under the direction of the former Day and Zimmermann/Basil Corporation (DZB).

From 1980 to 1994 the mission of the depot was to:

- receive, produce, assemble, load, issue, store, renovate, inspect, test, demilitarize, and dispose of conventional ammunition;
- operate and/or maintain in operational readiness cast and fuel-air explosive loading plants, rocket assembly plants, and medium/major caliber assembly lines;
- provide special/experimental high explosive (HE) casting, extruding, and pressing; fuel air explosive loading and support services to designated research and development activities;
- provide storage facilities for war reserve ammunition, and maintain designated ammunition in a state of readiness for mobilization, including assembling or otherwise providing base unit materials; and
- conduct testing of solid propelled munitions, HE warheads, mechanical and electronic fuses, cartridge cases, primers, rocket motors, and other ballistic devices.

On Oct. 1, 1994, HWAAP was redesignated as HWAD and its mission was revised. The installation has continued to fulfill its revised mission (shipping, storage and recycling of munitions) and operating under the direction of Day and Zimmermann Hawthorne Corporation (DZHC) [formerly DZB Corporation].

HWAD is currently a GO/CO facility. DZHC is the current operating contractor. The government and DZHC employ approximately 500 personnel.

HWAD is not on the NPL. Studies and investigations have been conducted under the guidance of the NDEP. Releases of hazardous substances, pollutants, or contaminants have been located within the meaning of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and applicable Nevada state law. The regulatory process for the Installation Restoration Program (IRP) is governed under RCRA.

Installation Program Cleanup Progress

IRP

Prior Year Progress: The PBC is ongoing and addressed the sites.

Future Plan of Action: Base-wide groundwater actions will continue under the PBC. Five-year reviews and LUCs are planned for all sites under site CCHWAAP-B27B.

MMRP

Prior Year Progress: The remedial investigation (RI) is currently underway for 13 sites and will continue into 2013.

Future Plan of Action: RD and RA will begin for multiple sites. Five-year reviews and LUCs are planned for all sites under site CCHWAAP-B27B.

CR

Prior Year Progress: All CR sites are in the study phase.

Future Plan of Action: Design and corrective measures implementation (construction) [CMI(C)] will begin for multiple sites.

HAWTHORNE ARMY DEPOT
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 129/123

Installation Site Types with Future and/or Underway Phases

1	Contaminated Ground Water (HWAAP-B24A)
1	Disposal Pit/Dry Well (HWAAP-B26)
1	Landfill (HWAAP-I09)
1	Spill Site Area (PBC@Hawthorne)
2	Surface Impoundment/Lagoon (HWAAP-B04, HWAAP-B27A)

Most Widespread Contaminants of Concern

Explosives, Metals, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), 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
HWAAP-A06A	OLD BOMB DISPOSAL AREA 1	IRA	OTHER	1988
HWAAP-B20	101-41 CATCHMENT PIT	IRA	COMPOSTING	1997
HWAAP-B32	101-41 CATCHMENT PIT	FRA	COMPOSTING	1997
HWAAP-H04	NAVYSIDE LANDFILL	IRA	OTHER	1997
HWAAP-J03	BLDG 70 DIESEL FUEL LEAK	FRA	BIOVENTING	1997
HWAAP-K04	ABOVEGROUND STORAGE TANKS AT BLDG 70	FRA	REMOVAL	1997
HWAAP-A09B	BATTERY DISPOSAL AREA	FRA	OTHER	1998
HWAAP-A08	CONSTRUCTION DEBRIS LANDFILL	IRA	OTHER	1999
HWAAP-B06	101-13 IMPOUNDMENT	FRA	BIOREMEDIATION	1999
HWAAP-B07	101-1 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B08	101-1 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B09	101-32 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B10	101-3 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B11A	101-31 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B11B	101-34 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B12	101-10 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B13	101-29/36 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B16	101-18 CATCHMENT PIT	FRA	BIOREMEDIATION - IN SITU	1999
HWAAP-B17A	101-20 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B17B	101-20 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B18	101-62 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B19	101-11 CATCHMENT PIT	FRA	BIOREMEDIATION	1999

IRP Summary

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

Site ID	Site Name	Action	Remedy	FY
HWAAP-B22A	101-44 CATCHMENT PIT	FRA	OTHER	1999
HWAAP-B22B	101-44 CATCHMENT PIT	FRA	OTHER	1999
HWAAP-B23	103-30 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-B30	101-16 CATCHMENT BASIN	FRA	BIOREMEDIATION	1999
HWAAP-B31	101-65 CATCHMENT PIT	FRA	BIOREMEDIATION	1999
HWAAP-H05	OLD DEPOT LAUNDRY WASHOUT	IRA	OTHER	1999
HWAAP-I03	104-7 PIT #1	IRA	OTHER	1999
HWAAP-I04	104-7 PIT #2	IRA	OTHER	1999
HWAAP-J11	103-16 LANDFILL/PILE	IRA	OTHER	1999
HWAAP-J12	LANDSCAPE LANDFILL	IRA	OTHER	1999
HWAAP-K05	LUST SITE AT BLDG 117-3	FRA	BIOVENTING	1999
HWAAP-A04	BABBITT CLOSED LANDFILL	FRA	OTHER	2000
HWAAP-B05	101-15 IMPOUNDMENT	FRA	BIOREMEDIATION	2000
HWAAP-B27B	103-8/10 OXIDATION DITCH	FRA	OTHER	2000
HWAAP-B27C	103-20 SURFACE IMPOUNDMENT	FRA	OTHER	2000
HWAAP-H01	FIRE TNG PIT	FRA	OTHER	2000
HWAAP-I18	104-2 HYDROCARBON SPILL	FRA	BIOREMEDIATION - IN SITU	2000
HWAAP-J15	103-16 LANDFILL	IRA	OTHER	2000
HWAAP-K03	UST SITES - INST WIDE	FRA	BIOVENTING	2000
HWAAP-A11	MAG 18-5 DISPOSAL PIT	FRA	OTHER	2001
HWAAP-B04	101-44 IMPOUNDMENT	IRA	REMOVAL	2001
HWAAP-C01A	102-31 ROTARY DEACTIVE FURNA	FRA	OTHER	2001
HWAAP-I11	49-9 PIT/LANDFILL	FRA	OTHER	2001
HWAAP-J14	103-6 TRENCH	FRA	REMOVAL	2001
HWAAP-J28	108-3 CATCHMENT PITS	FRA	OTHER	2001
HWAAP-J29	BUILDING 103-5 LANDFILL	FRA	OTHER	2004
HWAAP-K10	BURIED PAINT	IRA	REMOVAL	2004
HWAAP-B20	101-41 CATCHMENT PIT	FRA	SOLVENT EXTRACTION	2005
HWAAP-I07	101-44 LANDFILL	FRA	REMOVAL	2005
HWAAP-B29	103-41 UNLINED PONDS	FRA	COMPOSTING	2006
HWAAP-B04	101-44 IMPOUNDMENT	FRA	BIOREMEDIATION	2009
HWAAP-B24	102-52 ACID PIT	FRA	INCINERATION	2009
HWAAP-B24A	BLDG 336: FUEL STORAGE	FRA	SOIL VAPOR EXTRACTION	2009
HWAAP-B27A	103-16 CATCHMENT PIT	FRA	EX SITU SOIL TREATMENT	2009
HWAAP-I09	49-10 PIT/LANDFILL #1 & #2	FRA	REMOVAL	2009
PBC@Hawthorne	PBC	FRA	OTHER	2009
HWAAP-I02	110 GROUP OPEN BURNING PIT	FRA	BIOREMEDIATION	2012

IRP Summary

Duration of IRP

Date of IRP Inception: 198407

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201203/201301

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

IRP Contamination Assessment

Contamination Assessment Overview

Since 1974, site investigations and groundwater monitoring (GWM) have been conducted by the Army, the US Army Environmental Hygiene Agency (USAEHA) [now the US Army Center for Health Promotion and Preventive Medicine (USACHPPM)], the US Army Toxic and Hazardous Materials Agency (USATHAMA) (now the USAEC), the US Geological Survey (USGS), the US Army Corps of Engineers (USACE), and numerous contractors in various areas throughout the installation. The primary contaminants of concern (COCs) are explosives [2,4,6-trinitrotoluene (TNT), trichloroethylene (TCE), 1,3,5-trinitro-1,3,5-triazacyclohexane (RDX), nitrate/nitrite, and unexploded ordnance (UXO)].

Prior to the transfer of HWAAP to the Department of Army, the USGS conducted a study in three phases under the direction of the Department of Navy to assess the possibility of groundwater contamination in the vicinity of the disposal pits at facilities 103-41 (HWAAP-B29) and 103-16 (HWAAP-B27A). The disposal pits were constructed to receive explosive waste from the demilitarization operation. The explosive waste included composition D (ammonium picrate), amatol (TNT plus ammonium nitrate), and RDX.

From November 1974 to November 1977, in Phases I and III, the USGS installed a total of 26 exploratory wells in the immediate proximity and northwest of the disposal area adjacent to demilitarization facility 103-41 (HWAAP-B29). Analysis of water samples taken from the wells showed levels of nitrate/nitrite above background and several of the wells were found to contain TNT. The highest concentrations of TNT [300 parts per billion (ppb) and 430 ppb] were detected in two separate determinations in one of the wells. The compound dinitrotoluene (DNT) was also detected from one of the wells. A study indicated a narrow plume of TNT contamination in a northwesterly direction.

From June 1976 to November 1977, in Phase II, the USGS installed eight exploratory wells in the vicinity of disposal pits adjacent to the demilitarization facility 103-16 (HWAAP-B27A). Chemical analysis of the groundwater samples revealed nitrate/nitrite levels to be above background, in most cases, and one sample from one of the wells showed TNT at a trace level. Based on further analysis during the investigation phase, chemical analyses have not reached action levels for groundwater.

In 1977, after the transfer of HWAAP to the Department of Army, the US Army Armament Material Readiness Command (ARRCOM) requested that USATHAMA, then known as Project Manager for Chemical Demilitarization and Installation Restoration (PMCDIR), conduct assessments of HWAAP to determine if there was any contamination resulting from past waste disposal practices.

The USATHAMA conducted the installation assessment between 1977 and 1981. Over 25 pits were identified as having received explosive wastes from loading and demilitarization operations in the production areas: 101, 102, 103, 104/49, and 108. The assessment concluded that TNT had migrated in a narrow plume to a distance of between 1,200 and 3,200 feet downgradient from 103-41 disposal pits. The migration rate of TNT was slower than the groundwater rate. The assessment also concluded that nitrogen compounds, primarily nitrate, were migrating in two plumes toward Walker Lake. Between May 1 and May 5, 1995, a study which was performed by the USAEHA showed that HWAD operations had no impact on Walker Lake.

During the assessment a disposal area for mustard and phosgene chemical munitions (HWAAP-A05) was located. The area was first used during WWII. It was last used in 1946 to decontaminate and bury an unspecified quantity of mustard munitions and their toxic agent contents. In 1991, an attempt was made to locate the munitions and to determine if any mustard agent remained in the soil or in the munitions. Several pits were located and excavated. The M15 chemical detectors gave positive readings for mustard in only one munition; however, laboratory analyses of samples taken from the munitions were negative. Testing for mustard vapors from the pits was negative.

Since the total pit was not excavated, the area could still have chemical agent munitions buried at the site.

Several test ranges were also identified in the assessment. Of particular concern is the range near Walker Lake where extensive munitions testing was conducted from WWII to the early-1970s. Most of the rounds impacted in the lake and many remain there as UXO. Live rounds are frequently found on the receding shoreline of Walker Lake.

Another AOC is the Naval Inshore Operations Training Center (NIOTC) and firing range. Explosive ordnance disposal (EOD) personnel documented this as one of the most heavily UXO-contaminated areas at HWAD.

The Rocket Test Area located near the southern boundary of HWAD also contains UXO in the impact area. Adjacent to the Rocket Test Area there is also a site that was used for fuse and ordnance disposal from WWII through the Korean War. The historical archive from this era concerning past operations at HWAD reported that demolition charges used to destroy the

IRP Contamination Assessment

Contamination Assessment Overview

munitions were so large that live munitions were found as far as one mile from the detonation pit. The area is considered extremely hazardous and is fenced to discourage trespassing.

Between May 1987 and August 1988 an evaluation of solid waste management units (SWMUs) was performed by the USAEHA. At that time, 82 SWMUs were identified. From July 1992 through December 1992 site screening inspections were conducted to verify the SWMUs, and data were gathered for the US Environmental Protection Agency (USEPA) to revise the Hazard Ranking System (HRS) score. As a result of the site screening inspections, a total of 123 SWMUs were identified.

The following RIs were conducted under the IRP - Defense Environmental Restoration Account:

- Group A (33 SWMUs) (beginning in 1993),
- Group B (55 SWMUs),
- Old bomb disposal sites (12 SWMUs) (UXO and explosive disposal and burned sites),
- Seven underground storage tank (UST) sites, and
- One aboveground storage tank (AST) site (beginning in 1994).

The Group A SWMUs consist of 29 catchment pits/ponds/impoundments sites, two disposal pit sites, one disposal pile site, and one landfill. The work performed includes surface geophysics survey, near-surface soil and subsurface soil sampling and analyses, and groundwater sampling at three existing wells. Baseline risk assessments (BRA) for the 29 sites were completed in November 1997. Groundwater sampling is included in the long-term GWM plan.

The Group B SWMUs consist of 23 landfills, 15 catchment pits/impoundments, two deactivation furnace areas, seven disposal pits/ditches/trenches, two open burning (OB) pits, five discharge/spill areas, and one mustard gas disposal area. The work performed included aerial photography, global positioning system (GPS) surveying, airborne geophysics surveying, surface geophysics survey, subsurface screening for utilities and UXOs, soil gas survey, soil sampling and analyses, and groundwater measurements.

Groundwater sampling at some of these sites (B04, I07, I15, B05, B06, J05, A11, A05, J08, J09, J06, J10, I06, J21, J22, J07, J24, J11/15, J14, B25, C01a/b, J16, J02, I02, J17, I05, I03/04, K18, I11, I17, B28a, B28b, B28c, B28d, I09/10, J23, I08, B27b, B27c, I13, I14, J27, J26, A08, J12, J28, J29, J04, J25, J13, and A03) is part of the GWM program. BRAs for most of the sites were included in the RI/feasibility study (FS). Under the performance-based contract (PBC), the USAEC, the HWAD, the NDEP, and the contractor agreed that revised risk assessments would be completed as necessary.

During the summer of 1997, a pilot study for windrow composting was performed. In this study, 2,500 cubic yards (cy) of soil containing TNT, [high melting point explosive (HMX), a byproduct of RDX], and DNT were treated at SWMUs B20, B32, and I15. Remediation was completed at these sites and they are currently going through the closure process. As part of the pilot study, regulatory requirements for the process as well as operating conditions were established for the site. The involved regulatory agencies determined that the remediation process would not require a containment building or a solid surface pad.

Using treated wooden ammunition boxes as a wood source was deemed acceptable and the original study was expanded to include 300 cy of ammonium picrate contaminated soil. Results indicate that this treatment process will successfully remediate soil contaminated with ammonium picrate for which, prior to this test, there was no accepted treatment methodology.

The old bomb disposal sites consist of six landfills, four OB burial pit sites, and two popping furnace sites. These sites were used to dispose of ordnance. An airborne ground penetrating radar (AGPR) survey was conducted to evaluate these sites. As a result of the survey and previous geophysical surveys, test pits are proposed to characterize geophysical anomalies and soil sampling is proposed to determine if a release of hazardous constituents has occurred. All the old bomb sites are currently being handled under the compliance restoration (CR) program. Please see that section of the IAP for further details about these sites.

In February 2008, a site tour was conducted by the NDEP, the USAEC, and the HWAD Environmental Office. On the tour numerous AOCs were identified. Picric acid and white phosphorus rounds with HE bursters were specifically identified and noted in the disposal pit at A06B. When the IRP information was reviewed, the installation did not have specific information regarding the location of these AOCs. The NDEP, the USAEC, and the HWAD Environmental Office commissioned a survey conducted in February and March 2007 by Marine Corps Programs Office (MCPO) to identify GPS locations of the current IRP sites and identify any additional AOCs. The results of the survey are being reviewed by the USAEC to determine a path forward for the expanded AOCs. The site narratives reflect the results of the 2008 survey. In 2009, four miles of fencing was installed around these sites to restrict access to the AOCs.

IRP Contamination Assessment

Contamination Assessment Overview

Seven UST sites are located at Building (Bldg) 13, 103-6, 101-25, 94, Camp Jumbo, Bldg 106-10, and 20-21. Between 1991 and 1993 tanks were removed and sampling results showed evidence of elevated levels of total petroleum hydrocarbons (TPH) in the soil ranging from about 6,000 milligrams per kilogram (mg/kg) to 73,000 mg/kg at depths ranging from five to 19 feet. For three sites (Camp Jumbo, Bldg 106-10, and Bldg 20-21) a decision document (DD) for no further action (NFA) was approved and signed by the regulatory agency on Oct. 3, 1996. Three bioventing systems at Bldgs 13, 101-25, and 103-6 will be monitored under a contract managed under the PBC.

The AST site, HWAAP-J03 (Bldg 70 diesel leak), consists of two 100,000-gallon ASTs that were installed in the 1940s and were leaking diesel fuel over a period of time. In 1991, the contaminated soils were removed by HWAD creating a large excavation pit. An RI conducted in 1994 indicated that soil contamination of TPH was at an elevated level of over 40,000 mg/kg in the excavation pit, and TPH in groundwater was at 11 milligrams per liter (mg/L). In February 1997 the two ASTs were removed. A bioventing pilot study was completed at this site. Stockpiled soils contaminated with petroleum hydrocarbons from 12 sites were collected at HWAAP-J03. This soil was used to fill the excavation pit. The enhanced bioventing test results indicate that bioventing may be able to remediate the site within eight years. This system will be monitored under the PBC. Windrow composting of sites within the 101 production area is complete. Site HWAAP-B04, located in the 101 Area, is scheduled for remediation by windrow composting. Composting is performed outdoors, on a specifically prepared soil pad.

This IAP includes only the IRP eligible sites and those listed in the Army Environmental Database - Restoration (AEDB-R).

In August 2001, the HWAD conducted a five-year review of the January 1996 soil action levels. Based on this review and the review of the NDEP soil action levels, the NDEP standards derived from USEPA Region IX preliminary remediation goals (PRGs) were adopted.

Cleanup Exit Strategy

In August 2006 a PBC was awarded to bring sites B04, B20, B24, B24A, B26, B27A, I02, I09, J03, K03(a, b and d), and K05 to RC. In addition, GWM will be captured under a base-wide program funded under the PBC tracking site. Five-year reviews and Administrative LUCs will be tracked under site CCHWAAP-B27B.

IRP Previous Studies

Year	Title	Author	Date
1967	A Brief Appraisal of the Water Resources of the Walker Lake Area, Mineral, Lyon, and Churchill Counties, NV	Reconnaissance Series Report No. 40, Everett, D.E. and F.E. Rush; NV DWR	JAN-1967
1974	Hydrologic Regimen of Walker Lake, Mineral County, NV	WR Information Series, Report No. 21., Rush, F.E.; NV DWR and USGS	JAN-1974
1975	Source of Nitrate in Water from Supply Well 8, Hawthorne Naval Ammunition Depot, Nevada	Van Denburgh, A.S., F.E. Rush; US Geological Survey Administrative Progress Report	JAN-1975
	Groundwater Contamination by Percolating Explosives Wastes, Hawthorne Army Ammunition Plant, Mineral County, Nevada, Phase I, November 1974	US Department of the Interior, Geologic Survey	JUN-1975
1977	Preliminary Investigation of the Geothermal Resources near Hawthorne, NV. Project Report No. 50	Bohm, B.W. and R.L. Jacobsen; Water Resources Center, Desert Research Institute	JAN-1977
	Geothermal Potential of the Naval Ammunition Depot, Hawthorne, NV	Whelan, J.	JAN-1977
	Installation Assessment of Naval Ammunition Depot, Hawthorne, NV. Records Evaluation Report No. 114	US Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, MD	AUG-1977
	Groundwater Contamination by Percolating Explosives Wastes, Hawthorne Army Ammunition Plant, Mineral County, Nevada, Phase II, June 1976	USGS	NOV-1977
	Groundwater Contamination by Percolating Explosives Wastes, Hawthorne Army Ammunition Plant, Mineral County, Nevada, Phase III	USGS	NOV-1977
1978	Analysis of Surface Water and Sediment Samples from HWAAP for TNT, Picric Acid and RDX	Energetic Materials Div, LCWSL, ARRADCOM, Dover, NJ	NOV-1978
1980	Groundwater Contamination by Percolating Explosives Wastes, HWAAP, Mineral County, NV, Phase IV, Reconnaissance Near Walker Lake	USGS	JAN-1980
	Groundwater Contamination by Percolating Explosives wastes, Hawthorne Army Ammunition Plant, Mineral County, NV, Phase II, Reconnaissance of the 103-16 Area	Van Denburgh, A.S., R.R. Squires, and D.B. Wood; US Geological Survey Administrative Progress Report	JAN-1980
	Groundwater Contamination by Percolating Explosives Wastes, Hawthorne Army Ammunition Plant, Mineral County, NV, Phase III, Reconnaissance of the 103-41 Area	Van Denburgh, A.S., D.G. Schaefer, and D.B. Wood; US Geological Survey Administrative Progress Report	JAN-1980
1981	Field Investigation of Uncontrolled Hazardous Waste Sites, FIT Project, Site Inspection Report on Hawthorne	Ecology & Environment, Inc.	JAN-1981

IRP Previous Studies

1981	Title	Author	Date
	Army Ammunition Plant		
	Final Report, Survey and Assessment of Hawthorne Army Ammunition Plant, Hawthorne, Nevada	USATHAMA, Aberdeen Proving Ground, Maryland	SEP-1981
	Phase II, Hazardous Waste Management Special Study No. 39-26-0147-83, DARCOM Open-Burning/Open-Detonation Grounds Evaluation	HWAAP, Hawthorne, NV	OCT-1981
1982			
	Hazardous Waste Technical Consultation No. 38-26-0225-82, Waiver of Groundwater Monitoring Requirements	HWAAP, Hawthorne, NV	JUN-1982
	Water Quality Engineering Consultation No. 32-66-0176-83	HWAAP, Hawthorne, NV	DEC-1982
1983			
	Water Quality Engineering Special Study No. 32-24-0444-84, Evaluation of Wastewater Treatment Alternatives	HWAAP, Hawthorne, NV	MAY-1983
	Hazardous Waste Management Survey No. 37-26-0335-84	HWAAP, Hawthorne, NV	SEP-1983
	Closure/Post-Closure Plans, Hawthorne Army Ammunition Plant, Contract No. DAAA09-80-C-3011	Facilities Engineering Division, Day & Zimmermann/Basil Corporation	NOV-1983
1985			
	Hazardous Waste Investigation Report	Coulson, A.; NDEP at HWAAP	JAN-1985
	Letter, HWAAP to EPA Region IX. Information regarding potential releases from Solid Waste Management Units	HWAAP	NOV-1985
1987			
	Data on GW quality for the Walker Lake 1 degrees by 2 degrees quadrangle, Western Nevada and Eastern California	Open File Report #85-0648-1, Welch, A.H. and R.P. Williams; US Geological Survey	JAN-1987
1988			
	Groundwater Contamination Survey No. 38-26-0850-88. Evaluation of Solid Waste Management Units. Final Report. HWAAP, Hawthorne, NV 12-19 May 1987 and 1-5 August 1988	USAEHA	JAN-1988
	RCRA Facility Assessment, Hawthorne Army Ammunition Plant, TES IV Work Assignment No. 419	Jacobs Engineering	JAN-1988
	Services to Departments of Defense and Energy and other Government Agencies and their Contractors, Hawthorne Project, Hawthorne, NV	Pacific Environmental Resources, Inc. Walnut Creek, CA	JAN-1988
	Soil Survey Project after Action Report, Hawthorne Army Ammunition Plant	US Army Tech Escort Unit , US Army Corps of Engineers	JAN-1988
	Site Assessment of Parcels A, B, C, and D on Hawthorne Army Ammunition Plant, NV	US Army Toxic And Hazardous Materials Agency	JAN-1988
1989			
	Letter Arver Ferguson, USACE, Fort Worth District, from Jacqueline Wyland, USEPA Chief, Office of	Wyland, J., USEPA	JAN-1989

IRP Previous Studies

1989	Title	Author	Date
	Federal Facilities. Subject: Comments on Hazardous waste cleanup at HWAAP		
	Final Report Ordnance and Environmental Investigation at HWAAP, Hawthorne, NV, Volume 1,2, 3 and Appendices A-G	CEHND, International Technology Corporation (IT Corp)	MAY-1989
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	Final Report Screening Survey SWMU B20	Gore Sorber	OCT-1999
	Final - Qtrly Groundwater Monitoring Report 3rd Qtr 99	Tetra Tech	OCT-1999
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	Work Plan for Monitoring Well Abandonment, New Well Installation & Sampling	TEMI	OCT-2006
	Final RA Report, J29	Geofon	OCT-2006
	Free Product Recovery Work Plan - Site B-24A (Bldg 336)	Plexus	OCT-2006
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	Replacement pgs for final report, K10 Buried Paint Remediation	SECOR	OCT-2006
	HS and Accident Prevention Plan	Plexus	NOV-2006
	2007	Site Specific Work Plan, B27A	Plexus
2008	Final Base-Wide Annual Groundwater Monitoring Report	Plexus	APR-2008
	Final Interim Removal Work Plan, B24	Plexus	MAY-2008
	Final Site Specific Work Plan Investigation, I02	Plexus	JUL-2008
	Corrective Action Plan, I09 & I10	Plexus	AUG-2008
	Corrective Action Work Plan, B04	Plexus	AUG-2008

IRP Previous Studies

2009	Title	Author	Date
	Corrective Action Plan, B24A	Plexus	MAR-2009
	Final Base-Wide Annual Groundwater Monitoring Report	Plexus	APR-2009
	Draft First Quarter 2009 Groundwater Monitoring Report for SWMU B24A. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAY-2009
	Revised-Final Closure Report/Decision Document for SWMU K05. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAY-2009
	Re-submittal Revised-Final Closure Report/Decision Document for SWMU K03d. Hawthorne Army Depot, Hawthorne, NV	Plexus	MAY-2009
	Revised-Final Closure Report/Decision Document for SWMU K03a. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAY-2009
	Final Closure Report/Decision Document for SWMU B20. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAY-2009
	Revised-Final Closure Report/Decision Document for SWUM J03. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAY-2009
	Draft Closure Report/Decision Document for SWMU B04. Hawthorne Army Depot, Hawthorne, NV.	Plexus	JUN-2009
	Revised-Final Closure Report/Decision Document for SWMU I09/10. Hawthorne Army Depot, Hawthorne, NV	Plexus	JUN-2009
	Final Annual 2008 Basewide Groundwater Monitoring Report. Hawthorne Army Depot, Hawthorne, NV.	Plexus	JUN-2009
	Final First Quarter 2009 Groundwater Monitoring Report for SWMU B24A. Hawthorne Army Depot, Hawthorne, NV.	Plexus	JUN-2009
	Draft Corrective Measures Study Report SWMU I02. Hawthorne Army Depot, Hawthorne, NV.	Plexus	JUN-2009
	Draft Second Quarter 2009 Groundwater Monitoring Report for SWMU B24A. Hawthorne Army Depot, Hawthorne, NV.	Plexus	AUG-2009
	Final Corrective Action Plan SWMU B24A. Hawthorne Army Depot, Hawthorne, NV.	Plexus	SEP-2009
	Final Closure Report/Decision Document 102-52 Acid Pit SWMU B24. Hawthorne Army Depot, Hawthorne, NV.	Plexus	SEP-2009
2010			
	Final Annual 2009 Basewide Groundwater Monitoring Report. Hawthorne Army Depot, Hawthorne, NV.	Plexus	MAR-2010
2011			
	DD NFA Buried Paint (K10)	Baywest	DEC-2011
2012			
	DD NFA 101-41/44 Catchment pit (B21)	Baywest	JAN-2012
	Final RI/FS 103-20 (version 2)	Baywest	FEB-2012
	RI/FS Addendum, 103-8/10 (B27b)	Baywest	FEB-2012
	Groundwater Report (BWGWP)	Plexus	MAR-2012
	104-3 Catchment Pit Final Tech Memo (B34)	Baywest	APR-2012
	Lumber Burn Pit, RCRA Corrective Action Remedy Selection (H02)	Baywest	APR-2012

IRP Previous Studies

2012

Title	Author	Date
Final RI/FS (B29)	Baywest	APR-2012

HAWTHORNE ARMY DEPOT
Installation Restoration Program
Site Descriptions

Site ID: HWAAP-B04
Site Name: 101-44 IMPOUNDMENT

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198705.....	198808
CS.....	198705.....	198808
RFI/CMS.....	199405.....	199506
DES.....	199803.....	199901
IRA.....	200106.....	200109
CMI(C).....	199707.....	200909
CMI(O).....	200909.....	201212
LTM.....	201301.....	204209

RIP Date: 200909

RC Date: 201212

SITE DESCRIPTION

Site HWAAP-B04 is a double-lined surface impoundment approximately 140 by 240 by 15 feet, having a capacity of 586,000 gallons designed to collect explosive-contaminated wash-down water from demilitarization operations. The impoundment was never used, but was constructed using soil from a previous unlined impoundment that had collected explosive wash-down water from 1944 to 1977. The newer lined impoundment was constructed at the same location as the older unlined impoundment. A 1989 RI included collecting near surface soil, subsurface soil, and groundwater samples from within and adjacent to the impoundment. Explosives were detected in the soil samples and in the groundwater at levels up to 30 mg/L.

Additional RI work in 1994 included four surface soil samples collected from within the impoundment where visual staining of explosives was observed, and groundwater samples from existing wells. Elevated concentrations of explosives [240 mg/kg RDX and 22 mg/kg of 1,3,5-trinitrobenzene (TNB)] were detected in these soil samples. Groundwater samples detected high levels of explosives [2,600 micrograms per liter (ug/L) of RDX, 3.6 ug/L of 1,3,5-TNB, 18 ug/L of 4-amino-DNT, 40 ug/L of ammonium picrate]. TCE is also a COC at this site. Sixty-eight feet of cone penetrometer test (CPT) sounding was conducted at two locations to assess the optimal depths to collect subsurface soil samples. Explosive contamination exceeds NDEP action levels. Annual GWM began in 1997. One production well was installed in fiscal year (FY)04. Water from this well will be used to facilitate the bioremediation.

Between October 2005 and May 2006, a total of 5,920 cy of contaminated soil was excavated and treated.

Bioremediation began in 2000 with end-of-year funding and operated until those funds were exhausted. All costs are captured under the PBC until 2014 for CMI(C) and LTM.

The corrective action (CA) fieldwork was completed in FY09. Groundwater monitoring will continue.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-B24A
Site Name: BLDG 336: FUEL STORAGE

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200601.....	200602
CS.....	200602.....	200705
RFI/CMS.....	200607.....	200705
DES.....	200607.....	200707
CMI(C).....	200807.....	200812
CMI(O).....	200812.....	201301
LTM.....	201302.....	204209
RIP Date:	200812	
RC Date:	201301	

SITE DESCRIPTION

Former Bldg 336 is located in the Central Magazine area of HWAD. There are three 10,000-gallon USTs at the site; two are out of service. In the past, they contained gasoline. The third UST stores diesel fuel and has an associated dispensing system. These USTs are double-lined and have an active alarm system to detect leaks. In August 1999, a leak was discovered in the single-walled piping that conveyed gasoline from two 10,000-gallon USTs to the gasoline dispenser island that was located in the proximity of the former UST. An estimated 5,000 to 7,000 gallons of gasoline were released based upon inventory reconciliation records. An estimated 600 cy of gasoline-impacted soil were excavated to depths of up to 20 feet below ground surface (bgs). The dispenser island and associated piping were removed, and the two USTs were taken out of service.

Since August 1999, 32 monitoring wells (MW) have been installed. In November 2000, during the first comprehensive GWM event, free-product was observed in monitoring wells MW08 and MW09 at reported thicknesses of 3.8 and 2.2 feet, respectively. During the monitoring period at the Bldg 336 vicinity, free-product has been observed in monitoring wells MW08, MW09, MW10, and MW19; monitoring wells MW06 and MW14 also have each been reported to have once contained free-product.

In June 2002 a product recovery program, which entailed monthly bailing, was started. As of Aug. 23, 2004, approximately 175 gallons of product had been recovered. Prior to the third quarter 2005, free-product had not been observed in the site monitoring wells since July 2004, but free-product was observed in the third quarter 2005. Three separate but related remedial systems (soil vapor extraction, ozone sparging, and bioventing) have been installed at the site to mitigate the known impacts to soil and groundwater resulting from the releases associated with the gasoline dispensing system. Continued operation and monitoring for MNA under corrective measures implementation (operations) [CMI(O)] phase will continue following the end of the PBC in FY14.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-B26
Site Name: 103-6 POL PIT

STATUS

Regulatory Driver: RCRA

RRSE: LOW

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

Media of Concern: Soil

Phases	Start	End
RFA.....	198705.....	198808
CS.....	198705.....	198808
RFI/CMS.....	199405.....	199812
DES.....	200607.....	200806
CMI(C).....	200601.....	200909
CMI(O).....	200606.....	201301
LTM.....	201302.....	204209

RIP Date: 200909

RC Date: 201301

SITE DESCRIPTION

Site HWAAP-B26 is an inactive unlined surface impoundment located north of Bldg 103-6. The impoundment measures 25 by 85 by eight feet. The impoundment operated from the 1940s to 1980s and received steam line blowdown water, fuel oil, crude oil, and other waste POL products. There is visible evidence of POL-stained soils in and around the pit.

In 1992, the impoundment was backfilled with soil almost to grade level. The pit is currently characterized by a depressed area approximately twice as large as the originally reported size of the impoundment. An above-line steam line running through the site deteriorated and was replaced in 2001.

The RI work in 1994 included surface soil and hand auger sampling, and CPT soundings. Two hand auger samples and two CPT soil samples were collected from within the pit and analyzed for explosives, metals, SVOCs, VOCs, PCBs, and TPH. All groups of chemicals were detected in the surface and subsurface soil below action levels except for TPH. The TPH above action levels [16,000 mg/kg of total petroleum hydrocarbon-diesel (TPH-d)] was detected in the soil. Continuing operation and monitoring of the light non-aqueous phase liquids (LNAPL) recovery system for groundwater contamination is anticipated to continue at the end of the PBC in FY14.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-B27A
Site Name: 103-16 CATCHMENT PIT

STATUS

Regulatory Driver: RCRA
RRSE: MEDIUM
Contaminants of Concern: Explosives
Media of Concern: Soil

Phases	Start	End
RFA.....	198705.....	198808
CS.....	198705.....	198808
RFI/CMS.....	199405.....	199812
DES.....	200607.....	200709
CMI(C).....	200601.....	200909
CMI(O).....	200606.....	201301
LTM.....	201302.....	204209

RIP Date: 200909
RC Date: 201301

SITE DESCRIPTION

Site HWAAP-B27A consists of eight inactive unlined surface impoundments and two drainage ditches located northwest of the ordnance washout Bldg 103-16. The eight impoundments occupy a total area of 10 acres. Each impoundment is up to eight feet deep. There are two drainage ditches at the site. One extends northwest from the facility for approximately one-half mile and the other extends southeast of the facility and is branched to the northwest near the impoundments. The impoundments have eroded and are partially filled with windblown sand. There is visible evidence of several inches of ammonium picrate and TNT stained soils in the pits and sidewalls. Between 1946 and 1981 the drainage ditches and the pits potentially received up to 20,000 gallons of wastewater containing ammonium picrate, RDX, TNT, and red fuming nitric acid.

Groundwater samples from 1974 detected nitrates above 70 ug/L (USGS Phase II investigation). No significant levels of TNT, RDX, or ammonium picrate were detected in the groundwater. Groundwater remediation is not required.

The RI work in 1994 included collecting 15 surface soil samples, 14 hand auger samples, and seven CPT soil samples from the pits and the ditches and analyzing samples for explosives and metals. Explosives above action levels were detected in surface soils in the ditches and in the impoundments. In general, the concentrations decreased with depth. Concentrations of TNT were detected at 700 mg/kg and 340 mg/kg in surface soil samples and then decreased to 71 mg/kg at a depth of five feet. Additional sampling for ammonium picrate was performed in 2002 and confirmed high levels in the surface soil (within six to 12 inches).

Work at the site will be delayed at least until summer 2010 due to mission essential demilitarization in Bldg 10316 on munitions. Due to the explosive safety quantity distance requirement of 1,800 feet, work at the site cannot continue until August 2010. Continued operation and monitoring for MNA under CMI(O) phase will continue following the end of the PBC in FY14.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-I09

Site Name: 49-10 PIT/LANDFILL #1 & #2

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	199207.....	199207
CS.....	199405.....	199410
RFI/CMS.....	199410.....	199812
DES.....	200001.....	200103
CMI(C).....	200201.....	200909
CMI(O).....	200606.....	201301
LTM.....	201302.....	204209

RIP Date: 200909

RC Date: 201301

SITE DESCRIPTION

Site HWAAP-I09 consists of two open pits near an area used to assemble ship mines, bombs and torpedo warheads. The period of operation is not documented. Wastewater and wash down water were reportedly discharged to these pits.

The 1994 Investigation included 10 soil gas samples, six surface soil samples, and 15 subsurface soil samples collected from three borings to a depth of 56 feet. Three CPT soundings were advanced for a total of 106 feet to define the optimum depth to collect subsurface soils. The surface soil samples contained up to 1,260 mg/kg of TPH-d. Groundwater sampling showed hits of VOCs. Sewer line breakage was thought to be the source, but in 1999, sewer lines were investigated and the findings eliminated potential release points. A remedial design (RD) in 2000 included soil gas surveys to define the groundwater plume and development of site-specific natural attenuation criteria.

Two additional wells were installed in 2002 to evaluate the TCE in the groundwater. About 270 ppb of TCE was found at above action levels. In September 2005 five additional monitoring wells were installed to delineate the plume. Low levels of toluene were detected in all five wells. Continued operation and monitoring for monitored natural attenuation (MNA) under CMI(O) phase will continue following the end of the PBC in FY14.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

STATUS

Regulatory Driver: RCRA

RRSE: LOW

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

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	200209.....	200309
RFI/CMS.....	200310.....	200403
DES.....	200404.....	200409
CMI(C).....	200601.....	200909
CMI(O).....	200606.....	201208
LTM.....	201208.....	204209

RIP Date: 200909

RC Date: 201208

SITE DESCRIPTION

This site tracks funding for the PBC. It includes sites HWAAP-B04, HWAAP-B20, HWAAP-B24, HWAAP-B24A, HWAAP-B26, HWAAP-B27A, HWAAP-I02, HWAAP-I09, and the base-wide GWM program through FY14.

The majority of the sites under the PBC are described as spill site areas; however, some may be described as USTs, surface impoundment areas, disposal sites, and OB areas. HWAAP-B20 and B24 do not require post-PBC funding.

CLEANUP/EXIT STRATEGY

Groundwater will be monitored for 30 years, then wells will be abandoned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-A03	COAL ASH LANDFILL(NOT OPEN)	199810	NFA Decision Document signed by NDEP 07/21/99
HWAAP-A04	BABBITT CLOSED LANDFILL	200009	NFA Decision Document signed by NDEP 11/30/01
HWAAP-A05	MUSTARD GAS DISPOSAL AREA	201203	
HWAAP-A06A	OLD BOMB DISPOSAL AREA 1	199209	
HWAAP-A06B	OLD BOMB DISPOSAL AREA 2	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-A06C	OLD BOMB DISPOSAL AREA 3	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-A06D	OLD BOMB DISPOSAL AREA 4	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-A06E	OLD BOMB DISPOSAL AREA 5	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-A07	NAVAL INSHORE OPS TNG CNTR FIRING RANGE	198808	Active Site - Future cleanup will be under a RCRA Part B Permit
HWAAP-A08	CONSTRUCTION DEBRIS LANDFILL	200110	NFA Decision Document signed by NDEP 11/30/01
HWAAP-A09A	AMMO CAN PILES	199810	NFA Decision Document signed by NDEP 08/04/00
HWAAP-A09B	BATTERY DISPOSAL AREA	199803	NFA Decision Document signed by NDEP 03/22/00
HWAAP-A10	107-ROCKET IMPACT AREA	199709	MMRP active/inactive range site.
HWAAP-A11	MAG 18-5 DISPOSAL PIT	201203	
HWAAP-B01	WADF IMPOUNDMENT #1	198808	SI determined there was no contamination
HWAAP-B02	WADF IMPUNDMENT #2	198808	SI determined there was no contamination
HWAAP-B03	WADF IMPOUNDMENT #3	198808	SI determined there was no contamination
HWAAP-B05	101-15 IMPOUNDMENT	199911	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed by state 11/22/99.
HWAAP-B06	101-13 IMPOUNDMENT	199909	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed 11/30/01.
HWAAP-B07	101-1 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed by state 11/30/01.
HWAAP-B08	101-1 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed by state 8/4/00.
HWAAP-B09	101-32 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed by state 8/4/00.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-B10	101-3 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. NFA DD signed by state 8/4/00.
HWAAP-B11A	101-31 CATCHMENT PIT	199909	NFA DD signed by state 2/14/01.
HWAAP-B11B	101-34 CATCHMENT PIT	199909	Closure DD was signed by the state 12/6/99.
HWAAP-B12	101-10 CATCHMENT PIT	200008	A NFA decision document for soil was signed by NDEP August 4, 2000.
HWAAP-B13	101-29/36 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. Closure DD was signed by state 12/6/99.
HWAAP-B15	101-16 CATCHMENT PIT	199810	NFA Decision Document signed by NDEP 03/22/00
HWAAP-B16	101-18 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. Closure DD signed by state 4/20/01.
HWAAP-B17A	101-20 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. Closure DD signed by state 24 April 2000. Site for industrial use only
HWAAP-B17B	101-20 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. DD signed by NDEP 4 August 2000. Site is for industrial use only.
HWAAP-B18	101-62 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. DD signed by NDEP 2 March 2001. Site for industrial use only.
HWAAP-B19	101-11 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels. DD signed by NDEP on 20 April 2001.
HWAAP-B20	101-41 CATCHMENT PIT	200909	Action will be taken under site HWAAP-115
HWAAP-B21	101-41/42 CATCHMENT PIT	199912	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-B22A	101-44 CATCHMENT PIT	199909	NFA Decision Document signed by NDEP 03/13/01
HWAAP-B22B	101-44 CATCHMENT PIT	199909	NFA Decision Document signed by NDEP 03/09/01
HWAAP-B23	103-30 CATCHMENT PIT	200110	Five-year review determined that RA effectively remediated contamination below action levels. Closure DD signed by NDEP 30 November 2001; no construction allowed.
HWAAP-B24	102-52 ACID PIT	200909	NDEP signed final Closure Report/DD on October 6, 2009.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-B25	103-7 INERT WASTE IMPOUNDMEN	199912	NFA Decision Document signed by NDEP 03/29/00
HWAAP-B27B	103-8/10 OXIDATION DITCH	200009	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-B27C	103-20 SURFACE IMPOUNDMENT	200009	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-B28A	108-20 PO SPILL CATCHMENT	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-B28B	108-20 PO SPILL CATCHMENT	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-B28C	104-8 EO SPILL Impoundment	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-B28D	104-10 EO SPILL BASIN	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-B29	103-41 UNLINED PONDS	200609	Interim DD signed by state 22 September 1995. For groundwater purposes, this site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-B30	101-16 CATCHMENT BASIN	199909	Five-year review determined that RA effectively remediated contamination below action levels. Closure DD signed by NDEP on 22-Nov-99; no construction allowed.
HWAAP-B31	101-65 CATCHMENT PIT	199909	Five-year review determined that RA effectively remediated contamination below action levels.
HWAAP-B32	101-41 CATCHMENT PIT	199709	NFA Decision Document signed by NDEP 04/20/01
HWAAP-B33	102-51 CATCHMENT PIT	199810	NFA Decision Document signed by NDEP 03/29/00
HWAAP-B34	104-3 CATCHMENT PIT	199812	Not eligible for ER,A/BRAC funding. Active Site -
HWAAP-C01A	102-31 ROTARY DEACTIVE FURNA	200109	NFA Decision Document signed by NDEP 11/30/01
HWAAP-C02A	117-3 WADF ROTARY DEACTIVE FURNACE	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-C03	DOCUMENT INCINERATOR	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-C04	OLD BOMB POPPING FURNACE 1	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-C05	OLD BOMB POPPING FURNACE #2	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-D01	106-22 & 106-23 NONREACTIVE HW STORAGE	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-D02	115-9 & 113-73A REACTIVE HW STORAGE	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-E01A	WADF WWTP	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-E01B	WADF SEWAGE EVAP PONDS	198808	Not eligible for ER,A/BRAC funding. Site is active.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-E02	HWAAP STP EVAP/PERC PONDS	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-E03	HAWTHORNE SEWAGE EVAP PONDS	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-F01	TRANSFER STATION, PROP DISPOSE OFC(PDO)	198808	Not eligible for ER,A/BRAC funding. Site is active.
HWAAP-G01A	OLD BOMB OB/OD GROUND 1	198909	Not eligible for ER,A/BRAC funding
HWAAP-G01B	OLD BOMB OB/OD GROUND 2	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-G01C	OLD BOMB OB/OD GROUND 3 D AREA	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-H01	FIRE TNG PIT	200006	Decision Document modifications pending between Plexus and USAEC.
HWAAP-H03	ROAD & GROUNDS WASTE OB PIT	199812	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-H04	NAVYSIDE LANDFILL	200409	NFA Decision Document signed by NDEP 02/15/02
HWAAP-H05	OLD DEPOT LAUNDRY WASHOUT	200110	NFA Decision Document signed by NDEP 01/14/02
HWAAP-I01	NEW BOMB LANDFILL	199709	Not eligible for ER,A/BRAC funding - Active Site
HWAAP-I02	110 GROUP OPEN BURNING PIT	201203	
HWAAP-I03	104-7 PIT #1	199812	NFA Decision Document signed by NDEP 11/22/99
HWAAP-I04	104-7 PIT #2	199812	NFA Decision Document signed by NDEP 11/22/99
HWAAP-I05	33-16 LANDFILL	199812	NFA Decision Document signed by NDEP 11/22/99
HWAAP-I06	SPILL SITE 30-5	199812	NFA Decision Document signed by NDEP 09/15/99
HWAAP-I07	101-44 LANDFILL	200503	Interim DD signed by state 6 November 2001.
HWAAP-I08	BLDG 70 PIT/LANDFILL	200312	Decision Document being prepared by the COE. Interim DD signed by state 26 February 2002.
HWAAP-I11	49-9 PIT/LANDFILL	200109	NFA Decision Document signed by NDEP 11/30/01
HWAAP-I13	BLDG 10 LANDFILL/DISCHARGE	199812	NFA Decision Document signed by NDEP 11/22/99
HWAAP-I14	BLDG 46 OIL SPILL	199903	NFA Decision Document signed by NDEP 10/31/01
HWAAP-I15	101-42 CATCHMENT PIT	199501	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-I17	104-10 LANDFILL	199812	NFA Decision Document signed by NDEP 10/13/99
HWAAP-I18	104-2 HYDROCARBON SPILL	200006	NFA Decision Document signed by NDEP 07/05/02
HWAAP-I19	NAVY BEACH TEST RANGE	199709	Listed under MMRP as HWAAP-009-R-01.
HWAAP-I22	OLD BOMB OPEN BURNING PIT	201005	This site will now be handled under the

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			CR Program. Please see that section of the IAP for more details.
HWAAP-I23	OLD BOMB/ROCKET METAL LANDFILL	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-J02	115 GROUP BURN AREA/LANDFILL	199812	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J03	BLDG 70 DIESEL FUEL LEAK	200809	Closure Decision Document - May 2009
HWAAP-J04	107 AREA DRUM STORAGE/LANDFILL	199909	NFA Decision Document signed by NDEP 11/22/99
HWAAP-J05	DOCK 1 LANDFILL	199903	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J06	DOCK 2 LANDFILL	199903	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J07	DOCK 3 LANDFILL	199810	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J08	DOCK 4 LANDFILL	199810	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J09	DOCK 5 LANDFILL	199810	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J10	DOCK 6 LANDFILL	199810	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J11	103-16 LANDFILL/PILE	199912	NFA Decision Document signed by NDEP 08/04/00
HWAAP-J12	LANDSCAPE LANDFILL	200006	NFA Decision Document signed by NDEP 04/19/01
HWAAP-J13	WADF SOUTH DUMP	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-J14	103-6 TRENCH	200109	NFA Decision Document signed by NDEP 11/19/02
HWAAP-J15	103-16 LANDFILL	200012	NFA Decision Document signed by NDEP 08/04/00
HWAAP-J16	111-113 GROUP BURN AREA/LANDFILL	199812	NFA Decision Document signed by NDEP 10/13/99
HWAAP-J17	THORNE DRUM AREA	199810	NFA Decision Document signed by NDEP 03/22/00
HWAAP-J21	BLDG 97 OLD DOCK AREA	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-J22	50 GROUP PITS	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-J23	TRENCH AT DUSTY ACRES AREA	199812	NFA Decision Document signed by NDEP 03/22/00
HWAAP-J24	TRENCH NEAR 50-60	199810	NFA Decision Document signed by NDEP 11/22/99
HWAAP-J25	THORNE AREA LANDFILL	199902	NFA Decision Document signed by NDEP 04/24/00
HWAAP-J26	LANDFILL TURN TABLE AREA	199709	NFA Decision Document signed by NDEP 08/04/00
HWAAP-J27	LANDFILL CAMP JUMBO AREA	199709	NFA Decision Document signed by NDEP 08/04/00
HWAAP-J28	108-3 CATCHMENT PITS	200106	NFA Decision Document signed by NDEP 11/30/01
HWAAP-J29	BUILDING 103-5 LANDFILL	200409	This site was consolidated with HWAAP-B29 for bioremediation.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-K01	WALKER LAKE TEST RANGE	199709	MMRP active/inactive range site.
HWAAP-K02	WALKER LAKE TEST RANGE DISPOSAL PIT	199709	This site is a duplicate of site HWAAP-A10.
HWAAP-K03	UST SITES - INST WIDE	200809	Closure Decision Document - May 2009
HWAAP-K04	ABOVEGROUND STORAGE TANKS AT BLDG 70	199706	NFA Decision Document signed by NDEP 09/25/95
HWAAP-K05	LUST SITE AT BLDG 117-3	200809	Closure Decision Document - May 2009
HWAAP-K07	OLD BOMB DDT BURIAL SITE	201005	This site will now be handled under the CR Program. Please see that section of the IAP for more details.
HWAAP-K08	PAINT STORAGE LOCKER SHEDS	200305	NFA Decision Document signed by NDEP 05/06/03
HWAAP-K09	SUMP AND DISCHARGE PIPE	200305	NFA Decision Document signed by NDEP 05/06/03
HWAAP-K10	BURIED PAINT	200409	Decision Document modifications pending between Plexus and USAEC.
HWAAP-K11	SKEET RANGE	200305	NFA Decision Document signed by NDEP 05/06/03

IRP Schedule

Date of IRP Inception: 198407

Past Phase Completion Milestones

1984

ISC (HWAAP-K05 - LUST SITE AT BLDG 117-3)

1988

RFA (HWAAP-A06B - OLD BOMB DISPOSAL AREA 2, HWAAP-A06C - OLD BOMB DISPOSAL AREA 3, HWAAP-A06D - OLD BOMB DISPOSAL AREA 4, HWAAP-A06E - OLD BOMB DISPOSAL AREA 5, HWAAP-B04 - 101-44 IMPOUNDMENT, HWAAP-B12 - 101-10 CATCHMENT PIT, HWAAP-B20 - 101-41 CATCHMENT PIT, HWAAP-B24 - 102-52 ACID PIT, HWAAP-B26 - 103-6 POL PIT, HWAAP-B27A - 103-16 CATCHMENT PIT, HWAAP-B29 - 103-41 UNLINED PONDS, HWAAP-C04 - OLD BOMB POPPING FURNACE 1, HWAAP-C05 - OLD BOMB POPPING FURNACE #2, HWAAP-G01B - OLD BOMB OB/OD GROUND 2, HWAAP-G01C - OLD BOMB OB/OD GROUND 3 D AREA)

CS (HWAAP-A06C - OLD BOMB DISPOSAL AREA 3, HWAAP-A06E - OLD BOMB DISPOSAL AREA 5, HWAAP-B04 - 101-44 IMPOUNDMENT, HWAAP-B12 - 101-10 CATCHMENT PIT, HWAAP-B20 - 101-41 CATCHMENT PIT, HWAAP-B24 - 102-52 ACID PIT, HWAAP-B26 - 103-6 POL PIT, HWAAP-B27A - 103-16 CATCHMENT PIT, HWAAP-B29 - 103-41 UNLINED PONDS, HWAAP-C04 - OLD BOMB POPPING FURNACE 1, HWAAP-C05 - OLD BOMB POPPING FURNACE #2)

PA (HWAAP-A03 - COAL ASH LANDFILL(NOT OPEN), HWAAP-A04 - BABBITT CLOSED LANDFILL, HWAAP-A05 - MUSTARD GAS DISPOSAL AREA, HWAAP-A06A - OLD BOMB DISPOSAL AREA 1, HWAAP-A07 - NAVAL INSHORE OPS TNG CNTR FIRING RANGE, HWAAP-A08 - CONSTRUCTION DEBRIS LANDFILL, HWAAP-A09A - AMMO CAN PILES, HWAAP-A09B - BATTERY DISPOSAL AREA, HWAAP-A10 - 107-ROCKET IMPACT AREA, HWAAP-A11 - MAG 18-5 DISPOSAL PIT, HWAAP-B01 - WADF IMPOUNDMENT #1, HWAAP-B02 - WADF IMPOUNDMENT #2, HWAAP-B03 - WADF IMPOUNDMENT #3, HWAAP-B05 - 101-15 IMPOUNDMENT, HWAAP-B06 - 101-13 IMPOUNDMENT, HWAAP-B07 - 101-1 CATCHMENT PIT, HWAAP-B08 - 101-1 CATCHMENT PIT, HWAAP-B09 - 101-32 CATCHMENT PIT, HWAAP-B10 - 101-3 CATCHMENT PIT, HWAAP-B11A - 101-31 CATCHMENT PIT, HWAAP-B11B - 101-34 CATCHMENT PIT, HWAAP-B13 - 101-29/36 CATCHMENT PIT, HWAAP-B15 - 101-16 CATCHMENT PIT, HWAAP-B16 - 101-18 CATCHMENT PIT, HWAAP-B17A - 101-20 CATCHMENT PIT, HWAAP-B17B - 101-20 CATCHMENT PIT, HWAAP-B18 - 101-62 CATCHMENT PIT, HWAAP-B19 - 101-11 CATCHMENT PIT, HWAAP-B21 - 101-41/42 CATCHMENT PIT, HWAAP-B22A - 101-44 CATCHMENT PIT, HWAAP-B22B - 101-44 CATCHMENT PIT, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-B25 - 103-7 INERT WASTE IMPOUNDMENT, HWAAP-B27B - 103-8/10 OXIDATION DITCH, HWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, HWAAP-B28A - 108-20 PO SPILL CATCHMENT, HWAAP-B28B - 108-20 PO SPILL CATCHMENT, HWAAP-B28C - 104-8 EO SPILL Impoundment, HWAAP-B28D - 104-10 EO SPILL BASIN, HWAAP-B30 - 101-16 CATCHMENT BASIN, HWAAP-B31 - 101-65 CATCHMENT PIT, HWAAP-B32 - 101-41 CATCHMENT PIT, HWAAP-B33 - 102-51 CATCHMENT PIT, HWAAP-B34 - 104-3 CATCHMENT PIT, HWAAP-C01A - 102-31 ROTARY DEACTIVE FURNA, HWAAP-C02A - 117-3 WADF ROTARY DEACTIVE FURNACE, HWAAP-C03 - DOCUMENT INCINERATOR, HWAAP-D01 - 106-22 & 106-23 NONREACTIVE HW STORAGE, HWAAP-D02 - 115-9 & 113-73A REACTIVE HW STORAGE, HWAAP-E01A - WADF WWTP, HWAAP-E01B - WADF SEWAGE EVAP PONDS, HWAAP-E02 - HWAAP STP EVAP/PERC PONDS, HWAAP-E03 - HAWTHORNE SEWAGE EVAP PONDS, HWAAP-F01 - TRANSFER STATION, PROP DISPOSE OFC(PDO), HWAAP-G01A - OLD BOMB OB/OD GROUND 1, HWAAP-H01 - FIRE TNG PIT, HWAAP-H03 - ROAD & GROUNDS WASTE OB PIT, HWAAP-K01 - WALKER LAKE TEST RANGE, HWAAP-K02 - WALKER LAKE TEST RANGE DISPOSAL PIT)

SI (HWAAP-A03 - COAL ASH LANDFILL(NOT OPEN), HWAAP-A04 - BABBITT CLOSED LANDFILL, HWAAP-A05 - MUSTARD GAS DISPOSAL AREA, HWAAP-A06A - OLD BOMB DISPOSAL AREA 1, HWAAP-A07 - NAVAL INSHORE OPS TNG CNTR FIRING RANGE, HWAAP-A08 - CONSTRUCTION DEBRIS LANDFILL, HWAAP-A09A - AMMO CAN PILES, HWAAP-A09B - BATTERY DISPOSAL AREA, HWAAP-A10 - 107-ROCKET IMPACT AREA, HWAAP-A11 - MAG 18-5 DISPOSAL PIT, HWAAP-B01 - WADF IMPOUNDMENT #1, HWAAP-B02 - WADF IMPOUNDMENT #2, HWAAP-B03 - WADF IMPOUNDMENT #3, HWAAP-B05 - 101-15 IMPOUNDMENT, HWAAP-B06 - 101-13 IMPOUNDMENT, HWAAP-B07 - 101-1 CATCHMENT PIT, HWAAP-B08 - 101-1 CATCHMENT PIT, HWAAP-B09 - 101-32 CATCHMENT PIT, HWAAP-B10 - 101-3 CATCHMENT PIT, HWAAP-B11A - 101-31 CATCHMENT PIT, HWAAP-B11B - 101-34 CATCHMENT PIT, HWAAP-B13 - 101-29/36 CATCHMENT PIT, HWAAP-B15 - 101-16 CATCHMENT PIT, HWAAP-B16 - 101-18 CATCHMENT PIT, HWAAP-B17A - 101-20 CATCHMENT PIT, HWAAP-B17B - 101-20 CATCHMENT PIT,

IRP Schedule

<p>IRA 1989 CS 1992 PA</p>	<p>HWAAP-B18 - 101-62 CATCHMENT PIT, HWAAP-B19 - 101-11 CATCHMENT PIT, HWAAP-B21 - 101-41/42 CATCHMENT PIT, HWAAP-B22A - 101-44 CATCHMENT PIT, HWAAP-B22B - 101-44 CATCHMENT PIT, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-B25 - 103-7 INERT WASTE IMPOUNDMENT, HWAAP-B27B - 103-8/10 OXIDATION DITCH, HWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, HWAAP-B28A - 108-20 PO SPILL CATCHMENT, HWAAP-B28B - 108-20 PO SPILL CATCHMENT, HWAAP-B28C - 104-8 EO SPILL Impoundment, HWAAP-B28D - 104-10 EO SPILL BASIN, HWAAP-B30 - 101-16 CATCHMENT BASIN, HWAAP-B31 - 101-65 CATCHMENT PIT, HWAAP-B32 - 101-41 CATCHMENT PIT, HWAAP-B33 - 102-51 CATCHMENT PIT, HWAAP-B34 - 104-3 CATCHMENT PIT, HWAAP-C01A - 102-31 ROTARY DEACTIVE FURNA, HWAAP-C02A - 117-3 WADF ROTARY DEACTIVE FURNACE, HWAAP-C03 - DOCUMENT INCINERATOR, HWAAP-D01 - 106-22 & 106-23 NONREACTIVE HW STORAGE, HWAAP-D02 - 115-9 & 113-73A REACTIVE HW STORAGE, HWAAP-E01A - WADF WWTP, HWAAP-E01B - WADF SEWAGE EVAP PONDS, HWAAP-E02 - HWAAP STP EVAP/PERC PONDS, HWAAP-E03 - HAWTHORNE SEWAGE EVAP PONDS, HWAAP-F01 - TRANSFER STATION, PROP DISPOSE OFC(PDO), HWAAP-G01A - OLD BOMB OB/OD GROUND 1, HWAAP-H01 - FIRE TNG PIT, HWAAP-H03 - ROAD & GROUNDS WASTE OB PIT, HWAAP-K02 - WALKER LAKE TEST RANGE DISPOSAL PIT) (HWAAP-A06A - OLD BOMB DISPOSAL AREA 1)</p>
<p>CS 1992</p>	<p>(HWAAP-G01B - OLD BOMB OB/OD GROUND 2, HWAAP-G01C - OLD BOMB OB/OD GROUND 3 D AREA)</p>
<p>PA</p>	<p>(HWAAP-I01 - NEW BOMB LANDFILL, HWAAP-I03 - 104-7 PIT #1, HWAAP-I04 - 104-7 PIT #2, HWAAP-I05 - 33-16 LANDFILL, HWAAP-I06 - SPILL SITE 30-5, HWAAP-I07 - 101-44 LANDFILL, HWAAP-I08 - BLDG 70 PIT/LANDFILL, HWAAP-I11 - 49-9 PIT/LANDFILL, HWAAP-I13 - BLDG 10 LANDFILL/DISCHARGE, HWAAP-I14 - BLDG 46 OIL SPILL, HWAAP-I15 - 101-42 CATCHMENT PIT, HWAAP-I17 - 104-10 LANDFILL, HWAAP-I18 - 104-2 HYDROCARBON SPILL, HWAAP-I19 - NAVY BEACH TEST RANGE, HWAAP-J02 - 115 GROUP BURN AREA/LANDFILL, HWAAP-J04 - 107 AREA DRUM STORAGE/LANDFILL, HWAAP-J05 - DOCK 1 LANDFILL, HWAAP-J06 - DOCK 2 LANDFILL, HWAAP-J07 - DOCK 3 LANDFILL, HWAAP-J08 - DOCK 4 LANDFILL, HWAAP-J09 - DOCK 5 LANDFILL, HWAAP-J10 - DOCK 6 LANDFILL, HWAAP-J11 - 103-16 LANDFILL/PILE, HWAAP-J12 - LANDSCAPE LANDFILL, HWAAP-J13 - WADF SOUTH DUMP, HWAAP-J14 - 103-6 TRENCH, HWAAP-J15 - 103-16 LANDFILL, HWAAP-J16 - 111-113 GROUP BURN AREA/LANDFILL, HWAAP-J17 - THORNE DRUM AREA, HWAAP-J21 - BLDG 97 OLD DOCK AREA, HWAAP-J22 - 50 GROUP PITS, HWAAP-J23 - TRENCH AT DUSTY ACRES AREA, HWAAP-J24 - TRENCH NEAR 50-60, HWAAP-J25 - THORNE AREA LANDFILL, HWAAP-J26 - LANDFILL TURN TABLE AREA, HWAAP-J27 - LANDFILL CAMP JUMBO AREA, HWAAP-J28 - 108-3 CATCHMENT PITS, HWAAP-J29 - BUILDING 103-5 LANDFILL)</p>
<p>ISC RFA</p>	<p>(HWAAP-J03 - BLDG 70 DIESEL FUEL LEAK, HWAAP-K03 - UST SITES - INST WIDE) (HWAAP-I02 - 110 GROUP OPEN BURNING PIT, HWAAP-I09 - 49-10 PIT/LANDFILL #1 & #2, HWAAP-I22 - OLD BOMB OPEN BURNING PIT, HWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL)</p>
<p>1994 INV RI/FS CS SI</p>	<p>(HWAAP-J03 - BLDG 70 DIESEL FUEL LEAK, HWAAP-K05 - LUST SITE AT BLDG 117-3) (HWAAP-B32 - 101-41 CATCHMENT PIT) (HWAAP-A06B - OLD BOMB DISPOSAL AREA 2) (HWAAP-I05 - 33-16 LANDFILL, HWAAP-J11 - 103-16 LANDFILL/PILE, HWAAP-J12 - LANDSCAPE LANDFILL, HWAAP-J13 - WADF SOUTH DUMP, HWAAP-J14 - 103-6 TRENCH, HWAAP-J15 - 103-16 LANDFILL, HWAAP-J16 - 111-113 GROUP BURN AREA/LANDFILL, HWAAP-J23 - TRENCH AT DUSTY ACRES AREA, HWAAP-J25 - THORNE AREA LANDFILL, HWAAP-J26 - LANDFILL TURN TABLE AREA)</p>
<p>1995 INV CAP PA CS</p>	<p>(HWAAP-K03 - UST SITES - INST WIDE) (HWAAP-J03 - BLDG 70 DIESEL FUEL LEAK) (HWAAP-H04 - NAVYSIDE LANDFILL, HWAAP-H05 - OLD DEPOT LAUNDRY WASHOUT) (HWAAP-A06D - OLD BOMB DISPOSAL AREA 4, HWAAP-I02 - 110 GROUP OPEN BURNING PIT, HWAAP-</p>

IRP Schedule

SI	109 - 49-10 PIT/LANDFILL #1 & #2, HWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL) (HWAAP-I03 - 104-7 PIT #1, HWAAP-I04 - 104-7 PIT #2, HWAAP-I06 - SPILL SITE 30-5, HWAAP-I07 - 101-44 LANDFILL, HWAAP-I08 - BLDG 70 PIT/LANDFILL, HWAAP-I11 - 49-9 PIT/LANDFILL, HWAAP-I13 - BLDG 10 LANDFILL/DISCHARGE, HWAAP-I14 - BLDG 46 OIL SPILL, HWAAP-I15 - 101-42 CATCHMENT PIT, HWAAP-I17 - 104-10 LANDFILL, HWAAP-I18 - 104-2 HYDROCARBON SPILL, HWAAP-J02 - 115 GROUP BURN AREA/LANDFILL, HWAAP-J04 - 107 AREA DRUM STORAGE/LANDFILL, HWAAP-J05 - DOCK 1 LANDFILL, HWAAP-J06 - DOCK 2 LANDFILL, HWAAP-J07 - DOCK 3 LANDFILL, HWAAP-J08 - DOCK 4 LANDFILL, HWAAP-J09 - DOCK 5 LANDFILL, HWAAP-J10 - DOCK 6 LANDFILL, HWAAP-J17 - THORNE DRUM AREA, HWAAP-J21 - BLDG 97 OLD DOCK AREA, HWAAP-J22 - 50 GROUP PITS, HWAAP-J24 - TRENCH NEAR 50-60, HWAAP-J27 - LANDFILL CAMP JUMBO AREA, HWAAP-J28 - 108-3 CATCHMENT PITS, HWAAP-J29 - BUILDING 103-5 LANDFILL)
RFI/CMS	(HWAAP-B04 - 101-44 IMPOUNDMENT)
RI/FS	(HWAAP-A09A - AMMO CAN PILES, HWAAP-I15 - 101-42 CATCHMENT PIT)
1996	
PA	(HWAAP-K04 - ABOVEGROUND STORAGE TANKS AT BLDG 70)
RI/FS	(HWAAP-A03 - COAL ASH LANDFILL(NOT OPEN), HWAAP-A09B - BATTERY DISPOSAL AREA, HWAAP-B28A - 108-20 PO SPILL CATCHMENT, HWAAP-B28B - 108-20 PO SPILL CATCHMENT, HWAAP-B28C - 104-8 EO SPILL Impoundment, HWAAP-B28D - 104-10 EO SPILL BASIN, HWAAP-B33 - 102-51 CATCHMENT PIT, HWAAP-I14 - BLDG 46 OIL SPILL, HWAAP-J04 - 107 AREA DRUM STORAGE/LANDFILL, HWAAP-J05 - DOCK 1 LANDFILL, HWAAP-J06 - DOCK 2 LANDFILL, HWAAP-J07 - DOCK 3 LANDFILL, HWAAP-J08 - DOCK 4 LANDFILL, HWAAP-J09 - DOCK 5 LANDFILL, HWAAP-J10 - DOCK 6 LANDFILL, HWAAP-J13 - WADF SOUTH DUMP, HWAAP-J17 - THORNE DRUM AREA, HWAAP-J21 - BLDG 97 OLD DOCK AREA, HWAAP-J22 - 50 GROUP PITS, HWAAP-J24 - TRENCH NEAR 50-60, HWAAP-J26 - LANDFILL TURN TABLE AREA, HWAAP-J27 - LANDFILL CAMP JUMBO AREA)
CAP	(HWAAP-K05 - LUST SITE AT BLDG 117-3)
CS	(HWAAP-I22 - OLD BOMB OPEN BURNING PIT)
1997	
RI/FS	(HWAAP-B08 - 101-1 CATCHMENT PIT, HWAAP-B09 - 101-32 CATCHMENT PIT, HWAAP-B11A - 101-31 CATCHMENT PIT, HWAAP-B11B - 101-34 CATCHMENT PIT, HWAAP-B13 - 101-29/36 CATCHMENT PIT, HWAAP-B16 - 101-18 CATCHMENT PIT, HWAAP-B17A - 101-20 CATCHMENT PIT, HWAAP-B17B - 101-20 CATCHMENT PIT, HWAAP-B18 - 101-62 CATCHMENT PIT, HWAAP-B19 - 101-11 CATCHMENT PIT, HWAAP-B30 - 101-16 CATCHMENT BASIN, HWAAP-B31 - 101-65 CATCHMENT PIT, HWAAP-H04 - NAVYSIDE LANDFILL, HWAAP-I03 - 104-7 PIT #1, HWAAP-J14 - 103-6 TRENCH)
RFI/CMS	(HWAAP-A06B - OLD BOMB DISPOSAL AREA 2, HWAAP-A06C - OLD BOMB DISPOSAL AREA 3, HWAAP-A06D - OLD BOMB DISPOSAL AREA 4, HWAAP-A06E - OLD BOMB DISPOSAL AREA 5, HWAAP-B12 - 101-10 CATCHMENT PIT, HWAAP-C04 - OLD BOMB POPPING FURNACE 1, HWAAP-C05 - OLD BOMB POPPING FURNACE #2, HWAAP-G01B - OLD BOMB OB/OD GROUND 2, HWAAP-G01C - OLD BOMB OB/OD GROUND 3 D AREA, HWAAP-I22 - OLD BOMB OPEN BURNING PIT, HWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL)
IRA	(HWAAP-B20 - 101-41 CATCHMENT PIT, HWAAP-H04 - NAVYSIDE LANDFILL)
RD	(HWAAP-B32 - 101-41 CATCHMENT PIT)
IMP(C)	(HWAAP-J03 - BLDG 70 DIESEL FUEL LEAK)
RA(C)	(HWAAP-B32 - 101-41 CATCHMENT PIT, HWAAP-K04 - ABOVEGROUND STORAGE TANKS AT BLDG 70)
1998	
RD	(HWAAP-B05 - 101-15 IMPOUNDMENT, HWAAP-B06 - 101-13 IMPOUNDMENT, HWAAP-B08 - 101-1 CATCHMENT PIT, HWAAP-B09 - 101-32 CATCHMENT PIT, HWAAP-B10 - 101-3 CATCHMENT PIT, HWAAP-B11A - 101-31 CATCHMENT PIT, HWAAP-B11B - 101-34 CATCHMENT PIT, HWAAP-B13 - 101-29/36 CATCHMENT PIT, HWAAP-B15 - 101-16 CATCHMENT PIT, HWAAP-B16 - 101-18 CATCHMENT PIT, HWAAP-B17A - 101-20 CATCHMENT PIT, HWAAP-B17B - 101-20 CATCHMENT PIT, HWAAP-B18 - 101-62 CATCHMENT PIT, HWAAP-B19 - 101-11 CATCHMENT PIT, HWAAP-B30 - 101-16 CATCHMENT BASIN,

IRP Schedule

	HWAAP-B31 - 101-65 CATCHMENT PIT)
CAP	(HWAAP-K03 - UST SITES - INST WIDE)
DES	(HWAAP-B12 - 101-10 CATCHMENT PIT, HWAAP-K03 - UST SITES - INST WIDE)
RFI/CMS	(HWAAP-B24 - 102-52 ACID PIT)
RA(C)	(HWAAP-A09B - BATTERY DISPOSAL AREA)
RI/FS	(HWAAP-A04 - BABBITT CLOSED LANDFILL, HWAAP-B05 - 101-15 IMPOUNDMENT, HWAAP-B06 - 101-13 IMPOUNDMENT, HWAAP-B10 - 101-3 CATCHMENT PIT, HWAAP-B15 - 101-16 CATCHMENT PIT)
1999	
CMI(C)	(HWAAP-B12 - 101-10 CATCHMENT PIT)
RFI/CMS	(HWAAP-B26 - 103-6 POL PIT, HWAAP-B27A - 103-16 CATCHMENT PIT, HWAAP-B29 - 103-41 UNLINED PONDS, HWAAP-I09 - 49-10 PIT/LANDFILL #1 & #2)
IMP(C)	(HWAAP-K05 - LUST SITE AT BLDG 117-3)
RD	(HWAAP-A04 - BABBITT CLOSED LANDFILL, HWAAP-B22A - 101-44 CATCHMENT PIT, HWAAP-B22B - 101-44 CATCHMENT PIT, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-I18 - 104-2 HYDROCARBON SPILL)
RA(O)	(HWAAP-I14 - BLDG 46 OIL SPILL, HWAAP-J05 - DOCK 1 LANDFILL, HWAAP-J06 - DOCK 2 LANDFILL)
RA(C)	(HWAAP-A03 - COAL ASH LANDFILL(NOT OPEN), HWAAP-A09A - AMMO CAN PILES, HWAAP-B06 - 101-13 IMPOUNDMENT, HWAAP-B07 - 101-1 CATCHMENT PIT, HWAAP-B08 - 101-1 CATCHMENT PIT, HWAAP-B09 - 101-32 CATCHMENT PIT, HWAAP-B10 - 101-3 CATCHMENT PIT, HWAAP-B11A - 101-31 CATCHMENT PIT, HWAAP-B11B - 101-34 CATCHMENT PIT, HWAAP-B13 - 101-29/36 CATCHMENT PIT, HWAAP-B15 - 101-16 CATCHMENT PIT, HWAAP-B16 - 101-18 CATCHMENT PIT, HWAAP-B17A - 101-20 CATCHMENT PIT, HWAAP-B17B - 101-20 CATCHMENT PIT, HWAAP-B18 - 101-62 CATCHMENT PIT, HWAAP-B19 - 101-11 CATCHMENT PIT, HWAAP-B22A - 101-44 CATCHMENT PIT, HWAAP-B22B - 101-44 CATCHMENT PIT, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-B28A - 108-20 PO SPILL CATCHMENT, HWAAP-B28B - 108-20 PO SPILL CATCHMENT, HWAAP-B28C - 104-8 EO SPILL Impoundment, HWAAP-B28D - 104-10 EO SPILL BASIN, HWAAP-B30 - 101-16 CATCHMENT BASIN, HWAAP-B31 - 101-65 CATCHMENT PIT, HWAAP-B33 - 102-51 CATCHMENT PIT, HWAAP-I14 - BLDG 46 OIL SPILL, HWAAP-J05 - DOCK 1 LANDFILL, HWAAP-J06 - DOCK 2 LANDFILL, HWAAP-J07 - DOCK 3 LANDFILL, HWAAP-J08 - DOCK 4 LANDFILL, HWAAP-J09 - DOCK 5 LANDFILL, HWAAP-J10 - DOCK 6 LANDFILL, HWAAP-J13 - WADF SOUTH DUMP, HWAAP-J17 - THORNE DRUM AREA, HWAAP-J21 - BLDG 97 OLD DOCK AREA, HWAAP-J22 - 50 GROUP PITS, HWAAP-J24 - TRENCH NEAR 50-60)
IRA	(HWAAP-A08 - CONSTRUCTION DEBRIS LANDFILL, HWAAP-H05 - OLD DEPOT LAUNDRY WASHOUT, HWAAP-I03 - 104-7 PIT #1, HWAAP-I04 - 104-7 PIT #2, HWAAP-J11 - 103-16 LANDFILL/PILE, HWAAP-J12 - LANDSCAPE LANDFILL)
RI/FS	(HWAAP-A08 - CONSTRUCTION DEBRIS LANDFILL, HWAAP-B21 - 101-41/42 CATCHMENT PIT, HWAAP-B22A - 101-44 CATCHMENT PIT, HWAAP-B22B - 101-44 CATCHMENT PIT, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-B25 - 103-7 INERT WASTE IMPOUNDMENT, HWAAP-B27B - 103-8/10 OXIDATION DITCH, HWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, HWAAP-B34 - 104-3 CATCHMENT PIT, HWAAP-C01A - 102-31 ROTARY DEACTIVE FURNA, HWAAP-H01 - FIRE TNG PIT, HWAAP-H03 - ROAD & GROUNDS WASTE OB PIT, HWAAP-H05 - OLD DEPOT LAUNDRY WASHOUT, HWAAP-I04 - 104-7 PIT #2, HWAAP-I05 - 33-16 LANDFILL, HWAAP-I06 - SPILL SITE 30-5, HWAAP-I07 - 101-44 LANDFILL, HWAAP-I08 - BLDG 70 PIT/LANDFILL, HWAAP-I11 - 49-9 PIT/LANDFILL, HWAAP-I13 - BLDG 10 LANDFILL/DISCHARGE, HWAAP-I17 - 104-10 LANDFILL, HWAAP-I18 - 104-2 HYDROCARBON SPILL, HWAAP-J02 - 115 GROUP BURN AREA/LANDFILL, HWAAP-J11 - 103-16 LANDFILL/PILE, HWAAP-J12 - LANDSCAPE LANDFILL, HWAAP-J15 - 103-16 LANDFILL, HWAAP-J16 - 111-113 GROUP BURN AREA/LANDFILL, HWAAP-J23 - TRENCH AT DUSTY ACRES AREA, HWAAP-J25 - THORNE AREA LANDFILL, HWAAP-J28 - 108-3 CATCHMENT PITS, HWAAP-J29 - BUILDING 103-5 LANDFILL)
DES	(HWAAP-B04 - 101-44 IMPOUNDMENT, HWAAP-B29 - 103-41 UNLINED PONDS)
2000	
IRA	(HWAAP-J15 - 103-16 LANDFILL)

IRP Schedule

RD	(HWAAP-A11 - MAG 18-5 DISPOSAL PIT, HWAAP-B27B - 103-8/10 OXIDATION DITCH, HWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, HWAAP-C01A - 102-31 ROTARY DEACTIVE FURNA, HWAAP-I11 - 49-9 PIT/LANDFILL)
IMP(C)	(HWAAP-K03 - UST SITES - INST WIDE)
RA(C)	(HWAAP-A04 - BABBITT CLOSED LANDFILL, HWAAP-B05 - 101-15 IMPOUNDMENT, HWAAP-B21 - 101-41/42 CATCHMENT PIT, HWAAP-B27B - 103-8/10 OXIDATION DITCH, HWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, HWAAP-H01 - FIRE TNG PIT, HWAAP-I18 - 104-2 HYDROCARBON SPILL)
LTM	(HWAAP-B12 - 101-10 CATCHMENT PIT, HWAAP-J12 - LANDSCAPE LANDFILL)
PA	(HWAAP-K08 - PAINT STORAGE LOCKER SHEDS, HWAAP-K09 - SUMP AND DISCHARGE PIPE, HWAAP-K10 - BURIED PAINT, HWAAP-K11 - SKEET RANGE)
RFA	(HWAAP-K07 - OLD BOMB DDT BURIAL SITE)
SI	(HWAAP-K08 - PAINT STORAGE LOCKER SHEDS, HWAAP-K09 - SUMP AND DISCHARGE PIPE, HWAAP-K10 - BURIED PAINT, HWAAP-K11 - SKEET RANGE)
2001	
LTM	(HWAAP-J15 - 103-16 LANDFILL)
RA(C)	(HWAAP-A11 - MAG 18-5 DISPOSAL PIT, HWAAP-C01A - 102-31 ROTARY DEACTIVE FURNA, HWAAP-I11 - 49-9 PIT/LANDFILL, HWAAP-J14 - 103-6 TRENCH, HWAAP-J28 - 108-3 CATCHMENT PITS)
RI/FS	(HWAAP-A05 - MUSTARD GAS DISPOSAL AREA)
DES	(HWAAP-I09 - 49-10 PIT/LANDFILL #1 & #2)
RD	(HWAAP-I08 - BLDG 70 PIT/LANDFILL, HWAAP-J14 - 103-6 TRENCH)
IRA	(HWAAP-B04 - 101-44 IMPOUNDMENT)
2002	
RFI/CMS	(HWAAP-B20 - 101-41 CATCHMENT PIT)
LTM	(HWAAP-A08 - CONSTRUCTION DEBRIS LANDFILL, HWAAP-B23 - 103-30 CATCHMENT PIT, HWAAP-H05 - OLD DEPOT LAUNDRY WASHOUT)
2003	
RD	(HWAAP-J29 - BUILDING 103-5 LANDFILL)
RI/FS	(HWAAP-K08 - PAINT STORAGE LOCKER SHEDS, HWAAP-K09 - SUMP AND DISCHARGE PIPE, HWAAP-K11 - SKEET RANGE)
RFA	(PBC@Hawthorne - PBC)
2004	
RFI/CMS	(PBC@Hawthorne - PBC)
RA(C)	(HWAAP-I08 - BLDG 70 PIT/LANDFILL, HWAAP-J29 - BUILDING 103-5 LANDFILL)
RI/FS	(HWAAP-K10 - BURIED PAINT)
DES	(PBC@Hawthorne - PBC)
IRA	(HWAAP-K10 - BURIED PAINT)
LTM	(HWAAP-H04 - NAVYSIDE LANDFILL)
2005	
CM(C)	(HWAAP-B20 - 101-41 CATCHMENT PIT)
RA(C)	(HWAAP-I07 - 101-44 LANDFILL)
2006	
CM(C)	(HWAAP-B29 - 103-41 UNLINED PONDS)
RFA	(HWAAP-B24A - BLDG 336: FUEL STORAGE)
2007	
CS	(HWAAP-B24A - BLDG 336: FUEL STORAGE)
DES	(HWAAP-B24 - 102-52 ACID PIT, HWAAP-B24A - BLDG 336: FUEL STORAGE , HWAAP-B27A - 103-16 CATCHMENT PIT)

RFI/CMS (HWAAP-B24A - BLDG 336: FUEL STORAGE)
2008
 IMP(O) (HWAAP-J03 - BLDG 70 DIESEL FUEL LEAK, HWAAP-K03 - UST SITES - INST WIDE, HWAAP-K05 - LUST SITE AT BLDG 117-3)
 RFI/CMS (HWAAP-I02 - 110 GROUP OPEN BURNING PIT)
 DES (HWAAP-B26 - 103-6 POL PIT)
2009
 DES (HWAAP-I02 - 110 GROUP OPEN BURNING PIT)
 CMI(O) (HWAAP-B20 - 101-41 CATCHMENT PIT)
 CMI(C) (HWAAP-B04 - 101-44 IMPOUNDMENT, HWAAP-B24 - 102-52 ACID PIT, HWAAP-B24A - BLDG 336: FUEL STORAGE , HWAAP-B26 - 103-6 POL PIT, HWAAP-B27A - 103-16 CATCHMENT PIT, HWAAP-I09 - 49-10 PIT/LANDFILL #1 & #2, PBC@Hawthorne - PBC)
2010
 LTM (HWAAP-A06B - OLD BOMB DISPOSAL AREA 2, HWAAP-A06C - OLD BOMB DISPOSAL AREA 3, HWAAP-A06D - OLD BOMB DISPOSAL AREA 4, HWAAP-A06E - OLD BOMB DISPOSAL AREA 5, HWAAP-C04 - OLD BOMB POPPING FURNACE 1, HWAAP-C05 - OLD BOMB POPPING FURNACE #2, HWAAP-G01B - OLD BOMB OB/OD GROUND 2, HWAAP-G01C - OLD BOMB OB/OD GROUND 3 D AREA, HWAAP-I22 - OLD BOMB OPEN BURNING PIT, HWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL, HWAAP-K07 - OLD BOMB DDT BURIAL SITE)

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
HWAAP-B27A	103-16 CATCHMENT PIT	HWAAP-B27A 103-16 Ordnance Washout	20130101

Final RA(C) Completion Date: 201203

Schedule for Next Five-Year Review: 2016

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

HAWTHORNE ARMY DEPOT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-B04	101-44 IMPOUNDMENT	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-B24A	BLDG 336: FUEL STORAGE	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-B26	103-6 POL PIT	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-B27A	103-16 CATCHMENT PIT	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-I09	49-10 PIT/LANDFILL #1 & #2	CMI(O)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
PBC@Hawthorne	PBC	LTM						

HAWTHORNE ARMY DEPOT
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 18/5

Installation Site Types with Future and/or Underway Phases

- 2 Explosive Ordnance Disposal Area
(HWAAP-012-R-01, HWAAP-013-R-01)
- 11 Firing Range
(HWAAP-001-R-01, HWAAP-002-R-01, HWAAP-006-R-01, HWAAP-008-R-01, HWAAP-009-R-01, HWAAP-010-R-01, HWAAP-017-R-01, HWAAP-018-R-01, HWAAP-020-R-01, HWAAP-021-R-01, HWAAP-022-R-01)

Most Widespread Contaminants of Concern

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

Media of Concern

Groundwater, Sediment, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
HWAAP-001-R-01	WALKER LAKE WATER TEST RANGE	IRA	INSTITUTIONAL CONTROLS	2011
HWAAP-001-R-01	WALKER LAKE WATER TEST RANGE	IRA	UXO CLEARANCE	2012

Duration of MMRP

Date of MMRP Inception 200009

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202209/202209

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

MMRP Contamination Assessment

Contamination Assessment Overview

The Phase III Army range inventory [also known as the closed, transferred, or transferring (CTT) inventory] was completed at HWAD in May 2003. The inventory identified 17 sites as eligible for the Military Munitions Response Program (MMRP). The Phase III inventory serves as the preliminary assessment (PA) under CERCLA.

The SI was finalized in September 2009. An RI is currently underway for 13 MMRP sites.

Cleanup Exit Strategy

The installation plans to execute follow-on phases/actions for the active MMRP sites as required in the individual site cleanup strategies.

MMRP Previous Studies

	Title	Author	Date
2003	Final US Army Closed, Transferring and Transferred Range/Site Inventory for Hawthorne AD, NV	TechLaw, Inc.	MAR-2003
2004	Property Eligibility Report, Hawthorne Army Depot, Nevada	TechLaw, Inc.	JUL-2004
2009	Final SI Report	FPM Group, URS	SEP-2009
2012	Final Work Plan	Parsons	AUG-2012

HAWTHORNE ARMY DEPOT
Military Munitions Response Program
Site Descriptions

Site ID: HWAAP-001-R-01
Site Name: WALKER LAKE WATER TEST RANGE

STATUS

Regulatory Driver: CERCLA
MRSPP Score: 05
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201310.....	201409
IRA.....	201106.....	201205
RA(C).....	201410.....	201509
LTM.....	201510.....	201610
RIP Date:	N/A	
RC Date:	201509	

SITE DESCRIPTION

This closed range in the northern part of the installation, formerly known as the HWAAP A10 107 Rocket impact area still owned by the US Army, is 796 acres. It was used from approximately 1942 until approximately 1975, primarily to test rockets of various sizes up to five-inch, depth charges, and other unidentified munitions. Although the IAP references depth charges being tested here, installation personnel state that empty depth charge cases were routinely deployed as buoys, raft buoys and swimming boundaries, and that over the years many of these have broken free, thus resulting in accounts of depth charge testing even though none actually occurred. The UXO investigations of these cases have revealed an empty condition with no explosive components.

Walker Lake is receding, continuously exposing old rocket munitions that were formerly on the lake bottom. Clearance efforts have found rockets, depth charges, shotgun shells, fuses, fragments of propellants, and TNT. The AEDB-R site identification for this site was HWAAP-K01. The area of this range is partly undeveloped installation land and partly on Walker Lake, which is used for recreational purposes. This portion of the range lies within the installation boundary; a separate portion lying outside the installation boundary is addressed under HWAAP-021-R-01, Walker Lake Water Test Range [transferred (TD)].

RI/FS is currently underway. This MRS is located in the north central part of the installation. The historical range boundaries encompass both Army-owned and non-Army-owned property. The portion of the historical range located within the installation boundary on Army-owned property was designated as the Walker Lake Water Test Range MRS (HWAAP-001-R-01) and the portion located on non-Army owned property was designated as the Walker Lake Water Test Range (TD) MRS (HWAAP-021-R-01) for administrative purposes.

HWAAP-001-R-01 was reported as 743 acres in the CTT Range/Site Inventory Report and the Final historical records review (HRR). However, it was subsequently determined that changes to the installation boundary resulted in 53 acres of the Walker Lake Water Test Range (TD) MRS (HWAAP-021-R-01) being located within the installation boundary and that this area should be part of the Walker Lake Water Test Range MRS (HWAAP-001-R-01). The affected area is located within Walker Lake. The resulting MRS encompasses 796 acres within the northern part of the installation and is partly on undeveloped installation land and partly within Walker Lake.

CLEANUP/EXIT STRATEGY

After the FS is completed, an RD, excavation, off-site transportation and disposal, MEC removal action, and MEC institutional controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-002-R-01

Site Name: WALKER LAKE LAND TEST RANGE (TD)

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This 14-acre transferred range to the northeast of the installation, owned by the Bureau of Land Management, was used from approximately 1942 until approximately 1954 to test 7.2-inch Hedgehog depth charges. This range encompasses both 8,000- and 9,000-foot ranges, which were both shown on maps of this range. There is no possibility that the 7.2-inch Hedgehog depth charge could leave the installation boundary, as its maximum range as tested at HWAD was 300 yards, according to Operating Procedure 1415. No remediation activities are known to have taken place at this site and it was never owned by the DoD. The area of this range is undeveloped, but is likely used for recreational purposes. This portion of the range lies outside the installation boundary; a separate portion located inside the installation boundary is addressed under HWAAP-008-R-01, Walker Lake Land Test Range.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-006-R-01

Site Name: OLD BOMB ROCKET FIRING RANGE-SOUTH

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This 3,504-acre transferred range located south of the Old Bomb Area in the southeastern portion of the installation is owned by the Bureau of Land Management and was used from approximately 1968 until approximately 1980 to test various rockets. Approximately 25,000 rounds were fired here. The length of the safety fan, 11,000 yards, was derived from munitions descriptions for air-to-ground five-inch rockets found in a Navy technical manual. This safety fan was assumed to be the nearest match in the manual for the rockets fired at this range. This area has been swept by the operating contractor of HWAD and by military EOD teams. This range was never owned by the DoD. A portion of the historical range boundary is included in the Whiskey Flats munitions response site (MRS) (HWAAP-020-R-01). Munitions debris from this rocket testing has been reported on the adjacent Whiskey Flat MRS.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-008-R-01

Site Name: WALKER LAKE LAND TEST RANGE

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201308
RD.....	201103.....	201309
RA(C).....	201310.....	201509
LTM.....	201510.....	201610

RIP Date: N/A

RC Date: 201509

SITE DESCRIPTION

This 506-acre closed range in the northeastern part of the installation is still owned by the US Army and was used from approximately 1942 until approximately 1954 to test 7.2-inch Hedgehog depth charges. The range encompasses both 8,000- and 9,000-foot ranges, which were both shown on maps of this range. There is no possibility that the 7.2-inch Hedgehog depth charge could leave the installation boundary, as its maximum range as tested at HWAD was 300 yards, according to Operating Procedure 1415. This range is part of a compliance agreement with the US Army and the state of Nevada and has been swept on numerous occasions for removal of munitions debris and UXO. The area of this range is undeveloped. This portion of the range lies within the installation boundary; a separate portion lying outside the installation boundary is addressed under HWAAP-002-R-01, Walker Lake Land Test Range (TD). This area has been amended to include the Walker Lake Impact area.

CLEANUP/EXIT STRATEGY

After the FS is completed, an RD, excavation, off-site transportation and disposal, MEC removal action, and MEC institutional controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-009-R-01
Site Name: ASROC RANGES

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This 6,619-acre closed range is still owned by the US Army and was used in 1957 and 1958, and again from approximately 1962 to 1965, to test anti-submarine rockets (ASROCs). These rockets only contained inert warheads. This range is the combination of three separate ranges where ASROCs were fired: ASROC Range A, ASROC Range B/Barlow Ranch, and Navy Beach Test Range. The ranges were combined into one ASROC range to reduce the confusion generated by the multiple overlaps of these three ranges with the Walker Lake Water Test Range. The area of this range is primarily within Walker Lake, which is used for recreational purposes, although some shoreline and adjacent land is also encompassed by this range. The shoreline is undeveloped. A portion of this range is also located outside the installation boundary and is addressed under HWAAP-010-R-01, ASROC Ranges (TD). It has been discovered that a cleanup action took place in the mid-70's. This range is part of a compliance agreement between NDEP and HWAD and is swept on a quarterly basis by the operating contractor. As Walker Lake continues to recede, additional MEC becomes exposed and continued cleanup is required.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-010-R-01
Site Name: ASROC RANGES (TD)

STATUS

Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RIP Date:	N/A	
RC Date:	201309	

SITE DESCRIPTION

This 6,411-acre transferred range, partly owned by the state of Nevada and partly owned by the Bureau of Land Management, was used in 1957 and 1958, and again from approximately 1962 to 1965, to test ASROCs. These rockets only contained inert warheads. This range is the combination of three separate ranges where ASROCs were fired: ASROC Range A, ASROC Range B/Barlow Ranch, and Navy Beach Test Range. The ranges were combined into one ASROC range to reduce the confusion generated by the multiple overlaps of these three ranges with the Walker Lake Water Test Range. No remediation activities are known to have taken place at this range. The area of this range is primarily within Walker Lake, which is used for recreational purposes, although some shoreline and adjacent land is also encompassed by this range. The shoreline is undeveloped. A portion of this range is located inside the installation boundary, and is addressed under HWAAP-009-R-01, ASROC Ranges. This range was never owned by the DoD. It has been discovered that a cleanup action took place in the mid-70's. This range is part of a compliance agreement between NDEP and HWAD and is swept on a quarterly basis by the operating contractor. As Walker Lake continues to recede, additional MEC becomes exposed and continued cleanup is required.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-012-R-01
Site Name: PRE-1940 DETONATING PITS (TD)

STATUS

Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RIP Date:	N/A	
RC Date:	201309	

SITE DESCRIPTION

This 892-acre transferred site lying to the east of the installation is owned by the Bureau of Land Management and was used from approximately 1930 until approximately 1940, presumably for the detonation of obsolete munitions. Although documented information about this site, other than its presence on a map, was not available, an interviewee stated that the types of munitions that would have been detonated at such a site would include fuses, bombs, rockets, land mines, and mortars. This area represents a kickout area outside the installation boundary and was identified based on the longest kickout distance among the munitions likely detonated here. Installation personnel stated that current employees do not recall the use of these pits, that they have not seen these pits characterized in other reports, and that the recent unsigned, unapproved contractor-developed map created in 1980, which includes these pits, is most likely incorrect. No remediation activities are known to have taken place at this site, except a site reconnaissance in the area which identified only one inert piece of ordnance that was likely the result of kickouts from the Old Bomb Area detonations. The area of this site is undeveloped, but is most likely used for recreational purposes. This range was never owned by the DoD.

A programmatic decision was made to address this MRS under the active MMRP. While the property was found to be eligible for the Formerly Used Defense Sites (FUDS) program, the activity was not; thus, the decision and inclusion as an active MMRP site. An RI is currently underway and preliminary investigation results have been reviewed and the period of performance (POP) extends to July 2013.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-013-R-01
Site Name: PRE-1940 DETONATING PITS

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201310.....	201409
RA(C).....	201410.....	201709
LTM.....	201810.....	201909
RIP Date:	N/A	
RC Date:	201709	

SITE DESCRIPTION

This 3,140-closed site in the eastern part of the installation is still owned by the US Army and was used from approximately 1930 until approximately 1940, presumably for the detonation of obsolete munitions. Although documented information about this site, other than its presence on a map, was not available, an interviewee stated that the types of munitions that would have been detonated at such a site would include fuses, bombs, rockets, landmines, and mortars. Installation personnel stated that current employees do not recall the use of these pits, that they have not seen these pits characterized in other reports, and that the recent unsigned, unapproved contractor-developed map created in 1980, which includes these pits, is most likely incorrect. No remediation activities are known to have taken place at this site, other than a site reconnaissance in this area which, according to an HWAD employee, identified only one inert piece of ordnance, which installation personnel say was likely the result of kickouts from the Old Bomb Area detonations. The area of this site is undeveloped, but is most likely used for recreational purposes; however, the area immediately surrounding the site is industrial. A second portion of this range is outside the installation boundary and is addressed under HWAAP-012-R-001, Pre-1940 Detonating Pits (TD). An RI is currently underway and preliminary investigation results have been reviewed and the POP extends to July 2013.

CLEANUP/EXIT STRATEGY

After the FS is completed, RD, MEC Removal Action, and MEC Institutional Controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-017-R-01

Site Name: KICKOUT OUTSIDE NEW BOMB AREA

STATUS

Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201310.....	201409
RA(C).....	201410.....	201709
LTM.....	201710.....	201809
RIP Date:	N/A	
RC Date:	201709	

SITE DESCRIPTION

This transferred range is owned by the US Forest Service and consists of 58 acres located 22 miles south of the main installation. From approximately 1947 until approximately 1987 kickouts from the detonation of a variety of munitions, including mortars, rockets, torpedoes, fuses, and mines at the New Bomb disposal area landed here. Although the detonating area is still active, an interviewee stated that kickouts are no longer projected outside the boundary of the disposal area. This area was cleared of ordnance in 1987 and is currently undeveloped. HWAD operating contractor is required to perform annual sweep of this area.

CLEANUP/EXIT STRATEGY

After the FS is completed, RD, MEC Removal Action, and MEC Institutional Controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-018-R-01
Site Name: MONO LAKE

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

This MRS is 39 acres and was used in 1965 to test 10 9,200-pound (lb) TNT charges. The site is owned by the state of California and is part of Mono Lake, located in east-central California. The detonations were part of a study to assess the destructive potential of water waves produced by man-made energy releases. The beach at the lake was reportedly entirely remediated in the 1970s within a few years after the completion of these tests. The remediation included removal of debris from the beach. The bottom of the lake was not remediated; however, the HWAD Environmental Coordinator indicated that nothing was there except for TNT charges that had already been detonated. The study phase is underway.

CLEANUP/EXIT STRATEGY

Documentation will be prepared to close out the site. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-020-R-01
Site Name: WHISKEY FLAT

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201310.....	201409
RA(C).....	201410.....	202209
LTM.....	202210.....	202310

RIP Date: N/A

RC Date: 202209

SITE DESCRIPTION

This 9,115-acre transferred range, located south of the Old Bomb Area in the southeastern corner of the installation, is owned by the Bureau of Land Management. The range encompassed the safety fan for test rockets from approximately 1968 to 1975. It also received kickouts from OB/open detonation (OD) operations in the Old Bomb Area portion of the installation in 1946. An Army bulletin from that time noted that 10 personnel were in the Old Bomb Area destroying obsolete and defective ammunition, with 1,200 lbs of TNT used in each blast. Some of the kickouts from this operation went outside the installation boundary. In addition, three acres of the northernmost extreme portions of this area were part of the safety fan for the Carter Mortar Test Range, which was used to test mortars from approximately 1971 to 1990. Installation personnel stated that none of the munitions from the Carter Mortar Test Range would have gone outside of the installation boundary. As of mid-1995, 8,259 acres of Whiskey Flat had been cleared of hazardous ordnance and inert ordnance residue. The ordnance retrieved during this clearance project included rockets, rocket fuses, demolition charges, and TNT. What, if any, remediation activities have taken place in this area since 1995 is unknown. The area of this range is undeveloped, but is most likely used for recreational purposes. This range was never owned by the DoD. RI is currently underway and preliminary investigations have been reviewed

CLEANUP/EXIT STRATEGY

After the FS, an RD, excavation, MEC removal action, off-site transportation and disposal, and MEC institutional controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-021-R-01

Site Name: WALKER LAKE WATER TEST RANGE (TD)

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Sediment, Surface Water

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201310.....	201409
RA(C).....	201410.....	201709
LTM.....	201710.....	201809

RIP Date: N/A

RC Date: 201709

SITE DESCRIPTION

This 208-acre transferred range to the north of the installation, owned by the state of Nevada and the Bureau of Land Management, was used from approximately 1942 until approximately 1975, primarily to test rockets, depth charges, and other unidentified munitions. Walker Lake is receding, continuously exposing old munitions that were formerly on the lake bottom. Although the IAP references that depth charges were fired here, installation personnel state that empty depth charge cases were routinely deployed as buoys, raft buoys and swimming boundaries, and over the years many of these have broken free, thus resulting in accounts of depth charge testing even though none actually occurred. UXO investigations of these cases have revealed an empty condition with no explosive components. Clearance efforts have found rockets, small arms, depth charges, fuses, fragments of propellants, and TNT. The area of this range is partly on undeveloped land to the northwest of Walker Lake and partly on Walker Lake. Both the undeveloped land and the lake are used for recreational purposes. This portion of the range lies outside the installation boundary; a separate portion lying outside the installation boundary is addressed under HWAAP-001-R-01, Walker Lake Water Test Range. This range was never owned by the DoD. Compliance agreement between NDEP and HWAD requires operating contractor to perform quarterly surface sweeps for UXO.

CLEANUP/EXIT STRATEGY

After the FS, an RD, excavation, MEC removal action, off-site transportation and disposal, and MEC institutional controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: HWAAP-022-R-01

Site Name: OLD BOMB ROCKET FIRING RANGE-EAST

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

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

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200209.....	200305
SI.....	200703.....	200909
RI/FS.....	201007.....	201309
RD.....	201309.....	201409
RA(C).....	201410.....	202209
LTM.....	202210.....	202310

RIP Date: N/A

RC Date: 202209

SITE DESCRIPTION

This 15,496-acre transferred range located east of the Old Bomb Area in the southeastern portion of the installation is owned by the Bureau of Land Management and was used from approximately 1968 until approximately 1980 to test various rockets. The length of the safety fan, 11,000 yards, was derived from munitions descriptions for air-to-ground five-inch rockets found in a Navy technical manual. This safety fan was assumed to be the nearest match in the manual for the rockets fired at this range. These rockets were fired from a fixed land launch point. The US Marine Corps has conducted several UXO sweeps throughout the area known as Old Bomb, including this area. Other than these sweeps, no remediation activities are known to have taken place in this area. The area of this range is undeveloped, but is likely used for recreational purposes. This range was never owned by the DoD. RI is currently underway and prelim investigation has been reviewed. POP extends to July 2013.

CLEANUP/EXIT STRATEGY

After the FS, an RD, excavation, MEC removal action, off-site transportation and disposal, and MEC institutional controls are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
HWAAP-007-R-01	1958 ARMED FORCES DAY AREA	200909	Final SI (2009) recommended NFA at this site for both MEC and MC.
HWAAP-011-R-01	1957 ARMED FORCES DAY AREA	200909	Final HRR determined this site was eligible for the FUDS MMRP; therefore, it is not eligible for the Active MMRP.
HWAAP-015-R-01	COREY PEAK/TV HILL	200909	Final HRR determined this site was eligible for the FUDS MMRP; therefore, it is not eligible for the Active MMRP.
HWAAP-016-R-01	FUZE TEST AREA	200909	Final SI (2009) recommended NFA at this site for both MEC and MC.
PBA@MR HWAAP	PBA for MMRP	201201	PBA is fully funded.

MMRP Schedule

Date of MMRP Inception 200009

Past Phase Completion Milestones

2002

RFA (PBA@MR HWAAP - PBA for MMRP)

2003

PA (HWAAP-001-R-01 - WALKER LAKE WATER TEST RANGE, HWAAP-002-R-01 - WALKER LAKE LAND TEST RANGE (TD), HWAAP-006-R-01 - OLD BOMB ROCKET FIRING RANGE-SOUTH, HWAAP-007-R-01 - 1958 ARMED FORCES DAY AREA, HWAAP-008-R-01 - WALKER LAKE LAND TEST RANGE, HWAAP-009-R-01 - ASROC RANGES, HWAAP-010-R-01 - ASROC RANGES (TD), HWAAP-011-R-01 - 1957 ARMED FORCES DAY AREA, HWAAP-012-R-01 - PRE-1940 DETONATING PITS (TD), HWAAP-013-R-01 - PRE-1940 DETONATING PITS, HWAAP-015-R-01 - COREY PEAK/TV HILL, HWAAP-016-R-01 - FUZE TEST AREA, HWAAP-017-R-01 - KICKOUT OUTSIDE NEW BOMB AREA, HWAAP-018-R-01 - MONO LAKE, HWAAP-020-R-01 - WHISKEY FLAT, HWAAP-021-R-01 - WALKER LAKE WATER TEST RANGE (TD), HWAAP-022-R-01 - OLD BOMB ROCKET FIRING RANGE-EAST)

2009

CS (PBA@MR HWAAP - PBA for MMRP)

SI (HWAAP-001-R-01 - WALKER LAKE WATER TEST RANGE, HWAAP-002-R-01 - WALKER LAKE LAND TEST RANGE (TD), HWAAP-006-R-01 - OLD BOMB ROCKET FIRING RANGE-SOUTH, HWAAP-007-R-01 - 1958 ARMED FORCES DAY AREA, HWAAP-008-R-01 - WALKER LAKE LAND TEST RANGE, HWAAP-009-R-01 - ASROC RANGES, HWAAP-010-R-01 - ASROC RANGES (TD), HWAAP-011-R-01 - 1957 ARMED FORCES DAY AREA, HWAAP-012-R-01 - PRE-1940 DETONATING PITS (TD), HWAAP-013-R-01 - PRE-1940 DETONATING PITS, HWAAP-015-R-01 - COREY PEAK/TV HILL, HWAAP-016-R-01 - FUZE TEST AREA, HWAAP-017-R-01 - KICKOUT OUTSIDE NEW BOMB AREA, HWAAP-018-R-01 - MONO LAKE, HWAAP-020-R-01 - WHISKEY FLAT, HWAAP-021-R-01 - WALKER LAKE WATER TEST RANGE (TD), HWAAP-022-R-01 - OLD BOMB ROCKET FIRING RANGE-EAST)

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date: 202209

Schedule for Next Five-Year Review: 2016

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

HAWTHORNE ARMY DEPOT MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-001-R-01	WALKER LAKE WATER TEST RANGE	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-002-R-01	WALKER LAKE LAND TEST RANGE (TD)	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-006-R-01	OLD BOMB ROCKET FIRING RANGE-SOUTH	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-008-R-01	WALKER LAKE LAND TEST RANGE	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-009-R-01	ASROC RANGES	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-010-R-01	ASROC RANGES (TD)	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-012-R-01	PRE-1940 DETONATING PITS (TD)	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-013-R-01	PRE-1940 DETONATING PITS	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-017-R-01	KICKOUT OUTSIDE NEW BOMB AREA	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-018-R-01	MONO LAKE	RI/FS						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-020-R-01	WHISKEY FLAT	RI/FS						
		RD						
		RA(C)						
		LTM						

HAWTHORNE ARMY DEPOT MMRP Schedule

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-021-R-01	WALKER LAKE WATER TEST RANGE (TD)	RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
HWAAP-022-R-01	OLD BOMB ROCKET FIRING RANGE-EAST	RI/FS						
		RD						
		RA(C)						
		LTM						

HAWTHORNE ARMY DEPOT
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 18/12

Installation Site Types with Future and/or Underway Phases

- 1 Burn Area
(CCHWAAP-H02)
- 1 Disposal Pit/Dry Well
(CCHWAAP-I15)
- 1 Firing Range
(CCHWAAP-023)
- 3 Surface Impoundment/Lagoon
(CCHWAAP-B27B, CCHWAAP-B27C, CCHWAAP-B29)

Most Widespread Contaminants of Concern

Media of Concern

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

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of CR

Date of CR Inception: 198705

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201709/201709

Date of CR completion including Long Term Management (LTM): 204409

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the IRP and MMRP. On Dec. 29, 2008, the Office of the Deputy Under Secretary of Defense for Installations and Environment ODUSD (I&E), issued an interim policy for DERP eligibility that rescinded the 1986 eligibility date for the IRP and the 2002 eligibility date for the MMRP. This made many sites previously addressed in the Army Environmental Database - Compliance-related Cleanup (AEDB-CC) Program eligible for the DERP. Sites that are now eligible for the MMRP program have been migrated from AEDB-CC and given the naming convention of other MMRP sites. The newly eligible non munitions response (MR) type sites are considered to be IRP sites; however, the newly eligible sites are being coded as CR in AEDB-R to distinguish them from the original IRP sites and IRP metrics.

Due to new state regulatory requirements, 15 sites were reopened as CR sites (previously IRP sites). These sites are all undergoing investigations to determine if further actions are warranted at any of them.

Cleanup Exit Strategy

The RI or design phase is currently underway for all the CR sites. Please see the site-specific cleanup exit strategies for more details.

CR Previous Studies

Title

Author

Date

There are no Previous Studies

HAWTHORNE ARMY DEPOT
Compliance Restoration
Site Descriptions

Site ID: CCHWAAP-023
Site Name: Old Bomb Fenced Disposal Area

STATUS

Regulatory Driver: CERCLA

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

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200305
RI/FS.....	201205.....	201409
RD.....	201410.....	201509
RA(C).....	201510.....	201709

RIP Date: N/A

RC Date: 201709

SITE DESCRIPTION

The Old Bomb Fenced Disposal Area is located inside the HWAD near the southern boundary in the Old Bomb Operational Range. The area is secured and monitored. There are ongoing mission and range-related activities at this site. The area has a very significant presence of surface and subsurface MEC, MC, munitions debris (MD), and industrial wastes. The approximate area of this site is 4.2 acres. Non-stockpile chemical warfare material (CWM) is not suspected at this site; however, the driver for this site will be the industrial waste that it contains with any MD as secondary.

CLEANUP/EXIT STRATEGY

After the RI/FS, an RD, facilities decontamination, excavation and MEC removal action are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: CCHWAAP-B27B

Site Name: 103-8/10 OXIDATION DITCH

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Metals
Media of Concern: Sediment

Phases	Start	End
RFA.....	198705.....	198808
RFI/CMS.....	201007.....	201202
DES.....	201206.....	201212
CMI(C).....	201212.....	201409
LTM.....	201410.....	204409

RIP Date: N/A
RC Date: 201409

SITE DESCRIPTION

SWMU B27b is in HWAD's north magazine area, inside the Bldg 103 Group. The north magazine area no longer operates in its original capacity, but several of the buildings and roads are used for various purposes. Additionally, there is no public access to this SWMU or its adjacent facilities.

SWMU B27b has one inactive unlined oxidation ditch that connects to the west side of Bldgs 103-8 and 103-10 by two drain lines. The unlined oxidation ditch is approximately 1,360 feet long, 90 feet wide and mostly about four feet deep. A 50-foot segment near the head (east end) of the ditch is approximately eight feet deep with excavated soil piled along the rim of the ditch. The ditch appears to terminate into an area southwest of the catchment pits associated with Bldg 103-16. The wastewater discharge system associated with the ditch was found to be a series of drainpipes, sumps, settling tanks, and vaults. The sump area where the drain lines intersect includes two sumps, two concrete settling tanks, and two concrete distribution vaults. The unlined oxidation ditch reportedly used to contain discharged wastewater from Bldg 103-8 and Bldg 103-10. Bldg 103-10 housed a chemistry laboratory, indicating that laboratory wastewater also may have been discharged into the oxidation ditch. It has been reported that mercury was used in this laboratory and may have been released through the drain lines and through the ceiling vents as mercury vapor. Painting operations, which may have used VOCs, also were conducted at the facilities near this SWMU. The wastewater from Bldg 103-8 contained caustics, paint, and sandblasting residues from cleaning such items as ammunition cans, smokeless powder cans, and charge cans.

The depth to groundwater at SWMU B27b is estimated to be 80 feet bgs.

Investigations in 1994 and 1997 indicated soil contamination of lead and chromium at concentrations above proposed closure goals. Other potential COCs were not detected above the closure goals. A human health risk evaluation concluded that there was not an unacceptable risk to human health. Based on new state regulatory requirements, an investigation was performed, mainly for potential groundwater concerns.

A RCRA facilities investigation (RFI)/corrective measure study (CMS) was completed in February 2012. No COCs were found above regional screening levels (RSLs) in subsurface soil samples. Lead and mercury above RSL were found in sediment samples from effluent system drain lines, sumps, and settling basins. Alternative 4, excavation and off-site disposal of the effluent system components was selected as the corrective measure. A DD is expected to be completed in March 2012. A construction contract is anticipated to be awarded in 2013, and a site closure decision document is anticipated in 2014.

CLEANUP/EXIT STRATEGY

An RD, excavation and site closeout are planned. This site also tracks costs for five-year reviews and LUCs for all sites at the installation. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: CCHWAAP-B27C

Site Name: 103-20 SURFACE IMPOUNDMENT

STATUS

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

Phases	Start	End
RFA.....	198705.....	198808
RFI/CMS.....	201007.....	201202
DES.....	201206.....	201212
CMI(C).....	201212.....	201409

RIP Date: N/A
RC Date: 201409

SITE DESCRIPTION

SWMU B27c is in HWAD's north magazine area, inside the Bldg 103 Group. The north magazine area no longer operates in its original capacity, but several of the buildings and roads are used for various purposes. Additionally, there is no public access to this SWMU or its adjacent facilities. Except for the training activities in Bldg 103-20, the area surrounding the SWMU is primarily open land with several inactive industrial facilities formerly used for testing, restoring, and developing munitions.

SWMU B27c has one inactive unlined impoundment, which connects to the west side of Bldg 103-20 by a drainage ditch. The impoundment measures approximately 120 feet in diameter by 10 feet deep. The impoundment had been eroded at the time of investigations and was partially filled with windblown sand with various species of vegetation growing on the impoundment floor. The interior of the impoundment had been rearranged several times by installation personnel who were practicing earth-moving operations.

The depth to groundwater at SWMU B27c is estimated to be 80 feet bgs. The flow direction is estimated to be towards the northwest. The boundaries of the SWMU are defined using annotated monuments and survey pins. One survey monument was constructed and surveyed at SWMU B27c. A brass survey pin on the monument designates the monument number HWAAP-30-1996 and the SWMU number B27c. Two corner pins were set and surveyed to define a SWMU boundary, with the monument as the northwest corners. The western wall of Bldg 103-20 defines the eastern boundary of the SWMU.

During historical site inspections (Sis), the ditch contained no soil staining indicative of releases. Investigations in 1994 and 1997 indicated surface soil contamination of lead and chromium at concentrations above proposed closure goals. Other potential COCs were not detected above the closure goals. A human health risk evaluation concluded that there was not an unacceptable risk to human health; however, lead contamination was determined to be potentially hazardous to human health based solely on the comparison to the PRG. Lead-contaminated surface soil was excavated from SWMU B27c and the excavation was backfilled.

Based on new state regulatory requirements, an investigation was performed for this site, mainly for potential groundwater concerns.

An RFI/CMS was completed in February 2012. No COCs were found above industrial RSLs in subsurface soil samples. Lead above RSL was found in the drain line to the surface impoundment. Alternative 3, excavation and off-site disposal of the effluent system components was selected as the corrective measure. A decision document is expected to be completed in March 2012. A construction contract is anticipated to be awarded in 2013, and a site closure decision document is anticipated in 2014.

CLEANUP/EXIT STRATEGY

An RD, excavation and site closeout are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: CCHWAAP-B29
Site Name: 103-41 Unlined Ponds

STATUS

Regulatory Driver: RCRA
Contaminants of Concern: Explosives, Nitrate/Nitrite
Media of Concern: Groundwater, Soil

Phases	Start	End
RFA.....	198705.....	198808
RFI/CMS.....	201007.....	201212
CMI(C).....	201210.....	201309
LTM.....	201310.....	204309
RIP Date:	N/A	
RC Date:	201309	

SITE DESCRIPTION

Site HWAAP-B29 is a series of inactive unlined surface impoundments connected by steel troughs covering an area of approximately 0.25 square miles north of Bldg 103-41. Nine impoundments at this site each measure approximately 25 by 100 by three feet, which were used for TNT wash water. Five larger ponds measure approximately 100 by 100 by 10 feet. These larger impoundments were used for ammonium picrate explosives wash water from demilitarization. Ammonium picrate, TNT-stained soils, and black burn residue in the impoundments are evident.

Groundwater sampling in 2000 at this site detected up to 29 ug/l of TNT and other organic, inorganic, and nitrogen-bearing compounds. Current GWM shows low levels (below action levels) of explosives. Nitrate levels greatly exceed the drinking water standards of the state of Nevada.

The RI work in 1994 included groundwater sampling, surface soil and hand auger sampling, and CPT soundings. A pilot study successfully treated 300 cy of ammonium picrate-contaminated soil using Windrow composting. During 2003, through a teaming effort with the NDEP, PRGs for ammonium picrate were raised from seven parts per million (ppm) to 120 ppm for an industrial site. This should expedite cleanup of this site.

Based on new state regulatory requirements, an investigation is underway for this site, mainly for potential groundwater concerns. Twelve wells were installed during FY11 to determine COCs in shallow water-bearing zones. Sampling is planned for 30 years in the LTM phase.

CLEANUP/EXIT STRATEGY

LUCs and groundwater monitoring are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: CCHWAAP-H02
Site Name: Burn Pit @ pdo h02

STATUS

Regulatory Driver: RCRA

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

Media of Concern: Soil

Phases	Start	End
RFA.....	198705.....	198808
RFI/CMS.....	201110.....	201212
DES.....	201210.....	201212
CMI(C).....	201301.....	201309

RIP Date: N/A

RC Date: 201309

SITE DESCRIPTION

CCHWAAP-H02 is composed of two unlined v-shaped open trenches in the salvage yard next to the Hawthorne recycling center. One measures 250 by 30 ft. and 20 ft. deep. The installation burns unsalable, non- Pentachlorophenol (PCP) treated wood, scrap wire, and other products in the trench. The site was in service from 1970 to 1996. An RFI performed in 2011/2012 found that dioxins were the contaminants of concern. Concentrations above cleanup goals are limited to debris material and have not migrated to surrounding soil or groundwater.

CLEANUP/EXIT STRATEGY

An RD, excavation and site closeout are planned. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site ID: CCHWAAP-I15
Site Name: 101-42 CATCHMENT PIT

STATUS

Regulatory Driver: CERCLA
Contaminants of Concern: Explosives
Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199207.....	199207
RI/FS.....	201007.....	201207
RIP Date:	N/A	
RC Date:	201208	

SITE DESCRIPTION

Site SWMU I15 is in HWAD's central magazine area, on the southeast side of the 101 Production Area. Site SWMU I15 has two inactive unlined catchment pits. The upper catchment pit (eastern most) is approximately 175 feet west of Bldg 101-42 and the second, lower catchment pit (western most) is approximately 375 feet west of Bldg 101-42. The upper catchment pit is approximately 70 feet long by 15 feet wide and is up to five feet deep in the center. A four-inch diameter transite pipe, which likely was used to discharge wastewater from Bldg 101-41, is at the head of the catchment pit nearest Bldg 101-42. The lower catchment pit is approximately 100 feet west of the upper catchment pit and measures 110 feet long by 60 feet wide and is up to six feet deep. A four-inch transite pipe connects the upper catchment pit to the lower pit. TNT-stained soils were observed several feet up the sidewalls and on the bottom of this lower catchment pit with intensified staining three to six inches beneath the surface. Based on nearby wells, groundwater beneath SWMU I15 is expected to be at a depth of approximately 135 feet bgs.

The operating period of the building was from 1940 to the early-1970s. RI in 1994 included line locating to determine the pathway of the contaminated wastewater from the building to the pits. Data collection included 20 soil gas samples, 12 surface soil samples and one cone penetrometer sounding to assess the optimal depth to collect subsurface soil samples. No subsurface soil samples were collected. The surface soil samples were found to contain up to 1500 mg/kg of explosives. The soil from this site was combined with the soil from B20 in a pilot study of windrow composting. The soil was remediated and the pits were backfilled with clean soil. The RA was completed in 1997.

Based on new state regulatory requirements, an investigation is underway for this site, mainly for potential groundwater concerns.

CLEANUP/EXIT STRATEGY

Once more information is obtained in the study phase, a cleanup/exit strategy will be prepared. Five-year reviews and LUC costs are tracked in site CCHWAAP-B27B.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CCHWAAP-A06B	OLD BOMB DISPOSAL AREA 2	201110	
CCHWAAP-A06C	OLD BOMB DISPOSAL AREA 3	201110	
CCHWAAP-A06D	OLD BOMB DISPOSAL AREA 4	201110	
CCHWAAP-A06E	OLD BOMB DISPOSAL AREA 5	201110	
CCHWAAP-B21	101-41/42 CATCHMENT PIT	201203	
CCHWAAP-C04	OLD BOMB POPPING FURNACE 1 & 2	201110	
CCHWAAP-G01B	OLD BOMB OD/OB GROUND 2 & 3 D AREA	201110	
CCHWAAP-H03	ROAD & GROUNDS WASTE OB PIT	201203	
CCHWAAP-I22	OLD BOMB OPEN BURNING PIT	201110	
CCHWAAP-I23	OLD BOMB/ROCKET METAL LANDFILL	201110	
CCHWAAP-K07	OLD BOMB DDT BURIAL SITE	201110	
CCHWAAP-WADF	Western Area Demil Facility	201110	

CR Schedule

Date of CR Inception: 198705

Past Phase Completion Milestones

1988

RFA (CCHWAAP-B27B - 103-8/10 OXIDATION DITCH, CCHWAAP-B27C - 103-20 SURFACE IMPOUNDMENT, CCHWAAP-B29 - 103-41 Unlined Ponds, CCHWAAP-H02 - Burn Pit @ pdo h02, CCHWAAP-WADF - Western Area Demil Facility)
SI (CCHWAAP-A06C - OLD BOMB DISPOSAL AREA 3)
PA (CCHWAAP-A06B - OLD BOMB DISPOSAL AREA 2, CCHWAAP-A06C - OLD BOMB DISPOSAL AREA 3, CCHWAAP-A06D - OLD BOMB DISPOSAL AREA 4, CCHWAAP-A06E - OLD BOMB DISPOSAL AREA 5, CCHWAAP-B21 - 101-41/42 CATCHMENT PIT, CCHWAAP-C04 - OLD BOMB POPPING FURNACE 1 & 2, CCHWAAP-G01B - OLD BOMB OD/OB GROUND 2 & 3 D AREA, CCHWAAP-H03 - ROAD & GROUNDS WASTE OB PIT)

1992

PA (CCHWAAP-I15 - 101-42 CATCHMENT PIT, CCHWAAP-I22 - OLD BOMB OPEN BURNING PIT, CCHWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL)

1995

SI (CCHWAAP-I23 - OLD BOMB/ROCKET METAL LANDFILL)

1996

SI (CCHWAAP-I22 - OLD BOMB OPEN BURNING PIT)

2000

PA (CCHWAAP-K07 - OLD BOMB DDT BURIAL SITE)

2003

PA (CCHWAAP-023 - Old Bomb Fenced Disposal Area)

Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

Final RA(C) Completion Date: 201709

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of CR at Installation (including LTM phase): 204409

HAWTHORNE ARMY DEPOT CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCHWAAP-023	Old Bomb Fenced Disposal Area	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCHWAAP-B27B	103-8/10 OXIDATION DITCH	DES						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCHWAAP-B27C	103-20 SURFACE IMPOUNDMENT	DES						
		CMI(C)						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCHWAAP-B29	103-41 Unlined Ponds	RFI/CMS						
		CMI(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY13	FY14	FY15	FY16	FY17	FY18+
CCHWAAP-H02	Burn Pit @ pdo h02	RFI/CMS						
		DES						
		CMI(C)						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201204

Restoration Advisory Board (RAB): No

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

Community Interest Solicited on: 201108

Efforts Taken to Determine Interest

In December 1995, to facilitate public involvement in the HWAD IRP, HWAD published public notices in the Mineral County Independent Newspaper for establishment of a RAB. The installation has regularly solicited community participation to establish a RAB. This has included an open house for the general public, statewide TV coverage of the HWAD IRP, public notices in the local newspapers, presentations to community clubs and high schools, and a public outreach through the local library or the web site at <http://www.ndep.state.gov>.

Results

Only two inquiries were received from the public notice.

Follow-up Procedures

The installation will continue to solicit community involvement every two years. The NDEP is a full partner in the HWAD IRP and is supportive of the efforts to form a RAB for the depot. They also recognize the difficulties of recruiting RAB members in a rural location such as Hawthorne.

Additional Community Involvement Information

Community interest was last solicited in August 2011.

Administrative Record is located at

Hawthorne Army Depot - Environmental Branch
5 South Maine Avenue
Hawthorne, Nevada 89415-5000

Information Repository is located at

Hawthorne Army Depot - Environmental Branch
5 South Maine Avenue
Hawthorne, Nevada 89415-5000

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

TAPP Title: N/A

Potential TAPP: N/A

