



Operational Range Assessment Tyndall 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

Tyndall AFB, part of the Air Combat Command, is located approximately three miles east of Panama City, Florida, in the southeast corner of Bay County, Florida. The installation encompasses approximately 30,000 acres of federally owned land. Tyndall AFB has no associated geographically separate locations.

ORAP Findings: January 2023 ORA Report

- Munitions Constituents (MC) have the potential to be transported through surface water/sediment and shallow groundwater.
- No actual or significant threat of release was identified for any of the range assets assessed at Tyndall AFB.
- No potential or unacceptable risks to human health or the environment were identified for the areas assessed at Tyndall AFB.

Next Steps

Tyndall 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.



Installation Overview Continued

During the implementation of the ORAP at Tyndall AFB, five areas were determined to be eligible and assessed under the DAF ORAP – the Explosive Ordnance Disposal (EOD) Facility, Grenade Practice Range, Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE) .50 Caliber Range, RED HORSE Open Burn/Open Detonation (OB/OD) Area, and Sky X Research Facility.

An EOD Tool Training Area and Canine Training Area were identified during this ORA effort. These areas are deemed eligible for assessment under the DAF ORAP and will be evaluated during the next scheduled installation-wide implementation of the ORAP.

The following summarizes DAF ORAP efforts for the EOD Facility, Grenade Practice Range, RED HORSE .50 Caliber Range, RED HORSE OB/OD Area, and Sky X Research Facility. This is the fourth assessment under the ORAP for all five ranges.

EOD Facility Assessment Overview

The EOD Facility encompasses 57.14 acres and is located in the southcentral portion of the installation. The facility, established in 1966, is used for explosives proficiency training once per month and emergency dispositions on an as-needed basis, typically 3 to 12 times per year.

The Phase 2 ORA included the collection of surface and subsurface soil samples within on-range known source areas for modeling the potential for MC (metals and explosives) to leach to shallow groundwater (between 2 to 6 ft bgs). The results of the vertical migration simulation predicted potential MC (explosives) impact to groundwater underlying the range. However, no explosives were detected in downgradient surface water and sediment where groundwater is suspected of daylighting. As such, although MC have the potential to impact shallow groundwater at the EOD Facility, it is unlikely that MC are migrating within groundwater to off-range areas (Saint Andrew Sound).

No defined drainages were observed on-range. Runoff in the form of sheet flow would only occur during intense storm events. Two surface water and sediment

EOD Facility Assessment Overview Continued

samples were collected downgradient of known source areas. No MC (explosives) were detected in surface water and sediment samples. MC (metals) were detected at low-level concentrations in downgradient surface water samples below project action limits (PALs). MC (metals) were below reference levels and selected PALs in sediment.

Although there are possible MC transport mechanisms via shallow groundwater, surface water, and sediment there is no substantial threat of an off-range release, at this time, and no potential risks to receptors. During the next periodic Phase 2 ORA it is recommended to collect additional data to further evaluate source of metals in the environment and transport mechanisms at the EOD Facility.

Grenade Practice Range Assessment Overview

The Grenade Practice Range is located on the southcentral portion of the installation. The range encompasses a total of 14.37 acres and is located on the former Jeep Range. The range was used only six to eight times per year for training with 40-millimeter practice grenades; however, since Hurricane Michael in 2018, the range has been inactive.

The Phase 2 ORA included the collection of surface and subsurface soil samples from within known source areas to evaluate the potential for MC (metals and explosives) to infiltrate shallow groundwater. No explosive compounds were detected. MC (metals) were detected in on-range surface soils at levels less than their respective protection of groundwater PALs. In addition, there were no MC detections above background in subsurface soils, indicating it is unlikely that metals are leaching and infiltrating shallow groundwater at the Practice Grenade Range. Thus, there is no potential threat of an off-range MC release and no risk to receptors. The range will continue to be monitored under the periodic ORA.

RED HORSE .50 Caliber Range Assessment Overview

The RED HORSE .50 Caliber Range encompasses 0.34 acre and is located in the southeastern portion of the installation. The range, used for small arms training, was active from 1972 to 1979 and 1992 to 2007.

RED HORSE .50 Caliber Range ORA Overview Continued

The range has been and remains inactive. The inactive range is projected for permanent closure following the removal of associated built infrastructure.

The Phase 2 ORA included the collection of surface and subsurface soil samples within known source areas for soil to groundwater modeling of MC (metals). MC (lead) was detected in on-range soil samples; however, the results of the groundwater modeling indicated that it is unlikely for MC to migrate to shallow groundwater. As such, there is no potential threat of an off-range release and no potential risk to receptors. If the range has not been officially closed at the time of the next follow-on assessment, the range will continue to be monitored under the periodic ORA.

RED HORSE OB/OD Area Assessment Overview

The RED HORSE OB/OD Area encompasses 259.07 acres and is located in the southeastern portion of the installation. The RED HORSE OB/OD Area was established in 1992 and training includes advanced base recovery after attack, disaster preparedness, fire protection, chemical warfare training, and airfield damage recovery.

The Phase 2 ORA included the collection of surface and subsurface soil samples from within known source areas for modeling MC (metals and explosives). No explosive compounds were detected. MC (chromium and lead) were detected in surface soils at elevated levels in one sample location. However, no MC were detected above their respective protection of groundwater PALs and there were no detections of MC above background in subsurface soil samples. Thus, transport of MC via leaching to shallow groundwater and subsequent discharge was not deemed viable.

RED HORSE OB/OD Area ORA Overview Continued

A single sediment sample was also collected from one downgradient location. MC (chromium and lead) were detected above background concentrations but below PALs. Therefore, there is a potential for MC to migrate via stormwater runoff. As detected concentrations were below PALs, no risks to off-range receptors were identified.

Due to the potential for MC to be transported via stormwater runoff, the next periodic Phase 2 at the RED HORSE OB/OD Area is recommended to include additional sampling to further evaluate source of metals in the environment and MC transport.

Sky X Research Facility Assessment Overview

The Sky X Research Facility located in the southeastern portion of the installation, is comprised of two sub-areas: the Alpha Range and Bravo Range. The primary use area of the Sky X Research Facility encompasses 32.31 acres, but the range boundary is defined by the 1,153.81-acre safety zone. The Sky X Research Facility was established in 1975 and is used for the detonation of explosives to test, evaluate, and analyze structures and materials against explosive shockwaves.

The Phase 2 ORA included the collection of surface soil samples from within known source areas and surface water/sediment samples from downgradient locations. MC (metals) were detected in soil samples but below their respective protection of groundwater PALs. No MC (metals and explosives) were detected in downgradient surface water or sediment. As such, there is no threat of release and no potential risk to receptors. The Sky X Research Facility will continue to be monitored under the periodic ORA.

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/>