



Marine Corps Base (MCB) Hawaii Oahu, Hawaii

Range Environmental Vulnerability Assessment (REVA) Factsheet

November 2020

Background

DoD uses and manages operational ranges to support national security objectives and maintain the high state of operational readiness essential to its mission requirements.

DoD conducts non-regulatory, proactive, and comprehensive operational range assessments (ORAs) to support the long-term sustainability of these ranges while protecting human health and the environment.

The purpose of an ORA is to determine if there is a release or substantial threat of a release of munitions constituents (MC) from an operational range to an off range area that exceeds an applicable regulatory standard or creates a potential unacceptable risk to human health or the environment.

The Range Environmental Vulnerability Assessment (REVA) Program is the U.S. Marine Corps (USMC) program implemented to meet the DoD ORA requirements.

Operational Ranges Overview

MCB Hawaii occupies more than 4,500 acres over several noncontiguous properties. Operational ranges are located at three facilities on Oahu: Kaneohe Bay Range Training Facility (KBRTF), Puuloa Range Training Facility (PRTF), and Marine Corps Training Area Bellows (MCTAB). Live Fire occurs only at KBRTF and PRTF.

A variety of munitions training was recorded at MCB Hawaii during the periodic review period (2014-2019). The primary MC deposited on the ranges and evaluated under REVA are lead, perchlorate, and explosives.

KBRTF is a multipurpose range complex with use ranging from firing small arms to training with medium and large caliber high explosives (HE) items. PRTF is used only for small arms training. Minimal practice, blank, and simulator items are used at MCTAB.

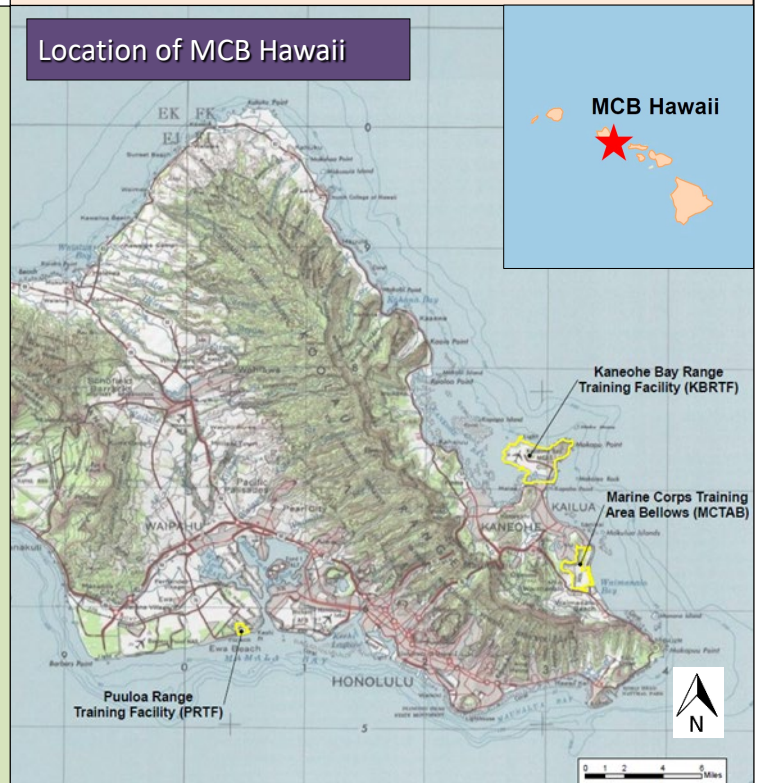
ORA Findings (11/2020)

The MCB Hawaii REVA Periodic Review concluded MC source – receptor pathways are incomplete. A viable MC source, migration pathway, and receptor are not present for the various media and receptors, which results in no interaction between an off range receptor and MC in off range exposure media. Off range migration of MC is unlikely due to employing management practices for range design and maintenance at small arms ranges, low MC source, and/or large water bodies that dilute concentrations. There is no known off range migration of MC that presents a potential unacceptable risk to human health or the environment.

Next Steps

The operational ranges will be reassessed during the next REVA Periodic Review (5 years), or sooner if there are changes to site conditions or training.

Location of MCB Hawaii



Range Assessment Overview

Scope: This REVA Periodic Review for MCB Hawaii covers munitions use on operational ranges that occurred from 2014 through 2019. The previous REVA study at MCB Hawaii (for the years 2008 through 2013) concluded that there was no immediate threat to identified off range receptors. As a proactive measure, follow-on work is in process to address berm erosion concerns at PRTF.

Approach: REVA uses a conceptual site model (CSM) to inform decision making. A complete CSM pathway consists of a source of MC, transport mechanisms of MC to an off range exposure media, and receptor interaction with the off range exposure media. For this REVA Periodic Review, data were collected to update the CSM since the previous REVA review was completed in 2013. This included a review of the operational ranges (e.g., range inventory and changes in design), changes in range use (e.g., amounts and types of munitions expenditure), changes in migration pathways, and changes to receptors (e.g., ecological, off limits areas).

Results: At MCB Hawaii, the CSM pathways for MC migration from the operational ranges to off range receptors are incomplete. Small arms present the largest MC source at the installation, but management practices mitigate migration of lead from the highest use small arms ranges. Previous MC modeling results for explosives and perchlorate from surface water, sediment, and groundwater were below human and ecological screening criteria. CSM changes during the current review period were not significant enough to change the previously modeled results.

Source: The quantity of MC (lead, explosives, perchlorate) generated during training at KBRTF and PRTF is low to moderate. Only minimal practice, blank, and simulator munitions are used at MCTAB (absence of an MC source). Use of small arms and explosives at KBRTF has increased during the current review period, while use of perchlorate-containing munitions has decreased. Overall explosives use is relatively low.

Transport Mechanisms: The transport mechanism for MC from the range or impact area to off range surface water or sediment is via stormwater runoff (overland flow) at KBRTF and infiltration to groundwater at PRTF. Downgradient off range areas at both facilities are in the bay or ocean, which are subject to tidal mixing.



Map of Range Complex



Off Range Receptors: No critical habitats have been designated at MCB Hawaii, but several threatened and endangered species are occasionally present. Recreational use occurs within off range areas at both facilities. The aquifer beneath KBRTF and PRTF is not used for drinking water.

Conclusion: The REVA Periodic Review of MCB Hawaii concludes that there is no known off range migration of MC that presents a potential unacceptable risk to human health or the environment. The operational ranges will be reassessed during the next REVA Periodic Review.

For more information on this range/range complex/installation contact Jennifer Simmons (jennifer.wilber@usmc.mil). For more information on the DoD Operational Range Assessment Program visit <http://www.denix.osd.mil/sri/home/>