FORT SHAFTER

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 multi-year 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.

INSTALLATION OVERVIEW

Installation Name: FORT SHAFTER
Installation City: HONOLULU
Installation County: HONOLULU
Installation State: HI
Regulatory Participation - Federal: N/A
Regulatory Participation - State: HDOH

ACRONYMS

Acronym	Definition
AEDB-R	Army Environmental Database - Restoration
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
C/I	Commercial/Industrial
DD	Decision Document
DES	Design
HDOH	Hawaii Department of Health
DU	Decision Unit
EAL	Environmental Action Level
EHMP	Environmental Hazard Management Plan
ENV	Environmental
FS	Feasibility Study
FY	Fiscal Year
IM	Interim Measure
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operations)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
ISC	Initial Site Characterization
LTM	Long-Term Management
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
MCL	Maximum Contaminant Levels
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
mg/kg	milligram/kilogram
MI	Multi-increment
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol

Acronym	Definition
N/A	Not Applicable
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PP	Proposed Plan
RA	Risk Assessment
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
SI	Site Inspection
TCE	Trichloroethylene
TPH-D	Total Petroleum Hydrocarbons - Diesel
UE	Unrestricted Exposure
USAG-HI	US Army Garrison - Hawaii
USARC	US Army Reserve Center
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UU/UE	Unlimited Use
VOC	Volatile Organic Compounds

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: 5/8

Number of Open Sites with Response Complete/Total Open MR Sites: 1/1

Number of Open Sites with Response Complete/Total Open CC Sites: 0/0

SITE-LEVEL INFORMATION

15835.1040_FTSHF-46_FORMER FUEL STATION NEAR USARC,

Env Site ID: FTSHF-46

Cleanup Site: FORMER FUEL STATION NEAR USARC,

Alias: 3B

Regulatory Driver: CERCLA

RIP Date: 6/30/2025

RC Date: 9/30/2054

RC Reason: Not assigned

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:	9/15/1993	5/15/1996
SI:	9/15/1993	5/15/1996
RI/FS:	6/15/2002	1/30/2023
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/15/2009	6/30/2025
RA(O):	12/15/2018	9/30/2054
LTM:	- -	- -

Site Narrative: This site was a fueling station and paint spray booth (Building T-1537) located in Area 4 (HLA, 1996) in the southwest corner of Fort Shafter. A review of historical aerial photographs and topographic maps indicates that gasoline and oil storage tanks were present at the site in 1952, and the structure was built prior to 1969. The buildings and structures, including the tanks, have been demolished and removed, and the area is currently an open field with short grasses and shrubs. The site inspection sampling results show low level trichloroethylene (TCE) groundwater contamination below maximum contaminant levels (MCL). The remedial investigation (RI)/risk assessment (RA) concluded that the observance of TCE in the shallow groundwater is consistent with an off-site source. In the RI/RA report, this site (FTSHF-46) is also known as Site G. Contaminants of potential concern for this site are arsenic, polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons, and three volatile organic compounds (VOC). The decision document (DD), signed in 2009, selected land use controls (LUC) as the remedy and consists of restricting land use at the site to industrial only, semiannual site inspections and five-year reviews. Additional LUCs for this site include installation of a fence with warning signs along a drainage channel on the perimeter of this site. At that time the state approved closure of some wells. The LUC monitoring began in 2008. In the first five-year review, completed in 2014, the state approved closure of the remaining wells. However, during closure, a strong hydrocarbon odor was detected in three of the wells, therefore, those three monitoring wells were not closed. To address the findings during the attempted closure of the wells, an investigation began in fiscal year (FY)16 to determine the nature and extent of petroleum, oils, and lubricants contamination in the groundwater. The supplemental RI/feasibility study (FS) was completed in 2018; the proposed plan (PP) was finalized in 2022; DD was finalized in 2023; and remedial action (construction) (RA(C)), inclusive of the remedial action completion report (RACR) and land use control implementation plan (LUCIP), is underway. The selected remedy for the site is LUCs consisting of restriction of land use to industrial, periodic site inspections, five-year reviews, and monitored natural attenuation. The requirements for RI/FS, PP, DD, RA(C), and remedial action (operations) (RA(O)) for groundwater contamination are captured under this site. Long-term management (LTM) as presented in the 2009 DD also continues for

this site. Because the future land use will remain commercial/industrial (C/I) 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 reviews will continue indefinitely. The first and second five-year reviews found the remedy as prescribed in the 2009 DD to be protective of human health and the environment. The next scheduled five-year review for the installation, and the first for this site as prescribed in the 2023 DD, is anticipated for FY25. Cleanup/Exit Strategy - Long-term groundwater monitoring is expected to continue until natural attenuation has been shown effective in reducing VOC concentrations in the groundwater or until remedial action objectives are achieved.

15835.1042_FTSHF-48_FORMER LAUNDRY FACILITY, FLATS

Env Site ID: FTSHF-48

Cleanup Site: FORMER LAUNDRY FACILITY, FLATS

Alias: 2B

Regulatory Driver: CERCLA

RIP Date: 10/15/2009

RC Date: 10/15/2009

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:

MRSPP: N/A

Phase	Start	End
PA:	9/15/1993	5/15/1996
SI:	9/15/1993	5/15/1996
RI/FS:	6/15/2002	9/15/2006
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/15/2009	10/15/2009
RA(O):	- -	- -
LTM:	10/15/2009	9/30/2054

Site Narrative: The site, Building 305, is a former laundry facility in the Fort Shafter Flats area. A review of historical aerial photographs and topographic maps indicates that the structure was built prior to 1950 and demolished prior to 1978. Building 305 was located on the north side of existing Building 1547. About one-third of the former building would have been in the footprint of Building 1547. The area is currently a paved parking lot with some landscaping. The preliminary assessment (PA)/site inspection (SI) report indicated mercury contamination in the groundwater and soil samples indicated the presence of VOCs below action levels. In the RI/RA report, this site is also known as Site B. The risk assessment for the site itself will likely allow for closure for industrial use; however, this site (FTSHF-48) includes additional work that may be necessary to evaluate on-site concentrations and consideration of sources of contamination to differentiate between site-specific and regional anthropogenic contamination should a change in land use occur. The DD, signed in 2009, selected LUCs as the remedy, and consists of restricting land use at the site to industrial only, semiannual site inspections, and five-year reviews. Additional LUCs for this site include installation of a fence with warning signs along a drainage channel on the perimeter of this site. LUC monitoring began in 2008. 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 first five-year review was completed in 2014, and the second five-year review was completed in FY20. Both reviews found the remedy to be protective of human health and the environment. The next scheduled five-year review is anticipated for FY25. Cleanup/Exit Strategy - The LTM phase will continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

15835.1044_FTSHF-50_FORMER REPAIR SHOP BLDG 1553

Env Site ID: FTSHF-50

Cleanup Site: FORMER REPAIR SHOP BLDG 1553

Alias: 3B

Regulatory Driver: CERCLA

RIP Date: 10/15/2009

RC Date: 10/15/2009

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:

MRSPP: N/A

Phase	Start	End
PA:	9/15/1993	5/15/1996
SI:	9/15/1993	5/15/1996
RI/FS:	6/15/2002	9/15/2006
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/15/2009	10/15/2009
RA(O):	- -	- -
LTM:	10/15/2009	9/30/2054

Site Narrative: This is the former repair shop site. It is located on the south side (near Middle Street) of what is now the US Army Reserve Center (USARC) and includes former Buildings 1553 and 1567. A review of historical aerial photographs and topographic maps indicates that Building 1553 was built prior to 1950 and was demolished after 1969 and prior to 1978. The former repair shop, Building 1553, overlaps a portion of the southeast corner of the existing Unit Storage Warehouse (Building 1556), and the south end of the former building extended to what is now a part of the H-1 viaduct roadway. The location of the former building is now asphalt-paved roadways and parking area and some landscaped grounds. The former motor pool repair shop, Building 1567, is also a part of the Building 1553 RI site. Site inspection samples retrieved indicate concentrations of pentachlorophenol above US Environmental Protection Agency (USEPA) MCLs. The RI/RA report refers to this site as Site C. The risk assessment for the site will likely allow for closure for industrial use. Further evaluation of on-site concentrations and consideration of sources of contamination at this site (FTSHF-50) may be necessary to evaluate petroleum contamination in site soils should a change in land use occur. The DD, signed in 2009, selected LUCs as the remedy, and consists of restricting land use at the site to industrial only, semiannual site inspections, and five-year reviews. Additional LUCs for this site include installation of a fence with warning signs along a drainage channel on the perimeter of this site. LUC monitoring began in 2008. 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 first five-year review was completed in 2014, and the second five-year review was completed in FY20. Both reviews found the remedy to be protective of human health and the environment. The next scheduled five-year review is anticipated for FY25. 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.

15835.1045_FTSHF-51_WASHRACK T-1539

Env Site ID: FTSHF-51

Cleanup Site: WASHRACK T-1539

Alias: 3B

Regulatory Driver: CERCLA

RIP Date: 10/15/2009

RC Date: 10/15/2009

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:

MRSPP: N/A

Phase	Start	End
PA:	9/15/1993	5/15/1996
SI:	9/15/1993	5/15/1996
RI/FS:	6/15/2002	9/15/2006
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/15/2009	10/15/2009
RA(O):	- -	- -
LTM:	10/15/2009	9/30/2054

Site Narrative: This site is located south (near Middle Street) of what is now the USARC. The vehicle washrack, Structure T1539 in Area 4, consists of a rectangular paved vehicle parking area that is surrounded by a six-inch high asphalt concrete berm. A review of historical aerial photographs and topographic maps indicates that the structure was built prior to 1969. The area around the washrack and the buildings directly north of the washrack, T-1533 and T-1354, are being used by a contractor for materials and equipment storage and truck parking. The washrack is no longer in use, and vegetation is starting to grow in the pavement. Samples retrieved indicate concentrations of arsenic in groundwater just below USEPA MCLs. The arsenic concentrations are likely naturally occurring. The RI/RA report refers to this site as Site E. The risk assessment for the site will likely allow for closure for industrial use. Further evaluation of on-site concentrations and consideration of sources of contamination may be necessary at this site (FTSHF-51) should a change in land use occur. The DD, signed in 2009, selected LUCs as the remedy, and consists of restricting land use at the site to industrial only, semiannual site inspections, and five-year reviews. Additional LUCs for this site include installation of a fence with warning signs along a drainage channel on the perimeter of this site. LUC monitoring began in 2008. 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 first five-year review was completed in 2014 and the second five-year review was completed in FY20. Both reviews found the remedy to be protective of human health and the environment. The next scheduled five-year review is anticipated for FY25. 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.

15835.1046_FTSHF-52_FORMER WAREHOUSE (T1542)

Env Site ID: FTSHF-52

Cleanup Site: FORMER WAREHOUSE (T1542)

Alias: 2B

Regulatory Driver: CERCLA

RIP Date: 10/15/2009

RC Date: 10/15/2009

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:

MRSPP: N/A

Phase	Start	End
PA:	6/15/1993	2/15/1996
SI:	6/15/1993	2/15/1996
RI/FS:	6/15/2002	9/15/2006
RD:	- -	- -
IRA:	- -	- -
RA(C):	1/15/2009	10/15/2009
RA(O):	- -	- -
LTM:	10/15/2009	9/30/2054

Site Narrative: This site is located on the southern edge of what is now the USARC in Fort Shafter. The warehouse structure (T1542) is no longer present at the site. A review of historical aerial photographs and topographic maps indicates that the structure was built prior to 1950. A portion of the former warehouse building location overlaps the west side of Building 1556, the Unit Storage Warehouse. The location of the former warehouse building is currently a paved driveway and parking area for Building 1556. The risk drivers for this site are PAHs and metals. The RI/RA report refers to this site as Site F. The risk assessment for the site will likely allow for closure; however, further evaluation will probably be required should the site be disturbed. The DD, signed in 2009, selected LUCs as the remedy, and consists of restricting land use at the site to industrial only, semiannual site inspections, and five-year reviews. Additional LUCs for this site include installation of a fence with warning signs along a drainage channel on the perimeter of this site. LUC monitoring began in 2008. 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 first five-year review was completed in 2014, and the second five-year review was completed in FY20. Both reviews found the remedy to be protective of human health and the environment. The next scheduled five-year review is anticipated for FY25. 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.

15835.1056_CCFS0007_LEAD-IMPACTED SITE-FRM SKEET RA

Env Site ID: CCFS0007

Cleanup Site: LEAD-IMPACTED SITE-FRM SKEET RA

Alias: FS LEAD

Regulatory Driver: CERCLA

RIP Date: 12/31/2024

RC Date: 12/31/2024

RC Reason: Not assigned

SC Date: 9/30/2054

Program: ENV Restoration, Army

Subprogram: IR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: Not Evaluated

MRSPP: N/A

Phase	Start	End
PA:	6/15/2012	8/15/2014
SI:	6/15/2012	8/15/2014
RI/FS:	8/15/2014	1/30/2023
RD:	- -	- -
IRA:	- -	- -
RA(C):	7/1/2023	12/31/2024
RA(O):	- -	- -
LTM:	1/1/2025	9/30/2054

Site Narrative: This site was initially addressed under Military Munitions Response Program at the Fort Shafter Skeet Range (FTSHF-005-R-01) Munitions Response Site (MRS). The Skeet Range MRS occupied approximately 16 acres in the western portion of Fort Shafter Flats. During the RI for the Skeet Range MRS, lead was detected in the soil. The selected remedial action at the Skeet Range MRS was excavation and off-site disposal of lead-contaminated soil above the unrestricted land use remediation goal of 400 milligrams/kilogram (mg/kg) within a 0.3-acre excavation area. During RA fieldwork, lead-contaminated soil was discovered in subsurface soil at depths beyond what could have been caused by Skeet Range activities. Lead concentrations in the soil at 3.5 to four feet below ground surface was found as high as 5,260 mg/kg. Based on soil removal activities conducted between 2013 and 2014, response action at the Skeet Range MRS is complete and no further action was achieved for the MRS. Residual contamination associated with dark brown, fine-grained soil (fill) was detected in the soil at depths of approximately four feet below ground surface. This site was then opened under the Installation Restoration Program to do an RI/FS to determine the nature and extent of the lead-contamination in the subsurface soil. The RI/FS was completed in 2018; the PP was finalized in 2022; the DD was finalized in 2023; and RA(C) (sign installation), inclusive of the RACR and LUCIP, is underway. The selected remedy for the site is LUCs consisting of restriction of land use to recreational, annual site inspections, and five-year 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, five-year remedy reviews will continue indefinitely. The next scheduled five-year review, and the first for this site, is anticipated for FY25. Cleanup/Exit Strategy - LTM phase is expected to continue at the site until all LUCs are determined to be no longer needed to protect human health and the environment.

15835.1059_15835.1059_FS Bldg 145 UST

Env Site ID: 15835.1059
Cleanup Site: FS Bldg 145 UST
Alias: #
Regulatory Driver: RCRA-I
RIP Date: 6/16/2022
RC Date: 6/16/2022
RC Reason: Study Completed, No Cleanup Required
SC Date: 1/2/2054
Program: ENV Restoration, Army
Subprogram: IR
NPL Status: No
Hazardous Ranking Score: 0
RRSE:
MRSPP: N/A

Phase	Start	End
ISC:	5/15/2016	6/15/2016
INV:	- -	- -
CAP:	- -	- -
DES:	- -	- -
IRA:	- -	- -
IMP(C):	6/1/2020	6/16/2022
IMP(O):	- -	- -
LTM:	6/17/2022	1/1/2054

Site Narrative: Underground storage tank (UST) closure activities for one 12,000-gallon diesel fuel tank commenced on May 13, 2016. The UST was emptied, decontaminated, and properly closed in place due to the proximity of high-voltage switch gear and underground cables. During the cleaning of the UST the interior of the tank was examined and found to be in excellent condition with no holes or perforations. A total of eight soil samples were collected from underneath the UST and the associated piping during closure sampling activities. Multi-increment (MI) sample S01 was collected from three locations at one end of the UST and MI sample S02 was collected at the other end of the UST. MI samples S03 to S08 were collected at each fixture or ninety-degree bend in the piping run between the UST and the day tank. The samples were analyzed for total petroleum hydrocarbons - diesel (TPH-D), PAHs, PCBs, cadmium, and lead. Based on laboratory results and visual observations, the UST was found to be intact with no evidence of a release to the surrounding soil. With respect to the piping associated with the UST system, TPH-D was found at a concentration exceeding the residential environmental action level (EAL) of 100 mg/kg in Sample S08. The concentration of TPH-D was 380 mg/kg in sample S08 collected near the vertical joint closest to the day tank and the generator. Based on these laboratory results the US Army Garrison-Hawaii (USAG-HI) reported a confirmed petroleum release to the Hawaii Department of Health (HDOH) in 2016. In response, the HDOH issued a letter notifying USAG-HI that delineation and over excavation is required. The UST closure report recommended the preparation of an environmental hazard management plan to manage the risks associated with the petroleum release. The environmental hazard management plan, finalized in 2020, delineates the extent and magnitude of the soil contamination as well as describes the management plans to mitigate the possible risks associated with the remaining contamination. LUCs will include restriction of land use C/I, annual physical site inspections, 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 remedy reviews will continue indefinitely. The periodic review schedule is anticipated to align with the current installation five-year review (FY25). 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.

15835.1060_FTSHF-PFAS_PFAS

Env Site ID: FTSHF-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 per- and polyfluoroalkyl substances (PFAS) cleanup at the installation. The PA/SI was completed in 2023 and recommended further study in an RI. The RI phase is underway.

15835.1050_FTSHF-004-R-01_Rifle Range 1 (TD)

Env Site ID: FTSHF-004-R-01

Cleanup Site: Rifle Range 1 (TD)

Alias: RR1 TD

Regulatory Driver: CERCLA

RIP Date: 10/15/2015

RC Date: 10/15/2015

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:	4/15/2006	3/15/2009
RI/FS:	6/15/2009	9/15/2013
RD:	3/15/2011	8/15/2014
IRA:	- -	- -
RA(C):	8/15/2014	10/15/2015
RA(O):	- -	- -
LTM:	1/15/2017	9/30/2054

Site Narrative: The Fort Shafter Rifle Range 1 Transferred MRS occupies approximately 1.27 acres of land located beyond the installation boundary on the northeastern portion of the installation, south of the south branch of Kahauiki Stream at the end of Hase Drive. It is the transferred portion of Rifle Range 1 and includes the 200-yard targets from that range. Rifle Range 1 was in operation from 1937 through the early-1960s and was identified as a known distance range for the use of rifles, carbines, Browning automatic rifles, and .30 caliber machine guns. There is also documentation limiting the weapons used at the range to shotguns and .22 caliber, .30 caliber, .38 caliber, and .45 caliber guns. Targets and other equipment were readily available for the range and included targets, frames, pasters, spotters, marking discs, and paste. An SI was conducted in 2009 which identified four munitions debris (MD) items (three small arm projectiles and expended slap flare). The SI concluded that further investigation for munitions and explosives of concern (MEC) and munitions constituents was warranted. The 2011 RI included 9.9-line miles of instrument aided visual survey for MEC, investigative intrusive activities, and incremental sampling of seven decision units for lead and antimony. During vegetation clearance, one MEC item (partial M-9 rifle grenade) and one MD item (small arms projectile) was identified on-site. Explosive ordnance disposal conducted a blow-in-place action, and explosives confirmation sampling was conducted. No other MEC or MD items were encountered during the RI. Five of the seven decision units reported lead and antimony at concentrations that exceed the Tier 1 EAL (200 mg/kg and 6.3 mg/kg). The current land use of the site is C/I. An additional data collection was performed in September 2012 to improve remedial alternatives development. Resulting concentrations of total lead were above the recreational land use EAL (2,240 mg/kg) in shallow surface soil. A FS was completed in March 2013 and recommended excavation, on-site stabilization, and off-site disposal of soil with LUCs as the most favorable remedial alternative. A PP and DD were completed as well and formally documented the remedial action decision. The remedial action fieldwork began in 2014 and was completed in FY16. Excavation was conducted for 0.67 acres. Contaminant concentrations were below the recreational remediation goal of 2,240 mg/kg for lead and 410 mg/kg for antimony. 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 second five-year review for the Fort Shafter installation, completed in FY20, was the first five-year review for this site. The next scheduled five-year review is anticipated for FY25. Cleanup/Exit Strategy - LTM phase is underway and will continue until the site reaches conditions appropriate for UU/UE or until the LUCs are no longer needed to protect human health and the environment.

SITE SUMMARY

SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
15835.1001	FTSHF-01_BLD 225, 434 FORMER PEST STG (W	3/31/1998
15835.1002	FTSHF-02_BLD 725 PESTICIDE STG (WSC #17)	1/31/1994
15835.1003	FTSHF-03_SHAFTER FLATS VEH MAINT BLD 151	2/29/1996
15835.1004	FTSHF-04_VEHICLE MAINT BLD 345 (WSC #19)	11/30/1992
15835.1005	FTSHF-06_AUTOCRAFT SHOP (WSC #2)	2/29/1996
15835.1006	FTSHF-07_VEHICLE WASH AREA AT FSACS (WSC	2/29/1996
15835.1007	FTSHF-09_VEH WASH AREA NR T1521 & T1522	7/31/1993
15835.1008	FTSHF-10_VETERINARY CLINIC (WSC #6)	2/29/1996
15835.1009	FTSHF-11_PHOTO LAB (BLDG 1500) (WSC #7)	2/29/1996
15835.1010	FTSHF-12_ARTS AND CRAFTS CENTER (WSC #8)	8/31/1990
15835.1011	FTSHF-13_MAINTENANCE AREA IN 400 BLOCK-6	11/30/1992
15835.1012	FTSHF-14_VEHICLE WASH AREA NR BLDG 405 (	1/31/1994
15835.1013	FTSHF-15_USTS-USASCH MAINTN AREA, BLD422	10/31/1996
15835.1014	FTSHF-16_VEHICLE WASH AREA NR BLDG 420 (	1/31/1994
15835.1015	FTSHF-17_USASCH MAINTEN AREA AT BLDG 420	12/31/1995
15835.1016	FTSHF-18_FLAM MATLS STG (BLDG 346, 347)	7/31/1992
15835.1017	FTSHF-19_DENTAL CLINIC (WSC #15)	8/31/1990
15835.1018	FTSHF-20_USTS AT BLDG 535 (SERVICE STAT)	10/31/1994
15835.1019	FTSHF-21_TRANSFORMER STG AREA (WSC #18)	8/31/1990
15835.1020	FTSHF-22_FORMER HERBICIDE STG BLDG 310 (	1/31/1994
15835.1021	FTSHF-23_PAINT/PLATING BLDG 1507-WING A	3/31/1998
15835.1022	FTSHF-24_PHOTOGRAPHY LABS(435,1290,1292)	1/31/1994
15835.1023	FTSHF-25_STORMWATER RUNOFF AREA (WSC #24	7/31/1992
15835.1024	FTSHF-26_LIFT STATION AT BLDG 1605 (WSC	8/31/1990
15835.1025	FTSHF-27_DUMP SITE (WSC #26)	1/15/2014
15835.1026	FTSHF-28_WATER TREATMENT LAB (WSC #27)	8/31/1990
15835.1027	FTSHF-29_WATER TREATMENT PLANT AT 511 (W	8/31/1990
15835.1028	FTSHF-30_INDOOR FIRING RANGE (WSC #29)	8/31/1990
15835.1029	FTSHF-33_USARC BLDG A,FT SHAFTER FLATS U	8/31/1993
15835.1030	FTSHF-34_USTS BLDG 310	10/31/1994
15835.1031	FTSHF-35_USTS BLDG 320	10/31/1994
15835.1032	FTSHF-36_USTS BLDG 430	10/31/1994
15835.1033	FTSHF-37_UST BLDG 508	6/30/1994
15835.1034	FTSHF-38_USTS BLDG 507	10/31/1994
15835.1035	FTSHF-39_UST BLDG 520	10/31/1994
15835.1036	FTSHF-41_UST BLDG 1500	10/31/1994
15835.1037	FTSHF-42_UST BLDG 1528	3/31/2000
15835.1038	FTSHF-43_UST BLDG 1535	10/31/1994
15835.1039	FTSHF-45_LUST SOIL REMEDIATION - BLDG 16	6/30/1996
15835.1041	FTSHF-47_FORMER FUELING STATION, BLDG 15	11/30/2009
15835.1043	FTSHF-49_FORMER WAREHOUSE 45	11/30/2009
15835.1052	CCFS0006_Command and Control Facility	3/31/2010

CRL ID	Site Name	Site Closeout Date
15835.1053	CCFS0003_BLDG 1507 Consolidated Motor Po	3/31/2010
15835.1047	FTSHF-003-R-01_RIFLE RANGE 2	9/15/2012
15835.1048	FTSHF-002-R-01_RIFLE RANGE 1	3/31/2009
15835.1049	FTSHF-001-R-01_PISTOL RANGE	12/31/2009
15835.1051	FTSHF-005-R-01_Skeet Range	9/15/2013
15835.1054	CCFS0001_FS1528 Car Care Center, POL Rel	3/31/2009
15835.1055	CCFS0002_Bldg 1547, SCIF	6/30/2009
15835.1057	CCFS0004_WBR Complex for IGPBS and AMF U	6/30/2009
15835.1058	CCFS0005_Proposed Youth Activity Center	6/30/2009

COMMUNITY INVOLVEMENT

Community Involvement Plan (Date Last Reviewed):	8/1/2019
Technical Review Committee Establishment Date:	N/A
Restoration Advisory Board (RAB) Establishment Date:	N/A
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Reasons for Not Establishing RAB:	No sufficient, sustained community interest in a RAB has been expressed by the community
RAB Date of Solicitation from Community:	9/19/2022
RAB Results of Solicitation:	No Response
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A
Administrative Record Location:	Salt Lake/Moanalua Public Library, 3225 Salt Lake Blvd, Honolulu, HI 96818
Information Repository Location:	Salt Lake/Moanalua Public Library, 3225 Salt Lake Blvd, Honolulu, HI 96818

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Complete	FYR	11/27/2018	10/9/2019	N/A	No follow up actions recommended	The remedies are functioning as intended. LUCs have been implemented and maintained. LUCs are currently in place and there were no observed changes to land use at any of the sites.
Underway	FYR	4/30/2024	4/30/2025	N/A	N/A	N/A
Planned	PR	11/4/2028	11/4/2029	N/A	N/A	N/A