

## EXECUTIVE SUMMARY

A Range Condition Assessment (RCA) is used to support range planning and management decisions as part of the Navy's Range Sustainability Environmental Program Assessment (RSEPA). This document contains the RCA of the SeaRay Target Range in Noxubee County, Mississippi. SeaRay Target Range is part of the Meridian Complex and is a land-based component of the Gulf of Mexico Range Complex. This document includes the Range Selection (Phase I) Review, Pre-Site Visit Information (Phase II) Review, Onsite Visit Information (Phase III) Review, including the Operational Range Site Model (ORSM) for munitions-related training activities, and the Decision Point 1 recommendations.

No environmental issues that adversely impact the overall sustainability of the SeaRay Target Range were identified during the RCA. However, the following issues should be addressed to maintain conformance with Navy and Department of Defense (DOD) policies and improve the sustainable use of the range:

- Range clearance and scrap management procedures do not conform to the Navy's Operational Range Clearance Policy (2 April 2004).
- Recommendations from the Range Air Installation Compatible Use Zone report to improve land use coordination between the Navy and local government officials and residents have not been implemented.

No further analysis is recommended regarding potential off-range releases of munitions constituents.

The following sections summarize the findings of each phase of the RCA conducted at the SeaRay Target Range:

### **Phase I — Range Selection Review**

This section emphasizes the strategic value of the SeaRay Target Range and the need to define the environmental condition of this land-based asset with a RCA.

### **Phase II — Pre-Site Visit Information Review**

This section describes how a team of U.S. Navy civilians and personnel from EnSafe Inc. conducted the RCA Pre-Site Visit Information Collection (Phase II) in April through June 2005. During Phase II, the team collected as much information as possible from public sources as well as Navy personnel responsible for environmental compliance, public works, forestry, air operations, munitions, and range operations. The team used this information to plan the onsite visit and identify key information that would be needed to complete the RCA. Information collected during this RCA has been compiled in a range data folder as described in Section 5.0.

### **Phase III — Onsite Visit Information Review**

#### ***Site Visit***

This section describes the August 2005 onsite visit by a team of U.S. Navy civilians and personnel from EnSafe. During the visit, the team interviewed key personnel responsible for range and environmental operations and collected range and environmental information, specifically related to munitions.

### ***Operational Range Site Model***

This section explains how the ORSM provides a summary of the operational, environmental, cultural, and land-use information used to evaluate the potential for the off-range release of munitions constituents (MCs) and the potential for exposure to off-range receptors. This initial ORSM was prepared as part of the RCA Phase III component of RSEPA. Critical information is discussed below.

**Range Boundary:** Section 3.1 of this report describes the range boundary for the SeaRay Target Range. This boundary was chosen as the range boundary for RSEPA purposes because it encompasses the munitions impact area and the surrounding buffer area. The Navy owns 654 acres of the range and the remaining 2,235 acres is private land on which the Navy holds a perpetual easement restricting access. In May 2006, the Navy prepared a Categorical Exclusion for the purchase of an additional 87 acres of easement for the buffer area.

**Operational Component:** Operational records for the SeaRay Target Range indicate that no live munitions (those containing high explosives) have been used at the range; only practice munitions incapable of producing a high-order detonation were employed. These practice munitions contain spotting charges that discharge on impact and produce a cloud of smoke to facilitate scoring. Small quantities of chemicals (a lead styphnate primer, a smokeless powder initiator, and titanium tetrachloride) are used in these spotting charges. Normally, the spotting charge is wholly consumed following the impact of the bomb. Based on the minute quantities of chemicals used in the spotting charges and their frequency of use, no further evaluation of these chemicals is recommended.

**Environmental Component:** The SeaRay Target Range is located in Noxubee County, north of Meridian, in rural east central Mississippi. A shallow, perched water table is present during the winter and spring 1.5 to 2.5 feet below ground surface in the low permeability soil; however, the shallowest drinking water aquifer of importance is greater than 1,200 feet below ground surface. At least three intermittent streams start on the range. Ephemeral and intermittent streams within the western portion of the impact area and easement boundaries drain to the north where they discharge to Hashuqua Creek, which ultimately flows to the Noxubee River. Ephemeral and intermittent streams within the eastern portion of the impact area and easement boundaries drain to the east where they flow into Macedonia Creek, which also discharges to the Noxubee River. There are approximately 6.7 acres of wetlands within the impact area. The range is surrounded by forests that are managed for commercial timber harvesting.

**Cultural Component:** No cultural resources were identified in a cursory cultural resource survey conducted by the United States Army Corps of Engineers in 1988. An archeological survey of Navy-owned portions of the range is scheduled for the summer of 2006.

**Land-Use Component:** The land use has been the same over the life of the range. Current and future land use on the target is military training, specifically air-to-ground delivery of practice munitions. Private land around the target is generally forested and is used for logging and hunting. The range boundary is posted with signs that inform the public that the range area is restricted access/use for safety reasons. However, many of the signs are missing or in poor condition. The access roads to the range are gated to only allow vehicular access to authorized personnel (*RAICUZ*, U.S. Navy, 004). However, hunters are known to cut the fences and trespass on the range.

**Predictive Modeling:** RSEPA recommends predictive modeling for 2,4,6-trinitrotoluene (TNT), 2,4-dinitrotoluene (DNT), heahydro-1,3,5-trinitro-1,3,5-triazone (RDX), octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX), and perchlorate. These MCs are modeled in RSEPA because they make up a majority of the masses of energetic compounds in Navy munitions, have readily available U.S. Environmental Protection Agency-approved testing methods, and are more mobile in the environment than other MCs. No records were identified during the RCA indicating that these MCs were used on the SeaRay Target Range. Since the SeaRay Target Range only uses practice munitions and no other contamination concerns were identified, predictive modeling was not performed.

### **Decision Point 1 Outcome**

#### ***Are Further Steps Required to Maintain Compliance?***

Overall, training and the operation of the SeaRay Target Range is in compliance with applicable environmental programs. This report recommends that the SeaRay Target Range develop and implement an Operational Range Clearance Plan to conform with Navy directives regarding range clearance and scrap management and implement recommendations regarding community outreach programs.

#### ***Is Further Analysis Required to Assess Risk of Potential Off-Range Release?***

Live munitions have not been used at the SeaRay Target Range. Based on the ORSM, no further analysis is required to assess the risk of off-range releases of MCs.

### **Recommendations**

No further analysis is recommended to assess risk of potential off-range release of MCs.

To improve the sustainable use of the range and maintain conformance with Navy and DOD policies, the following recommendations are made:

- Prepare and implement an Operational Range Clearance Plan in accordance with the Navy's Operational Range Clearance Policy (2 April 2004) to address range clearance and scrap management procedures.
- Implement recommendations from the Range Air Installation Compatible Use Zone report to improve community outreach and coordination between the Navy and local government officials and residents in order to sustain compatible land use.