

PROTECTED SPECIES MONITORING AND MITIGATION RESULTS

FOR

**2017 LONG RANGE STRIKE WEAPON SYSTEM
EVALUATION PROGRAM OPERATIONAL TESTING**

PACIFIC MISSILE RANGE FACILITY, KAUA'I, HI



FINAL REPORT

**Department of the Air Force
53D WG/ 86 FWS
1001 Nomad Way, Bldg 1310
Suite 202
Eglin AFB, FL 32542**

AUGUST 2017

This page is intentionally left blank

TABLE OF CONTENTS

EXECUTIVE SUMMARY 4

1. MITIGATION AND MONITORING REQUIREMENTS..... 5

 Determining Survey Areas 5

2. DESCRIPTION OF LONG RANGE STRIKE WSEP MISSION 5

 2.1 Pre-Mission Survey Results 5

 2.2 Mission Results 6

 2.3 Post-Mission Survey Results 6

3. SUMMARY OF ALL MISSION RESULTS 6

4. SIGNATURES..... 7

EXECUTIVE SUMMARY

This report fulfills requirements of the biological Opinion (BO) and Letter of Authorization (LOA) issued by the National Marine Fisheries Service (NMFS) to 86 Fighter Weapons Squadron (FWS) for Long Range Strike Weapon System Evaluation Program (WSEP) Operational Evaluation. On 24 August 2017, six GBU-39 Small Diameter Bombs (SDBs) were released. Weapons were employed against the following coordinates, N22° 43' 00" W159° 56' 00" on the water surface, located in the Pacific Ocean at the Pacific Missile Range Facility (PMRF). Employment occurred approximately 40 miles offshore from Kaua'i, HI. Net explosive weights were 37 pounds apiece with detonations occurring at the water surface. The BO and LOA included mitigation and monitoring procedures in order to offset potential impacts to marine mammals (humpback whales). This report describes the implementation of the mitigation and monitoring procedures, the results of pre- and post- mission surveys, a summary of the mission day's events, any potential take that may or may not have occurred, and analyzes the overall effectiveness of these measures.

For Long Range Strike WSEP activities that occurred August 24, 2017, no mammals were sighted during the pre- and post-mission surveys. No mammals were noted as having been disturbed at this location. **Thus, 86 FWS believes that no takes occurred as a result of the Long Range Strike WSEP mission.**

86 FWS believes all mitigation and monitoring measures were successfully implemented and were effective in protecting marine mammals from negative impacts associated with the live detonations from 2017 Long Range Strike WSEP Operation Evaluations.

1. MITIGATION AND MONITORING REQUIREMENTS

The following subsections describe the mitigation and monitoring requirements that were developed during consultations with NMFS and implemented during Long Range Strike WSEP missions. To prevent impacts to protected species, the 86 FWS proposed to survey a given area before each mission to ensure it was clear of protected species before live missions begin. Surveys would be conducted by dedicated observers who received training in identifying marine species.

Determining Survey Areas

The BO and LOA require that an area of minimum radius eight miles from the impact point be surveyed for 30 minutes pre- and post-mission. This area was determined based on previous missions conducted at PMRF and considered operational feasibilities for completing the aerial surveys.

2. DESCRIPTION OF LONG RANGE STRIKE WSEP MISSION

This section describes the events of the live mission day conducted for Long Range Strike WSEP operations. The mission was conducted in two segments, with each segment individually satisfying the impact area survey requirements.

2.1 Pre-Mission Survey Results

Pre-mission surveys were each conducted by one F-16 Fighting Falcon. The survey was completed using state of the art advanced targeting pods as described in the BO. All observers received Marine Species Observer Training/Refresher Course on 23 Aug 2017. The pre-mission surveys began at 0840 and 1425 local time and ended at 0913 and 1507 local time. Surveys were completed at an altitude conducive to an optimal combination of targeting pod accuracy and efficiency, about 10,000 ft MSL. At this altitude, pilots were able to effectively scan the required area in high detail. Surveys were flown in a 3 nautical mile orbit centered above the impact point. Targeting pod surveys were conducted using a transect scan pattern, enabling the pilot to monitor as the entire footprint as effectively as possible. The weather was sunny with occasional clouds. Sea States were reported to be at Sea State 3. Visibility was good, and weather was not an issue for marine life detection. Ground facilities used for monitoring included cameras and infrared sensors located on Makaha Ridge. When not supporting mission execution, these instruments were trained at the impact point to detect any marine life. Again, weather was conducive to marine life detection. Per the monitoring and mitigation plan, no passive acoustic monitoring (PAM) was performed. The surveys yielded no sighting of marine mammals.

Concurrently with the pre-mission surveys, a specially equipped Grumman Gulfstream II was used to clear the range of all non-participating vessels. Once the safety container was cleared of all vessels and the pre-mission surveys reported no visible marine life, a Green Range was

declared by the Safety Officer who monitored the mission from PMRF's Range Operations Control Center (ROCC).

2.2 Mission Results

The SDBs were successfully employed and impacted their target locations as planned. Six live SDB-Is were released and detonated on the surface as verified by the hydrophones located on the range.

Aircraft also employed inert GBU-12 laser guided bombs and training 20mm PGU-27 rounds. These weapons had no explosive ordnance.

2.3 Post-Mission Survey Results

After the mission was completed, the F-16s returned to the impact sites. Post-mission monitoring was conducted within a radius of 8 miles around the impact site and within the immediate area of the impact location. Post-Mission survey aircraft arrived at the impact site at 1015 and 1554 local time and completed the surveys at 1045 and 1624 local time. Survey of the planned impact site occurred for more than one-half hour. No protected species sightings were recorded.

3. SUMMARY OF ALL MISSION RESULTS

For Long Range Strike WSEP evaluations that occurred on 24 August 2017, there were no sightings of protected mammals during the pre- and post-mission surveys.

Munitions that were actually dropped are compared to what was authorized in both the LOA and BO in Table 1.

Table 1. Comparison of Proposed and Actual Live Munitions Released

| Type of Munition | NEW (lbs) | Detonation Type | Total # in LOA & BO | # Released in 2017 |
|------------------|-----------|-----------------|---------------------|--------------------|
| GBU-39 (Live) | 37 | Surface | 8 | 6 |

4. SIGNATURES

PROTECTED SPECIES MONITORING & MITIGATION RESULTS FOR LONG RANGE STRIKE WEAPON SYSTEMS EVALUATION PROGRAM 2017 MISSIONS

FINAL REPORT

EGLIN AIR FORCE BASE, FLORIDA

Prepared by: _____
PETER A. CIALKOWSKI, 1Lt, USAF
86 FWS Engineer

17 Nov 2017

DATE

Reviewed by: _____
MICHAEL ACKERMAN, AFCEC/CZN
Project Manager

DATE