



Marine Corps Air Station (MCAS) Miramar, California

Range Environmental Vulnerability (REVA) Factsheet

August 2018

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 to meet the DoD ORA requirements.

Operational Ranges Overview

MCAS Miramar is located in southern California. The mission of MCAS Miramar is to provide services, materials, and facility management to support operations of the Third Marine Aircraft Wing and other activities and units.

Nine small arms ranges (SARs) and an explosive ordnance disposal (EOD) training range are actively used for munitions training at MCAS Miramar. The ranges are located within East Miramar, east of Interstate 15 and north of CA-52.

Training on the operational ranges at MCAS Miramar supports Third Marine Aircraft Wing (3rd MAW), other USMC tenant organizations, and the San Diego Sherriff's Department.

The primary MC deposited on the ranges, and evaluated under the REVA, are lead on the SARs and RDX on the EOD Training Range.

ORA Findings (08/2018)

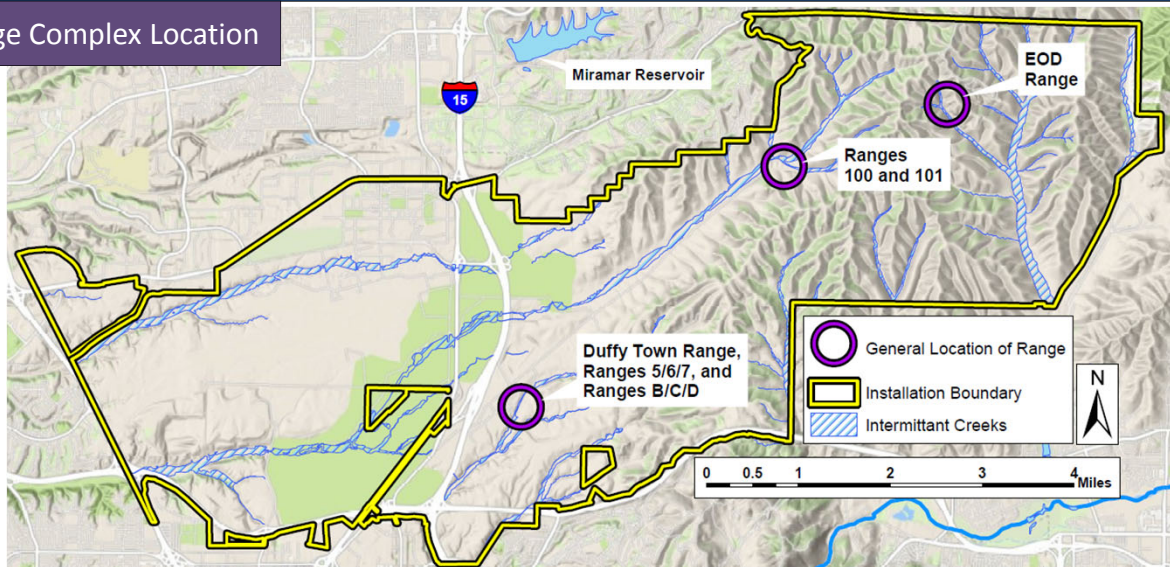
The MCAS Miramar REVA Periodic Review concluded MC source – receptor pathways are incomplete, consequently, there are no known off-range migration of MC that presents a potential unacceptable risk to human health or the environment. There is relatively low munitions expenditure and lead recovery from impact berms limits the lead source. MC migration is unlikely due to minimal rainfall, absence of perennial surface water, high evaporation rates, neutral storm water pH, an impermeable hardpan, and deep groundwater. Engineered storm water controls limit MC transport via runoff. Previous assessments indicate MC are unlikely to migrate to potential receptors in appreciable quantities.

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.



Map of Range Complex Location

Range Assessment Overview

Scope: This REVA Periodic Review for MCAS Miramar covers munitions use on operational ranges that occurred from 2013 through 2017. The previous REVA study at MCAS Miramar (for the years 2008 through 2012) concluded that there was no unacceptable risk to human health or the environment, no further action was recommended, and ranges would be reassessed during the next periodic review.

Approach: REVA uses a conceptual site model (CSM) to inform decision making. A complete CSM pathway consists of a source of MC, transport mechanism 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 potential migration pathways, and changes to receptors (e.g., newly installed groundwater supply wells, ecological).

Results: At MCAS Miramar, the CSM pathways for MC migration from the operational ranges to off-range receptors are incomplete, predominantly due to the relatively low quantity of lead generated at the SARs and RDX at the EOD Training Range, minimal rainfall, and relatively high evaporation rates.

Source: The quantity of MC (lead and RDX) generated is low. Periodic maintenance (most recently 2017) includes removing and recycling lead from the impact berms and erosion control on the berms.

Transport Mechanisms: Off-range migration of MC (lead and RDX) is unlikely. There are no permanent surface water bodies and groundwater is 160 to 200 feet below ground surface. The dry climate and neutral pH of storm water runoff are not conducive to leaching lead from the impact berms.

Off-Range Receptors: Human and ecological receptors are present off-range; however, they are 1.5 to 2.5 miles downgradient from the ranges. Surface water drainage from the ranges is ephemeral and does not connect MCAS Miramar to off-range areas.

Groundwater is not known to be used on or near MCAS Miramar and all drinking water is supplied by the City of San Diego. Ecological receptors may interact with surface soil from the impact berm when moved by storm water; however, water evaporates or infiltrates quickly and the distance from the source area to the nearest range boundary is over a mile.

Conclusion:

The REVA Periodic Review of MCAS Miramar 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 Wilber (jennifer.wilber@usmc.mil). For more information on the DoD Operational Range Assessment Program visit the DoD Environment, Safety and Health Network and Information (DENIX) website.