

**FY2013**

**SCHOFIELD BARRACKS**  
**Army Defense Environmental Restoration Program**  
**Installation Action Plan**

Printed 18 October 2013

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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, Installation Management Command, Pacific Region (IMCOM-Pacific), the US Army Environmental Command (USAEC), Schofield Barracks, 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

AAFES	Army and Air Force Exchange Service
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
ASTS	Air Stripping Treatment System
bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
C/I	Commerical/Industrial
CC	Compliance-related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COPC	Contaminants of Potential Concern
CR	Compliance Restoration
CTT	Closed, Transferring, and Transferred
DD	Decision Document
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DoD	Department of Defense
DOH	Department of Health
DSMA	Disodium Methanearsenate
DU	Decision Unit
EAL	Environmental Action Level
EHMP	Environmental Hazard Management Plan
ER,A	Environmental Restoration, Army
FFA	Federal Facilities Agreement
FRA	Final Remedial Action
FS	Feasibility Study
FY	Fiscal Year
GAC	Granular Activated Carbon
GW	Groundwater
HDOH	Hawaii Department of Health
IA	Interim Action
IAP	Installation Action Plan
IMCOM	Installation Management Command
IMCOM-Pacific	Installation Management Command, Pacific Region
IMP(C)	Implementation (Construction)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IS	Incremental Sampling
ISC	Initial Site Characterization
K	thousand
kg	kilogram
KGC	Kalakaua Golf Course
LF	Landfill

## Acronyms

LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituent
MCL	Maximum Contaminant Level
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
mg	milligram
MILCON	Military Construction
mm	millimeter
MMRP	Military Munitions Response Program
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
MSMA	Methanearsenate
MTBE	Methyl-Tert-Butyl-Ether
N/A	Not Applicable
NFA	No Further Action
NPL	National Priorities List
O&M	Operations & Maintenance
ODUSD I&E	Office of the Deputy Under Secretary of Defense for Installation and Environment
OE	Ordnance and Explosives
OU	Operable Unit
PA	Preliminary Assessment
PBA	Performance-Based Acquisition
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricants
PP	Proposed Plan
ppb	parts per billion
PRG	Preliminary Remediation Goal
QA	Quality Analysis
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RAC	Risk Assessment Code
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation / Feasibility Study
RIP	Remedy-in-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
RSL	Regional Screening Level
SI	Site Inspection
SYST	System

## Acronyms

TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TD	Transferred
TI	Technical Impracticability
TRC	Technical Review Committee
TRMT	Treatment
TSC	Transportation Service Center
USAEC	US Army Environmental Command
USAG-HI	US Army Garrison, Hawaii
USATHAMA	US Army Toxic and Hazardous Materials Agency (currently called USAEC)
USEPA	Environmental Protection Agency
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWII	World War II

## Installation Information

### Installation Locale

**Installation Size (Acreage):** 17725

**City:** Schofield Barracks

**County:** Honolulu

**State:** Hawaii

### Other Locale Information

Schofield Barracks covers 17,725 acres in the north-central plateau of the island of Oahu, Hawaii. The facility is divided into two areas; the East Range and the Main Post. The facility lies approximately 22 miles northwest of the city of Honolulu. The area around the barracks is mostly agricultural land. The nearest municipality is Wahiawa, bordering the East Range to the north, supporting residential, commercial and light industrial uses. The town of Mililani lies approximately two and a half miles southeast of Schofield Barracks and is mostly used for residential and commercial purposes. Wheeler Army Airfield lies between the main post and the East Range.

### Installation Mission

Schofield Barracks mission is to train, equip, and sustain the Army forces for the Pacific Theater.

### Lead Organization

IMCOM

### Lead Executing Agencies for Installation

USAEC

### Regulator Participation

**Federal**

US Environmental Protection Agency (USEPA), Region IX

**State**

Hawaii Department of Health (HDOH)

### National Priorities List (NPL) Status

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

**Date for RA(C) Completion:**

201412

**Date for NPL Deletion:** 200008

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

Installation is in the process of determining interest in establishing a RAB.



## Installation Program Summaries

### IRP

**Primary Contaminants of Concern:** Volatiles (VOC)

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

### MMRP

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

**Affected Media of Concern:** Soil, Surface Water

### CR

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

**Affected Media of Concern:** Soil

## 5-Year / Periodic Review Summary

### 5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201201	201209	2012
Complete	200609	200709	2007
Complete	200204	200204	2002
Planned	201701	201709	2017

### Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
FINAL ROD FOR OU 4, SCHOFIELD BARRACKS	SCHBR-12
FINAL ROD FOR OU 4, SCHOFIELD BARRACKS	SCHBR-12
FINAL ROD FOR OU2, SCHOFIELD BARRACKS	SCHBR-19
FINAL ROD FOR OU2, SCHOFIELD BARRACKS	SCHBR-19

### Results

### Actions

### Plans

#### Recommendations and Implementation Plans:

Current water treatment systems for operable unit (OU) 2 (Site 19) implemented to limit contact with groundwater exceeding maximum contaminant levels (MCLs) are fully operational and treat groundwater to remove contaminants to levels an order of magnitude below MCLs; however, the remedy may not be fully protective of human health and the environment because new wells that may lie within the plume have been installed since the last five-year review but have not been evaluated for inclusion in the monitoring area. The new wells will be evaluated and included if necessary.

The current OU4 (Site 12) remedy of a landfill cover continues to be effective and will continue to be effective with continued repair and maintenance as part of the long-term management (LTM) plan.

## Land Use Control (LUC) Summary

**LUC Title:** OU 2 restrictions

**Site(s):** SCHBR-19

**ROD/DD Title:** FINAL ROD FOR OU2, SCHOFIELD BARRACKS

**Location of LUC**

OU 2 is groundwater located beneath Schofield Barracks, Wheeler Army Airfield and its surrounding region. OU 2 is actively being used as the drinking water source for Schofield Barracks, Wheeler Army Airfield, and nearby military facilities.

**Land Use Restriction:** Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

**Types of Engineering Controls:** None

**Types of Institutional Controls:** Deed Notices, Restrictions on Groundwater Withdrawal

**Date in Place:** 199702

**Modification Date:** N/A

**Date Terminated:** N/A

**Inspecting Organization:** Installation

**Record of LUC:** Master Plan or Equivalent

**Documentation Date:** N/A

**LUC Enforcement:** 5 Year Reviews

**Contaminants:** ORGANICS

**Additional Information**

N/A

**LUC Title:** OU 4 restriction

**Site(s):** SCHBR-12

**ROD/DD Title:** FINAL ROD FOR OU 4, SCHOFIELD BARRACKS

**Location of LUC**

OU 4 consists of the Schofield Barracks former landfill site, along the north west border of Schofield Barracks adjacent to Kahoolawe St. & Kauai St. It is approximately 45 acres in size.

**Land Use Restriction:** Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Restrict access to the site, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Landfill restriction - Restrict plantings that interfere LF cap or cover system (roots that penetrate the cap or cover system), Landfill restriction - Restrict vehicular traffic, Media specific - Prohibit activities that results in contact with contaminated sediments, Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No residential use

**Types of Engineering Controls:** Fences, Signs

**Types of Institutional Controls:** Notations in Master Plan, Zoning

**Date in Place:** 199808

**Modification Date:** N/A

**Date Terminated:** N/A

**Inspecting Organization:** Installation

**Record of LUC:** Master Plan or Equivalent

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## Land Use Control (LUC) Summary

**Documentation Date:** N/A

**LUC Enforcement:** 5 Year Reviews

**Contaminants:** METALS, ORGANICS

**Additional Information**

N/A

# Cleanup Program Summary

## Installation Historic Activity

Schofield Barracks is an active US Army Garrison-Hawaii (USAG-HI) installation and is the largest Army installation in Oahu. It was established in 1908 to provide a base for the Army's mobile defense of Pearl Harbor and the entire island. Initial construction of the post occurred between 1909 and 1917, when more than 250 buildings were erected. During the 1920s, expansion of Schofield Barracks continued as the infantry, cavalry, and artillery regiments were joined by a regional battalion, an ordnance company, an ammunition team, a tank company, a medical regiment, a maintenance squadron, and chemical gas regiment units. These types of units continue to operate at Schofield Barracks.

In 1941, following the attack at Pearl Harbor by the Japanese, Schofield Barracks became a supply base and command center for the war in the Pacific. Facilities were expanded when training camps were established because of increased wartime operations. During the war, Schofield Barracks is reported to have housed as many as 100,000 Soldiers at one time.

After World War II (WWII), the population of Schofield Barracks declined sharply; however, a resurgence was experienced in 1951 when the Hawaiian Infantry Center was established as a basic training center for troops bound for the Korean War. Another resurgence in the population at the site occurred in 1954 when the 25th Infantry Division returned to headquarters at Schofield Barracks.

As headquarters for the 25th Infantry Division, 45th Sustainment Brigade, and numerous tenants, Schofield Barracks currently houses approximately 25,000 individuals. Its mission is to provide administration, training, and housing facilities for these units, as well as depot and repair facilities, a medical facility, and community and housing support. General operations performed at Schofield Barracks include administration, training, and small-scale industrial operations. No major industrial operations are performed at the site. Small-scale industrial operations include:

- Vehicle repair, maintenance, rust proofing and painting
- Weapons refinishing
- Optical instrumentation maintenance
- Laundry operations
- Photography
- Electrical equipment service
- Training aids manufacturing
- Building maintenance and repair
- Medical laboratory operations
- Sewage treatment, and
- Municipal activities.

Training activities at Schofield Barracks consist of non-firing and firing activities. Non-firing activities are conducted primarily in the East Range area and predominantly consist of field tactical training, tactical problem-solving, and routine bivouac. Firing activities, which involve the use of live ammunition, are conducted primarily near the west side of installation.

In April 1985 the Army notified the HDOH that high levels [30 parts per billion (ppb)] of trichloroethylene (TCE) had been detected in wells supplying drinking water to 25,000 people at Schofield Barracks. An additional 55,000 people in Wahiawa and Mililani obtain drinking water from public wells within three miles of hazardous substances on the base. Within three miles downstream of the installation, Wahiawa Reservoir is used to irrigate 3,000 acres of pineapple fields and is also used for recreational activities.

An Army investigation in May 1985 confirmed TCE contamination of the drinking water wells. In September 1986, the Army installed an air stripping facility to remove TCE from the contaminated Schofield Barracks wells, making the water safe to drink.

In July 1989 Schofield Barracks was proposed for the NPL and in September 1990 it was placed on the final list as a result of contamination of the sole source drinking water aquifer. In September 1991 the Army and the USEPA Region IX signed a federal facilities agreement (FFA). Hawaii signed the FFA in June 1996. The Defense/State memorandum of agreement and cooperative agreement have also been signed and oversight personnel have been hired by the state.

During the course of the groundwater investigation, six public meetings and 10 TRC meetings were held on Schofield and in Wahiawa. There was no public interest for formation of a RAB at those meetings.

In September 1998 the USEPA placed the installation in the "Construction Completion" category, subsequent to the completion of repairs made on the landfill cap. The Army submitted the final closureout report to the USEPA in December 1998. Schofield Barracks was removed from the USEPA's NPL in August 2000.

## Cleanup Program Summary

### Installation Program Cleanup Progress

#### IRP

**Prior Year Progress:** LTM is ongoing for OU2 and OU4.

**Future Plan of Action:** The LTM and maintenance programs for OU2 and OU4 will be continued.

#### MMRP

**Prior Year Progress:** Future anticipated costs have been funded through RIP/RC.

**Future Plan of Action:** Following PP/DD, an RA will be conducted at SCHBR-013-R-01. Future LTM is anticipated.

#### CR

**Prior Year Progress:** LTM will begin at CCSB0004 in FY2013.

**Future Plan of Action:** LTM will continue at CCSB0004 through FY2043.

**SCHOFIELD BARRACKS**  
**Army Defense Environmental Restoration Program**  
**Installation Restoration Program**

# IRP Summary

**Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count:** 125/123

## Installation Site Types with Future and/or Underway Phases

- 1 Contaminated Ground Water  
(SCHBR-19)
- 1 Landfill  
(SCHBR-12)

## Most Widespread Contaminants of Concern

Volatiles (VOC)

## Media of Concern

Groundwater, Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
SCHBR-19	OU2 Groundwater Contamination	IRA	AIR STRIPPING	1987
SCHBR-42	FORMER STORAGE TANKS, 5 USTS (FFA 30)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1992
SCHBR-126	QUAD B USTS	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-127	QUAD E USTS	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-128	QUAD F USTS	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-129	BLDG 665 USTS	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-130	HEALTH CLINIC USTS	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-131	QUAD I UST	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-132	QUAD J UST	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
SCHBR-42	FORMER STORAGE TANKS, 5 USTS (FFA 30)	FRA	THERMAL DESORPTION	1996
SCHBR-12	FORMER LANDFILL (FFA 7)	FRA	CAPPING	1998
SCHBR-64	MAINTENANCE AREA E (FFA 3/6)	FRA	EX SITU SOIL TREATMENT	1999
SCHBR-106	OPEN STORAGE AREA (1977) (FAA 74)	IRA	EX SITU SOIL TREATMENT	2000
SCHBR-126	QUAD B USTS	FRA	WASTE REMOVAL - SOILS	2000
SCHBR-134	MAINTENANCE AREA, BLDG 368 (FFA 72B)	FRA	EX SITU SOIL TREATMENT	2000
SCHBR-80	MAINTENANCE AREA U (FFA 3/11)	FRA	EX SITU SOIL TREATMENT	2000

## Duration of IRP

**Date of IRP Inception:** 198306

**Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC):** 200112/199809

**Date of IRP completion including Long Term Management (LTM):** 204309



# IRP Contamination Assessment

## Contamination Assessment Overview

Initial investigations at Schofield Barracks were conducted in 1983 and 1984 as part of the Army's initial installation assessment program ("Installation Assessment of US Army Support Command, Hawaii", US Army Toxic and Hazardous Materials Agency (USATHAMA), May 1984). No significant sources of contamination were identified and no further action (NFA) was recommended.

The recent history of environmental investigations at Schofield Barracks began in April 1985 when TCE was reported in the Schofield Barracks supply wells. The Army informed the HDOH that up to 30 ppb of TCE had been detected in the water supply wells that provide drinking water to over 25,000 people on post. Potential contamination of the local aquifer was of concern because an additional 55,000 persons in Wahiawa and Mililani obtain drinking water within three miles of the base. In 1986, in response to the detection of TCE in its water wells, the Army installed an air stripper treatment system to remove TCE from the drinking water.

In 1985, following discovery of TCE in the water supply, the US Army Environmental Hygiene Agency conducted an investigation of drinking water contamination by TCE. The resulting report ("Investigation of Drinking Water Contamination by TCE, Schofield Barracks") identified several potential generators and sources of TCE in and around Schofield Barracks, including areas in the East Range and the former landfill (OU4).

In July 1989, based on the presence of TCE in a sole source drinking water aquifer above the Safe Drinking Water Act MCL of five ppb, Schofield Barracks was proposed for the NPL and subsequently placed on the list in September 1990 with a hazard ranking score of 28.9. An FFA was then negotiated with the Army, the USEPA Region IX, and the HDOH for the conduct of a comprehensive environmental investigation of Schofield Barracks.

In August 1990 the USATHAMA conducted an assessment of all hazardous waste sites on Schofield Barracks. The "USATHAMA Property Report - Schofield Army Barracks," prepared by Roy F. Weston, Inc. (Weston, 1990), identified and scored all hazardous waste sites on Schofield Barracks. This report formed the basis for the sites specified in the FFA for investigation and the current list of 125 sites under the AEDB-R.

In fiscal year (FY) 1992 under the Installation Restoration Program (IRP), a preliminary assessment (PA)/site investigation (SI) was conducted by the USATHAMA (Harding Lawson Associates, 1992) to aid in scoping the remedial investigation (RI)/feasibility study (FS) efforts for OUs 1, 2, and 4. Under the PA/SI, sampling at OU1 sites was limited to borings at the former laundry (SCHBR-19) and it was recommended for NFA based on the SI and records review. All other sites were recommended for further investigation for TCE contamination under the RI program initiated in January 1993.

Other related environmental studies include two investigations of the former landfill. Because the site's landfill permit was due to expire on Dec. 31, 1981, a study was conducted in 1980, under contract to Kennedy Engineers, to examine various options for solid and hazardous waste disposal at Schofield Barracks. The key report comprising this study was the solid and hazardous waste disposal plan which has two companion documents: the interim disposal alternatives report and the closure of existing landfill report. Details of this study are provided under specific discussion of the landfill (OU4, AEDB-R Site 12).

OU 1: RI investigations conducted from March 1993 through September 1993 concluded that none of the 11 sites are sources of TCE contamination and that none of the sites require further investigation. As a result, a NFA / record of decision (NFA/ROD) was signed by the Army and the USEPA in November 1995 and February 1996 respectively.

OU2: Phase I RI investigations (February 1993 through May 1994) focused on collecting groundwater data from municipal and irrigation wells surrounding Schofield Barracks to determine the extent of impacted wells. OU2 investigations also evaluated wellhead treatment as the remedy. In October 1994 Phase II OU2 RI and OU4 FS field efforts were initiated to support preparation of RI and FS reports, proposed plans (PP), and RODs.

With the completion of repairs to the landfill cap in July 1998 and the completion of the preliminary closeout report, the USEPA determined that all construction activities related to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial actions at Schofield Barracks have been completed according to the requirements of the ROD for the four OUs. Consequently, on Sept. 22, 1998 the USEPA classified Schofield Barracks in the "Construction Completion" category. The final closeout report was submitted to the USEPA on Dec. 1, 1998.

OU3: The PA and/or RI investigations performed for each of the sites covered under OU3 concluded that chemicals detected in the soil, surface water, and sediment do not pose a threat to human health or the environment and that there is no route of

# IRP Contamination Assessment

## Contamination Assessment Overview

exposure; therefore, no RAs at the OU3 sites were necessary. As a result, in November 1996 an NFA/ROD was signed by the Army and the USEPA.

OU4: The RI investigations conducted from February 1993 through March 1994 concluded that the landfill is a continuing source of TCE and carbon tetrachloride in the groundwater; however, groundwater flow direction eliminates the landfill as the TCE source affecting the Schofield Supply Wells.

Schofield Barracks was formally removed from the USEPAs NPL in August 2000.

A ten year performance-based acquisition (PBA) contract was awarded to Environmental Chemical Corporation (ECC) on Sept. 28, 2006, to conduct LTM for OU2 and OU4.

A CERCLA 121(c) five-year review was conducted for the installation in FY2012. OU2 and OU4 sites were evaluated. Based on the five-year review findings, new supply wells may be constructed within the plume area vicinity for OU2; however, they have not been added into the groundwater monitoring well network. As a result, corrective actions are underway to ensure new supply wells (within plume area) are included in the monitoring well network in the future. The OU4 remedy continues to be effective.

## Cleanup Exit Strategy

Implementation of LTM at OU2 and OU4 under a PBA contract that extends to 2016 is underway to address and monitor the regional groundwater contamination of TCE and carbon tetrachloride at OU2 and to perform operation and maintenance at OU4.

Five-year reviews will be conducted in FY2017, FY2022, FY2027, FY2032, FY2037 and FY2042. LTM is expected to continue through FY2043.

## IRP Previous Studies

Year	Title	Author	Date
1976	Possible effects of increasing pumpage from the Schofield GW Body, Oahu, HI	US Geological Survey	MAY-1976
1978	Schofield Barracks Analysis of Existing Facilities Environmental Assessment Report, Master Plan Basic Information Maps	Towill	AUG-1978
1979	Land Management/Erosion Control Study USASCH Installations, HI, Schofield Barracks Military Reservation	Walter Lum	MAR-1979
1980	Supplement Sanitary Landfill Study, Schofield Barracks, Oahu, HI, Closure of Existing Landfill	Kennedy Engineers	NOV-1980
1981	Field Investigation of Uncontrolled Hazardous Waste Sites, Site Inspection Report on Schofield Barracks Landfill	Ecology and Environment	JAN-1981
1992	Final Preliminary Assessment/Site Investigation Report for OU 1, 2, and 4 Volumes I-III, Schofield Barracks, Oahu, HI	Harding Lawson	MAY-1992
	Site Analysis, Schofield Barracks, HI	The Bionetics Corporation	SEP-1992
1993	Characterization and Disposal Study of Sediment sampled from 5 Sedimentation Basins, Schofield Barracks, Oahu, HI	Belt Collins and Associates	MAR-1993
1995	Final Remedial Investigation Report for OU 1, Volume I-II, Schofield Barracks, Oahu, HI	Harding Lawson	APR-1995
	Final Record of Decision for OU 1, Schofield Barracks, Oahu, HI	Harding Lawson	SEP-1995
1996	Final Remedial Investigation Report, OU 3, Schofield Barracks, Oahu, HI , Volumes 1-6	Uribe and Assoc.	MAR-1996
	Final Feasibility Study Report for OU 2, Schofield Barracks, Oahu, HI	Harding Lawson	MAY-1996
	Final Record of Decision for OU 4 , Schofield Barracks, Oahu	Harding Lawson	JUL-1996
1997	Justification for a TI Waiver at Schofield Barracks for the Groundwater Record of Decision	NA	FEB-1997
	Public Health Assessment for Schofield Barracks, Honolulu County, HI	NA	OCT-1997
2002	Final First Five-Year Review Report for OU 2 and OU 43, Schofield Barracks, Oahu, HI	Harding Lawson	SEP-2002
2007	Final Second Five-Year Review Report for Operable Units 2 and 4, Schofield Barracks, Sites 12 and 19	MACTEC Engineering and Consulting, Inc.	SEP-2007
2012			

## IRP Previous Studies

2012

Title	Author	Date
Final Third Five-Year Review Report, Operable Units 2 and 4, Schofield Barracks Sites 12 and 19	ECC	AUG-2012

**SCHOFIELD BARRACKS**  
**Installation Restoration Program**  
**Site Descriptions**

**Site ID: SCHBR-12**  
**Site Name: FORMER LANDFILL (FFA 7)**

**STATUS**

**Regulatory Driver:** CERCLA

**RRSE:** HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
PA.....	198401.....	199302
SI.....	199106.....	199302
RI/FS.....	199302.....	199512
RD.....	199604.....	199608
RA(C).....	199611.....	199807
LTM.....	199809.....	204309

**RIP Date:** N/A

**RC Date:** 199809

**SITE DESCRIPTION**

OU4 consists of the former sanitary landfill, operated from 1967 to 1981, is located in an area which was used as a burn site from 1942 until 1967. Quantities and types of waste that were burned are unknown; however, interviews with former personnel suggested that excess gun powder, paper and building debris have been burned at the site. The landfill received domestic, construction, medical, and hazardous wastes, such as acids, bases, digested sewer sludge, medicines, inorganic compounds, spent pesticide and fluoride containers, and unusable paints.

Landfill operation inadequacies resulted in refuse being dumped over the edge of the landfill, underground fires, leachate production, methane gas production and emission, slope instability, odors, ponding water, and vectors. Analysis of samples collected before landfill closure indicated high turbidity and pesticides or herbicides.

The 1981 USEPA field inspection report concluded that previous hazardous waste disposal at the site was very likely to occur. It suggested that the most immediate environmental threat was from the instability of the landfill and its erosion. The climate and geologic conditions at the site allowed the generation and movement of leachate.

In 1981 the landfill was closed and capped with a clay cover. The FY1992 PA/SI included a soil gas survey of the landfill which indicated volatile organic compounds (VOC) contamination including TCE and dichloroethylene. The RI Phase I was conducted between March 1993 and January 1994, including soil gas surveys, lysimeter installation and sampling, deep soil sampling and installation of monitoring wells. Results of the RI Phase I indicated that the landfill is a continuing source of contamination to the groundwater, but is not the source of the TCE contamination found at the Schofield Barracks supply wells.

Further investigations of the landfill, conducted under the FS phase to expedite the site investigation, were limited to collecting data required to design a more effective cap to reduce the impacts and to determine whether hot spot removal was feasible. The OU4 FS report, which was finalized in December 1995, recommended re-grading the cap to its original design, installing gas monitoring wells around the landfill perimeter to comply with Resource Conservation and Recovery Act (RCRA) requirements, installing a passive landfill gas venting system, and re-vegetation of the cap. The LTM of the cover was also recommended in the FS report. In April 1996 a PP was released for public review. The ROD was completed and signed by the Army, the state of Hawaii, and the USEPA Region IX in September 1996, November 1996, and November 1996, respectively.

In August 1998 the repair/maintenance action at the landfill was completed. The landfill cap was cleared of Guinea grass and regraded. Other improvements included a drainage system and installation of gas wells. In March 2001 maintenance actions to repair cracks were completed. Cracks continue to appear on the landfill and apparent signs of settling are visible.

In 1997 a waiver for technical impracticability was granted by USEPA Region 9 for OU2 and OU4 and was approved by the regulatory agencies in 1997. The facility was removed from the NPL in 2000.

In 2007, cessation of methane gas monitoring was suggested based on previous results from consecutive monitoring periods; the USEPA and HDOH concurred.

**Site ID: SCHBR-12**  
**Site Name: FORMER LANDFILL (FFA 7)**

Extensive damage to the central drainage channel occurred during a heavy rainfall event on Dec. 11, 2008. The cap of the landfill was not impacted, but further erosion could have impact. Drainage repairs funded in an out-of-contract modification were completed in end of 2010.

A PBA contract for LTM was awarded in September 2006 and runs through December 2016. A five-year review was conducted in FY2012. No issues regarding the effectiveness of the OU4 remedy were identified. Public notice of the five-year review was published in October 2012.

### **CLEANUP/EXIT STRATEGY**

Implementation of LTM is underway at SCHBR-12 in accordance with the operations and maintenance (O&M) plan. Long-term groundwater monitoring and maintenance at the landfill is ongoing to address cracks and settlement that continue to be a problem. Side slopes require additional maintenance. Quarterly inspections of the cap and drainage system for regulatory reporting are conducted. Applying herbicide to Guinea grass, cutting of grass, and repairs of the landfill cap and side slope are ongoing as part of the long-term maintenance plan.

A part of the LTM goal is to reduce the sampling frequency at some of the wells; however, the five-year review conducted in FY2012 recommended that current sampling frequency remain the same. The current PBA contract covers up to FY2016. LTM and five-year reviews will be required beyond that.

Site Name: OU2 Groundwater Contamination

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198306.....	199205
SI.....	199108.....	199205
RI/FS.....	199111.....	199608
IRA.....	198601.....	198612
LTM.....	199702.....	204309

RIP Date: N/A

RC Date: 199702

SITE DESCRIPTION

The function of OU2 is to address installation-wide groundwater contamination. Groundwater is located between 550 to 650 feet below ground surface (bgs). TCE was detected in the water-supply wells in 1985, and its source could not be identified. Due to the detection of TCE, Schofield Barracks was on the NPL and delisted in 2000. Schofield Barracks overlies the Wahiawa Aquifer that combined with the Honolulu-Pearl Harbor Basal Water Body into which 80 percent of the Schofield Aquifer flows is the main fresh water source for the island of Oahu. The level of detected TCE was above the Safe Drinking Water Act maximum contaminant level of five ppb.

An ASTS was installed and operated in 1986 to treat approximately six million gallons of water per day from the Wahiawa Aquifer to provide for military personnel at Schofield Barracks. The operation of the ASTS has been ongoing through the present, along with continued monitoring of the extent of the plume. The plume has remained stationary. The approximate annual total of pure TCE withdrawn from the system is approximately 33 gallons per year. Observations of well concentration data have determined that well No. 4 has the highest levels of TCE (30 to 40 ppb) and the concentrations in the three remaining wells tend to rise when well No. 4 is shut down. Based upon the location of well No. 4, the TCE plume has been projected to lie to the east and south of the SB water supply wells.

In FY1992, a PA/SI was completed. The survey identified 39 wells within a six-mile radius of the wells. The wells identified were a mix of Army wells, privately owned wells, and Board of Water Supply wells. Ten were randomly selected for VOC sampling. One well, west of Wheeler Army Airfield, detected TCE levels at 5.3 ppb; all others were below detection. The PA/SI sampling results indicated that TCE is present in the Schofield supply wells, wells at Kunia, and a number of monitoring wells in the Schofield vicinity. Phase II RI field investigations were conducted between October 1994 and August 1995. The Phase II RI investigations focused on collecting data to support the implementation of a point-of-use treatment approach for the final ground water remedy. Under this approach, the Army monitors surrounding wells and treat groundwater only where it is pumped and used. No active pump-and-treat system will be installed based on technical and economic impracticability. In April 1996 the final Phase II RI report was submitted to the regulatory agencies. The FS (1996), which evaluates a full range of wellhead treatment alternatives, was completed. A PP to continue treatment at the water plant, monitor wells in the area for any migration of the TCE plume, and to install wellhead treatment at any municipal wells that are impacted, was distributed to the public. Concentrations of TCE and carbon-tetrachloride have generally remained the same in impacted wells from 1993 through the present. In 1997 a technical impracticability (TI) waiver was granted for OU2 by USEPA Region 9; it was approved by the regulatory agencies in 1997. The ROD was signed by the Army, the HDOH, and the USEPA in September 1996, November 1996, and February 1997, respectively. RC was achieved in 1997.

A PBA contract was awarded in 2006 and runs through December 2016. LTM will continue for this site, including operation and maintenance of the ASTSs at the Kunia Village well and Sandwich Isle Communications Inc. well installed in 2011 to provide approximately one million gallons of water per day for irrigation and a 40-person work building. The LTM for the new ASTS is funded under a separate contract from the PBA contract.

A five-year review was conducted in FY2012, and new supply wells that may lie within the plume were discovered. RAs to evaluate and possibly add the supply wells to the monitoring area are underway. Public notice of the five-year review was



**Site ID: SCHBR-19**

**Site Name: OU2 Groundwater Contamination**

published in October 2012.

## **CLEANUP/EXIT STRATEGY**

Implementation of LTM is underway to address the impacts of Schofield Barracks operations on the regional groundwater contamination by TCE and carbon tetrachloride. The O&M of the ASTSs at the Kunia Village (formerly Del Monte) well and Sandwich Isles, Inc. well is included in the scope. Groundwater monitoring, well and pump maintenance, and LTM reports are part of the LTM effort at this site.

Part of the exit strategy is to reduce the amount of long-term monitoring by reducing the sampling frequency and number of constituents of concern at OU2; however, the five-year review conducted in FY2012 recommended that the current sampling frequency remain the same.

The current PBA contract funds LTM through 2016. LTM and five-year reviews will be required beyond FY2016.

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-01	FIRING RNG BURNING AREAS (FFA 50)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-02	DFE ENTOMOLOGY - BLDG 368 (FFA 38)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-03	DFE LAND MGMT BRANCH BLD 379 (FFA 39)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-04	BEHIND BLDG 379 WASHRACK (FFA 39)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-05	DPCA GOLF COURSE BLDG 6019 (FFA 37)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-06	ADJ TO BLDG 6019 CONCERT APRON (FFA 37)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-07	AREA R WST STG AREA (FFA 20)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-09	BLDG T 2140 SPRAY PNT BOOTH (FFA 45)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-100	DARK STAINED AREAS (1962) (FFA 68)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-101	OPEN STORAGE AREAS (1942-1953) (FFA 69)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-102	OPEN STORAGE AREA (1942-1968) (FFA 70)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-103	OPEN STORAGE AREA (1955) (FFA 71)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-104	OPEN STORAGE AREA (1942) (FFA 72A)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-105	MOTOR POOL (1942) (FFA 73)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-106	OPEN STORAGE AREA (1977) (FAA 74)	200112	Final Remedial Investigation Report, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996 - No COCs found on-site
SCHBR-107	PROBABLE CONTAINERS/OS (1950-51)(FFA 75)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-108	LIGHT OBJECT/OPEN BURNING(1942) (FFA 76)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-109	LIGHT & MED TONE OBJECTS (1942) (FFA 77)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-110	OPEN STORAGE AREAS (1942) (FFA 78)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-111	LIGHT TONE OBJECTS (1942) (FFA 79)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-112	POSSIBLE TRENCH (1953) (FFA 80)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-113	INDUSTRIAL OPS/OPEN STOR (1942)(FFA 81B)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-114	TRENCH (FFA 82)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-115	OPEN STORAGE/MOTOR POOL (FFA 83)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-116	OPEN STORAGE/MOTOR POOL (FFA 84)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-117	OPEN STORAGE/MOTOR POOL (FFA 85)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-118	OPEN STORAGE (1942-55) (FFA 86)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-119	OPEN STORAGE/MOTOR POOL(1950-59)(FFA 87)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-120	MOTOR POOL (1955-78) (FFA 88)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-121	OPEN STORAGE/POSS PITS(1951-59)(FFA 89)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-122	MOTOR POOL/DARK STAINS (1959-70)(FFA 90)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-123	REFUSE (1942) (FFA 91)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-124	OPEN STORAGE (1950) (FFA 92)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-125	OPEN FIRE (1951)/(1955) (FFA 93)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-126	QUAD B USTS	200009	Heating Oil UST Field Investigation, Quad B, Tanks 155 - 158, 1996
SCHBR-127	QUAD E USTS	199409	Clean-up Complete in Apr-1994
SCHBR-128	QUAD F USTS	199409	Clean-up Complete in Apr-1994
SCHBR-129	BLDG 665 USTS	199409	Final Closure Report, Tank Sites 665-1 & 665-2, Schofield Barracks, Removal of Underground Fuel Storage Tanks at Various US Army Facilities, Hawaii 1994
SCHBR-13	STP NO BYPASS PROVISIONS (FFA 56)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-130	HEALTH CLINIC USTS	199409	Clean-up Complete in Apr-1994
SCHBR-131	QUAD I UST	199409	Clean-up Complete in Apr-1994
SCHBR-132	QUAD J UST	199409	Clean-up Complete in Apr-1994

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-133	TWO PITS (1962) (FFA 64B)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-134	MAINTENANCE AREA, BLDG 368 (FFA 72B)	200009	Final Remedial Investigation Report, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996 - No COCs found on-site
SCHBR-15	CENTRAL RANGES (FFA 15)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-16	EAST RANGE DISPOSAL SITE (FFA 51)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-17	FORMER LAUNDRY (FFA 52)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-18	ACID PIT (FFA 46)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-20	DRUM STORAGE AREA (FFA 1)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-21	VEHICLE SCRAP YARD (FFA 2)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-26	TASC (BLDG 2061)(FFA 9)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-27	BLDG T-1125, TARGET SHOP (FFA 10)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-28	BLDG T-2276 (FFA 12)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-29	BLDG 2275 TARGET REP/CARPENT SHOP(FFA 16)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-30	MAINTENANCE AREA (BLDG T-1029) (FFA 17)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-31	DISTRIBUTION WH (BLDG T-1052) (FFA 18)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-32	BATTERY SHOP(BLDG T-1081) (FFA 19)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-33	PEST CONTROL SHOP (BLDG 370/380)(FFA 21)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-34	PEST CONTROL SHOP (FFA 22)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-35	ARTS & CRAFTS (BLDG 585) (FFA 23)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-36	AUTOCRAFT CAR WASH (BLDG 910) (FFA 24)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-37	AUTOCRAFT SHOP (BLDG 910) (FFA 25)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-38	CAR CARE (BLDG 80) (FFA 26)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-39	VETERINARY CLINIC (FFA 27)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-40	HEALTH CLINIC (FFA 28)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-41	INCINERATOR (BLDG 673) (FFA 29)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-42	FORMER STORAGE TANKS, 5 USTS (FFA 30)	199712	Remedial Action completed Dec-1997
SCHBR-43	DENTAL CLINIC (FFA 31)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-44	24-HOUR PHOTO SERVICE (FFA 32)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-45	MAINT AREAS (BLDG T-2054,T-2060)(FFA 33)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-46	WEAPONS MAINTENANCE (BLDG 2131)(FFA 34)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-47	OPTICAL REPAIR (BLDG 1054) (FFA 35)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-48	GAS CHAMBER (BLDG 2253C) (FFA 36)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-49	TRANSFORMERS (9) (FFA 40)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-50	TRANSFORMER LEAK AREA (FFA 41)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-51	MAINTENANCE AREA (BLDG 387) (FFA 42)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-52	AMMO STORAGE BUNKERS (27) (FFA 43)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-53	CHEM IMPREG PLANT (BLDG 2308) (FFA 44)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-54	PHOTO OPERATIONS (BLDG 2065) (FFA 47)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1,2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-55	BLDG 370B INDUSTRIAL OPS (FFA 48)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-56	AIRCRAFT FUSELAGE AREA (FFA 54A)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-57	TUNNELS (FFA 55)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-58	LANDFILL 3 VARIOUS LOCATIONS (FFA 49)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-60	MAINTENANCE AREA A (FFA 3)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-61	MAINTENANCE AREA B (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-62	MAINTENANCE AREA C (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-63	MAINTENANCE AREA D (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-64	MAINTENANCE AREA E (FFA 3/6)	199905	NFA based on Final Record of Decision, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996
SCHBR-65	MAINTENANCE AREA F (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-66	MAINTENANCE AREA G (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-67	MAINTENANCE AREA H (FFA 3)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-68	MAINTENANCE AREA I (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-69	MAINTENANCE AREA J (FFA 3/6)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-70	MAINTENANCE AREA K (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-71	MAINTENANCE AREA L (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-72	MAINTENANCE AREA M (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-73	MAINTENANCE AREA N (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-74	MAINTENANCE AREA O (FFA 3/6/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-75	MAINTENANCE AREA P (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-76	MAINTENANCE AREA Q (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-77	MAINTENANCE AREA R (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-78	MAINTENANCE AREA S (FFA 3/11)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-79	MAINTENANCE AREA T (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-80	MAINTENANCE AREA U (FFA 3/11)	200009	NFA based on Final Record of Decision, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996
SCHBR-81	MAINTENANCE AREA V (FFA 3)	199610	Final RI Report for OU 3, Schofield

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Barracks, Hawaii, March 1996
SCHBR-82	MAINTENANCE AREA W (FFA 3/6)	199610	NFA based on Final Record of Decision, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996
SCHBR-83	MAINTENANCE AREA X (FFA 3/11)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-84	MCCARTHY FLATS RANGES (FFA 13)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-85	KOLEKOLE FIRING RANGES (FFA 14)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-86	TRANSFORMER STORAGE AREA (FFA 40)	199302	Final Preliminary Assessment/Site Inspection Report for OU 1, 2, and 4, Schofield Barracks, Hawaii, May 1992
SCHBR-87	AIRCRAFT STORAGE BUNKERS (FFA 54B)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-88	ENGINE REBUILD AREA (FFA 54C)	199509	Final RI Report for OU 1, Schofield Barracks, Hawaii, 17 April 1995
SCHBR-89	PITS (1942) (FFA 57)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-90	POSSIBLE WASTE DISPOSAL (1984) (FFA 58)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-91	TWO TRENCHES (1942) (FFA 59)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-92	TREATMENT PLANT (1953) (FFA 60)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-93	TRENCH & PIT W/LIQUID(1953-77) (FFA 61)	199701	Final Remedial Investigation Report, Operable Unit 3, Schofield Barracks, Island of Oahu, Hawaii, 1996 - No COCs found on-site
SCHBR-94	FOUR TRENCHES (1962) (FFA 62)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-95	THREE PITS W/LIGHT MATERIAL (FFA 63)	199610	Final RI Report for OU 3, Schofield Barracks, Hawaii, March 1996
SCHBR-96	PITS (1962) (FFA 64A)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-97	STAINS/OPEN STORAGE AREA (1942)(FFA 65)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-98	POSSIBLE REFUSE (1942) (FFA 66)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994
SCHBR-99	TREATMENT PLANT (1953) (FFA 67)	199403	Preliminary Assessment of Operable Unit 3 Sites, Schofield Army Barracks, Island of Oahu, Hawaii, 1994

# IRP Schedule

Date of IRP Inception: 198306

## Past Phase Completion Milestones

### 1987

IRA (SCHBR-19 - OU2 Groundwater Contamination )

### 1992

IRA (SCHBR-42 - FORMER STORAGE TANKS, 5 USTS (FFA 30))

PA (SCHBR-19 - OU2 Groundwater Contamination )

SI (SCHBR-19 - OU2 Groundwater Contamination )

### 1993

PA (SCHBR-01 - FIRING RNG BURNING AREAS (FFA 50), SCHBR-02 - DFE ENTOMOLOGY - BLDG 368 (FFA 38), SCHBR-03 - DFE LAND MGMT BRANCH BLD 379 (FFA 39), SCHBR-04 - BEHIND BLDG 379 WASHRACK (FFA 39), SCHBR-05 - DPCA GOLF COURSE BLDG 6019 (FFA 37), SCHBR-06 - ADJ TO BLDG 6019 CONCERT APRON (FFA 37), SCHBR-07 - AREA R WST STG AREA (FFA 20), SCHBR-09 - BLDG T 2140 SPRAY PNT BOOTH (FFA 45), SCHBR-12 - FORMER LANDFILL (FFA 7), SCHBR-13 - STP NO BYPASS PROVISIONS (FFA 56), SCHBR-15 - CENTRAL RANGES (FFA 15), SCHBR-16 - EAST RANGE DISPOSAL SITE (FFA 51), SCHBR-17 - FORMER LAUNDRY (FFA 52), SCHBR-18 - ACID PIT (FFA 46), SCHBR-20 - DRUM STORAGE AREA (FFA 1), SCHBR-21 - VEHICLE SCRAP YARD (FFA 2), SCHBR-26 - TASC (BLDG 2061)(FFA 9), SCHBR-27 - BLDG T-1125, TARGET SHOP (FFA 10), SCHBR-28 - BLDG T-2276 (FFA 12), SCHBR-29 - BLDG 2275 TARGET REP/CARPENT SHOP(FFA 16, SCHBR-30 - MAINTENANCE AREA (BLDG T-1029) (FFA 17), SCHBR-31 - DISTRIBUTION WH (BLDG T-1052) (FFA 18), SCHBR-32 - BATTERY SHOP(BLDG T-1081) (FFA 19), SCHBR-33 - PEST CONTROL SHOP (BLDG 370/380)(FFA 21), SCHBR-34 - PEST CONTROL SHOP (FFA 22), SCHBR-35 - ARTS & CRAFTS (BLDG 585) (FFA 23), SCHBR-36 - AUTOCRAFT CAR WASH (BLDG 910) (FFA 24), SCHBR-37 - AUTOCRAFT SHOP (BLDG 910) (FFA 25), SCHBR-38 - CAR CARE (BLDG 80) (FFA 26), SCHBR-39 - VETERINARY CLINIC (FFA 27), SCHBR-40 - HEALTH CLINIC (FFA 28), SCHBR-41 - INCINERATOR (BLDG 673) (FFA 29), SCHBR-42 - FORMER STORAGE TANKS, 5 USTS (FFA 30), SCHBR-43 - DENTAL CLINIC (FFA 31), SCHBR-44 - 24-HOUR PHOTO SERVICE (FFA 32), SCHBR-45 - MAINT AREAS (BLDG T-2054,T-2060)(FFA 33), SCHBR-46 - WEAPONS MAINTENANCE (BLDG 2131)(FFA 34), SCHBR-47 - OPTICAL REPAIR (BLDG 1054) (FFA 35), SCHBR-48 - GAS CHAMBER (BLDG 2253C) (FFA 36), SCHBR-49 - TRANSFORMERS (9) (FFA 40), SCHBR-50 - TRANSFORMER LEAK AREA (FFA 41), SCHBR-51 - MAINTENANCE AREA (BLDG 387) (FFA 42), SCHBR-52 - AMMO STORAGE BUNKERS (27) (FFA 43), SCHBR-53 - CHEM IMPREG PLANT (BLDG 2308) (FFA 44), SCHBR-54 - PHOTO OPERATIONS (BLDG 2065) (FFA 47), SCHBR-55 - BLDG 370B INDUSTRIAL OPS (FFA 48), SCHBR-56 - AIRCRAFT FUSELAGE AREA (FFA 54A), SCHBR-57 - TUNNELS (FFA 55), SCHBR-58 - LANDFILL 3 VARIOUS LOCATIONS (FFA 49), SCHBR-60 - MAINTENANCE AREA A (FFA 3), SCHBR-61 - MAINTENANCE AREA B (FFA 3/11), SCHBR-62 - MAINTENANCE AREA C (FFA 3/11), SCHBR-63 - MAINTENANCE AREA D (FFA 3/11), SCHBR-64 - MAINTENANCE AREA E (FFA 3/6), SCHBR-65 - MAINTENANCE AREA F (FFA 3/11), SCHBR-66 - MAINTENANCE AREA G (FFA 3/11), SCHBR-67 - MAINTENANCE AREA H (FFA 3), SCHBR-68 - MAINTENANCE AREA I (FFA 3/11), SCHBR-69 - MAINTENANCE AREA J (FFA 3/6), SCHBR-70 - MAINTENANCE AREA K (FFA 3/11), SCHBR-71 - MAINTENANCE AREA L (FFA 3/11), SCHBR-72 - MAINTENANCE AREA M (FFA 3/11), SCHBR-73 - MAINTENANCE AREA N (FFA 3/11), SCHBR-74 - MAINTENANCE AREA O (FFA 3/6/11), SCHBR-75 - MAINTENANCE AREA P (FFA 3/11), SCHBR-76 - MAINTENANCE AREA Q (FFA 3/11), SCHBR-77 - MAINTENANCE AREA R (FFA 3/11), SCHBR-78 - MAINTENANCE AREA S (FFA 3/11), SCHBR-79 - MAINTENANCE AREA T (FFA 3/11), SCHBR-80 - MAINTENANCE AREA U (FFA 3/11), SCHBR-81 - MAINTENANCE AREA V (FFA 3), SCHBR-82 - MAINTENANCE AREA W (FFA 3/6), SCHBR-83 - MAINTENANCE AREA X (FFA 3/11), SCHBR-84 - MCCARTHY FLATS RANGES (FFA 13), SCHBR-85 - KOLEKOLE FIRING RANGES (FFA 14), SCHBR-86 - TRANSFORMER STORAGE AREA (FFA 40), SCHBR-87 - AIRCRAFT STORAGE BUNKERS (FFA 54B), SCHBR-88 - ENGINE REBUILD AREA (FFA 54C))

SI (SCHBR-01 - FIRING RNG BURNING AREAS (FFA 50), SCHBR-07 - AREA R WST STG AREA (FFA 20), SCHBR-12 - FORMER LANDFILL (FFA 7), SCHBR-16 - EAST RANGE DISPOSAL SITE (FFA 51), SCHBR-17 - FORMER LAUNDRY (FFA 52), SCHBR-30 - MAINTENANCE AREA (BLDG T-1029) (FFA 17), SCHBR-31 - DISTRIBUTION WH (BLDG T-1052) (FFA 18), SCHBR-37 - AUTOCRAFT SHOP (BLDG 910) (FFA 25), SCHBR-51 - MAINTENANCE AREA (BLDG 387) (FFA 42), SCHBR-56 - AIRCRAFT FUSELAGE AREA (FFA 54A), SCHBR-87 - AIRCRAFT STORAGE BUNKERS (FFA 54B), SCHBR-88 - ENGINE REBUILD AREA (FFA 54C))



## IRP Schedule

### 1994

ISC (SCHBR-126 - QUAD B USTS, SCHBR-127 - QUAD E USTS, SCHBR-128 - QUAD F USTS, SCHBR-129 - BLDG 665 USTS, SCHBR-130 - HEALTH CLINIC USTS, SCHBR-131 - QUAD I UST, SCHBR-132 - QUAD J UST)

RI/FS (SCHBR-37 - AUTOCRAFT SHOP (BLDG 910) (FFA 25))

IRA (SCHBR-126 - QUAD B USTS)

IMP(C) (SCHBR-127 - QUAD E USTS, SCHBR-128 - QUAD F USTS, SCHBR-129 - BLDG 665 USTS, SCHBR-130 - HEALTH CLINIC USTS, SCHBR-131 - QUAD I UST, SCHBR-132 - QUAD J UST)

PA (SCHBR-100 - DARK STAINED AREAS (1962) (FFA 68), SCHBR-101 - OPEN STORAGE AREAS (1942-1953) (FFA 69), SCHBR-102 - OPEN STORAGE AREA (1942-1968) (FFA 70), SCHBR-103 - OPEN STORAGE AREA (1955) (FFA 71), SCHBR-104 - OPEN STORAGE AREA (1942) (FFA 72A), SCHBR-105 - MOTOR POOL (1942) (FFA 73), SCHBR-106 - OPEN STORAGE AREA (1977) (FAA 74), SCHBR-107 - PROBABLE CONTAINERS/OS (1950-51)(FFA 75), SCHBR-108 - LIGHT OBJECT/OPEN BURNING(1942) (FFA 76), SCHBR-109 - LIGHT & MED TONE OBJECTS (1942) (FFA 77), SCHBR-110 - OPEN STORAGE AREAS (1942) (FFA 78), SCHBR-111 - LIGHT TONE OBJECTS (1942) (FFA 79), SCHBR-112 - POSSIBLE TRENCH (1953) (FFA 80), SCHBR-113 - INDUSTRIAL OPS/OPEN STOR (1942)(FFA 81B), SCHBR-114 - TRENCH (FFA 82), SCHBR-115 - OPEN STORAGE/MOTOR POOL (FFA 83), SCHBR-116 - OPEN STORAGE/MOTOR POOL (FFA 84), SCHBR-117 - OPEN STORAGE/MOTOR POOL (FFA 85), SCHBR-118 - OPEN STORAGE (1942-55) (FFA 86), SCHBR-119 - OPEN STORAGE/MOTOR POOL(1950-59)(FFA 87), SCHBR-120 - MOTOR POOL (1955-78) (FFA 88), SCHBR-121 - OPEN STORAGE/POSS PITS(1951-59)(FFA 89), SCHBR-122 - MOTOR POOL/DARK STAINS (1959-70)(FFA 90), SCHBR-123 - REFUSE (1942) (FFA 91), SCHBR-124 - OPEN STORAGE (1950) (FFA 92), SCHBR-125 - OPEN FIRE (1951)/(1955) (FFA 93), SCHBR-133 - TWO PITS (1962) (FFA 64B), SCHBR-134 - MAINTENANCE AREA, BLDG 368 (FFA 72B), SCHBR-89 - PITS (1942) (FFA 57), SCHBR-90 - POSSIBLE WASTE DISPOSAL (1984) (FFA 58), SCHBR-91 - TWO TRENCHES (1942) (FFA 59), SCHBR-92 - TREATMENT PLANT (1953) (FFA 60), SCHBR-93 - TRENCH & PIT W/LIQUID(1953-77) (FFA 61), SCHBR-94 - FOUR TRENCHES (1962) (FFA 62), SCHBR-95 - THREE PITS W/LIGHT MATERIAL (FFA 63), SCHBR-96 - PITS (1962) (FFA 64A), SCHBR-97 - STAINS/OPEN STORAGE AREA (1942)(FFA 65), SCHBR-98 - POSSIBLE REFUSE (1942) (FFA 66), SCHBR-99 - TREATMENT PLANT (1953) (FFA 67))

### 1995

RI/FS (SCHBR-01 - FIRING RNG BURNING AREAS (FFA 50), SCHBR-07 - AREA R WST STG AREA (FFA 20), SCHBR-16 - EAST RANGE DISPOSAL SITE (FFA 51), SCHBR-30 - MAINTENANCE AREA (BLDG T-1029) (FFA 17), SCHBR-31 - DISTRIBUTION WH (BLDG T-1052) (FFA 18), SCHBR-51 - MAINTENANCE AREA (BLDG 387) (FFA 42), SCHBR-56 - AIRCRAFT FUSELAGE AREA (FFA 54A), SCHBR-87 - AIRCRAFT STORAGE BUNKERS (FFA 54B), SCHBR-88 - ENGINE REBUILD AREA (FFA 54C))

### 1996

RD (SCHBR-12 - FORMER LANDFILL (FFA 7))

RA(C) (SCHBR-42 - FORMER STORAGE TANKS, 5 USTS (FFA 30))

RI/FS (SCHBR-105 - MOTOR POOL (1942) (FFA 73), SCHBR-112 - POSSIBLE TRENCH (1953) (FFA 80), SCHBR-113 - INDUSTRIAL OPS/OPEN STOR (1942)(FFA 81B), SCHBR-115 - OPEN STORAGE/MOTOR POOL (FFA 83), SCHBR-12 - FORMER LANDFILL (FFA 7), SCHBR-120 - MOTOR POOL (1955-78) (FFA 88), SCHBR-122 - MOTOR POOL/DARK STAINS (1959-70)(FFA 90), SCHBR-125 - OPEN FIRE (1951)/(1955) (FFA 93), SCHBR-133 - TWO PITS (1962) (FFA 64B), SCHBR-134 - MAINTENANCE AREA, BLDG 368 (FFA 72B), SCHBR-18 - ACID PIT (FFA 46), SCHBR-19 - OU2 Groundwater Contamination , SCHBR-33 - PEST CONTROL SHOP (BLDG 370/380)(FFA 21), SCHBR-38 - CAR CARE (BLDG 80) (FFA 26), SCHBR-47 - OPTICAL REPAIR (BLDG 1054) (FFA 35), SCHBR-61 - MAINTENANCE AREA B (FFA 3/11), SCHBR-62 - MAINTENANCE AREA C (FFA 3/11), SCHBR-63 - MAINTENANCE AREA D (FFA 3/11), SCHBR-64 - MAINTENANCE AREA E (FFA 3/6), SCHBR-67 - MAINTENANCE AREA H (FFA 3), SCHBR-68 - MAINTENANCE AREA I (FFA 3/11), SCHBR-69 - MAINTENANCE AREA J (FFA 3/6), SCHBR-70 - MAINTENANCE AREA K (FFA 3/11), SCHBR-71 - MAINTENANCE AREA L (FFA 3/11), SCHBR-74 - MAINTENANCE AREA O (FFA 3/6/11), SCHBR-75 - MAINTENANCE AREA P (FFA 3/11), SCHBR-77 - MAINTENANCE AREA R (FFA 3/11), SCHBR-78 - MAINTENANCE AREA S (FFA 3/11), SCHBR-80 - MAINTENANCE AREA U (FFA 3/11), SCHBR-81 - MAINTENANCE AREA V (FFA 3), SCHBR-82 -

**1997**  
 MAINTENANCE AREA W (FFA 3/6), SCHBR-89 - PITS (1942) (FFA 57), SCHBR-91 - TWO TRENCHES (1942) (FFA 59), SCHBR-95 - THREE PITS W/LIGHT MATERIAL (FFA 63)  
 RI/FS (SCHBR-93 - TRENCH & PIT W/LIQUID(1953-77) (FFA 61))  
**1998**  
 RA(C) (SCHBR-12 - FORMER LANDFILL (FFA 7))  
**1999**  
 RA(C) (SCHBR-64 - MAINTENANCE AREA E (FFA 3/6))  
**2000**  
 IRA (SCHBR-106 - OPEN STORAGE AREA (1977) (FAA 74))  
 RA(C) (SCHBR-134 - MAINTENANCE AREA, BLDG 368 (FFA 72B), SCHBR-80 - MAINTENANCE AREA U (FFA 3/11))  
 IMP(C) (SCHBR-126 - QUAD B USTS)  
**2002**  
 RI/FS (SCHBR-106 - OPEN STORAGE AREA (1977) (FAA 74))

**Projected Phase Completion Milestones**

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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**Final RA(C) Completion Date:** 200007

**Schedule for Next Five-Year Review:** 2017

**Estimated Completion Date of IRP at Installation (including LTM phase):** 204309

## SCHOFIELD BARRACKS IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
SCHBR-12	FORMER LANDFILL (FFA 7)	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
SCHBR-19	OU2 Groundwater Contamination	LTM						

**SCHOFIELD BARRACKS**  
**Army Defense Environmental Restoration Program**  
**Military Munitions Response Program**

# MMRP Summary

**Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count:** 15/12

**Installation Site Types with Future and/or Underway Phases**

3 Small Arms Range  
(SCHBR-004-R-01, SCHBR-012-R-01, SCHBR-013-R-01)

**Most Widespread Contaminants of Concern**

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

**Media of Concern**

Soil, Surface Water

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

Site ID	Site Name	Action	Remedy	FY
SCHBR-014-R-01	Moyer Housing Project	IRA	UXO CLEARANCE	2009
SCHBR-012-R-01	Garden Gulch Pistol Ranges	FRA	REMOVAL	2013

**Duration of MMRP**

**Date of MMRP Inception** 200204

**Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC):** 201412/201412

**Date of MMRP completion including Long Term Management (LTM):** 204309

# MMRP Contamination Assessment

## Contamination Assessment Overview

The Department of Defense (DoD) has established the Military Munitions Response Program (MMRP) under the Defense Environmental Restoration Program (DERP) to address DoD sites with MEC, including unexploded ordnance (UXO), discarded military munitions (DMM), and MC. The US Army's inventory of closed, transferring, and transferred (CTT) military ranges and sites, identified sites eligible for action under MMRP. The MMRP eligible sites include other than operational ranges where UXO, DMM and MC is known or suspected and the release occurred prior to Sept. 30, 2002. Properties classified as operational ranges are not eligible and, therefore, are excluded from the MMRP.

The MMRP began in the late-1990s with three phases of range inventories. Phase I consisted of installations completing an initial data call. The USAEC managed the implementation of Phases II and III of the MMRP inventory. The Phase 2 inventory dealt with active and inactive range considerations. Phase 3 involved the CTT range inventory conducted in 2002. The inventories included extensive mapping, data collection for upload to the Army Range Inventory Database, an assessment of explosives safety risk using the risk assessment code (RAC) methodology for CTT ranges or sites with UXO or DMM identified in the inventory, and the determination of which sites on the inventory potentially qualify for the MMRP.

In May 2003 a PA (final CTT inventory report) was completed for Schofield Barracks. Thirteen MMRP sites were identified at the installation. In May 2008 an SI was completed for all sites and additional investigation at five sites (SCHBR-004-R-01, SCHBR-008-R-01, SCHBR-010-R-01, SCHBR-012-R-01, and SCHBR-013-R-01) was recommended. During trenching for utilities at Moyer Housing (SCHBR-014-R-01), a demilitarized piece of ordnance was found. Thus, another MMRP site was created. For the duration of intrusive activities, a USACE ordnance and explosives (OE) safety specialist was on-site for construction support. The construction support was completed when intrusive activities were completed at the site. The site was closed after construction activities ceased.

The SI was completed in FY2008. An IRA was completed at SCHBR-004-R-01 in FY2009. The RI for the five active sites (SCHBR-004-R-01, SCHBR-008-R-01, SCHBR-010-R-01, SCHBR-012-R-01, and SCHBR-013-R-01) was completed in FY2011. Following, SCHBR-013-R-01 was split to close out the west part, and SCHBR-013-R-02 was created in FY2012. NFA was required for SCHBR-008-R-01, SCHBR-010-R-01, and SCHBR-013-R-02, so a DD was signed and the sites were closed.

An additional investigation was conducted at SCHBR-004-R-01, and it was concluded that there is no unacceptable risk to human health or the environment. The site will be recommended for NFA.

An FS was conducted, and a DD was signed for SCHBR-012-R-01. An RA consisting of soil removal and capping was performed and completed in January 2013.

After an FS was conducted and a DD was signed for Southern Pistol Range-East (SCHBR-013-R-01). An RA of soil and MEC removal, then LUC implementation will be conducted.

## Cleanup Exit Strategy

An NFA DD for SCHBR-005-R-01 is underway, and site closure is expected in FY2013. LUC implementation is underway for SCHBR-012-R-01 and will be complete in FY2013. SCHBR-013-R-01 is currently in RD phase, and the RA is expected to be complete in FY2014.

## MMRP Previous Studies

	<b>Title</b>	<b>Author</b>	<b>Date</b>
<b>2002</b>	Final CTT Inventory Report	TechLaw	OCT-2002
<b>2006</b>	Historical Records Review	TLI Solutions	NOV-2006
<b>2008</b>	Final SI Report	TLI Solutions	MAY-2008
<b>2010</b>	MMRP Anomaly Resolution, Tactical Vehicle Maintenance Facility, Schofield Barracks, Oahu, Hawaii	Explosive Ordnance Technologies, Inc.	JAN-2010
<b>2011</b>	Final Remedial Investigation Report, Schofield Barracks, Hawaii Phase II (Yonkers Range, ER-7A, A-100-L-2, Garden Gulch Pistol Ranges, Southern Pistol Ranges)	Weston Solutions, Inc.	JUL-2011
<b>2012</b>	Final Feasibility Study, Garden Gulch Pistol Ranges (SCHBR-012-R-01), Schofield Barracks, Hawaii Phase II	Weston Solutions, Inc.	JAN-2012
	Final Feasibility Study, Southern Pistol Range-East (SCHBR-013-R-01), Schofield Barracks, Oahu, Hawaii	CH2M Hill	SEP-2012
<b>2013</b>	Final Remedial Investigation Report Addendum, Yonkers Range (SCHBR-004-R-01), Schofield Barracks, Oahu, Hawaii	CH2M Hill	FEB-2013

**SCHOFIELD BARRACKS**  
**Military Munitions Response Program**  
**Site Descriptions**



**Site ID: SCHBR-004-R-01**  
**Site Name: YONKERS RANGE**

**STATUS**

**Regulatory Driver:** CERCLA  
**MRSPP Score:** 07  
**Contaminants of Concern:** Metals  
**Media of Concern:** Soil

<b>Phases</b>	<b>Start</b>	<b>End</b>
PA.....	200204.....	200305
SI.....	200604.....	200806
RI/FS.....	200907.....	201312
<b>RIP Date:</b>	N/A	
<b>RC Date:</b>	201312	

**SITE DESCRIPTION**

Yonkers Range munitions response (MR) site is currently undeveloped and is located on the northern edge of the cantonment area, slightly south of Wilikina Drive and west of Stoneman Field and McNair Gate at Schofield Barracks, HI. Although the type of weapons used at the range is not specified in the documents collected, training at 1,000-inch ranges typically involves the use of small arms weapons including .22 caliber, .30 caliber, .50 caliber, and 7.62 millimeter (mm) machine guns. Typically, the distance between the firing line and the targets is 100 yards at a 1,000-inch range. In summary, based on the depiction of the range in historic maps and aerial photographs, it is estimated that the range was used from the late-1930s through the 1960s for small arms training. Potential MEC associated with the site are small arms including .22 caliber, .30 caliber, .50 caliber, and 7.62mm machine guns and .30 caliber carbines.

An SI was conducted in 2008 and included a visual survey of approximately 3.3 line miles, and the collection of three surface soil samples and four sediment samples. No MEC was identified during the visual survey; however, munitions debris (MD) in the form of an expended M117 series slap flare was found along the path into the site. In addition, evidence of military training activities were present in the form of spools of concertina, and remains of a barbed wire fence. Analytical results from the soil sampling indicate that all concentrations for explosives and metals were non-detects or below the USEPA Region 9 preliminary remediation goals (PRGs), with the exception of two sample concentrations for lead that were detected [506 and 1,430 milligram (mg)/kilogram (kg)] over the USEPA Region 9 PRG (400 mg/kg).

The focus of the remedial investigation was to determine the nature and extent of MC contamination associated with small arms munitions. Field activities included an instrument aided visual survey, investigative intrusive activities, geophysical mapping, and increment sampling (IS) of the soil. Metals were detected in the soil, however did not exceed the action levels for the designated land use (commercial/industrial) therefore the RI recommended NFA for MC. No MEC was found during the RI, therefore the site was recommended for NFA for MEC.

A supplemental investigation was conducted in FY2012 to further define soil contamination for the residential scenario and confirm NFA recommendations. Surface soil sample results confirmed that site-wide lead concentrations in soil are below the unrestricted land use PRG, and there is no unacceptable risk to future residents or other site users. Therefore, NFA is recommended for MC.

A PBA contract was funded in FY2011 to achieve RC by December 2014. A DD and PP are currently underway and expected to be complete in FY2013. LTM will not be necessary.

**CLEANUP/EXIT STRATEGY**

A DD will be finalized to document NFA for the site.

## Site ID: SCHBR-012-R-01

### Site Name: Garden Gulch Pistol Ranges

#### STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Metals, Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA.....	200204.....	200305
SI.....	200604.....	200806
RI/FS.....	200907.....	201207
RD.....	201103.....	201210
RA(C).....	201103.....	201301
LTM.....	201301.....	204301

RIP Date: N/A

RC Date: 201301

#### SITE DESCRIPTION

The Garden Gulch Ranges MR site is located south of Yonkers Range and west of Stoneman Field and McNair Gate. It includes five pistol ranges that are divided by a road, with one range northeast of the road and four to the west. The five pistol ranges are referred to as the Garden Gulch Pistol Ranges MR site for the remainder of the report due to their proximity to one another and their location within Garden Gulch. The pistol ranges vary in size with acreages of 0.17 acres, 0.09 acres, 0.07 acres, 0.09 acres and 0.25 acres. The ranges were first identified during a historical records review on a map dated Nov. 16, 1939.

Based on the range locations within the gulch, it is possible that pistol ranges were considered subcaliber ranges that were in use as a result of training for WWII. Ammunition used during these training sessions in the 1940s may have included .22 caliber, .38 caliber, and .45 caliber rounds.

An SI was conducted in 2008 and included a visual survey of approximately 4.4 line miles, and the collection of six surface soil samples, and ten sediment samples. No MEC or MD were identified during the visual survey, and analytical results indicate that no explosives were detected above USEPA regional screening levels (RSL). Metals (lead, antimony, and copper) however were found to be present in the soil at concentrations above RSL.

An RI/FS, PP, and DD have been completed at this site and was funded under a PBA contract to achieve RC by January 2013. The remedial action for Garden Gulch Pistol Ranges was conducted in FY12 and was executed per the Final Remedial Design Work Plan. The remedial action included excavation of lead-contaminated soil exceeding the recreational land use action level, stabilization of metals in excavated soil using ECOBOND Chemical Stabilization Technology, disposal of soil in an off-site disposal facility, installation of a soil cap, and LUCs.

A land use control implementation plan was completed in May 2013. Land Use Controls include maintenance of the installed soil cap and restriction of site activities to recreational use only. Therefore, RC was achieved in FY2013 with LTM and five-year reviews for this munitions response site (MRS).

#### CLEANUP/EXIT STRATEGY

A LUC implementation plan will be completed in FY2013. Response Complete will be achieved in FY2013 with LTM and five-year reviews for this MRS extending to 2043.

# Site ID: SCHBR-013-R-01

## Site Name: Southern Pistol Ranges - East

### STATUS

**Regulatory Driver:** CERCLA

**MRSPP Score:** 04

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

Media of Concern: Soil

Phases	Start	End
PA.....	200205.....	200305
SI.....	200604.....	200806
RI/FS.....	200907.....	201305
RD.....	201201.....	201306
RA(C).....	201201.....	201412
LTM.....	201501.....	204309

**RIP Date:** N/A

**RC Date:** 201412

### SITE DESCRIPTION

The Southern Pistol Ranges MR area is located in the southeast portion of the installation near installation boundary. Two pistol ranges were identified south of the cantonment area near the Small Bore Range, on a site map dated Nov. 16, 1939. It is estimated that these two ranges were constructed and used for training during the 1940s. The two pistol ranges are presented as one MRS and referred to as the Southern Pistol Ranges due to their close physical proximity and the fact that their operational history and munitions types are the same. The easternmost range is 0.23 acres and the westernmost range is 1.04 acres, for a site total of 1.3 acres.

An SI completed for the site in 2008 included a visual survey of approximately three line miles, and the collection of seven surface soil samples. No MEC were identified during the SI; however, MD in the form of expended small arms and smoke grenades were found in the western part of both ranges. At both sites, the MD items appeared to have been thrown down the sides of the respective gulches from above.

Soil sample results indicate that trace amounts of nitroglycerin (0.93Jmg/kg and 0.47J mg/kg) and 2,4-dinitrotoluene (0.45J mg/kg 0.44J mg/kg) are present in quality control (QC) samples: SBSPR-SOO04 and SB-SPBR-SO005. Both of these samples were taken from the same location on the western side of the site. The detected amount of explosive constituents are well below the USEPA Region 9 RSL (34.7 mg/kg for nitroglycerin and 122 mg/kg for 2,4-dinitrotoluene). Explosives were not detected in the quality assurance (QA) sample taken from the same location. In addition sample SBSPR-SOO04 detected elevated levels of lead that exceed the RSL. The associated QA and QC samples had significantly lower detected concentrations of lead (320 mg/kg and 339 mg/kg). The SI recommended further investigation for MEC and MC at the site.

An RI was completed. The RI included instrument aided visual survey, investigative intrusive activities, geophysical mapping, and IS. The current land use is industrial/commercial. Results of the RI determined the need for future phases at the site. The west portion of the site was recommended for NFA for MEC and MC under a new MRS (SCHBR-013-R-02), and the east portion of the site requires further investigation for MEC.

An FS was completed in September 2012. The recommended remedial alternative includes MEC clearance over the previously uninvestigated and accessible portion of the site (0.8 acres), surface/subsurface MEC clearance using mag and dig and Digital Geophysical Mapping (DGM), and excavation and disposal of soil exceeding the lead commercial/industrial (C/I) land use action level in the remaining 0.2 acres.

A PP was developed to present the remedial alternative to the public, and a DD was finalized in May 2013 to formally document the decision.

Remedial Design was completed in June 2013, and the Remedial Action is currently underway and expected to be complete in FY14.

It is anticipated that the site will achieve RC by December 2014. The site is funded to RC under a PBA contract awarded in

**Site ID: SCHBR-013-R-01**  
**Site Name: Southern Pistol Ranges - East**

FY2011. LTM will be implemented at the MRS and will consist of five-year reviews, O&M, and MEC institutional controls.

**CLEANUP/EXIT STRATEGY**

The removal action is currently underway and fully funded under the PBA contract. It is anticipated that the site will achieve RC by December 2014. LTM will be implemented at the MRS and will consist of five-year reviews, O&M, and MEC institutional controls.

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
SCHBR-001-R-01	A-100-1	200806	Not eligible for MMRP, Final SI concluded site was located on an operational range.
SCHBR-002-R-01	SMALL BORE RANGE	200806	Final SI recommended no further action for both MEC and MC.
SCHBR-003-R-01	WAIAWA TRAINING AREA	200701	Not eligible for MMRP, will be addressed under FUDS program.
SCHBR-005-R-01	YONKERS RANGE (TD)	200806	Not eligible for MMRP, Final SI concluded Yonkers Range did not have a transferred portion as originally suspected.
SCHBR-006-R-01	D-400-L	200701	Not eligible for MMRP, will be addressed under FUDS program.
SCHBR-007-R-01	CENTER COMBAT RANGE	200701	Not eligible for MMRP, will be addressed under FUDS program.
SCHBR-008-R-01	ER-7A	201209	Decision Document dated August 2012
SCHBR-009-R-01	A-101-L-1	200806	Not eligible for MMRP, Final SI concluded site was located on an operational range.
SCHBR-010-R-01	A-100-L-2	201209	Decision Document dated August 2012
SCHBR-011-R-01	A-100-L-2 (TD)	200806	Final SI recommended no further action for both MEC and MC.
SCHBR-013-R-02	Southern Pistol Ranges West	201209	Decision Document dated August 2012
SCHBR-014-R-01	Moyer Housing Project	200906	MEC was found during construction event. UXO support was needed during construction activities, which are now complete. Site was closed since no additional actions were needed at the site.

# MMRP Schedule

**Date of MMRP Inception** 200204

## Past Phase Completion Milestones

### 2003

PA (SCHBR-001-R-01 - A-100-1, SCHBR-002-R-01 - SMALL BORE RANGE, SCHBR-003-R-01 - WAIAWA TRAINING AREA, SCHBR-004-R-01 - YONKERS RANGE, SCHBR-005-R-01 - YONKERS RANGE (TD), SCHBR-006-R-01 - D-400-L, SCHBR-007-R-01 - CENTER COMBAT RANGE, SCHBR-008-R-01 - ER-7A, SCHBR-009-R-01 - A-101-L-1, SCHBR-010-R-01 - A-100-L-2, SCHBR-011-R-01 - A-100-L-2 (TD), SCHBR-012-R-01 - Garden Gulch Pistol Ranges, SCHBR-013-R-01 - Southern Pistol Ranges - East, SCHBR-013-R-02 - Southern Pistol Ranges West)

### 2008

SI (SCHBR-001-R-01 - A-100-1, SCHBR-002-R-01 - SMALL BORE RANGE, SCHBR-004-R-01 - YONKERS RANGE, SCHBR-005-R-01 - YONKERS RANGE (TD), SCHBR-008-R-01 - ER-7A, SCHBR-009-R-01 - A-101-L-1, SCHBR-010-R-01 - A-100-L-2, SCHBR-011-R-01 - A-100-L-2 (TD), SCHBR-012-R-01 - Garden Gulch Pistol Ranges, SCHBR-013-R-01 - Southern Pistol Ranges - East, SCHBR-013-R-02 - Southern Pistol Ranges West)

### 2009

PA (SCHBR-014-R-01 - Moyer Housing Project)  
 RI/FS (SCHBR-014-R-01 - Moyer Housing Project)  
 IRA (SCHBR-014-R-01 - Moyer Housing Project)

### 2012

RI/FS (SCHBR-008-R-01 - ER-7A, SCHBR-010-R-01 - A-100-L-2, SCHBR-012-R-01 - Garden Gulch Pistol Ranges, SCHBR-013-R-02 - Southern Pistol Ranges West)

## Projected Phase Completion Milestones

See attached schedule

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

Site ID	Site Name	ROD/DD Title	ROD/DD Date
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**Final RA(C) Completion Date:** 201412

**Schedule for Next Five-Year Review:** 2017

**Estimated Completion Date of MMRP at Installation (including LTM phase):** 204309

## SCHOFIELD BARRACKS MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
SCHBR-004-R-01	YONKERS RANGE	RI/FS						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
SCHBR-012-R-01	Garden Gulch Pistol Ranges	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
SCHBR-013-R-01	Southern Pistol Ranges - East	RA(C)						
		LTM						

**SCHOFIELD BARRACKS**  
**Army Defense Environmental Restoration Program**  
**Compliance Restoration**



## CR Summary

**Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count:** 15/14

### Installation Site Types with Future and/or Underway Phases

1 Underground Storage Tank  
(CCSB0004)

### Most Widespread Contaminants of Concern

Petroleum, Oil and Lubricants (POL)

### Media of Concern

Soil

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

Site ID	Site Name	Action	Remedy	FY
CCSB0018	8th TSC Motor Pool	IRA	WASTE REMOVAL - SOILS	2010
CCSB0029	Schofield Barracks Building 1180	IRA	REMOVAL	2010
CCSB0030	SB 3010 UST	IRA	WASTE REMOVAL - SOILS	2011
CCSB0031	Former Kalakaua Golf Course	IRA	OTHER	2011
CCSB0004	Schofield Barracks 80-5	FRA	CAPPING	2012

### Duration of CR

**Date of CR Inception:** 199209

**Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC):** 201202/201202

**Date of CR completion including Long Term Management (LTM):** 204309

# 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's Compliance-related Cleanup (CC) program eligible for the DERP. Sites that are now eligible for the MMRP have been migrated from Army Environmental Database - Compliance-related Cleanup (AEDB-CC) and given the naming convention of other MRS. The newly eligible non-MR type sites are considered to be Installation Restoration (IR) sites; however, the newly eligible sites are being coded as Compliance Restoration (CR) in AEDB-R to distinguish them from the original IR sites and IR metrics.

Five CR sites were initially identified at Schofield Barracks:

- CCSB0004 (Schofield Barracks 80-5) still underway
- CCSB0017 (Schofield Barracks Quad D)
- CCSB0018 [8th transportation service center (TSC) Motor Pool]
- CCSB0030 [SB 3010 underground storage tank (UST)], and
- CCSB0031 (former Kalakaua golf course).

## Cleanup Exit Strategy

An impermeable cap over the UST area (site CCSB0004) was installed and LTM is expected to maintain and inspect the condition of the impermeable cap for at least 30 years.

## CR Previous Studies

**Title**

**Author**

**Date**

There are no Previous Studies

# **SCHOFIELD BARRACKS**

## **Compliance Restoration**

### **Site Descriptions**

**STATUS**

Regulatory Driver: RCRA  
Contaminants of Concern: Petroleum, Oil and Lubricants (POL)  
Media of Concern: Soil

Phases	Start	End
ISC.....	199209.....	200303
INV.....	200305.....	201012
CAP.....	201101.....	201105
DES.....	201105.....	201109
IMP(C).....	201105.....	201202
LTM.....	201202.....	204309
<b>RIP Date:</b> N/A		
<b>RC Date:</b> 201202		

**SITE DESCRIPTION**

Schofield Barracks 80-5 is located near the Foote Gate entrance to Schofield Barracks, within the Army and Air Force Exchange Services (AAFES) car care center. The car care center is located on the south side of Foote Avenue near the intersection of Foote Avenue and Kunia Road. The car care center is operated by AAFES and provides petroleum fuels and automotive services to military personnel and their dependents. UST SB 80-5 was one of six 10,000-gallon, double walled fiberglass-reinforced plastic USTs located in a tank farm area at the site. Currently, five 10,000-gallon, double walled fiberglass-reinforced plastic USTs are in service (four gasoline tanks and one diesel tank) and are located in the tank farm area.

Weston Solutions, Inc. (Weston) is contracted under a PBA contract to characterize and delineate the subsurface petroleum impacted soil at the site, and achieve site closure. A characterization report was submitted by Weston in April 2011 that recommended installation of an impermeable cap to mitigate the migration of contaminants of potential concern (COPC) in the subsurface and implementation of an Environmental Hazard Management Plan (EHMP) to mitigate direct exposure hazards to surface contaminated soil.

The installation of an asphalt cap is documented in the November 2011 Remedial Action Completion Report. A Final EHMP (April 2012) addresses the site hazards for future construction activities and outlines procedures for future industrial/commercial land use.

In a letter dated March 2012, HDOH concluded that a conditional NFA with EHMP status is warranted. LTM will continue in the form of in-house periodic reviews, therefore, there is no cost associated with the LTM phase.

**CLEANUP/EXIT STRATEGY**

An impermeable cap over the UST area was installed and was funded under the existing PBA contract. LTM is expected to maintain and inspect the condition of the impermeable cap for at least 30 years.

## Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CCSB0008	Schofield Barracks 985	200905	Final Environmental Hazard Evaluation, May 2009
CCSB0009	Schofield Barracks Bldg 580	201003	Department of Health NFA letter dated March 2010
CCSB0010	Schofield Barracks Bldg 2515	201003	Department of Health NFA letter dated March 2010
CCSB0011	Schofield Barracks Bldg 1080	200909	Department of Health closure letter dated September 2009
CCSB0012	Schofield Barracks Quad B	201003	Department of Health NFA letter dated March 2010
CCSB0015	Schofield Barracks 955, Physical Ce	201003	Department of Health NFA letter dated March 2010
CCSB0017	Schofield Barracks Quad D	201106	Department of Health NFA letter dated Jun 2011.
CCSB0018	8th TSC Motor Pool	201010	Department of Health NFA letter dated October 2011
CCSB0026	Kaena Family Housing	201003	Department of Health NFA letter dated March 2010
CCSB0027	Schofield Barracks Quad I SB747	201003	Department of Health NFA letter dated March 2010
CCSB0028	Schofield Barracks WTU OPS SB 697	201003	Department of Health NFA letter dated March 2010
CCSB0029	Schofield Barracks Building 1180	201003	Department of Health NFA letter dated March 2010
CCSB0030	SB 3010 UST	201109	Department of Health conditional NFA letter dated July 2011
CCSB0031	Former Kalakaua Golf Course	201109	Department of Health NFA letter dated July 2009

## CR Schedule

**Date of CR Inception:** 199209

### Past Phase Completion Milestones

#### 1996

ISC (CCSB0011 - Schofield Barracks Bldg 1080)

#### 1997

ISC (CCSB0012 - Schofield Barracks Quad B)

#### 1998

ISC (CCSB0015 - Schofield Barracks 955, Physical Ce)

#### 2000

ISC (CCSB0008 - Schofield Barracks 985)

#### 2002

ISC (CCSB0009 - Schofield Barracks Bldg 580, CCSB0010 - Schofield Barracks Bldg 2515, CCSB0028 - Schofield Barracks WTU OPS SB 697)

#### 2003

ISC (CCSB0004 - Schofield Barracks 80-5, CCSB0017 - Schofield Barracks Quad D)

#### 2007

SI (CCSB0031 - Former Kalakaua Golf Course)

PA (CCSB0031 - Former Kalakaua Golf Course)

#### 2008

PA (CCSB0018 - 8th TSC Motor Pool)

ISC (CCSB0026 - Kaena Family Housing, CCSB0027 - Schofield Barracks Quad I SB747)

#### 2009

INV (CCSB0008 - Schofield Barracks 985, CCSB0011 - Schofield Barracks Bldg 1080)

#### 2010

ISC (CCSB0029 - Schofield Barracks Building 1180, CCSB0030 - SB 3010 UST)

INV (CCSB0009 - Schofield Barracks Bldg 580, CCSB0010 - Schofield Barracks Bldg 2515, CCSB0012 - Schofield Barracks Quad B, CCSB0015 - Schofield Barracks 955, Physical Ce, CCSB0026 - Kaena Family Housing, CCSB0027 - Schofield Barracks Quad I SB747, CCSB0028 - Schofield Barracks WTU OPS SB 697, CCSB0029 - Schofield Barracks Building 1180)

IRA (CCSB0018 - 8th TSC Motor Pool, CCSB0029 - Schofield Barracks Building 1180)

#### 2011

SI (CCSB0018 - 8th TSC Motor Pool)

INV (CCSB0004 - Schofield Barracks 80-5, CCSB0017 - Schofield Barracks Quad D, CCSB0030 - SB 3010 UST)

IRA (CCSB0030 - SB 3010 UST, CCSB0031 - Former Kalakaua Golf Course)

DES (CCSB0004 - Schofield Barracks 80-5)

CAP (CCSB0004 - Schofield Barracks 80-5)

RI/FS (CCSB0031 - Former Kalakaua Golf Course)

#### 2012

IMP(C) (CCSB0004 - Schofield Barracks 80-5)

### Projected Phase Completion Milestones

See attached schedule

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

To Be Determined

## CR Schedule

**Final RA(C) Completion Date:** 201202

**Schedule for Next Five-Year Review:** 2017

**Estimated Completion Date of CR at Installation (including LTM phase):** 204309



## SCHOFIELD BARRACKS CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
CCSB0004	Schofield Barracks 80-5	LTM						

## Community Involvement

**Technical Review Committee (TRC):** 199312

**Community Involvement Plan (Date Published):** TBD

**Restoration Advisory Board (RAB):** No

**Reason Not Established:** Installation is in the process of determining interest in establishing a RAB.

### **Additional Community Involvement Information**

A community involvement plan has not been developed. USAG-HI solicited for a RAB in July 2011. The request for interest was published in the Honolulu Star Advertiser from July 24 through 26, 2011. No RAB was formed due to insufficient public interest. USAG-HI solicited for RAB interest again in March 2013. The 30-day public comment period is underway, and formation of a RAB will be determined after the public comment period is completed.

### **Administrative Record is located at**

Department of Public Works  
948 Santos Dumont Ave, Bldg. 105  
Wheeler AAF, Schofield Barracks, HI 96857-5013  
808-656-3092

### **Information Repository is located at**

Mililani Library  
95-450 Makaimoimo Street  
Mililani, HI 96789  
808-627-7470

Wahiawa Public Library  
820 California Avenue  
Wahiawa, HI 96786  
808-622-6345

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

**TAPP Title:** N/A

**Potential TAPP:** N/A

