



Operational Range Assessment Moody Air Force Base

Air Force Operational Range Assessment Program

February 2019

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 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 USAF Operational Range Assessment Program (ORAP), established to comply with DoD policy, sets forth procedures for consistently conducting ORAs throughout the Air Force. The USAF 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

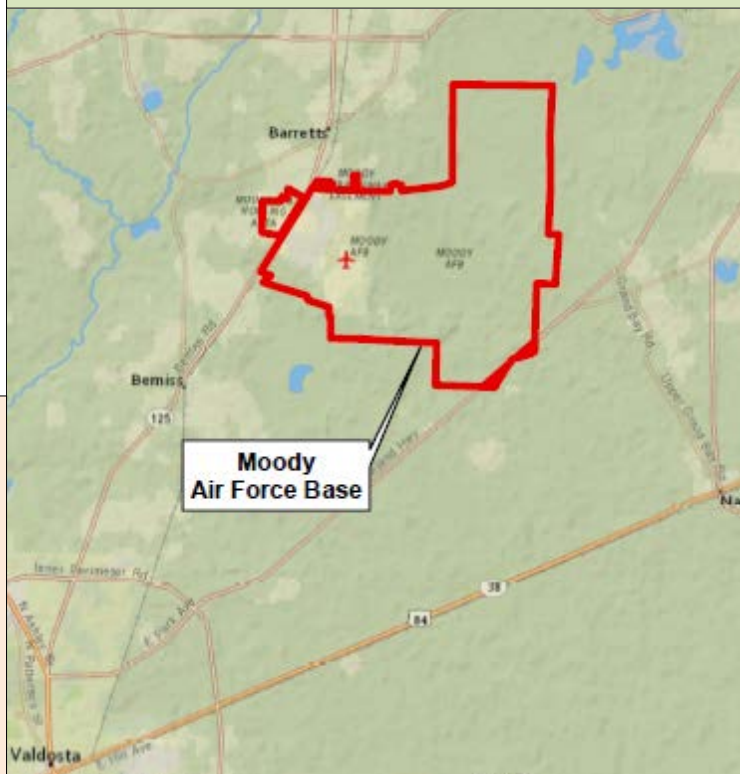
Moody Air Force Base (AFB), part of the Air Combat Command, falls within the boundaries of Lanier and Lowndes Counties in south-central Georgia. The base is approximately 30 miles north of the Georgia-Florida border. Moody AFB is comprised of a western and eastern portion. The western portion contains the main base, while Grand Bay Weapons Range (Grand Bay) is located in the eastern portion.

ORAP Findings: October 2017 ORA Report

- Migration mechanisms were identified as unlikely to transport munitions constituents (MC) to off-range locations.
- No actual or potential off-range migration of MC exists for the areas assessed.
- No unacceptable risks to human health or the environment were identified.

Next Steps

Moody AFB (to include Grand Bay and Avon Park) is scheduled to be assessed in accordance with USAF and DoD policy specifying periodic assessment at least every five years or sooner if significant changes occur that may impact assessment decisions.



Installation Overview Continued

Moody AFB also manages two geographically separate units. The Grassy Pond Recreational Annex is located approximately 20 miles south of Moody AFB in Lake Park, Georgia. Avon Park Air Force Range (Avon Park) is located east of Avon Park, Florida.

During implementation of the ORAP at Moody AFB, nine ranges were verified as eligible for an assessment under the USAF ORAP – an Explosive Ordnance Disposal (EOD) Facility, Security Forces Training Area 4 (TA-4), Combat Arms Training Maintenance (CATM) Facility, Grand Bay Weapons Range, Avon Park Air Force Range, a Military Operations in Urban Terrain (MOUT) Village, M203 Grenade Range (GR), TA-3, and a Field Training Area.

Two additional training areas were identified TA-1 and a Land Navigation Area. However, historic and current activities do not involve munitions use as such these areas are deemed ineligible for an assessment under the ORAP. Furthermore, the Mission Lake TA identified under the Military Munitions Response Program as operational was further evaluated under the ORAP. No additional records could be obtained confirming identified historic munitions use and installation personnel no longer indicate training involved munitions. As historic use could not be verified and current use does not involve munitions the Mission Lake TA was not further assessed. No other ranges or training areas were identified.

The following summarizes USAF ORAP efforts for the EOD Facility, TA-4, CATM Facility, and Grand Bay. The summary also includes Avon Park which was assessed under a separate ORA effort. This is the first ORA at the EOD, TA-4, and CATM; second ORA at Grand Bay, and third ORA for Avon Park. The newly identified areas (i.e., MOUT, GR, TA-3, and Field Training Area) will be assessed during the next schedule ORA at Moody AFB.

EOD Facility Assessment Overview

The EOD Facility is located on the east side of the base within the footprint of Grand Bay Weapons Range. The EOD Facility covers approximately 11.5 acres, which is the extent of the associated 400-foot quantity distance

EOD Facility Assessment Overview Continued

safety arc. The EOD Facility was constructed in 1980 for proficiency training, range clearance activities, and emergency response actions. Detonation occurs at a designated location in the center of the range within two earthen berms. The facility has a maximum net explosive weight (NEW) limit of 120 pounds.

The 2017 initial Phase 1 ORA concluded limited MC may be present in soils within the detonation area. Therefore, transport of MC from soils via wind entrainment, surface water runoff, or infiltration to groundwater is unlikely. Because off-range MC migration is not anticipated, there are no source-receptors interactions. All exposure routes are incomplete and no risks to receptors were identified.

TA-4 Assessment Overview

TA-4 is located along the southern boundary of the main base and covers approximately 160 acres. The area is primarily undeveloped woodlands with an open space located along the western boundary of the training area. Convoy and patrol training has occurred within the area since the mid-2000s. The area is currently inactive, but historically training took place monthly. TA-4 is approved for small arms blanks, pyrotechnics, and obscurant smoke usage.

In 2017 the initial Phase 1 was completed. Due to the sporadic nature and minimal munitions use, limited MC would be expected in soils throughout the area. Due to minimal potential for MC in soils, all possible transport routes to off-locations are deemed unlikely. No complete exposure pathways were identified, as such there are no risks to humans or the environment.

CATM Facility Assessment Overview

The CATM Facility is located on the east side of the main base and is used exclusively for small arms training. The CATM Facility encompasses approximately 11 acres and includes three sub-areas: a rifle range; pistol range; and a machine gun range. Use of the area for training activities has occurred since the 1950s. In 2011, the historical range was modified and replaced by two semi-contained firing ranges which included the installation of a bullet traps and dust

CATM Facility Assessment Overview Continued

collection systems. The firing ranges have a covered firing line, side containment, overhead baffles, and a concrete range floor. The historic berm remains at the site. The Machine Gun Range consists of two firing points and an earthen backstop berm. The Machine Gun Range has been inactive since 2010/2011.

The 2017 ORA concluded MC may be present in soils associated with the former berm and current range activities. Air and soil transport mechanisms were deemed unlikely. Stormwater runoff is directed to a detention pond where water evaporates or infiltrates as such surface water transport is unlikely. Additionally, vertical migration by infiltration through soils to groundwater is expected to be limited. Based upon range activities, environmental characteristics, and limited potential MC migration, there is no suspected threat of an off-range MC release; and no suspected risk to off-range human and ecological receptors has been identified.

Grand Bay Assessment Overview

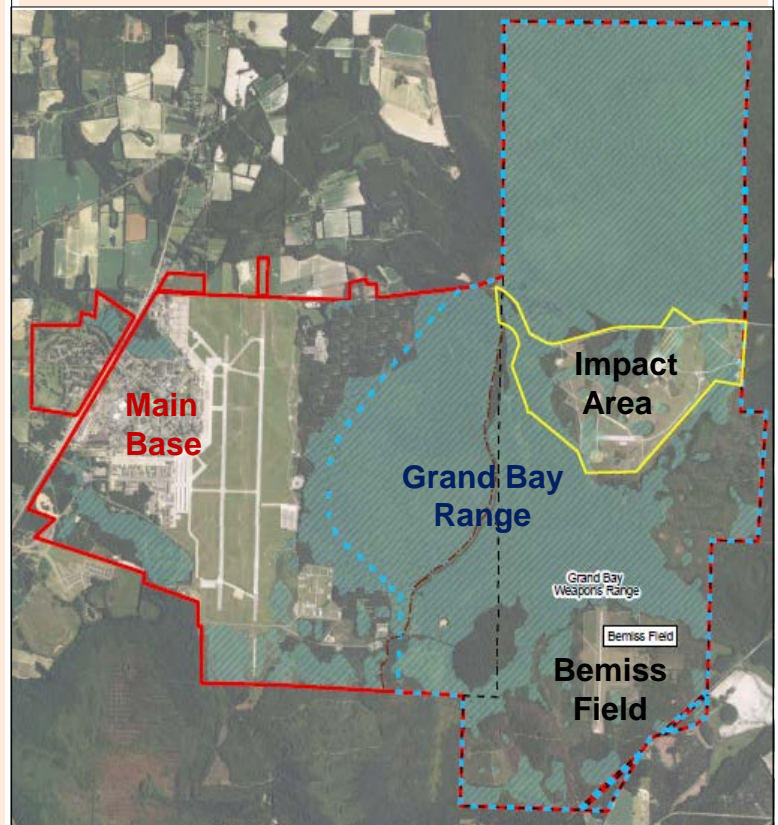
Grand Bay Weapons Range is contiguous with Moody AFB main base. The boundary of Grand Bay, identified by where access of unauthorized personnel is controlled and non-range operations are restricted, encompasses approximately 7,300 acres. Although the area was acquired in the early 1940s, the range was not constructed until 1985. No known prior munitions use occurred until 1987. It should be noted, an area encompassing 5,874 acres demarks, for planning purposes, the main base from range operations.

Grand Bay is comprised of two primary areas: the impact area located in the central portion of the range; and Bemiss Field located in the southern portion of the range. All current aerial operations are conducted within the impact area which encompasses 450 acres. Airborne munitions use only includes training rounds; no high explosive or incendiary rounds are authorized. Ground training in the form of sniper training and security forces training is also conducted at the impact area and at Bemiss Field. Ground training areas are approved for use of small arms (live and blanks), pyrotechnics, and obscurant smoke.

Grand Bay Assessment Overview Continued

In 2007 an initial Phase 1 ORA was completed. An MC source was identified in soils due to current and historic use of the range. The effort determined surface water features have the potential to transport MC to off-range locations and receptors are present. Additionally, due to a shallow groundwater aquifer MC may infiltrate groundwater and subsequently be discharged to surrounding surface waters. However, no complete or potentially complete source-receptor interactions were identified.

The 2017 the Phase 1 ORA confirmed MC may be present in soils and to a lesser extent in surface water/sediment surrounding the impact area. The potential for MC to be transported through wetlands to off-range locations was verified; however, possible infiltration of MC to shallow groundwater was deemed unlikely. Surface water and sediment sample data from a separate study conducted in 2015 associated with the impact area did not have any exceedances of MC of potential concern along the boundary of the range thus indicting off-range MC migration via surface water is unlikely. The effort concluded no complete exposure pathways exist.



Avon Park Assessment Overview

Avon Park Range, located in central Florida, is managed by Moody AFB, Georgia. The range, encompassing roughly 106,073 acres, is about 12 miles east of the city of Avon Park, and covers large portions of Polk and Highland Counties. The area comprising Avon Park has a long history of being used for military purposes that date back to the mid-1850's. In the early 1940's lands were purchased as a pre-war civil airport by the U.S. Government. The site was eventually designated as the Avon Park Army Airfield and was used by the U.S. Army Air Corps as a bombing and gunnery range. In 1956, the area transitioned from an operating airfield to an air-to-ground weapons range. The range includes air-to-ground, small arms, and specialized ground training areas as well as a cantonment area. Currently there are nine designated training areas which include seven air-to-ground sites, MacDill Auxiliary Airfield, and six ground / maneuver training areas.

In 2004, the USAF conducted a limited field study on air-to-ground ranges. During the study samples were collected at or near the range boundary along suspected MC migration routes. For Avon Park surface water and sediment samples were obtained and analyzed for metals, explosives, and perchlorate. All results were below identified screening levels, and the study found MC is not migrating to off-range locations.

In 2007 a Phase 2 ORA was completed. Groundwater samples were collected and analyzed for explosives, perchlorate, white phosphorus, and metals (chromium and lead). Chromium was the only MC of potential concern reported above detection limits. However, concentrations were comparable to established background and at concentrations several times less than screening levels. The effort concluded that MC are not migrating to off-site locations.

The 2017 Phase 2 ORA verified a source of MC present in soils and confirmed the primary transport route is MC infiltration and percolating through the soil column to shallow groundwater. Shallow groundwater samples were collected and analyzed for MC of concern.

Avon Park Assessment Overview Continued

Chromium and lead were detected below background values and/or below applicable screening levels. Additionally, trace detections of two explosive compounds (PETN and nitrobenzene) were identified in one on-range sample at levels well below groundwater screening levels for human health and ecological receptors. Given trace detections of MC in on-range samples, the ORA concluded there is a potential for MC to percolate through the soil column to shallow groundwater. However, the surficial aquifer does not connect to any potable source, as such no complete pathway exists for human receptors. As shallow groundwater tends to discharge to surface waters, the ORA concluded MC could also migrate from groundwater to surface water/sediment. Based on site conditions and location of receptors, ecological source-receptor interactions were deemed unlikely but potentially complete. No unacceptable risks to off-range human and/or environmental receptors were identified. No further evaluation, beyond a periodic ORA was recommended.



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/>