Operational Range Assessment
Moody Air Force Base

Air Force Operational Range Assessment Program May 2024

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. The Department 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 DAF Operational Range Assessment Program (ORAP), established to comply with DoD policy, sets forth procedures for consistently conducting ORAs throughout the Air Force. The DAF ORAP assessment methodology uses an installation-wide approach to verify the ORAP inventory and accomplish range-specific assessments. An Air Force ORA is comprised of two primary phases: Qualitative Assessment, Phase 1 and Quantitative Assessment, Phase 2 (if required).

- A Qualitative Assessment, Phase 1, encompasses records review, interviews, and a visual survey.
- A Quantitative Assessment, Phase 2, encompasses records review, interviews, visual survey, and environmental media sampling.

Installation Overview

Moody AFB is located in south-central Georgia in Lowndes and Lanier counties, approximately 30 miles north of the Georgia-Florida border. The installation encompasses 10,992 acres of federally owned land and is divided into two main areas: the main base (western portion of Moody AFB) and the Grand Bay Weapons Range (eastern portion of Moody AFB).

ORAP Findings: February 2023 ORA Report

- Munitions Constituents (MC) have the potential to be transported primarily through surface water and sediment media.
- No actual or substantial threat of an off-range MC release was identified for the areas assessed at Moody AFB.
- No potential risks to human health or the environment were determined to exist.

Next Steps

Moody AFB is scheduled to be assessed in accordance with DAF and DoD policy specifying periodic assessment at least every five years or sooner if significant changes occur that may impact assessment decisions.

Map of Installation Area

Installation Overview Continued

Moody AFB manages two Geographically Separated Units (GSU). The Grassy Pond Recreational Annex is a 489-acre parcel located approximately 20 miles south of Moody AFB in Lake Park, Georgia. No munitions are expended on this GSU and, as such, it is not discussed further. The Avon Park Air Force Range is a 106,079-acre GSU located east of Avon Park, Florida. The Avon Park Air Force Range is being assessed separately from Moody AFB under the DAF ORAP.

Moody AFB has four operational areas eligible for assessment under the ORAP: Combat Arms Training Maintenance (CATM) Facility; Training Area (TA) Complex; Training Area 4 (TA-4), and the Grand Bay Weapons Range (GBWR). No other operational areas were identified at Moody AFB.

CATM Facility Assessment Overview

The CATM Facility encompasses approximately 11 acres in the south-central portion of Moody AFB. The CATM Facility includes two fully contained small arms ranges (SARs) and an inactive machine gun range (MGR). The CATM Facility has been in use for small arms training since the 1950s and contains historical earthen berms.

This is the second assessment of the CATM Facility, the initial Phase 1 ORA was completed in 2017. This ORA concurred that a potential source of MC (metals) is present at the CATM Facility at target areas, bullet traps, firing points, and on the range floors of the two active SARs. Additionally, MC is suspected to be present within soils of the historical impact berm. Known/suspected MC were identified as copper, iron, lead, and zinc. The air, soil, surface water/sediment, and groundwater migration routes were deemed unlikely. During this periodic Phase 1, no viable off-range migration mechanisms were identified. As such, there is no threat of release nor risks to receptors. Based on the available information, the CATM Facility is recommended for a periodic Phase 1 ORA.

TA Complex Assessment Overview

The TA Complex is a virtual complex encompassing four areas: Training Area 3 (TA-3); Civil Engineering Field Training Exercise Site (CE-FTX); a Grenade Range; and Military Operations in Urban Terrain Village.

TA Complex Assessment Overview Continued

The TA Complex encompasses 312 acres in the northern portion of Moody AFB. The complex has been used since the mid-2000s for a variety of training exercises including land navigation; force-on-force training; maneuvers; basic movement drills; tactical movements; shoot, move, communicate (SMC) training; simulated attacks; convoy movement and protection; extrication; bivouac overnight training; helicopter landing; and canine training. Munitions expended at the TA Complex include 40-millimeter inert practice grenades, small caliber dye marking rounds, small caliber blanks, flashbang grenades, smoke grenades, and ground burst simulators (GBSs).

This is the initial assessment of the TA Complex under the DAF ORAP, no previous ORA has been conducted. During this initial Phase 1, no viable MC (metals and explosives) migration mechanisms were identified. As such, there is no threat of release and no risks to human or ecological receptors. Based on the available information, the TA Complex is recommended for a periodic Phase 1 ORA.

TA-4 Assessment Overview

TA-4 encompasses approximately 160 acres in the south-central portion of Moody AFB. TA-4 has been used since the mid-2000s for land navigation, force-on-force, maneuvers, basic movement drills, tactical movements, SMC, simulated attacks, convoy movement and protection, extrication, bivouac overnight, and canine training. Munitions expended at TA-4 include GBSs, dye marking rounds, small caliber blanks, flashbang grenades, smoke grenades, and explosives training tools.

An initial Phase 1 ORA was conducted in 2017 which determined a limited source of MC may be present within soils. Known/suspected MC were identified as explosives, perchlorate, and metals (chromium, lead, and zinc).

During this periodic Phase 1, it was confirmed that the air, soil, surface water/sediment, and groundwater pathways are incomplete. As no viable migration mechanisms were identified, there is no threat of release nor risks to receptors. Based on the available information, TA-4 is recommended for a periodic Phase 1 ORA.

GBWR Assessment Overview

The GBWR encompasses approximately 7,450 acres on the eastern portion of Moody AFB. The GBWR contains three sub-areas: the Impact Area; Bemiss Field; and the Explosive Ordnance Disposal (EOD) Facility. The GBWR was established in 1985 and has been used for air-to-ground training with a variety of aircraft and practice bombs. No high explosive or incendiary bombs are authorized. Additionally, GBWR includes ground-based training which utilizes small caliber munitions. Explosives area associated with EOD proficiency training and range clearances.

GBWR was initially assessed under the DAF ORAP in 2007 and subsequently evaluated in 2017. The 2017 Phase 1 assessment affirmed that a potential source of MC is present within soils associated with the Impact Area and detonation point at the EOD Facility. Known/suspected MC for the GBWR were identified as metals, explosives, perchlorate, and white phosphorus (WP). The air, soil, and groundwater transport mechanisms and exposure pathways were deemed unlikely. The surface water/sediment pathway was deemed viable as stormwater runoff from source areas discharge to the adjacent on-range Grand Bay – Banks Lake (GBBL) wetland complex and subsequently flows south to Grand Bay Creek before finally existing the GBWR eastern boundary.

The 2017 ORA utilized data from a 2015 U.S. Army Corps of Engineers (USACE) study of surface water and sediment within the wetland areas of the GBWR, which indicated MC (metals) were detected above screening criteria in on-range surface water samples. Although MC transport routes were deemed unlikely and no complete exposure to receptors identified, a Phase 2 ORA was recommended for the GBWR based on elevated metal detections within the interior of the range, roughly 1-mile from the boundary.

GBWR Assessment Overview Continued

This initial Phase 2 included the collection of one surface water and sediment on-range sample from a downgradient location near the eastern installation boundary (suspected discharge point). The effort also collected reference data from three upgradient locations to ascertain naturally occurring levels.

MC metals (aluminum, chromium, iron, lead, and zinc) were detected in downgradient surface water sample (parent and/or field duplicate).

- Iron and lead were below reference concentrations reflecting naturally occurring levels.
- Zinc (detected in the duplicate sample only) was slightly above the reference level indicating likely within range of natural conditions.
- Chromium was detected above reference level (non-detect); however, the detection did not exceed the ecological project action limit (PAL).
- Aluminum exceeded reference levels and the selected ecological PAL. However, pond risers at the sample location may be a non-range related source and as such not indicative of migration.

MC (lead) was the only metal detected in the downgradient sediment sample (parent and/or field duplicate). Lead concentrations were slightly above the reference concentration indicating detections likely within range of natural conditions.

Based on available data, the possibility for MC to be transported via runoff is viable. As such the potential exists for MC (metals) to migrate in surface water and sediment. Due to the potential for MC to migrate via surface water/sediment, additional sampling to further evaluate MC source areas and potential non-range-related contributing sources is recommended for the next periodic Phase 2 ORA at GBWR.

For more information on this assessment or the Air Force Operational Range Assessment Program contact the Ranges Subject Matter Expert, Technical Branch, Environmental Quality Directorate, Air Force Civil Engineer Center
For more information on the DoD Operational Range Assessment Program visit https://denix.osd.mil/orap/home/