# **SCHOFIELD BARRACKS**

Army Cleanup Program

Installation Action Plan Final June 2024

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#### **STATEMENT OF PURPOSE**

The Installation Action Plan (IAP) provides evidence that the Army is firmly committed to expeditious identification and cleanup of environmental contamination, and that the installation has a credible, organized program to carry out that commitment. The IAP provides an outline of the total multiyear environmental cleanup program for each site with ongoing or future planned restoration activity and includes the (1) environmental restoration requirements, (2) the rationale for the selected technical approach, and (3) foundation to develop corresponding financial needs for each cleanup site.

### ACRONYMS

Acronym	Definition
AEDB-R	Army Environmental Database - Restoration
ASTS	Air Stripping Treatment System
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
сс	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
С/І	Commercial/Industrial
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
DCS	Deputy Chief of Staff
DD	Decision Document
DERP	Defense Environmental Restoration Program
DES	Design
DOD	Department of Defense
ЕНМР	Environmental Hazard Management Plan
ENV	Environmental
EOD	Explosive Ordnance Disposal
ESD	Explanation of Significant Differences
FS	Feasibility Study
FUDS	Formerly Used Defense Site
FY	Fiscal Year
НДОН	Hawaii Department of Health
HMR	Helemano Rad Rec Station
HRR	Historical Records Review
HRS	Hazard Ranking Score
IM	Interim Measure
IR	Installation Restoration
IRA	Interim Remedial Action
kg	Kilogram
KILMR	Kilauea Military Reservation
LTM	Long-Term Management
LUC	Land Use Control

Acronym	Definition	
LUCIP	Land Use Control Implementation Plan	
MAKU	Makua Military Reservation	
МС	Munitions Constituents	
MD	Munitions Debris	
MEC	Munitions and Explosives of Concern	
mg	Milligram	
MMR	Makua Military Reservation	
MMRP	Military Munitions Response Program	
MR	Munitions Response	
MRS	Munitions Response Site	
MRSPP	Munitions Response Site Prioritization Protocol	
MUWM	Makua Underwater Munitions	
N/A	Not Applicable	
NFA	No Further Action	
NPL	National Priorities List	
ОВ	Open Burn	
OD	Open Detonation	
OU	Operable Unit	
0&M	Operations and Maintenance	
РА	Preliminary Assessment	
PFAS	Per- and Polyfluoroalkyl Substances	
ΡΟΤΑ	Pohakuloa Training Area	
РР	Proposed Plan	
PRG	Preliminary Remediation Goals	
RA	Remedial Action	
RACR	Remedial Action Completion Report	
RA(C)	Remedial Action (Construction)	
RA(O)	Remedial Action (Operations)	
RC	Response Complete	
RCRA	Resource Conservation and Recovery Act	
RD	Remedial Design	
RFA	RCRA Facility Assessment	
RFI	RCRA Facility Investigation	
RI	Remedial Investigation	
RIA	Remedial Investigation Addendum	
RIP	Remedy-In-Place	
ROD	Record of Decision	

Acronym	Definition	
RRSE	Relative Risk Site Evaluation	
RSL	Regional Screening Level	
SCHBR	Schofield Barracks	
SI	Site Inspection	
SVOC	Semi-Volatile Organic Compound	
ТАМС	Tripler Army Medical Center	
TCE	Trichloroethylene	
TCRA	Time Critical Removal Action	
ТРН	Total Petroleum Hydrocarbon	
UE	Unrestricted Exposure	
USAG-HI	US Army Garrison-Hawaii	
USEPA	US Environmental Protection Agency	
UST	Underground Storage Tank	
UU	Unlimited Use	
VOC	Volatile Organic Compound	
WAAF	Wheeler Army Airfield	
WAST	Waikakalaua Ammo Storage Tunnels	
wwii	World War II	

#### PHASE TRANSLATION TABLE

CERCLA Phase	RCRA Phase	RCRA UST Phase
Preliminary Assessment (PA)	RCRA Facility Assessment (RFA)	Initial Site Characterization (ISC)
Site Inspection (SI)	Confirmation Sampling (CS)	Investigation (INV)
Remedial Investigation/ Feasibility Study (RI/FS)	RCRA Facility Investigation/Corrective Measures Study (RFI/CMS)	Corrective Action Plan (CAP)
Remedial Design (RD)	Design (DES)	Design (DES)
Interim Remedial Action (IRA)	Interim Measure (IM)	Interim Remedial Action (IRA)
Remedial Action (Construction) (RA(C))	Corrective Measures Implementation (Construction) (CMI(C))	Implementation (Construction) (IMP(C))
Remedial Action (Operations) (RA(O))	Corrective Measures Implementation (Operations) (CMI(O))	Implementation (Operations) (IMP(O))
Long-Term Management (LTM)	Long-Term Management (LTM)	Long-Term Management (LTM)

#### **PROGRAM SUMMARY**

Number of Open Sites with Response Complete/Total Open IR Sites: 7/14 Number of Open Sites with Response Complete/Total Open MR Sites: 10/13 Number of Open Sites with Response Complete/Total Open CC Sites: 0/0 SITE-LEVEL INFORMATION

### **HELEMANO RAD REC STATION**

Installation Name: SCHOFIELD BARRACKS Installation City: WAHIAWA Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

#### 2209A.1012\_HMR-PFAS\_PFAS

Env Site ID: HMR-PFAS Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 10/1/2028 RC Date: 10/1/2028 RC Reason: Not assigned SC Date: 10/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	11/13/2019
SI:	11/14/2019	10/1/2028
RI/FS:		
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from Deputy Chief of Staff (DCS) G-9, this site was created to account for all per- and polyfluoroalkyl substances (PFAS) cleanup at the installation. In 2023, the Army determined that areas of potential interest identified during the preliminary assessment (PA) at three additional sub-installations, Dillingham Military Reservation, Kipapa Ammunition Storage Site, and Kunia Field Station will proceed to the site inspection (SI) phase. Therefore, the SI phase remains currently underway.

### **KILAUEA MILITARY RESERVATION**

Installation Name: KILAUEA MILITARY RESERVATION Installation City: VOLCANO Installation County: HAWAII Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

#### 2213A.1022\_KILMR-PFAS\_PFAS

Env Site ID: KILMR-PFAS Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 3/1/2028 RC Date: 3/1/2028 RC Reason: Not assigned SC Date: 3/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	11/13/2019
SI:	11/14/2019	8/31/2023
RI/FS:	9/1/2023	3/1/2028
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from DCS G-9, this site was created to account for all PFAS cleanup at the installation. The PA/SI was completed in 2023 and recommended further study in a remedial investigation (RI). The RI phase is underway.

### **KUNIA FIELD STATION**

Installation Name: KUNIA FIELD STATION Installation City: WAHIAWA Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

#### 2223A.1001\_FSK-01\_LUST REMEDIATION (305K GAL TK)

Env Site ID: FSK-01
Cleanup Site: LUST REMEDIATION (305K GAL TK)
Alias: 2B
Regulatory Driver: RCRA-I
<b>RIP Date:</b> 9/30/2005
<b>RC Date:</b> 9/30/2005
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
ISC:	10/31/1993	2/28/1994
INV:	10/31/1993	2/28/1994
CAP:	9/30/1998	7/31/2001
DES:	4/30/1998	5/31/2005
IRA:	3/31/1994	7/31/1996
IMP(C):	5/31/2005	9/30/2005
IMP(O):		
LTM:	6/15/2006	9/30/2054

Site Narrative: Kunia Field Station was built during World War II (WWII) and was originally used as an aircraft assembly plant. The installation was later transformed into a communications facility operated by the Navy Information Operations Command and is still active. The station formerly housed a 305,000gallon capacity underground storage tank (UST). In 1991, this tank failed a tank tightness test and was subsequently removed in May 1994. The UST had stored diesel fuel and subsequently was designated as site FSK-01 to address several environmental investigations related to the UST. Prior to removal of the UST, eight borings were advanced at the periphery of the concrete UST to collect soil samples for laboratory analysis. Analytical results revealed the presence of volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) in the samples collected at concentrations below the Hawaii Department of Health (HDOH) cleanup guidelines in effect at the time. In 1994 the leaking UST was excavated, demolished, and removed. Soil samples were collected during the removal/closure of the UST and analytical results showed that benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbon (TPH)-D, and polycyclic aromatic hydrocarbons were detected. Thus, a post-removal investigation was conducted of subsurface soil within and around the footprint of the former UST in the same year after the UST closure. Soil samples collected during the investigation revealed the presence of petroleum hydrocarbons, VOCs, and SVOCs; however, the concentration of contaminants including diesel and benzo(a)pyrene, exceeded the respective tier 1 soil action levels. In 1999, an RI was performed at the former leaking UST site to further delineate the horizontal and vertical extent of contamination resulting from the subject UST. During that period, 16 soil borings were advanced to a maximum depth of 250 feet below ground surface (bgs). Diesel concentrations in several collected soil samples exceeded the tier 1 soil action level. Based on the RI data, the contaminant plume was determined to be of an elongated configuration, oriented from north to south, and extending to approximately 50 feet laterally from the former UST footprint and 250 feet bgs. The RI results were used to initiate risk-based human health and ecological evaluations and the subsequent remedial action (RA) work. Soil beneath and surrounding the UST was found to be contaminated with diesel fuel. Due to contamination extending to

such deep depth, removal was determined to be infeasible. Construction of the remedial cap system to prevent exposure to soil and to minimize infiltration of rainwater was selected as the remedial approach in partnership between the US Army Garrison-Hawaii (USAG-HI) Directorate of Public Works and the HDOH. In 2005 the cap was installed. In 2008, the response action memorandum (decision document (DD) equivalent) for the site was approved and signed. Concurrently, implementation of long-term management (LTM) began in 2008 and continues to present. Land use controls (LUC) have been implemented to restrict any intrusive activities (such as digging, excavating, etc.) in accordance with the response action memorandum/DD. LTM consisting of remedial cap inspection and maintenance, periodic reviews every five years, and LUC are administered. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for unlimited use (UU)/ unrestricted exposure (UE), five-year remedy reviews will continue indefinitely. Currently LTM is underway. Periodic reviews are conducted every five years during LTM with the first periodic review completed in 2014 and second periodic review in 2018. Based on the previous periodic reviews, remedy remains protective of human health and the environment. LTM efforts have ensured the integrity of the remedy components. Cleanup/Exit Strategy - LTM will continue at the site until all remedy components and LUCs are determined to be no longer needed to protect human health and the environment.

### **MAKUA MILITARY RESERVATION**

Installation Name: MAKUA MILITARY RESERVATION Installation City: WAIANAE Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

#### 2215A.1006\_MAKU-002-R-01\_MAKUA TRAINING AREA (TD)

Env Site ID: MAKU-002-R-01
Cleanup Site: MAKUA TRAINING AREA (TD)
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 9/15/2016
<b>RC Date:</b> 9/15/2016
RC Reason: All Required Cleanup(s) Completed
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

**MRSPP: 10** 

Phase	Start	End
PA:	4/15/2002	5/15/2003
SI:	4/30/2006	6/30/2008
RI/FS:	9/30/2008	9/15/2015
RD:	9/15/2015	9/15/2015
IRA:		
RA(C):	9/15/2015	9/15/2016
RA(O):		
LTM:	12/15/2016	9/30/2054

Site Narrative: The site originally encompassed 855 acres and was reduced to 688 acres after completion of an RI in 2015 and transfer of 166 acres that were no further action (NFA) to the state. This site extends to the west and north of the Makua boundary. On Dec. 7, 1941, the Army took over the entire Makua-Kaena Point area for security and training operations. In December 1942, the Army issued a real estate directive for 6,600 acres of land in the Makua area for continued use as a training area. As part of this directive, private parcels of land within the Makua area were taken by condemnation, whereas territorial lands were conferred by the territorial governor's consent (Onyx, 2001). A series of real estate actions that occurred during 1964 resulted in the current 4,190-acre mixture of leased, ceded, and fee-simple land holdings that does not include these closed, transferred or transferring range areas. The entire Makua Valley was used for aerial helicopter gunnery maneuvers by the US Army, Hawaii National Guard, and the US Marine Corps for small arms and artillery firing, helicopter gunnery practice, and tactical livefire exercises. From 1941 to 1949, the area was originally used for invasion training. Invasion training activities included naval aerial bombing of the area, while battleships shelled from the ocean, and troops from amphibious craft landed on the beach. Between 1949 and 1951, range-clearing operations were conducted to remove unexploded bombs and shells. Range activities continued in the early-1950s to prepare for the Korean conflict. A range clearance of the southern beach portion was conducted between February and May 1950. The final historical records review (HRR) for Makua confirmed that beach assaults occurred along the coastline of Makua and that amphibious assault training occurred on the western boundary of the installation, along the Pacific Ocean. According to the interviewee, most of the range training activities occurred for deployment to Korea and Vietnam and that after WWII, this area was most likely used for maneuvering with pyrotechnics and artillery firing positions. Approximately 1,500 acres were transferred to the state in the 1960s. The last transfer involved 855 acres in 1990. Since this last transfer was after 1986, it was not eligible for the Formerly Used Defense Sites (FUDS) program; instead, it is managed under the Active Army Military Munitions Response Program (MMRP). This portion of the training area was not used as the primary target. A second clearance operation of Makua

Valley occurred in 1963. A portion of the operational Makua Training Area was included, but the ordnance recovered was not disclosed. Recovered ordnance were either destroyed in place or removed from the area and destroyed. An SI was completed in 2008. No munitions and explosives of concern (MEC) were identified within the site. One munitions debris (MD) item, a fragment from what may have been a 155mm projectile was identified in the southern beach portion of the munitions response site (MRS). The SI recommended further investigation for MEC at the site. The RI was completed and finalized in 2011. Based on the RI results, no further action was recommended for munitions constituents (MC) but recommended continuation of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) process for MEC at this site. In addition, the RI recommended a portion of the site (approximate 166 acres) be closed under NFA. For administrative purposes, the 166 acres of NFA site was tracked under Army Environmental Database – Restoration (AEDB-R) ID as MAKU-002-R-02 and is listed as closed site. A remedial investigation addendum (RIA) was completed in 2015 to address data gaps from the 2011 RI. The RIA further concluded that approximately 256 acres of the MRS was suitable for NFA and is tracked under a different AEDB-R ID as MAKU-002-R-03. As a result, the remaining portion of this MRS (433 acres) site MAKU-002-R-01 continued with the CERCLA process. The DD was signed in 2015. The selected final remedy decision for the MRS is LUC implementation to monitor the potential MEC hazard remaining on-site and ensure associated land use restrictions are in compliance with the DD. Based on inaccessible terrain and the current and anticipated future land uses at the MRS, the potential explosive hazard, which does not allow for UU/UE at the MRS, will best be managed through LTM and five-year reviews will continue indefinitely to ensure protectiveness of human health, safety, and the environment. LTM is underway and includes monitoring and maintenance, annual site inspection, land use controls, and CERCLA five-year reviews to occur every five years. The first five-year review is anticipated to be completed in fiscal year (FY)24. Cleanup/Exit Strategy - LTM will continue at the site until LUCs are determined to be no longer needed to protect human health and the environment.

#### 2215A.1007\_MAKU-003-R-01\_Beach Assault Training Area

Env Site ID: MAKU-003-R-01 Cleanup Site: Beach Assault Training Area Alias: # Regulatory Driver: CERCLA RIP Date: 1/1/2017 RC Date: 1/1/2017 RC Reason: All Required Cleanup(s) Completed SC Date: 9/30/2054 Program: ENV Restoration, Army Subprogram: MR NPL Status: No Hazardous Ranking Score: 0 RRSE: N/A

**MRSPP: 10** 

Phase	Start	End
PA:	4/30/2002	5/31/2003
SI:	4/30/2006	6/30/2008
RI/FS:	9/30/2008	9/30/2011
RD:	1/30/2012	4/30/2015
IRA:		
RA(C):	1/31/2012	1/1/2017
RA(O):		
LTM:	10/15/2017	9/30/2054

Site Narrative: This site, known as the Beach Assault Training Area, encompasses 23.14 acres of Makua Military Reservation (MMR). The site had been used extensively since the 1920s for training and artillery and bombing practice. The site is located in the southern portion of MMR and between Farrington Highway to the east and Makua Beach owned by the state to the west. The site was used for general military training purposes from the 1940s until 1990. Training activities included naval aerial bombing, shelling from offshore battleships, and amphibious assaults on Makua Beach. In addition, training activities for small arms and artillery firing, helicopter gunnery practice and maneuvers, tactical live-fire training exercises, and ground training of troops in simulated war time activities have also occurred. A wide variety of munitions have been used at the site including small arms, medium caliber arms, large caliber arms, field artillery grenades, mortars, rockets, pyrotechnics, bombs, and bulk explosives. The terms of the lease allow public access to Makua Beach. A range clearance of the site was conducted between February and May 1950. The clearance operation covered approximately 1,200 acres and included land from the seashore to approximately 1,000 yards inland. Items recovered during the clearance included rockets, shells and projectiles, rifle grenades, bombs, small arms, and bulk explosives. An SI was completed at the site in 2008. No MEC were identified within the site. One MD item, a fragment from what may have been a 155mm projectile, was identified within the site during the SI. The SI recommended NFA for MC but further investigation for MEC. Subsequently, an RI was conducted in 2011 and concluded that the site required removal action and remedial design. Due to data gaps, an RIA was conducted. Based on both the RI and RIA, the results concluded with 95% confidence that 1.253 unexploded ordnance would be encountered per acre in areas that were not fully cleared and surveyed. Thus, these areas were considered a MEC hazard area. As a result, it was recommended the MRS continue with a feasibility study (FS) to evaluate potential alternatives to mitigate the remaining MEC hazard area. In 2015, a focused FS was completed and provided three alternatives to address the remaining MEC hazards. The selected remedy recorded in the final DD was MEC removal for subsequent UU/UE and community outreach within the Makua area to educate the public about potential explosive

hazards. The Remedial Action Completion Report (RACR) was completed in 2016 and accessible areas of the MRS were cleared of surface and subsurface MEC within the depth of detection. The inaccessible areas had been historically disturbed (i.e., construction of the highway and burial activities); thus, it was very likely that the inaccessible areas were clear of MEC. Regardless, it was recommended to implement LUCs for the entire area to prevent possible direct contact with subsurface MEC. A land use control implementation plan (LUCIP) detailing the LUC and LTM requirements was completed in 2016. An explanation of significant differences (ESD) was completed in 2019 to document the modification to the 2016 DD which added LUCs and LTM requirements to the site. Because there is possibility of MEC remaining in the subsurface of the site which does not allow for UU/UE, LUC and five-year remedy reviews will continue indefinitely. LTM includes land use controls, annual site inspections, community outreach programs, and CERCLA five-year reviews. The first five-year review is underway. Cleanup/Exit Strategy - LTM will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

#### 2215A.1018\_MAKU-004-R-01\_UXO FOUND UNDERWATER OFF M

Env Site ID: MAKU-004-R-01
Cleanup Site: UXO FOUND UNDERWATER OFF M
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 10/1/2027
<b>RC Date:</b> 10/1/2027
RC Reason: Not assigned
SC Date: 11/2/2056
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A
MRSPP: 4

Phase	Start	End
PA:	7/15/2016	7/15/2016
SI:		
RI/FS:	9/15/2020	9/30/2025
RD:		
IRA:	9/15/2016	5/15/2019
RA(C):	10/1/2025	10/1/2027
RA(O):		
LTM:	11/1/2027	11/1/2056

Site Narrative: The Makua Underwater Munitions MRS is located in the northwestern portion of Oahu near Kaena Point. The MRS is situated offshore of the state of Hawaii Makua Beach Park and is adjacent to MMR in Waianae, Hawaii. The Makua Underwater Munitions MRS is a 20-acre underwater area and is adjacent to two nearby MRSs. The MRS occurs within the ocean, which is owned by the U.S. and controlled by the state of Hawaii. Unexploded ordnance was found underwater offshore of MMR in June/July 2016. Navy explosive ordnance disposal (EOD) responded and addressed found items. A time critical removal action (TCRA) was conducted, and the completion report was finalized in early 2019. During the TCRA, surface clearance of 99.85% (19.97 acres) of the MRS was completed; 0.15% (0.03 acres or 1,281 square feet) had limited accessibility due to safety concerns associated with the terrain and ocean currents. The areas could not be cleared with handheld magnetometers. Based on the TCRA results, the site was recommended for RI/FS. Currently, the RI/FS is underway. Cleanup/Exit Strategy - It is anticipated that the site may require implementation of underwater use restrictions and site monitoring depending on the final RI/FS results and stakeholders' input.

### **POHAKULOA TRAINING AREA**

Installation Name: POHAKULOA TRAINING AREA Installation City: HILO Installation County: HAWAII Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

#### 2216A.1003\_POTA-03\_ABANDONED LANDFILL 1 (WSC #6)

Env Site ID: POTA-03
Cleanup Site: ABANDONED LANDFILL 1 (WSC #6)
Alias: NFA
Regulatory Driver: CERCLA
<b>RIP Date:</b> 5/15/1997
<b>RC Date:</b> 5/15/1997
RC Reason: Study Completed, No Cleanup Required
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
PA:	6/15/1983	8/15/1984
SI:	5/15/1995	5/15/1997
RI/FS:		
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:	9/15/2008	9/30/2054

Site Narrative: Abandoned Landfill 1 was initially identified in an installation assessment conducted in 1984. The abandoned landfill is located in the southern section of the main post. The landfill was closed in 1977 by the Army. An SI was completed in FY97. The site was not required to meet the criteria of 40 Code of Federal Regulations Parts 257 and 258 for municipal solid waste landfills and no cover design or closure report was needed. POTA-03 does not have specific post-closure monitoring requirements, but it must maintain a minimum of two feet of cover over the landfill area to meet HDOH regulations. In March 2009, an exclusionary fence around the former landfill was erected to limit exposure to the landfill wastes; a geographic information shapefile for LUC boundary determination was created; and a topographic survey was conducted. Community input to the proposed plan (PP) for the site and POTA-06 was solicited in January 2010. The DD was signed in March 2010. Implementation of LTM phase is underway. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue indefinitely. LTM phase includes maintenance of the landfill exclusionary boundaries and signs, and five-year reviews. Inspection and maintenance of the site are currently ongoing to meet the LUC requirement. In accordance with the ramp-down strategy, as of May 2012, physical site inspections have been reduced from quarterly to semiannually. A concurrence letter for the reduction in inspections was provided by the HDOH. Previous five-year reviews were completed 2014 and 2019 with no major findings, and it was recommended to continue the LTM effort as there is no optimization opportunity. The third five-year review is underway. Cleanup/Exit Strategy - LTM phase will continue at the site until all LUCs are no longer needed to protect human health and the environment.

#### 2216A.1005\_POTA-06\_LANDFILL 2 (WSC #7)

Env Site ID: POTA-06
Cleanup Site: LANDFILL 2 (WSC #7)
Alias: NFA
Regulatory Driver: CERCLA
<b>RIP Date:</b> 7/15/1997
<b>RC Date:</b> 7/15/1997
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:

MRSPP: N/A

Phase	Start	End
PA:	6/15/1983	8/15/1984
SI:	5/15/1995	5/15/1997
RI/FS:		
RD:		
IRA:		
RA(C):	7/15/1995	7/15/1997
RA(O):		
LTM:	9/15/2008	9/30/2054

Site Narrative: POTA-06 was used from 1979 until it was closed in October 1993. In 1997, an SI was completed for both sites and POTA-06 was covered with lava cinder. According to the Pohakuloa Training Area landfill closure report for POTA-06, issued in June 1994, the HDOH required methane monitoring of the site for a total of five years. In March 2009, an exclusionary fence around the former landfill was erected to limit exposure to the landfill wastes. In addition, the cinder cover was augmented with additional cinder, and a topographic survey was completed. Methane monitoring commenced in FY09 for POTA-06. Community input to the PP was solicited in January 2010. The DD was signed in March 2010. Because the future land use will remain industrial and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, LTM and five-year remedy reviews will continue indefinitely. LTM included maintenance of the landfill exclusionary boundaries, signs, the cinder cover, methane monitoring to satisfy the HDOH closure report requirement, and five-year reviews in conjunction with the POTA-03 site. Implementation of LTM phase is underway. Inspection and maintenance of the site are currently ongoing to meet the LUC requirement. Methane gas monitoring has been discontinued based on the methane results of four consecutive quarterly monitoring events and the ramp-down strategy. Physical site inspections have been reduced from a guarterly to semiannual basis as of May 2012. A concurrence letter for the reduction in inspections and elimination of methane gas monitoring was provided by the HDOH. There were two fiveyear reviews completed respectively in 2014 and 2019. The third five-year review is underway. There are no major findings, and it is recommended to continue the LTM phase effort and there is no optimization opportunity. Cleanup/Exit Strategy - LTM phase will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

#### 2216A.1029\_POTA-20\_PFAS

Env Site ID: POTA-20 Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 3/1/2028 RC Date: 3/1/2028 RC Reason: Not assigned SC Date: 3/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	9/15/2019
SI:	12/15/2019	8/31/2023
RI/FS:	9/1/2023	3/1/2028
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from DCS G-9, this site was created to account for all PFAS cleanup at the installation. The PA/SI was completed in 2023 and recommended further study in an RI. The RI is underway.

#### 2216A.1023\_PTA-003-R-01\_Pu'u Pa'a Site

Env Site ID: PTA-003-R-01 Cleanup Site: Pu'u Pa'a Site Alias: # Regulatory Driver: CERCLA RIP Date: 10/1/2032 RC Date: 9/30/2062 RC Reason: Not assigned SC Date: 9/30/2062 Program: ENV Restoration, Army Subprogram: MR NPL Status: No Hazardous Ranking Score: 0 RRSE: N/A MRSPP: 2

Phase	Start	End
PA:	9/15/1997	3/15/1999
SI:	9/15/1997	3/15/1999
RI/FS:	9/15/2009	7/20/2028
RD:	10/1/2028	9/30/2030
IRA:	6/30/2006	11/30/2024
RA(C):	10/1/2030	9/30/2032
RA(O):	10/1/2032	9/30/2062
LTM:		

Site Narrative: The Pu'u Pa'a site is a land parcel surrounded entirely by the Former Waikoloa Maneuver Area FUDS. The Pu'u Pa'a parcel was originally investigated in 1997 as part of the FUDS site but deemed ineligible for FUDS due to the Army's active use of the parcel for non-live firing training until 2000. It was known as the Pu'u Pa'a Local Training Area until 1998 and then used by the Hawaii Army National Guard for similar training exercises until approximately 2000. Pu'u Pa'a MRS is a 13,542 acre parcel with gently sloping land located approximately 1.5 miles south of the town of Waimea on the lower southwestern slope of Mauna Kea. It is mostly covered with grass and some cactus plants dispersed throughout. The most significant geographic feature is the Pu'u Pa'a cinder cone located in the north central portion of the property. The parcel is privately owned by Parker Ranch and is primarily used for livestock grazing. One tenant on the parcel (Hawaii American Water) operates a wastewater treatment plant on the site. The RI was completed in 2013. The RI found a total of 25 MEC items dispersed throughout the MRS. The maximum detected concentrations of all MC were either within the range of naturally occurring elements or below concentrations that pose unacceptable risk. A 128-acre portion of the northeast corner of the site was previously cleared by the FUDS program and will be recommended for NFA. The RI report was finalized in 2014 and recommended further action for MEC for the remaining 13,594 acres. An NFA is recommended for MC. The FS was subsequently conducted but never completed beyond the draft 2019 FS due to a TCRA authorized by Headquarters Department of Army for a portion of the MRS because of imminent threat to public health and safety posed by surface MEC. The TCRA was initiated in January 2021 and was completed in February 2022. Approximately 2,818 acres were cleared of surface munitions. Approximately 0.03 acres could not be cleared due to surface obstructions. 46 MEC items and 15,057.8 pounds of munitions debris were removed and disposed of during the TCRA. The property owner has identified other parcels of the MRS for future development and requested additional clearance for anticipated future commercial/industrial (C/I) land use. On March 31, 2023, an action memorandum was signed to conduct surface and subsurface MEC clearance of approximately ten acres where future development is imminent. A second TCRA is currently underway. The FS, PP, and DD are

underway. Data from the draft 2019 FS, 2021 TCRA, and 2023 TCRA will be incorporated into the FS. The cleanup effort for the MRS is anticipated to require up to 30 years since the MRS encompasses a considerably large area. Headquarters Department of Army retains approval authority for this site for all clean up phases [interim remedial action (IRA), RI/FS, remedial design (RD) and remedial action (construction) RA(C)] performed until further notice.

## **SCHOFIELD BARRACKS**

Installation Name: SCHOFIELD BARRACKS Installation City: WAHIAWA Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: EPA Regulatory Participation - State: HDOH

#### 15815.1029\_SCHBR-12\_FORMER LANDFILL (FFA 7)

Env Site ID: SCHBR-12
Cleanup Site: FORMER LANDFILL (FFA 7)
Alias: OU4
Regulatory Driver: CERCLA
RIP Date: 7/31/1998
<b>RC Date:</b> 9/30/1998
RC Reason: Other
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: Delisted
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
PA:	1/31/1984	2/28/1993
SI:	6/30/1991	2/28/1993
RI/FS:	2/28/1993	12/31/1995
RD:	4/30/1996	8/31/1996
IRA:		
RA(C):	11/30/1996	7/31/1998
RA(O):		
LTM:	9/30/1998	9/30/2054

Site Narrative: Operable Unit (OU) 4 which consists of a 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 US Environmental Protection Agency (USEPA) field inspection report concluded that previous hazardous waste disposal at the site was very likely to have occurred. It suggested that the most immediate environmental threat was from the instability of the landfill and its erosion. In 1981, the landfill was closed and capped with a clay cover. The FY92 PA/SI included a soil gas survey of the landfill which indicated VOCs contamination including trichloroethylene (TCE) and dichloroethylene. The RI Phase I was conducted between 1993 and 1994, and included soil gas surveys, lysimeter installation and sampling, deep soil sampling, and installation of monitoring wells. Results of the RI 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 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 finalized in 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. LTM of the cover was also recommended in the FS report. In 1996, a PP was released for public review. The record of decision (ROD) was completed and signed by the Army, the state of Hawaii, and the USEPA Region IX

in 1996. In 1998, the repair/maintenance action at the landfill was completed. The landfill cap was cleared and regraded. Other improvements included a drainage system and installation of gas wells. In 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 National Priorities List (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. Extensive damage to the central drainage channel occurred during a heavy rainfall event on Dec. 11, 2008. Drainage repairs were completed at the end of 2010. The fifth five-year review was completed in October 2022 as part of the installation wide under NPL sites and concluded that no significant issues were identified in regards of the protectiveness of the final selected remedy for OU4. Implementation of LTM is underway at SCHBR-12 in accordance with the 2020 LTM plan. Ongoing maintenance at the landfill is required to address cracks and settlement on the landfill cap. Inspections of the cap, drainage system, and irrigation system for regulatory reporting are conducted quarterly. Herbiciding and/or removal of vegetation that may cause damage to landfill features (i.e., fence, drainage headwall), cutting of grass, and repairing of the landfill cap and related features (e.g., fence, signage) are ongoing as part of the long-term maintenance plan. Because the future land use will remain C/I and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue indefinitely. Cleanup/Exit Strategy - LTM will also continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

#### 15815.1050\_SCHBR-19\_OU2 Groundwater Contamination

Env Site ID: SCHBR-19
Cleanup Site: OU2 Groundwater Contamination
Alias: 1A
Regulatory Driver: CERCLA
<b>RIP Date:</b> 2/28/1997
<b>RC Date:</b> 9/30/2054
RC Reason: Not assigned
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: Delisted
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
PA:	6/30/1983	5/31/1992
SI:	8/31/1991	5/31/1992
RI/FS:	11/30/1991	8/31/1996
RD:		
IRA:	1/15/1986	12/15/1986
RA(C):	8/31/1996	2/28/1997
RA(O):	2/28/1997	9/30/2054
LTM:		

Site Narrative: The function of OU2 is to address installation-wide groundwater contamination. 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. The level of detected TCE was above the Safe Drinking Water Act maximum contaminant level of five parts per billion. An air stripping treatment system (ASTS) was installed 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 TCE withdrawn from the system is 33 gallons per year. In FY92, 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 detected TCE levels at 5.3 parts per billion; all others were below detection. The PA/SI sampling results indicated that TCE is present in the Schofield supply wells, Kunia Village wells, and a number of monitoring wells in the Schofield vicinity. The Phase II RI investigations conducted between 1994 and 1995 focused on collecting data to support the implementation of a point-of-use treatment approach for the final groundwater remedy. Under this approach, the Army monitors surrounding wells and treats groundwater only where it is pumped and used. In 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 waiver was granted for OU2 by USEPA Region 9. The ROD was signed by the Army, the HDOH, and the USEPA in September 1996, November 1996, and February 1997, respectively. The ROD obligations to date include - 1) Schofield Barracks WTP, 2) Kunia Village ASTS, 3) Sandwich Isle ASTS, and 4) Villa Rose carbon filtration system. A second ASTS was installed and

completed in FY11 for the Sandwich Isle well to provide approximately one million gallons of water per day for irrigation for a 40-person work building. Operations and maintenance (O&M) were required for this Sandwich Isle ASTS as part of the obligation set forth in the ROD. The O&M and groundwater monitoring began in FY11 as soon as the Sandwich Isle ASTS was completed and operational. In 2014, the O&M of the ASTS was ceased because the well owner stopped operating the well. In the last quarter of FY16, the well owner contacted the Army that they will be operating the supply well again. In 2018, the well owner notified the Army that all their operations would cease; therefore, usage of the ASTS was ended. In 2022, the well owner contacted the Army to have the ASTS recommissioned; the Army is currently working to award a contract for a recommissioning survey. In 2016, groundwater sample results from a new well on Villa Rose Farm, within the footprint of the TCE plume, showed detection of TCE above the maximum contaminant level and traces of carbon tetrachloride. The well was designed to supply potable water to the ranch's employees and livestock. Therefore, as part of the obligation set forth in the ROD, the Army designed and built a carbon filtration system at the Villa Rose Farm to treat the newly constructed water supply well. O&M of the treatment system and routine sampling and monitoring began in FY18. The most recent five-year review was completed in October 2022 as part of the installation-wide review of NPL sites and concluded that no significant issues were identified with regards to the protectiveness of the final selected remedy for OU2. Based on the five-year review, LTM activities should be continue per the LTM or O&M Plan. Because contaminants at levels of concern will remain in groundwater at the site that do not allow UU/UE for an undetermined period of time, five-year remedy reviews will continue indefinitely. Cleanup/Exit Strategy - Remedial action (operations) (RA(O)) will also continue for this site, including regular groundwater sampling and monitoring, recommissioning of the Sandwich Isle ASTS, operation and maintenance of the Kunia Village ASTS, and operation and maintenance of the Villa Rose carbon filtration system.

#### 15815.1143\_CCSB0004\_Schofield Barracks 80-5

Env Site ID: CCSB0004		
Cleanup Site: Schofield Barracks 80-5		
Alias: SBB98FWN02		
Regulatory Driver: RCRA-I		
<b>RIP Date:</b> 2/15/2012		
<b>RC Date:</b> 2/15/2012		
RC Reason: All Required Cleanup(s) Completed		
SC Date: 9/30/2053		
Program: ENV Restoration, Army		
Subprogram: IR		
NPL Status: No		
Hazardous Ranking Score: 0		
RRSE:		

Phase Start End ISC: 9/30/1992 3/31/2003 INV: 5/31/2003 12/15/2010 CAP: 1/15/2011 5/15/2011 DES: 5/15/2011 9/15/2011 IRA: - -- -IMP(C): 5/15/2011 2/15/2012 - -IMP(O): - -2/15/2012 9/30/2053 LTM:

MRSPP: N/A

Site Narrative: Schofield Barracks 80-5 is located near the Foote Gate entrance to Schofield Barracks, within the Army and Air Force Exchange Services 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 Army and Air Force Exchange Services 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. UST SB 80-5 failed a leak detection test in 1992, taken out of service in 1994, and closed in place in 1998. Subsequent investigations detected evidence of petroleum impacted soil in the subsurface. However, there are no records of large fuel loss or leaking from SB 80-5, and it is unknown where or when the tank leak may have occurred. Currently, five 10,000-gallon, double walled fiberglass-reinforced plastic USTs are in service (four gasoline tanks and one diesel tank) and are in the tank farm area. A characterization report was submitted in 2011 that recommended installation of an impermeable cap to mitigate the migration of contaminants of potential concern in the subsurface and implementation of an environmental hazard management plan (EHMP) to mitigate direct exposure hazards to contaminated soil. The installation of an asphalt cap is documented in the 2011 Remedial Action Completion Report. A Final EHMP (2012) addresses the site hazards for future construction activities and soil management, and outlines procedures for LTM of the contamination. In a letter dated March 2012, HDOH concluded that a conditional NFA with EHMP status is warranted. Implementation of LTM phase is ongoing. The LTM phase is expected to maintain and inspect the condition of the impermeable cap and the zoned land use of C/I, which is not anticipated to change. Periodic reviews will be conducted in conjunction with the installation-wide five-year review schedule that is already in place. Because the future land use will remain C/I and hazardous substances pollutants or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE periodic five-year remedy reviews will continue indefinitely. The FY17 and FY22 periodic reviews were completed, and both determined that the remedy is protective of human health and the environment. Cleanup/Exit Strategy - LTM phase will also continue

at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

### 15815.1156\_SCHBR-135\_PFAS

Env Site ID: SCHBR-135 Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 3/1/2028 RC Date: 3/1/2028 RC Reason: Not assigned SC Date: 3/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	9/15/2019
SI:	3/15/2020	8/31/2023
RI/FS:	9/1/2023	3/1/2028
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from DCS G-9, this site was created to account for all PFAS costs at the installation. The PA/SI for Schofield Barracks was completed in 2023 and recommended further study in an RI. The RI phase is underway.

### 15815.1136\_SCHBR-013-R-01\_Southern Pistol Ranges

Env Site ID: SCHBR-013-R-01
Cleanup Site: Southern Pistol Ranges
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 12/31/2014
<b>RC Date:</b> 12/31/2014
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

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Phase Start End PA: 5/31/2002 5/31/2003 SI: 4/30/2006 6/30/2008 RI/FS: 7/31/2009 5/15/2013 RD: 1/15/2012 6/15/2013 IRA: - -- -**RA(C)**: 1/15/2012 12/31/2014 RA(O): - -- -LTM: 1/15/2015 9/30/2054

**MRSPP:** 10

Site Narrative: The Southern Pistol Ranges MRS is located in the southeast portion of the installation near the 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 munition types are the same. Based on RI results, it was determined that the western portion of the Southern Pistol Ranges MRS would not require further action, while the eastern portion would require further action. Consequently, the MRS was split into two MRSs. The Southern Pistol Range-East MRS was originally identified as 1.04 acres during the HRR, but the investigation area was extended to 2.63 before the RI. After the RI it was recommended that the MRS be further expanded to its current 4.03-acre area. 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 indicated trace amounts of nitroglycerin and 2, 4-dinitrotoluene. Both samples were taken from the same location on the western side of the site. The detected amounts of explosive constituents were well below the USEPA Region 9 regional screening levels (RSL). Explosives were not detected in the quality assurance sample taken from the same location. In addition, one sample detected elevated levels of lead that exceed the RSL. The associated quality assurance and quality control samples had significantly lower detected concentrations of lead. The SI recommended further investigation for MEC and MC at the site. The RI included an instrument-aided visual survey, investigative intrusive activities, geophysical mapping, and increment sampling. The current land use is C/I. Results of the RI, completed in 2011, 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 required further investigation for MEC. A FS was

completed in September 2012. The recommended remedial alternative included 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, and excavation and disposal of soil exceeding the lead 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 2013 to formally document the decision. RD was completed right after and the RA fieldwork began later in 2013. During the RA, it was discovered that lead contamination went well beyond the planned excavation area identified in the RI, DD, and RA work plan. It was determined that the selected remedy was no longer appropriate. A revised RA strategy was developed, approved, and documented in the ESD which was finalized in 2014. The contaminated soil would be left in place with a geotextile and soil cover layer with LUCs. Fieldwork resumed in January 2014, and the RA was completed in December 2014. LTM has been implemented at the MRS and consists of O&M, annual site inspections, five-year reviews, and institutional controls. The LUCIP describes the responsibilities and procedures for enforcing, managing/tracking, and when appropriate, modifying or terminating the LUC requirements. Because the future land use will remain C/I and hazardous substances pollutants or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE five-year remedy reviews will continue indefinitely. The FY17 and FY22 fiveyear reviews were completed and determined that the remedy remains protective of human health and the environment. Cleanup/Exit Strategy - LTM phase will also continue as long as MEC hazards exist and/or concentrations in the soil remain above the residential remediation goals.

### 15815.1137\_SCHBR-012-R-01\_Garden Gulch Pistol Range

Env Site ID: SCHBR-012-R-01 Cleanup Site: Garden Gulch Pistol Range Alias: # Regulatory Driver: CERCLA RIP Date: 1/31/2013 RC Date: 1/31/2013 RC Reason: All Required Cleanup(s) Completed SC Date: 9/30/2054 Program: ENV Restoration, Army Subprogram: MR NPL Status: No Hazardous Ranking Score: 0 RRSE: N/A

**MRSPP: 10** 

Phase	Start	End
PA:	4/30/2002	5/31/2003
SI:	4/30/2006	6/30/2008
RI/FS:	7/31/2009	7/15/2012
RD:	3/31/2011	10/15/2012
IRA:		
RA(C):	3/31/2011	1/31/2013
RA(O):		
LTM:	1/31/2013	9/30/2054

Site Narrative: The Garden Gulch Ranges MRS is located 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 MRS 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 HRR 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 4.4line miles, and the collection of six surface soil samples, and 10 sediment samples. No MEC or MD were identified during the visual survey, and analytical results indicate that no explosives were detected above USEPA RSLs. Metals (lead, antimony, and copper) however were found to be present in the soil at concentrations above RSLs. An RI/FS, PP, and DD have been completed at this site. The RA for Garden Gulch Pistol Ranges was conducted in FY12 and was executed per the final remedial design work plan. The RA 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 implementation of LUCs. A LUCIP was completed in May 2013. LUCs include maintenance of the installed soil cap and restriction of site activities to recreational use only. Therefore, response complete (RC) was achieved in FY13 with LTM and five-year reviews for this MRS. The LTM includes annual inspection of the soil cap, annual MRS perimeter and vicinity inspections to ensure the LUCs continues to be adequately protective to human health and the environment, and CERCLA five-year reviews. Because the future land use will remain recreational and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue indefinitely. The FY17 fiveyear review was completed and determined that the remedy remains protective of human health and

the environment. The FY22 five-year review identified that an ESD or ROD amendment can capture the need for the soil cap and document the soil cap as part of the remedy at Garden Gulch MRS. This effort would allow for the next five-year review to conduct a full technical analysis of the soil cap construction activities completed at the site. Cleanup/Exit Strategy - LTM phase will also continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

# **TRIPLER ARMY MEDICAL CENTER**

Installation Name: TRIPLER ARMY MEDICAL CENTER Installation City: HONOLULU Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

### 2218A.1002\_TAMC-02\_TAMC LANDFILL (SW BORDER)

Env Site ID: TAMC-02
Cleanup Site: TAMC LANDFILL (SW BORDER)
Alias: 1B
Regulatory Driver: CERCLA
<b>RIP Date:</b> 5/31/2002
<b>RC Date:</b> 5/31/2002
RC Reason: All Required Cleanup(s) Completed
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:
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MRSPP: N/A

Phase	Start	End
PA:	1/15/1995	12/30/1995
SI:	5/1/1997	9/30/1997
RI/FS:	1/15/1999	9/30/2000
RD:	11/30/1998	9/30/2000
IRA:	1/1/2002	8/31/2008
RA(C):	11/30/1998	5/31/2002
RA(O):		
LTM:	9/30/2008	9/30/2054

Site Narrative: Site TAMC-02 is a former unsanctioned dump located in the southwestern section of Tripler Army Medical Center (TAMC). Available historic records indicate that the commencement date of the dump site is unknown; however, past research has shown that the site (3.2 acres) was used from approximately 1947 through 1974 and could have been as early as 1944. The area was quarried prior to dumping operations, and early use of the site was associated with hospital construction activities conducted from 1944 through 1947. During later years, the dump site reportedly received incinerator ash, laboratory wastes, oil/solvent, and other waste items from TAMC, as well as nearby military post, Fort Shafter. The dump site is approximately 450 feet long, north to south, and varies in width from 250 to 310 feet east to west. The wastes were placed on grade, or in shallow trenches, which were covered with soil. Maximum thickness of the wastes has been documented at 28 feet. In 1995, a preliminary field screening investigation was conducted to determine the presence or absence of the contamination from the landfill. The preliminary field screening investigation recommended a comprehensive field investigation and a full risk assessment. The comprehensive field investigation, conducted in 1997, recommended mitigating measures in the form of a landfill cap and concrete channelization of the stream boundary. Long-term monitoring to ensure the protection of groundwater was also recommended. An RA and FS were completed in 1999 and in 2002, a landfill cap was constructed at TAMC-02. The landfill cap consists of (from top to bottom)- six inches of vegetative soil; 1.5 feet of cover soil; a geocomposite drainage layer; a 40mm textured geomembrane barrier layer; and imported fill. The cap was designed to prevent significant infiltration into the dump wastes and prevent any erosion from washing contaminated soils off the site. The dump site surface was re-graded to direct surface flow to the west and south and to provide a flatter, smoother surface. The steep side slopes were cut back to flatter slopes. These grading improvements were made to reduce erosion and allow easier access. Surface water drainage control structures were installed at the site to control the surface water flows. In late 2003, a series of large storms washed out part of an adjacent storm drain system and eroded the southwestern edge of the unapproved dump site cap, exposing the membrane liner. Phase I

reconstruction of the drainage channel was conducted in 2005. This phase was designed as an interim solution and intended to address the most critical areas of the drainage channel. In 2008, the DD for the site was finalized and, in addition to the mitigating measures recommended in the comprehensive field investigation, the selected remedy also included LUC restrictions such as fencing, signage, prohibition of excavation, and LTM. The LTM phase includes regular site inspection, maintenance of the landfill cap and drainage channel on a semi-annual basis, and five-year reviews. The site is currently in LTM phase. Three five-year reviews were conducted for the site respectively in FY13, FY18, and FY23. The latest five-year review concluded that the current remedy continues to be protective of human health and the environment. As part of LUC requirements, routine maintenance and site inspection of the landfill cap is necessary to ensure the optimal protectiveness of the remedy. Cleanup/Exit Strategy - Because the future land use will remain C/I and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue indefinitely. LTM phase will also continue at the site until all LUCs are no longer needed to protect human health and the environment.

### 2218A.1009\_CCTAMC0001\_TAMC 145 UST Site

Env Site ID: CCTAMC0001
Cleanup Site: TAMC 145 UST Site
Alias: TAMC 145
Regulatory Driver: RCRA-I
<b>RIP Date:</b> 1/15/2013
<b>RC Date:</b> 1/15/2013
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:

MRSPP: N/A

Phase	Start	End
ISC:	11/30/1994	4/30/1999
INV:	6/15/1999	12/30/2001
CAP:	5/15/2002	12/30/2010
DES:	3/31/2010	6/30/2011
IRA:		
IMP(C):	1/15/2011	1/15/2013
IMP(O):		
LTM:	1/15/2013	9/30/2054

Site Narrative: TAMC 145 UST Site is a former gas station (buildings 144/145) which was in operation from 1980 to 1998. Currently, the site is an open unpaved area. Three USTs were installed on-site in 1980; TAMC 145-1 (10,000 gallons), TAMC 145-2 (3,000 gallons), and TAMC-145-3 (3,000-gallons). UST 145-3 was taken out of service and removed in 1994; USTs 145-1 and 145-2 were removed in 1999. Soil samples were taken after both removals and groundwater samples were taken after the 1994 activity. The buildings and all existing above and below ground equipment were removed in 2001. Two additional investigations in 2002 and 2008 were conducted at the site to delineate the extent of contaminated soil and perched groundwater which were encountered during the tank removals. Contaminants of potential concern included TPH, BTEX, naphthalene, and tertiary butyl alcohol. A facility investigation was conducted at the site and a site characterization report was completed in December 2010. Soil borings and groundwater sampling were used to delineate the extent of soil contamination to bedrock and assess the potential migration of contaminants to the basal aquifer. The site characterization report recommended source removal and the installation of an impermeable barrier to prevent leaching to groundwater. Remedial activities including stockpiling of non-petroleum impacted soil, excavation and disposal of petroleum impacted soil, excavation extent sampling, and shallow monitoring well abandonment, was performed in 2012. Proposed installation of the impermeable barrier was not acceptable to the State of Hawaii Historic Preservation Office and the site remained as green space. The HDOH issued a conditional NFA letter for this site which required land use to be restricted to C/I use. LTM phase includes annual inspection and reporting of the site to ensure existing and future land use activities adhere to the recommendations in the EHMP, and periodic reviews. Because the future land use will remain C/I and hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, periodic five-year remedy reviews will continue indefinitely. Both the first and second periodic reviews, completed in 2018 and 2023, respectively, found the remedy at the site to be protective of human health and the environment. Cleanup/Exit Strategy -

LTM phase will also continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

## 2218A.1011\_TAMC-PFAS\_PFAS

Env Site ID: TAMC-PFAS Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 3/1/2028 RC Date: 3/1/2028 RC Reason: Not assigned SC Date: 3/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	11/13/2019
SI:	11/14/2019	8/31/2023
RI/FS:	9/1/2023	3/1/2028
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from DCS G-9, this site was created to account for all PFAS cleanup at the installation. The PA/SI was completed in 2023 and recommended further study in an RI. The RI is underway.

## WAIKAKALAUA AMMO STORAGE TUNNELS

Installation Name: WAIKAKALAUA AMMO STORAGE TUNNELS Installation City: WAHIAWA Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

### 2220A.1001\_WAST-001-R-01\_STORAGE TUNNEL 24A

Env Site ID: WAST-001-R-01
Cleanup Site: STORAGE TUNNEL 24A
Alias: #
Regulatory Driver: CERCLA
RIP Date: 9/15/2016
<b>RC Date:</b> 9/15/2016
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

**MRSPP: 10** 

Phase	Start	End
PA:	4/15/2002	5/15/2003
SI:	4/15/2006	9/15/2008
RI/FS:	9/15/2008	2/15/2014
RD:	1/15/2012	10/15/2015
IRA:		
RA(C):	1/15/2012	9/15/2016
RA(O):		
LTM:	9/15/2016	9/30/2054

Site Narrative: Waikakalaua Ammo Storage Tunnels (WAST) consisted of 52 tunnels that were built into the hillside to provide ammunition storage for the Army during and after WWII. The site was located at the southern end of the WAST and adjacent to Wheeler and was used to store anti-tank and rifle fragmentation grenades. According to Army-Navy Explosives Safety Board Abstract Number 28, tunnel #24A exploded in 1946 blowing large pieces of the concrete baffle out of the tunnel and across the gulch with such force that it destroyed a railroad track 300 feet away and caused a 20-foot depression to form above the tunnel. An arc plus/minus 10 degrees from the center of the tunnel entry, at a distance of 1,800 feet from the front of the tunnel, was developed based upon standards for the type and amount of munitions stored, the storage facility involved, and equations yielding the fragmentation distance taken from the DOD Ammunition and Explosives Safety Standard Manual, 1993. The size of the site has been estimated at 23.82 acres. Most of the impacted area lies outside of the installation boundary. The nearest surface water, Waikele stream, flows through the site and groundwater is approximately 275 feet bgs. An SI was completed in 2008. During the SI, the MEC items such as M9A1 rifle grenade warheads and 0.30 caliber blank rounds, and MD items including fragments of additional M9A1 rifle grenades were identified along the gulch wall opposite the former tunnel entrance. Although the MEC and MD items were found within the Storage Tunnel 24A Transferred MRS, it is assumed that MEC and MD are potentially located in the near proximity of the site. All of the MEC items recovered were destroyed by EOD personnel. Two M9A1 rifle grenades were also discovered and destroyed during EOD operations performed at the site on May 1, 2007. No MEC or MD were observed during visual surveys conducted near the lower elevations of the eastern gulch wall and above and surrounding the tunnel entrance. An additional visual survey of the streambed of Waikele Stream located to the south of the MRS was conducted in June 2008. Three additional MEC and one MD item were identified on Army property. The items were all complete or fragments of M9A1 rifle grenades. The SI soil analytical results indicated metals were detected below USEPA Region IX preliminary remediation goals (PRG) with the exception of manganese. Four of the 10 samples collected from this site had concentrations of manganese ranging

from 1,770 milligrams (mg)/kilogram (kg) to 4,000 mg/kg which exceeded the USEPA Region IX PRG of 1,760 mg/kg. No explosive residues were detected in any of the samples collected from the site. The SI recommended the site be further investigated for MEC and MC. Moreover, a fence and warning signs were installed around the area where MEC was detected during the SI. An RI was completed in 2011 and recommended a portion of the site to continue with the CERCLA process which includes FS, PP, DD, RD, RA(C), and LTM. The other portion of the site (southern portion of the RI boundary near the beginning of Navy property) was recommended to be NFA. This NFA portion has been split out to a separate MRS (WAST-001-R-02 [2220A.1004]). In 2013, an RIA was conducted to further define the nature of extent of the MEC and to fill in data gaps as part of supporting the development of a focused FS for the site. The focused FS was completed in 2015 detailing the remedial alternatives for the site. The DD was then completed and signed in October 2015 documenting the selected final remedy decision which was MEC removal and LUCs documenting the potential explosive hazard remaining on-site and associated land use limitations. Remedial actions took place between January and February 2016. 100 percent clearance of MEC within the accessible areas was conducted. Because there is possibility of explosive hazards remaining in the inaccessible areas of the site which do not allow for UU/UE, LUC and five-year remedy reviews will continue indefinitely. The LUC implementation was conducted, and a Final LUCIP was completed in September 2016. The most recent five-year review was completed in 2023 and concluded that the remedy is protective of human health and the environment. Thus, the MRS is to continue annual LTM inspections and maintenance. Cleanup/Exit Strategy - LTM is ongoing which includes annual site inspection and reporting, land use controls, and five-year reviews. LTM will continue at the site until LUCs are determined to be no longer needed to protect human health and the environment.

### 2220A.1002\_WAST-002-R-01\_STORAGE TUNNEL 24A (TD)

Env Site ID: WAST-002-R-01
Cleanup Site: STORAGE TUNNEL 24A (TD)
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 9/15/2016
<b>RC Date:</b> 9/15/2016
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

**MRSPP: 10** 

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Phase	Start	End
PA:	4/15/2002	5/15/2003
SI:	4/15/2006	9/15/2008
RI/FS:	9/15/2008	2/15/2014
RD:	1/15/2012	10/15/2015
IRA:		
RA(C):	1/15/2012	9/15/2016
RA(O):		
LTM:	9/15/2016	9/30/2054

Site Narrative: This site was a concern because munitions may have been deposited outside of and downstream of an explosion which occurred in the tunnel in 1946. The site is comprised of non-Armyowned land to the east, west, and south of the exploded tunnel. Due to the force of the explosion and its dispersion radius, munitions may have migrated into the surrounding areas within the proximity of the explosion. The site, which is estimated at 165.82 acres, encompasses three parcels - one parcel extends to the west of the WAST boundary which represent the main blast area, a second parcel extends to the east which is behind the tunnel entrance, and a third parcel is Navy-owned property south of the site within the Waikele Stream floodplain. The site is composed of the impacted areas from this explosion, including the gulch wall opposite, the agricultural lands above on both sides of the tunnel, and the affected stream bed which is not on Army property. The nearest surface water, Waikele stream, flows through the site and groundwater is approximately 275 feet bgs. An SI was completed in 2008. During the SI, the MEC items such as M9A1 rifle grenade warheads and 0.30 caliber blank rounds, and MD items including fragments of additional M9A1 rifle grenades were identified along the gulch wall opposite the former tunnel entrance. Additional visual surveys were conducted within the streambed of Waikele Stream in June 2008 on property owned by the Navy that is south of the WAST. No MEC or MD items were observed within the Navy property; however, the stakeholders have determined that the area within the bed of Waikele stream required additional investigation. The SI soil analytical results indicated that arsenic and manganese were detected in a concentration that exceeded their respective environmental action levels. In addition, explosive residues were detected in samples but below screening levels. The SI recommended the site be further investigated for MEC and MC. Due to the presence of MEC items on the property that is owned by Robinson Kunia Land, LLC and leased by Waikele Farms, the area where MEC was found was fenced and warning signs were instituted as part of the SI to prevent civilians from being exposed to additional MEC items. An RI was completed in 2011. The RI recommended that eastern portion of the site continue with further actions such as MEC removal and remedial design, and a NFA was recommended for the remaining western portion of the site. For

administrative purposes, the RI recommended to separate the site into further action (eastern portion) and NFA (western portion) respectively where the NFA portion was tracked under WAST-002-R-02 (2220A.1006). In 2014, a RI addendum was completed to fill in data gaps for the previous 2011 RI. A focused FS was completed, and the final selected remedy was documented in the 2015 DD. Remedial actions with 100% clearance of MEC within the accessible areas were conducted and the site was recommended for NFA in 2016. The inaccessible areas were recommended for LUCs implementation. In 2016, a long-term management plan was completed, and it detailed the long-term monitoring requirement for the site. Response complete was achieve with LUCs and LTM. Because there is possibility of explosive hazards remaining on site which do not allow for UU/UE, LUC and five-year remedy reviews will continue indefinitely. LTM is ongoing which includes annual site inspection and reporting, land use controls, and five-year reviews. A five-year review was completed in 2023 and concluded that the remedy is protective of human health and the environment. Thus, the MRS is to continue the annual LTM inspections and maintenance. Cleanup/Exit Strategy - LTM will continue at the site until LUCs are determined to be no longer needed to protect human health and the environment.

## WHEELER ARMY AIRFIELD

Installation Name: WHEELER ARMY AIRFIELD Installation City: WAHIAWA Installation County: HONOLULU Installation State: HI Regulatory Participation - Federal: N/A Regulatory Participation - State: HDOH

### 2221A.1046\_WAAF-PFAS\_PFAS

Env Site ID: WAAF-PFAS Cleanup Site: PFAS Alias: # Regulatory Driver: CERCLA RIP Date: 3/1/2028 RC Date: 3/1/2028 RC Reason: Not assigned SC Date: 3/2/2028 Program: ENV Restoration, Army Subprogram: IR NPL Status: No Hazardous Ranking Score: 0 RRSE: MRSPP: N/A

Phase	Start	End
PA:	5/21/2018	11/13/2019
SI:	11/14/2019	8/31/2023
RI/FS:	9/1/2023	3/1/2028
RD:		
IRA:		
RA(C):		
RA(O):		
LTM:		

**Site Narrative:** Per direction from DCS G-9, this site was created to account for all PFAS costs at the installation. The PA/SI was completed in 2023 and recommended further study in an RI. The RI is underway.

### 2221A.1021\_WAAF-005-R-01\_ARCHERY RANGE NORTH

Env Site ID: WAAF-005-R-01
Cleanup Site: ARCHERY RANGE NORTH
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 12/15/2015
<b>RC Date:</b> 12/15/2015
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

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Phase	Start	End	
PA:	4/15/2002	5/15/2003	
SI:	4/15/2006	6/15/2008	
RI/FS:	6/15/2009	10/15/2013	
RD:	6/15/2011	12/15/2013	
IRA:			
RA(C):	6/15/2011	12/15/2015	
RA(O):			
LTM:	12/15/2015	9/30/2054	

**MRSPP:** 10

Site Narrative: The Archery Range North MRS is comprised of approximately four acres of land located along an auxiliary runway in the southwestern portion of Wheeler Army Airfield (WAAF). The site consists of a grassy, open lot bounded to the south and southeast by bluffs that are approximately 60 to 80 feet high. The site was used as a small arms firing range by the Air Force since the 1950s and was converted to an archery range by the Army in 2003. The range is currently closed. An SI was completed at the site in May 2008. MD associated with small arms and 40mm practice grenades were observed within and beyond the southern boundary of the site. MEC were not identified during the investigation. Soil samples contained MC (metals only) above the USEPA Region 9 RSLs. Further investigation for MEC and MC was recommended based on the presence of 40mm practice grenades and MC in site soils. An RI was completed which included 29.1-line miles of instrument aided visual survey, investigative intrusive activities, and increment sampling. MEC was not identified during the RI fieldwork; however, several items of MD were found. Soil samples were collected from the site using 14 decision units. Analytical results showed antimony, arsenic, copper, lead, and manganese to be present in surface soil. The current land use of the site is C/I. The 7.75 MR site acreage was reduced to 5.15 acres by excluding the southeastern portion containing MD and adding it to the MR site WAAF-011-R-01 (2221A.1024). The archery range site was recommended for NFA for MEC. An additional data collection was conducted to improve the quality of remedial alternatives. Surface soil sampling for x-ray fluorescence correlation was performed. Results demonstrated that the x-ray fluorescence device would be an efficient tool to guide excavation. Subsurface soil sampling for treatability testing was also performed at the site. Stabilization was successful in reducing the concentration below the hazardous waste action level but does not reduce bioavailability. The FS was completed in 2013. It was recommended that the site be subdivided into two separate MRS, Archery Range North (in need of response actions to address concentrations in soil above PRG and Archery Range South (eligible for unrestricted land use due to below residential PRGs and recommended for NFA). The recommended remedial alternative for Archery Range North included excavation, ex situ treatment, on-site reuse, and on-island disposal of soil, and LUC. A PP and DD to

formally document and present the alternative to the public was completed in October 2013. The RD was completed in 2013. RA fieldwork and RC was achieved in 2015. Concentrations of lead in soil above unrestricted land use action levels remain at the site, therefore, LUCs were implemented to manage potential human exposure to contaminated soil through restrictions on allowable land uses and periodic inspections of site conditions. LTM is currently underway and consists of O&M, annual site inspections, and five-year reviews. Because hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue until UU/UE is achieved. The first five-year review was completed in FY17 and determined that the remedy remains protective of human health and the environment. The second five-year review is currently underway. Cleanup/Exit Strategy - LTM will continue as long as lead concentrations in soil remain above C/I and recreational remediation goals.

### 2221A.1024\_WAAF-006-R-01\_1940s SMALL ARMS RANGE

Env Site ID: WAAF-006-R-01
Cleanup Site: 1940s SMALL ARMS RANGE
Alias: #
Regulatory Driver: CERCLA
<b>RIP Date:</b> 1/15/2013
<b>RC Date:</b> 1/15/2013
RC Reason: All Required Cleanup(s) Completed
SC Date: 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

Phase	Start	End	
PA:	4/15/2002	5/15/2003	
SI:	4/15/2006	6/15/2008	
RI/FS:	6/15/2009	6/15/2012	
RD:	3/15/2011	9/15/2012	
IRA:			
RA(C):	3/15/2011	1/15/2013	
RA(O):			
LTM:	1/15/2013	9/30/2054	

**MRSPP:** 10

Site Narrative: The 1940s Small Arms Range MRS is a 0.55-acre site completely encompassed by WAAF-008-R-01, Skeet Range, located 1,400 feet south of the airplane parking lot and motor pool area on WAAF. The site was identified on a 1940s aerial photograph; however limited information about duration and use of the range exists. An SI was completed in May 2008. No MEC was found during visual surveys; however, MD including 7.62mm casings, and MC (lead and antimony) were found in soils above USEPA Region 9 RSLs. Further investigation of MC was recommended for the site. The current use of the site is C/I. The RA for the 1940s Small Arms Range was conducted in FY12 and was executed as recorded in the final DD. The RA 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, and the installation of a soil cap. Concentrations of lead and arsenic in soil above unrestricted land use action levels remain at the site; therefore, LUCs were implemented to manage potential human exposure to contaminated soil through restrictions on allowable land uses and periodic inspections of site conditions. The LUCIP was completed in FY13, and RC was also achieved in FY13. LTM is currently underway and consists of annual site inspections and fiveyear reviews. Because hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue until UU/UE is achieved. The first five-year review was completed in FY17 and determined that the remedy remains protective of human health and the environment. The second five-year review is currently underway. Cleanup/Exit Strategy - LTM will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

### 2221A.1031\_WAAF-011-R-02\_WHEELER 40 MM RANGE SOUTH

Env Site ID: WAAF-011-R-02
Cleanup Site: WHEELER 40 MM RANGE SOUTH
Alias: WAAF40MM S
Regulatory Driver: CERCLA
<b>RIP Date:</b> 7/30/2022
<b>RC Date:</b> 7/30/2022
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

**MRSPP: 10** 

Phase	Start	End	
PA:	5/15/2010	8/15/2010	
SI:	9/15/2010	3/15/2012	
RI/FS:	1/15/2012	3/15/2019	
RD:			
IRA:			
RA(C):	12/15/2018	7/30/2022	
RA(O):			
LTM:	8/1/2022	9/30/2054	

Site Narrative: The 40mm Range MRS (WAAF-011-R-02) is part of the Wheeler Gulch munitions response area (WAAF-011-R) and encompassed an area of approximately 20.27 acres. The 40mm Range MRS was included in the MMRP when it was first identified during the RI field activities conducted at an adjacent site (Firing Range 2a) in 2010. The site was found to have MD from 40mm practice grenades. There was a wire target stand and several drums that also appeared to have been used as targets. Debris from 40mm M408A1 and M781 practice grenades was located in and around both of these target areas. In addition, warning signs were present along the southern boundary of the adjacent site (Range 2a), which became apparent once vegetation was cleared from the site for RI activities. The 40mm debris contamination is spread widely throughout Firing Range 2a and further to the south. Although specific dates of use for this area are unknown, the M407A1 practice rounds first came into use in 1964, while use of the M781 practice rounds began in the mid-1970s. The M781 practice rounds are still in use today; however, based on the vegetation growth and deteriorated condition of the targets at the site, it is estimated that training at this range ended sometime in the late-1990s. Consequently, the 40mm range was under investigation and administered as part of the SI field activities conducted at Practice Bombing Range MRS in 2010. SI field activities included 5.2-line miles of visual survey and four soil samples and two sediment samples. During the visual survey, one MEC item, a 40mm M407A1 practice grenade, .50 caliber rounds, substantial amounts of MD from practice grenades, a firing point, target stands, and target drums were identified. The SI was completed in 2011 and the MRS was recommended for further action. During the RI, a full coverage of electromagnetic detection and digging was conducted using 100 feet by 100 feet survey grid approach to accessible areas (slopes less than 30 degrees). All anomalies were intrusively investigated, MEC, discarded military munitions, MD and small arms ammunition were removed from the investigated area. The RI results indicated that the accessible and investigated area of the 40mm Range MRS (northern portion), do not pose a MEC or MC hazard while the inaccessible areas (southern portion) that were not investigated, potentially pose an MEC hazard but do not pose a MC hazard. As a result, a focused FS, completed in October 2014, recommended the northern portion of the MRS to be

NFA and LUCs implemented in the southern portion of the MRS. In September 2016, during review of the DD, the state denied the NFA of the northern portion; therefore, both portions of the MRS include LUCs to manage potential human exposure to surface and subsurface MEC through signage, restrictions on allowable land uses, and periodic inspection of site conditions. Both DDs were signed in November 2018. A combined LUCIP for both 40mm North and South was finalized in November 2019 and the implementation of the LUC engineering controls (i.e., signage) was completed in February 2021. The RACR was finalized in FY22. LTM for the MRS includes implementing LUCs to restrict future development, annual site inspections, and five-year reviews. Because hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue until UU/UE is achieved. The first five-year review is currently underway. Cleanup/Exit Strategy - LTM will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

### 2221A.1036\_2221A.1036\_WAAF-012-R-01 Airdrome Road

Env Site ID: 2221A.1036 Cleanup Site: WAAF-012-R-01 Airdrome Road Alias: # Regulatory Driver: CERCLA RIP Date: 10/15/2029 RC Date: 10/15/2029 RC Reason: Not assigned SC Date: 10/16/2058 Program: ENV Restoration, Army Subprogram: MR NPL Status: No Hazardous Ranking Score: 0 RRSE: N/A MRSPP: 9

Phase	Start	End	
PA:	5/15/2016	6/15/2016	
SI:	6/15/2016	9/15/2017	
RI/FS:	9/30/2017	10/15/2027	
RD:			
IRA:			
RA(C):	10/16/2027	10/15/2029	
RA(O):			
LTM:	10/16/2029	10/15/2058	

**Site Narrative:** As part of the Combat Aviation Brigade Infrastructure military construction project, a contractor was excavating a trench to install a sewer force main pipe along Airdrome Road on Wheeler Army Airfield adjacent to the wastewater treatment plant. While excavating at about five feet below ground surface, the contractor encountered what appeared to be a layer of debris. As the contractor continued to excavate through the debris layer, a projectile object was discovered. Army EOD was called and responded to the site. A total of 16 MEC items were removed from the excavation from approximately five feet to seven feet below ground surface (approximately 2.5 foot wide trench). The items all appeared to be MKIII practice bombs (approximately 20-25 pounds each). EOD did not dig laterally to determine the extent of how many MEC items may exist, but it appears that the area may be a disposal site where MEC and other debris was buried. Military construction is planned at the site during the next eight years. The RI/FS will remain open during the duration of the military construction to address additional MEC if it is encountered during construction.

### 2221A.1037\_WAAF-011-R-04\_WHEELER 40MM RANGE NORTH

Env Site ID: WAAF-011-R-04
Cleanup Site: WHEELER 40MM RANGE NORTH
Alias: WAAF40MM N
Regulatory Driver: CERCLA
<b>RIP Date:</b> 7/30/2022
<b>RC Date:</b> 7/30/2022
RC Reason: All Required Cleanup(s) Completed
<b>SC Date:</b> 9/30/2054
Program: ENV Restoration, Army
Subprogram: MR
NPL Status: No
Hazardous Ranking Score: 0
RRSE: N/A

**MRSPP: 10** 

Phase	Start	End	
PA:	5/15/2010	8/15/2010	
SI:	9/15/2010	3/15/2012	
RI/FS:	1/15/2012	11/15/2018	
RD:			
IRA:			
RA(C):	12/15/2018	7/30/2022	
RA(O):			
LTM:	8/1/2022	9/30/2054	

Site Narrative: The 40mm Range MRS (WAAF-011-R-02) is part of the Wheeler Gulch Munitions Response Area (WAAF-011-R) and encompassed an area of approximately 20.27 acres. The 40mm Range MRS was included in the MMRP when it was first identified during the RI field activities conducted at an adjacent site (Firing Range 2a) in 2010. The site was found to have MD from 40mm practice grenades. There was a wire target stand and several drums that also appeared to have been used as targets. Debris from 40mm M408A1 and M781 practice grenades was located in and around both of these target areas. In addition, warning signs were present along the southern boundary of the adjacent site (Range 2a), which became apparent once vegetation was cleared from the site for RI activities. The 40mm debris contamination is spread widely throughout Firing Range 2a and further to the south. Although specific dates of use for this area are unknown, the M407A1 practice rounds first came into use in 1964, while use of the M781 practice rounds began in the mid-1970s. The M781 practice rounds are still in use today; however, based on the vegetation growth and deteriorated condition of the targets at the site, it is estimated that training at this range ended sometime in the late 1990s. Consequently, the 40mm range was under investigation and administered as part of the SI field activities conducted at Practice Bombing Range MRS in 2010. SI field activities included 5.2-line miles of visual survey and four soil samples and two sediment samples. During the visual survey, one MEC item, a 40mm M407A1 practice grenade, .50 caliber rounds, substantial amounts of MD from practice grenades, a firing point, target stands, and target drums were identified. The SI was completed in 2011 and the MRS was recommended for further action. During the RI, a full coverage of electromagnetic detection and digging was conducted using 100 feet by 100 feet survey grid approach to accessible areas (slopes less than 30 degrees). All anomalies were intrusively investigated MEC, discarded military munitions, MD, and small arms ammunition were removed from the investigated area. The RI results indicated that the accessible and investigated area of the 40mm Range MRS (northern portion), do not pose a MEC or MC hazard while the inaccessible areas (southern portion) that were not investigated, potentially pose a MEC hazard but do not pose a MC hazard. As a result, a focused FS was developed to evaluate three remedial

alternatives to manage the remaining site risks. Based on the comparative analysis of the alternatives, alternative 2 which recommended the northern portion of the MRS to be NFA and LUCs implemented in the southern portion of the MRS, was the most plausible and effective remedy to manage the site. The RI/FS was completed in December 2014. In September 2016, during review of the DD, the state denied the NFA of the northern portion; therefore, both portions of the MRS include LUCs to manage potential human exposure to surface and subsurface MEC through signage, restrictions on allowable land uses, and periodic inspection of site conditions. Both DDs were signed in November 2018. A combined LUCIP for both 40mm North and South was finalized in November 2019 and the implementation of the LUCs (i.e., signage) was completed in February 2021. The RACR was finalized in FY22. LTM for the MRS includes implementation of LUCs to restrict future development, annual site inspections, and five-year reviews. Because hazardous substances, pollutants, or contaminants will remain at the site at concentrations exceeding levels that allow for UU/UE, five-year remedy reviews will continue until UU/UE is achieved. The first five-year review is currently underway. Cleanup/Exit Strategy - LTM will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

**SITE SUMMARY** 

### SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
2209A.1001	HMR-01 BLDG 201 UST	12/31/1994
2209A.1002	HMR-02 BLDG 300 UST	12/31/1994
2209A.1003	HMR-03 BLDG 3A USTS	9/30/1994
2209A.1004	HMR-04 FORMER SEWAGE TREATMENT PLT SITE	12/15/2012
2209A.1005	HMR-05 FORMER HOLDING PONDS SITE	12/15/2012
2209A.1006	HMR-06 ABANDONED COMMUNICATION TUNNEL	1/15/2014
2209A.1007	HMR-07 SOLID WASTE DUMP SITE	12/15/2012
2209A.1008	HMR-08 BURIED PAINT LOCKERS - BLDG 300	1/15/2014
2209A.1009	CCHMR0001 HMR 222 VEH MAINT 728th MP BN	9/30/2010
2209A.1010	CCHMR0001 HMR 222 VEH MAINT 728th MP BN	9/30/2009
2209A.1011	CCHMR0002_HMR Bldg 300	11/30/2004
2213A.1001	KILMR-01_SHED BEHIND BLDG 91 (WSC #14)	8/31/1990
2213A.1002	KILMR-02_LANDFILL (WSC #8)	5/31/1995
2213A.1003	KILMR-03_PRIOR WASTE DISPOSAL AREA (WSC	5/31/1995
2213A.1004	KILMR-13_STG SHEDS (WOOD SHEDS #254,#80)	3/31/1994
2213A.1005	KILMR-14_FOAM STORAGE AREA (WSC #7)	11/30/1993
2213A.1006	KILMR-15_FORMER BIO LAB (WSC #9)	5/31/1995
2213A.1007	KILMR-18_SEPTIC TANK (WSC #19)	11/30/1993
2213A.1008	KILMR-19_TRANSFORMER STORAGE SITE (WSC #	12/31/1995
2213A.1009	KILMR-21_UST BLDG 35	12/31/1994
2213A.1010	KILMR-22_UST BLDG 36	12/31/1994
2213A.1011	KILMR-23_UST BLDG 86	12/31/1994
2213A.1012	KILMR-24_UST BLDG 88	12/31/1994
2213A.1013	KILMR-25_UST BLDG 40	12/31/1994
2213A.1014	KILMR-26_UST BLDG 76	12/31/1994
2213A.1015	KILMR-28_USTS BLDG 101	12/31/1994
2213A.1016	KILMR-6_DRUM STORAGE AREA (WSC #1)	8/31/1990
2213A.1017	KILMR-7_ABOVE GROUND FUEL OIL TANK (WSC	8/31/1990
2213A.1018	KILMR-8_ABOVE GRD DIESEL/KEROSENE TANKS(	8/31/1990
2213A.1019	KILMR-9_MOGAS USTS (WSC #3)	8/31/1990
2213A.1020	KILMR-002-R-01_SMALL ARMS RANGE	10/31/2007
2213A.1021	KILMR-001-R-01_KA'U DESERT IMPACT/TRAINI	5/1/2003
2223A.1002	FSK-02_BLDG 25, PCB CONTAMINATION	12/15/2012
2223A.1003	FSK-03_MICROWAVE TOWER	12/15/2012
2215A.1001	MAKU-01_FIRING RANGE E SIDE OF VALLEY	8/31/1984
2215A.1002	MAKU-02_DEMO TRAINING AREA	8/31/1984
2215A.1003	MAKU-03_EOD DISPOSAL AREA	8/31/1984
2215A.1004	MAKU-04_LANDFILL - KEAWAULA DUMP	8/31/1984
2215A.1005	MAKU-001-R-01_MAKUA TRAINING AREA	5/1/2003
2215A.1008	PBA@MR MAKUA_PBA@MMRP MAKUA	9/30/2008
2215A.1009	MAKU-002-R-02_NFA PORTION OF MTA (TD)	6/15/2013
2215A.1017	MAKU-002-R-03_MTA(TD) NFA PLATEAU & BEAC	12/15/2015

CRL ID	Site Name	Site Closeout Date
2215A.1010	CCMAKU0001_MAKUA Groundwater Monitoring	5/4/2023
2215A.1011	CCMAKU0002_UXO Clearance at Site 4627	9/30/2018
2215A.1012	CCMAKU0003_UXO Clearance at Site 4628	9/30/2018
2215A.1013	CCMAKU0004_UXO Clearance at Site 4629	9/30/2018
2215A.1014	CCMAKU0005_UXO Clearance at Site 4630	9/30/2018
2215A.1015	CCMAKU0006_UXO Clearance at Site 5920	9/30/2018
2215A.1016	CCMAKU0007_UXO Clearance at Site 9523	9/30/2018
2216A.1001	POTA-01_FORMER FFTA PIT (WSC #11)	12/15/2012
2216A.1002	POTA-02_FORMER STG AREA BEHIND BLDG T-31	12/15/2012
2216A.1004	POTA-04_ARTILLARY FIRING AREA POWDER BUR	9/30/1994
2216A.1006	POTA-07_IMPACT AREA (WSC #1)	8/31/1990
2216A.1007	POTA-08_BRADSHAW FIELD STORAGE AREA (WSC	12/31/1995
2216A.1008	POTA-09 POL STORAGE AREA (WSC #3)	12/31/1995
2216A.1009	POTA-10 UST SITES (7) (WSC #4)	8/31/1990
2216A.1010	POTA-11_MAINTENANCE AREA (WSC #5)	12/31/1995
2216A.1011	POTA-12 AMMUNITION STG MAGAZINES (8) (WS	8/31/1990
2216A.1012	POTA-13 FOAM STORAGE SHED (WSC #9)	8/31/1990
2216A.1013	POTA-14 UST SITE (WSC #10)	8/31/1990
2216A.1014	POTA-15_FORMER TRANSFORMER STG AREA (WSC	12/31/1995
2216A.1015	POTA-16_43 SEPTIC TANKS/12 LEACH WELLS (	8/31/1990
2216A.1016	POTA-17 UST BLDG 186	10/31/1994
2216A.1017	POTA-18 VEHICLE REFUELING AREA	12/31/2012
2216A.1018	POTA-19_EQUIPMENT STORAGE AREA	12/31/1995
2216A.1019	PTA-002-R-01_KULANI BOYS' HOME	9/30/2012
2216A.1020	 PTA-001-R-01 HUMUULA SHEEP STATION-WEST	9/30/2012
2216A.1021	PTA-001-R-02_Humuula Sheep Station-East	7/31/2005
2216A.1022	 PBA@MR POHAKUL_PBA@MMRP Pohakuloa	9/30/2008
2216A.1024	PTA-002-R-02 Kulani Burn Pile	10/31/2012
2216A.1025	PTA-004-R-01 FORMER BAZOOKA RANGE	9/30/2015
15815.1001		9/30/1995
15815.1002	SCHBR-02_DFE ENTOMOLOGY - BLDG 368 (FFA	2/28/1993
15815.1003	SCHBR-03_DFE LAND MGMT BRANCH BLD 379 (F	2/28/1993
15815.1004	SCHBR-04_BEHIND BLDG 379 WASHRACK (FFA 3	2/28/1993
15815.1005	SCHBR-05_DPCA GOLF COURSE BLDG 6019 (FFA	2/28/1993
15815.1006	SCHBR-06 ADJ TO BLDG 6019 CONCERT APRON	2/28/1993
15815.1007	SCHBR-07_AREA R WST STG AREA (FFA 20)	9/30/1995
15815.1008	SCHBR-09_BLDG T 2140 SPRAY PNT BOOTH (FF	2/28/1993
15815.1009	SCHBR-100_DARK STAINED AREAS (1962) (FFA	3/31/1994
15815.1010	SCHBR-101 OPEN STORAGE AREAS (1942-1953)	3/31/1994
15815.1011	SCHBR-102 OPEN STORAGE AREA (1942-1968)	3/31/1994
15815.1012	SCHBR-103_OPEN STORAGE AREA (1955) (FFA	3/31/1994
15815.1013	SCHBR-104_OPEN STORAGE AREA (1942) (FFA	3/31/1994
15815.1014	SCHBR-105_MOTOR POOL (1942) (FFA 73)	3/31/1996
15815.1015	SCHBR-106_OPEN STORAGE AREA (1977) (FAA	12/31/2001
15815.1016	SCHBR-107_PROBABLE CONTAINERS/OS (1950-5	3/31/1994

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CRL ID	Site Name	Site Closeout Date
15815.1064	SCHBR-37 AUTOCRAFT SHOP (BLDG 910) (FFA	3/31/1994
15815.1065	SCHBR-38_CAR CARE (BLDG 80) (FFA 26)	3/31/1996
15815.1066	SCHBR-39_VETERINARY CLINIC (FFA 27)	2/28/1993
15815.1067	SCHBR-40 HEALTH CLINIC (FFA 28)	2/28/1993
15815.1068	SCHBR-41_INCINERATOR (BLDG 673) (FFA 29)	2/28/1993
15815.1069	SCHBR-42 FORMER STORAGE TANKS, 5 USTS (F	7/31/1996
15815.1070	SCHBR-43 DENTAL CLINIC (FFA 31)	2/28/1993
15815.1071	SCHBR-44_24-HOUR PHOTO SERVICE (FFA 32)	2/28/1993
15815.1072	SCHBR-45 MAINT AREAS (BLDG T-2054,T-2060	2/28/1993
15815.1073	SCHBR-46 WEAPONS MAINTENANCE (BLDG 2131)	2/28/1993
15815.1074	SCHBR-47_OPTICAL REPAIR (BLDG 1054) (FFA	3/31/1996
15815.1075	SCHBR-48_GAS CHAMBER (BLDG 2253C) (FFA 3	2/28/1993
15815.1076	SCHBR-49 TRANSFORMERS (9) (FFA 40)	2/28/1993
15815.1077	SCHBR-50_TRANSFORMER LEAK AREA (FFA 41)	2/28/1993
15815.1078	SCHBR-51_MAINTENANCE AREA (BLDG 387) (FF	9/30/1995
15815.1079	SCHBR-52 AMMO STORAGE BUNKERS (27) (FFA	2/28/1993
15815.1080	SCHBR-53_CHEM IMPREG PLANT (BLDG 2308) (	2/28/1993
15815.1081	SCHBR-54_PHOTO OPERATIONS (BLDG 2065) (F	2/28/1993
15815.1082	SCHBR-55 BLDG 370B INDUSTRIAL OPS (FFA 4	2/28/1993
15815.1083	SCHBR-56_AIRCRAFT FUSELAGE AREA (FFA 54A	9/30/1995
15815.1084	SCHBR-57 TUNNELS (FFA 55)	2/28/1993
15815.1085	SCHBR-58 LANDFILL 3 VARIOUS LOCATIONS (F	2/28/1993
15815.1086	SCHBR-60_MAINTENANCE AREA A (FFA 3)	2/28/1993
15815.1087	SCHBR-61_MAINTENANCE AREA B (FFA 3/11)	3/31/1996
15815.1088	SCHBR-62 MAINTENANCE AREA C (FFA 3/11)	3/31/1996
15815.1089	SCHBR-63 MAINTENANCE AREA D (FFA 3/11)	3/31/1996
15815.1090	SCHBR-64_MAINTENANCE AREA E (FFA 3/6)	5/31/1999
15815.1091	SCHBR-65 MAINTENANCE AREA F (FFA 3/11)	2/28/1993
15815.1092	SCHBR-66_MAINTENANCE AREA G (FFA 3/11)	2/28/1993
15815.1093	SCHBR-67_MAINTENANCE AREA H (FFA 3)	3/31/1996
15815.1094	SCHBR-68_MAINTENANCE AREA I (FFA 3/11)	3/31/1996
15815.1095	SCHBR-69_MAINTENANCE AREA J (FFA 3/6)	3/31/1996
15815.1096	SCHBR-70 MAINTENANCE AREA K (FFA 3/11)	3/31/1996
15815.1097	SCHBR-71 MAINTENANCE AREA L (FFA 3/11)	3/31/1996
15815.1098	SCHBR-72_MAINTENANCE AREA M (FFA 3/11)	2/28/1993
15815.1099	SCHBR-73_MAINTENANCE AREA N (FFA 3/11)	2/28/1993
15815.1100	SCHBR-74 MAINTENANCE AREA O (FFA 3/6/11)	3/31/1996
15815.1101	SCHBR-75_MAINTENANCE AREA P (FFA 3/11)	3/31/1996
15815.1102	SCHBR-76_MAINTENANCE AREA Q (FFA 3/11)	2/28/1993
15815.1103	SCHBR-77 MAINTENANCE AREA R (FFA 3/11)	3/31/1996
15815.1104	SCHBR-78_MAINTENANCE AREA S (FFA 3/11)	3/31/1996
15815.1105	SCHBR-79_MAINTENANCE AREA T (FFA 3/11)	2/28/1993
15815.1106	SCHBR-80 MAINTENANCE AREA U (FFA 3/11)	7/31/2000
15815.1107	SCHBR-81_MAINTENANCE AREA V (FFA 3)	3/31/1996
15815.1108	SCHBR-82_MAINTENANCE AREA W (FFA 3/6)	3/31/1996

CRL ID	Site Name	Site Closeout Date
15815.1109	SCHBR-83_MAINTENANCE AREA X (FFA 3/11)	2/28/1993
15815.1110	SCHBR-84_MCCARTHY FLATS RANGES (FFA 13)	2/28/1993
15815.1111	SCHBR-85_KOLEKOLE FIRING RANGES (FFA 14)	2/28/1993
15815.1112	SCHBR-86 TRANSFORMER STORAGE AREA (FFA 4	2/28/1993
15815.1113	SCHBR-87_AIRCRAFT STORAGE BUNKERS (FFA 5	9/30/1995
15815.1114	SCHBR-88_ENGINE REBUILD AREA (FFA 54C)	9/30/1995
15815.1115	SCHBR-89 PITS (1942) (FFA 57)	3/31/1996
15815.1116	SCHBR-90_POSSIBLE WASTE DISPOSAL (1984)	3/31/1994
15815.1117	SCHBR-91_TWO TRENCHES (1942) (FFA 59)	3/31/1996
15815.1118	SCHBR-92_TREATMENT PLANT (1953) (FFA 60)	3/31/1994
15815.1119	SCHBR-93_TRENCH & PIT W/LIQUID(1953-77)	1/31/1997
15815.1120	SCHBR-94_FOUR TRENCHES (1962) (FFA 62)	3/31/1994
15815.1121	SCHBR-95 THREE PITS W/LIGHT MATERIAL (FF	3/31/1996
15815.1122	SCHBR-96_PITS (1962) (FFA 64A)	3/31/1994
15815.1123	SCHBR-97 STAINS/OPEN STORAGE AREA (1942)	3/31/1994
15815.1124	SCHBR-98 POSSIBLE REFUSE (1942) (FFA 66)	3/31/1994
15815.1125	SCHBR-99_TREATMENT PLANT (1953) (FFA 67)	3/31/1994
15815.1141	CCSB0027_Schofield Barracks Quad I SB747	3/31/2010
15815.1142	CCSB0026 Kaena Family Housing	3/31/2010
15815.1144	CCSB0008_Schofield Barracks 985	5/31/2009
15815.1145	 CCSB0009_Schofield Barracks Bldg 580	3/31/2010
15815.1146	CCSB0010_Schofield Barracks Bldg 2515	3/31/2010
15815.1147	CCSB0011_Schofield Barracks Bldg 1080	9/30/2009
15815.1148	CCSB0012_Schofield Barracks Quad B	3/31/2010
15815.1149	CCSB0015 Schofield Barracks 955, Physica	3/31/2010
15815.1150	CCSB0017_Schofield Barracks Quad D	6/30/2011
15815.1151	CCSB0018_8th TSC Motor Pool	10/31/2010
15815.1152	CCSB0028 Schofield Barracks WTU OPS SB 6	3/31/2010
15815.1153	CCSB0029_Schofield Barracks Building 118	3/31/2010
15815.1154	CCSB0030_SB 3010 UST	9/30/2011
15815.1155	CCSB0031_Former Kalakaua Golf Course	9/30/2011
15815.1126		6/30/2008
15815.1127	SCHBR-004-R-01_YONKERS RANGE	11/15/2013
15815.1128	SCHBR-003-R-01_WAIAWA TRAINING AREA	5/1/2003
15815.1129	SCHBR-005-R-01_YONKERS RANGE (TD)	6/30/2008
15815.1130	SCHBR-002-R-01_SMALL BORE RANGE	6/30/2008
15815.1131		9/15/2012
15815.1132	SCHBR-007-R-01_CENTER COMBAT RANGE	5/1/2003
15815.1133		7/15/2011
15815.1134		6/30/2008
15815.1135		5/1/2003
15815.1138		6/30/2008
15815.1139	SCHBR-013-R-02_SOUTHERN PISTOL RANGES W	7/15/2011
15815.1140		6/30/2009
15815.1160	CCWAAF002_WAAF Archery Range	3/31/2003

CRL ID	Site Name	Site Closeout Date
15815.1161	CCWAAF001_WAAF200 POL Release Site	4/30/2004
15815.1162	CCSB0005_SB 2138 DOL Shop 5 - CDC	6/30/2009
15815.1163	CCSB0006_SB 2460, 2462, 2465, 2480, 2482	2/28/2009
15815.1164	CCSB0007 SB 2480, 2482, 2485	12/31/2000
15815.1166	CCSB0008_Schofield Barracks 985	12/31/2009
15815.1167	CCSB0009_Schofield Barracks Bldg 580	9/30/2009
15815.1168	CCSB0010_Schofield Barracks Bldg 2515	9/30/2009
15815.1169	CCSB0011_Schofield Barracks Bldg 1080	12/31/2009
15815.1170	CCSB0012_Schofield Barracks Quad B	9/30/2009
15815.1171	CCSB0013 Various MILCON ESAs	9/30/2006
15815.1172		2/29/2008
15815.1173	CCSB0015_Schofield Barracks 955, Physica	9/30/2009
15815.1174	CCSB0016 IBCT Facility - So. Range	6/30/2009
15815.1175	CCSB0017_Schofield Barracks Quad D	9/30/2009
15815.1176	CCSB0018_8th TSC Motor Pool	9/30/2009
15815.1177	CCSB0019 UEPH (Porter Village)	12/31/2009
15815.1178	CCSB0020_SB 2640 - 249th Prime Power	3/31/2009
15815.1179	CCSB0021_POL Site under BLDG 589 Parking	6/30/2009
15815.1180	CCSB0022_Engineer Unit Operations & Main	6/30/2009
15815.1181	CCSB0023_MP Unit OPS and Maintenance Fac	6/30/2009
15815.1182	CCSB0024 EOD Unit OPS	6/30/2009
15815.1183	CCSB0025 GTF Infrastructure Facilities	6/30/2009
15815.1186	CCSB0028_Schofield Barracks WTU OPS SB 6	9/30/2009
15815.1187	CCSB0032_Schofield Barracks BAX	9/30/2012
2218A.1001	TAMC-01 BLD 114 PESTICIDE UST (WSC #6)	12/31/1994
2218A.1003	TAMC-03_BLD 114 PESTICIDE STG (WSC #7)	12/31/1994
2218A.1004	TAMC-04 UST BLDG 125 POL LEAK (WSC #18)	9/30/2007
2218A.1005	TAMC-05 UST @ BLDG 113 (WSC #8)	5/31/1995
2218A.1006	TAMC-06 OLD TRANSFORMER SUBSTATION	12/31/2012
2218A.1007	TAMC-07 UST WING B	12/31/1994
2218A.1008	TAMC-11 UST BLDG 145 (AAFES)	12/31/1994
2218A.1010	CCTAMC0003_TAMC 137 Central Plant	2/28/2011
2218A.1012	CCTAMC0002_TAMC 125	5/31/2003
2220A.1003	PBA@MR WAIKAKA PBA@MMRP Waikakalaua	9/30/2008
2220A.1004	WAST-001-R-02_NFA PORTION OF WAST 24A	5/15/2013
2220A.1005	WAST-001-R-03_WAST 24A NFA EAST	9/15/2016
2220A.1006		5/15/2013
2220A.1007	WAST-002-R-03_24A (TD) NFA WEST PLATEAU	9/15/2016
2221A.1001	WAAF-03 200K GAL AVGAS UST (SITE D1)	12/31/1994
2221A.1002	WAAF-05 BLDG 102 USTS	11/30/1998
2221A.1003	WAAF-06_BLDG 105 UST	11/30/1994
2221A.1004	WAAF-07_BLDG 107 UST	11/30/1994
2221A.1005	WAAF-08 BLDG 108 UST	11/30/1994
2221A.1006	WAAF-09 BLDG 111 UST	11/30/1994
2221A.1007	WAAF-10 BLDG 114 UST	11/30/1994

CRL ID	Site Name	Site Closeout Date
2221A.1008	WAAF-11_BLDG 208 USTS	11/30/1994
2221A.1009	WAAF-12_BLDG 235 UST	11/30/1994
2221A.1010	WAAF-13_BLDG 800 USTS	11/30/1994
2221A.1011	WAAF-14_BLDG 1004 USTS	11/30/1994
2221A.1012	WAAF-17_UST BLDG 1112	11/30/1994
2221A.1013	WAAF-18_UST BLDG 1578	11/30/1994
2221A.1014	WAAF-19_TCE CONTAMINATION	2/28/1995
2221A.1015	WAAF-20_WHEELER NETWORK SEGMENT CONTROL	9/30/2004
2221A.1016	WAAF-21_ARCHERY RANGE SITE	9/30/2004
2221A.1026	CCWAAF0002_WAAF 218	3/31/2010
2221A.1038	DP002_SITE 2 GULCH RUNWAY DUMP	11/15/2000
2221A.1039	DP003_SITE 3 KUNIA GATE DUMP	12/15/1995
2221A.1040	FT004_SITE 4 Fire Training Area	12/15/1994
2221A.1041	LF001_SITE 1 LANDFILL	12/15/1994
2221A.1042	SD005_ST 5 AIRCRAFT PKG/WASH RACK	7/15/2000
2221A.1043	SD006_SITE 6 AIRCRAFT PARKING	7/15/2000
2221A.1044	WP007_SITE 7 SANITARY SEWER SYSTEM	7/15/2000
2221A.1045	WP008_ABANDONED OXIDATION PONDS	7/15/2000
2221A.1017	WAAF-001-R-01_SMALL ARMS RANGE 1	6/30/2008
2221A.1018	WAAF-004-R-01_FIRING RANGE 2B	6/30/2008
2221A.1019	WAAF-002-R-01_SMALL ARMS RANGE 1 (TD)	6/30/2008
2221A.1020	WAAF-003-R-01_FIRING RANGE 2A	12/31/2013
2221A.1022	WAAF-008-R-01_Skeet Range	1/15/2015
2221A.1023	WAAF-007-R-01_Pursuit Gunnery 1,000"Ran	6/30/2008
2221A.1025	WAAF-009-R-01_WAAF PH6B	8/31/2011
2221A.1027	WAAF-010-R-01_WAAF CAB	5/15/2013
2221A.1028	WAAF-011-R-01_Wheeler Army Airfield Gulc	3/15/2015
2221A.1029	WAAF-005-R-02_ARCHERY RANGE SOUTH	7/15/2011
2221A.1033	WAAF-011-R-03_WAAF SADDLE CLUB STABLES	12/15/2014
2221A.1030	CCWAAF0001_WAAF 108-1	3/31/2011
2221A.1032	CCWAAF0003_WAAF 204	3/31/2011
2221A.1034	CCWAAF0004_WAAF WBR PH6B	8/31/2008
2221A.1035	CCWAAF0005_WAAF CAB	10/31/2009

## COMMUNITY INVOLVEMENT

Installation:	HELEMANO RAD REC STATION	KILAUEA MILITARY RESERVATION	KUNIA FIELD STATION	MAKUA MILITARY RESERVATION	POHAKULOA TRAINING AREA
Community Involvement Plan (Date Last Reviewed):	N/A	N/A	8/5/2019	11/15/2016	11/1/2016
Technical Review Committee Establishment Date:	N/A	N/A	N/A	N/A	N/A
Restoration Advisory Board (RAB) Establishment Date:	N/A	N/A	N/A	N/A	N/A
RAB Adjournment Date:	N/A	N/A	N/A	N/A	N/A
RAB Adjournment Reason:	N/A	N/A	N/A	N/A	N/A
Reasons for Not Establishing RAB:	N/A	N/A	No sufficient, sustained community interest in a RAB has been expressed by the community	No sufficient, sustained community interest in a RAB has been expressed by the community	No sufficient, sustained community interest in a RAB has been expressed by the community
RAB Date of Solicitation from Community:	N/A	N/A	9/19/2022	9/19/2022	9/19/2022
RAB Results of Solicitation:	N/A	N/A	No Response	No Response	No Response
Current Technical Assistance for Public Participation (TAPP):	N/A	N/A	N/A	N/A	N/A
TAPP Title:	N/A	N/A	N/A	N/A	N/A
Potential TAPP:	N/A	N/A	N/A	N/A	N/A

Administrative Record Location:	N/A	N/A	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Waianae Public Library 85-625 Farrington Hwy Kapolei Public Library 1020 Manawai St	Hilo Public Library 300 Waianuenue Ave Kailua-Kona Public Library 75-138 Hualalai Rd Thelma Parker Memorial Community School Library 67-1209 Mamalahoa Hwy
Information Repository Location:	N/A	N/A	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Waianae Public Library 85-625 Farrington Hwy Kapolei Public Library 1020 Manawai St	Hilo Public Library 300 Waianuenue Ave Kailua-Kona Public Library 75-138 Hualalai Rd Thelma Parker Memorial Community School Library 67-1209 Mamalahoa Hwy

Installation:	SCHOFIELD BARRACKS	TRIPLER ARMY MEDICAL CENTER	WAIKAKALAUA AMMO STORAGE TUNNELS	WHEELER ARMY AIRFIELD
Community Involvement Plan (Date Last Reviewed):	8/1/2019	8/15/2019	11/15/2016	8/15/2019
Technical Review Committee Establishment Date:	12/31/1993	N/A	N/A	N/A
Restoration Advisory Board (RAB) Establishment Date:	N/A	N/A	N/A	N/A
RAB Adjournment Date:	N/A	N/A	N/A	N/A
RAB Adjournment Reason:	N/A	N/A	N/A	N/A
Reasons for Not Establishing RAB:	No sufficient, sustained community interest in a RAB has been expressed by the community	No sufficient, sustained community interest in a RAB has been expressed by the community	No sufficient, sustained community interest in a RAB has been expressed by the community	No sufficient, sustained community interest in a RAB has been expressed by the community
RAB Date of Solicitation from Community:	9/19/2022	9/19/2022	9/19/2022	9/19/2022
RAB Results of Solicitation:	No Response	No Response	No Response	No Response
Current Technical Assistance for Public Participation (TAPP):	N/A	N/A	N/A	N/A
TAPP Title:	N/A	N/A	N/A	N/A
Potential TAPP:	N/A	N/A	N/A	N/A

Administrative Record Location:	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Aiea Public Library 99-374 Pohai Pl Salt Lake- Moanalua Public Library 3225 Salt Lake Blvd	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St
Information Repository Location:	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Aiea Public Library 99-374 Pohai Pl Salt Lake- Moanalua Public Library 3225 Salt Lake Blvd	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St	Wahiawa Public Library 820 California Ave Mililani Public Library 95-450 Makaimoimo St

## FIVE-YEAR / PERIODIC REVIEW SUMMARY

Installation:	HELEMANO RAD REC STATION		
Status:	N/A	N/A	
Review Type (i.e. FYR or PR):	N/A	N/A	
Start Date:	N/A	N/A	
End Date:	N/A	N/A	
Plans Narrative:	N/A	N/A	
Actions Narrative:	N/A	N/A	
Results Narrative:	N/A	N/A	

Installation:	KILAUEA MILITARY RESERVATION		
Status:	N/A	N/A	
Review Type (i.e. FYR or PR):	N/A	N/A	
Start Date:	N/A	N/A	
End Date:	N/A	N/A	
Plans Narrative:	N/A	N/A	
Actions Narrative:	N/A	N/A	
Results Narrative:	N/A	N/A	

Installation:	KUNIA FIELD STATION		
Status:	Completed Underway		
Review Type (i.e. FYR or PR):	PR	PR	
Start Date:	3/3/2017	1/9/2024	
End Date:	8/21/2018	9/30/2024	
Plans Narrative:	N/A	N/A	
Actions Narrative:	No follow up actions recommended	N/A	
Results Narrative:	The remedy is protective of human health and the environment	N/A	

Installation:	MAKUA MILITARY RESERVATION	
Status:	Completed	Planned
Review Type (i.e. FYR or PR):	FYR	FYR
Start Date:	1/27/2022	10/1/2024
End Date:	1/22/2024	11/20/2025
Plans Narrative:	N/A	N/A
Actions Narrative:	Repair/replacement of signage and community outreach for munitions education (e.g., 3Rs) at MAKU-003-R-01 in order to be protective in the long-term	N/A
Results Narrative:	N/A	N/A

Installation:	POHAKULOA TRAINING AREA	
Status:	Completed	Underway
Review Type (i.e. FYR or PR):	FYR	FYR
Start Date:	11/27/2018	3/1/2024
End Date:	3/24/2020	3/1/2025
Plans Narrative:	N/A	N/A
Actions Narrative:	N/A	N/A
Results Narrative:	N/A	N/A

Installation:	SCHOFIELD BARRACKS	
Status:	Completed	Planned
Review Type (i.e. FYR or PR):	PR and FYR (2)	PR and FYR (2)
Start Date:	PR/FYR (2)- 8/18/2021	10/1/2026
End Date:	PR- 10/24/2022; FYR (NPL)- 10/20/2022; FYR (non-NPL)- 06/30/2023	9/24/2027
Plans Narrative:	See Actions	N/A
Actions Narrative:	ESD or ROD amendment can capture the need for the soil cap and document the soil cap as part of the remedy at Garden Gulch MRS. This effort would allow for the next FYR to conduct a full technical analysis of the soil cap construction activities completed at the site.	N/A
Results Narrative:	The remedy is achieving the RAOs.	N/A

Installation:	TRIPLER ARMY MEDICAL CENTER	
Status:	Completed	Planned
Review Type (i.e. FYR or PR):	FYR and PR	FYR and PR
Start Date:	FYR/PR- 5/26/2022	FYR/PR- 10/01/2027
End Date:	FYR/PR- 9/28/2023 and 10/11/2023	FYR/PR- 09/18/2028
Plans Narrative:		N/A
Actions Narrative:	FYR/PR - (PR) No issues identified during this PR that affect current/future protectiveness of remedy.	N/A
<b>Results Narrative:</b>		N/A

Installation:	WAIKAKALAUA AMMO STORAGE TUNNELS	
Status:	Completed	Planned
Review Type (i.e. FYR or PR):	FYR	FYR
Start Date:	1/28/2022	1/19/2025
End Date:	10/24/2023	1/19/2026
Plans Narrative:	N/A	N/A
Actions Narrative:	N/A	N/A
Results Narrative:	N/A	N/A

Installation:	WHEELER ARMY AIRFIELD	
Status:	Completed	Planned
Review Type (i.e. FYR or PR):	FYR	FYR
Start Date:	5/17/2021	10/1/2026
End Date:	2/28/2024	9/25/2027
Plans Narrative:	N/A	N/A
Actions Narrative:	Installation of signage outside of the vegetated area (and the MRS boundary) at WAAF-011- R-02 in order to be protective in the long-term	N/A
Results Narrative:	The remedy is protective of human health and the environment.	N/A