



# Operational Range Assessment Laughlin Air Force Base

Air Force Operational Range Assessment Program

December 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. 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

Laughlin Air Force Base (AFB), part of the Air Force Air Education and Training Command, is located in Val Verde County in southwestern Texas approximately 7 miles east of Del Rio, Texas. Laughlin AFB manages four geographically separated units including: Laughlin Auxiliary Airfield; Lake Amistad Recreational Area; Instrument Landing System; and a Next Generation Radar (NEXRAD) Site.

## ORAP Findings: December 2017 ORA Report

- Migration mechanisms at Laughlin AFB 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 at Laughlin AFB.
- No unacceptable risks to human health or the environment were identified for the areas evaluated at Laughlin AFB.

## Next Steps

Laughlin AFB 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

During implementation of the ORAP at Laughlin AFB, two ranges were verified as eligible and assessed under the USAF ORAP – a Small Arms Range (SAR) and the Ground Defense Training Area (TA). Multiple operational areas on Laughlin AFB are considered ineligible for an assessment under the ORAP – a Skeet Range used only for recreational purposes; a Chemical Warfare TA which is fully enclosed; a Combat Skills TA in which training exercise do not involve munitions, and an ATV Training Area that is not used for range related activities.

Of the geographically separate areas managed by Laughlin AFB, only the Auxiliary Airfield has a training related purposes. The airfield is used for touch and go training by pilots. No munitions are used at this or any of the other geographically separate units and as such no assessment under the ORAP is warranted.

The following summarizes ORAP efforts for the SAR and the Ground Defense TA. This is the second ORA at the SAR, and initial ORA at the Ground Defense TA.

### SAR Assessment Overview

The SAR is located in the southern portion of Laughlin AFB. The SAR has been operational since 1962 for small arms training. The SAR is currently a partially contained range with a covered firing line, a pea gravel floor, overhead baffles, concrete side walls, historic side berms, and an earthen impact berm. The area is enclosed within a perimeter fence, which is 1.2 acres in size. However, the installation-provided surface danger zone encompasses approximately 3.5 acres. Lead-containing munitions were used prior to 2008, since 2008 only frangible munitions have been utilized. The SAR is used weekly by Laughlin AFB personnel.

The 2011 ORA Phase 1 found that MC present within the impact berm and range floor could leach to shallow groundwater, and a potentially complete groundwater exposure pathway for human receptors was present. Further assessment, a Phase 2, was recommended.

### SAR Assessment Overview Continued

The 2018 Phase 2 ORA included media sampling and modeling to further assess potential migration of MC from the SAR. The effort confirmed a potential source of MC present at or near the firing line, range floor, historic side berms, and back berm. The ORA verified the only likely MC transport mechanism is infiltration to groundwater; however, such vertical migrations would be impeded by site conditions such as low precipitation rates, high evaporation rates, and low permeability caliche layers. MC metals (copper, lead, and iron) were detected at concentrations in several soil samples that exceeded the USEPA Protection of Groundwater screening levels, the most stringent comparison value utilized. However, a conservative Seasonal Soil Compartment Model (SESOIL) simulation indicated no metals in soil will reach groundwater for the foreseeable future. Therefore, MC are unlikely to migrate to off-range areas via the groundwater pathway. All exposure pathways were identified as incomplete for human and ecological receptors.

### Ground Defense TA Assessment Overview

The Ground Defense TA encompasses 3.46 acres of land in the eastern portion of Laughlin AFB. The area has been used since 1990 for ground maneuvers and simulated attack training. The TA is utilized by Security Forces on a quarterly to semiannual basis. Munitions use includes small caliber blanks, pyrotechnics, and obscurants that are deployed throughout the area.

The 2018 ORA deemed based on training activities, munitions used, and management of the TA a limited source of MC would be available in the environment. MC, if present, may be sparsely deposited in soils across the entire area. Due to site conditions such as heavy vegetation, flat topography, lack of precipitation, high evaporation rates, lack of erosional or drainage channels, and low permeability caliche layers all mechanisms to potentially transport MC were deemed not viable. The 2018 ORA determined all exposure pathways were incomplete.

**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/>**