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In accordance with the Letters of Authorization
Under the MMPA and ITS authorization under
the ESA

31 July 2015

Annual Exercise Report

03 August 2016 through 02 August 2017 Second Year

For The U.S. Navy's Mariana Islands Training and Testing (MITT) Study Area

27 October 2017

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ANNUAL MARIANA ISLANDS TRAINING AND TESTING UNCLASSIFIED EXERCISE REPORT

INTRODUCTION

The U.S. Navy prepared this unclassified version of the Annual Report covering the period from 03 August 2016 to 02 August 2017. In compliance with the National Marine Fisheries Service (NMFS) Final Rule under the Marine Mammal Protection Act (MMPA) for the Mariana Islands Training and Testing (MITT) Study Area a classified version of this report is also submitted to NMFS.

In the MITT Study Area Letter of Authorization¹ requirements for “Monitoring and Reporting”, the following report subsections were specified. However, only unclassified information is present within this report:

- (1) Major Training Exercises (MTE)/SINKEX
 - (i) Reporting requirements for Coordinated and Strike Group Exercises and SINKEX
 - (ii) Exercise information for each MTE
 - (iii) Evaluation of mitigation effectiveness
 - (iv) Exercise information for each SINKEX
- (2) Summary of Sources Used
 - (i) Total annual usage of each type of sound source
- (3) Geographic Information Presentation

The information in this Annual Report represents the best practical data collection for this period. To provide accounting for the entire 5-year period of the authorization, in the final annual report Navy will submit a 5-year close-out table with final totals of authorized and actual usage.

¹MITT: 7(e) of the Letter of Authorization, and 50 CFR §218.95(g)(1) through (g)(3)

(1) Date/time/location of sighting			(2) Species	(3) Number of individuals	(4) Initial detection sensor	(5) Indication of specific type of platform the observation was made from	(6) Length of time observers maintained visual contact with marine mammal(s) (min)	(7) Sea state (Beaufort scale)	(8) Visibility (nm)	(9) Sound source in use at time of sighting (Y/N)	(10) Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000yd	(11) Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or wh	(12) If source in use is hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	(13) Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present
16-Sep-16	0633Z	MITT	whale	2	VIS	DDG	3	1	10	N	200-500	Maneuvered away	na	Blowing
16-Sep-16	2300Z	MITT	whale	1	VIS	DDG	1	1	10	N	200-500	Maneuvered away	na	nr

(ii) (F) Individual marine mammal sighting information for each sighting when mitigation occurred during each MTE

Table 1-ii-2. MITT MTE – Individual Marine Mammal Sighting Information: Valiant Shield 2016 11 Sep – 23 Sep 2016

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

(iii) Evaluation (based on data gathered during all exercises) of mitigation effectiveness

There was one major training exercise conducted in the MITT Study Area during this reporting period (see **Table 1-ii-1**). In support of this MTE, the Navy conducted over 1,067 hours of Marine Species Awareness and environmental compliance training for 1,160 personnel prior to the beginning of the exercise.

Table 1-iii-1. MITT Study Area Major Training Exercises

MTE Type	Dates	# of Exercise Days	# of US Ships Involved (MFAS and non-MFAS)	# of Mitigation Sightings	# of Marine Mammals
Valiant Shield	11 – 23 Sep 2016	13	*	2	3
Total		13	*	2	3

* Information is presented in the classified version of this report

MITT Study Area Major Training Exercise Marine Mammal Observations

There were 2 sightings of a total of 3 marine mammals during the single MTE in the MITT Study Area (see **Table 1-ii-1**). Breakdown of sightings by species type are shown in **Table 1-iii-2**.

Table 1-iii-2. Total number of marine mammal sightings observed from Navy platforms during Major Training Exercises when mitigation occurred.

Species Type	# of Mitigation Sightings	% of Mitigation Sightings	# of Marine Mammals	% of Total Number of Marine Mammals
Dolphins	0	0%	0	0%
Whales	2	100%	3	100%
Pinnipeds	0	0%	0	0%
Turtles	0	0%	0	0%
Not recorded	0	0%	0	0%
Totals:	2		3	

MITT Study Area Major Training Exercise Mitigations

There were no active sonar mitigation actions taken during the single MTE in the MITT Study Area during the reporting period. Exercise participants did report 2 instances of Navy ships maneuvering to avoid a total of 3 whales.

SUMMARY: Mitigation Effectiveness and Navy Mitigation Zone Adherence

The Lookout and mitigation zone measures approved by NMFS and outlined in the MITT Study Area LOA were effective in appropriately mitigating exposure of marine mammals to sonar. Although no active sonar mitigations took place in the MITT Study Area during the reporting period, the Protective Measures Assessment Protocol (PMAP) is directed to be used prior to each activity requiring potential mitigation to ensure proper requirements and mitigation zones are utilized. Fleet commanders, aircrews, and ship watch teams continue to improve individual awareness and enhance reporting practices. This improvement can be attributed to the various pre-exercise conferences, mandatory Marine Species Awareness Training (including on-line training required for watch standing qualifications), adherence to required active sonar mitigation zones, and application of lessons learned in marine mammal sighting and reporting.

(iv) Exercise Information for each SINKEX

One SINKEX event was conducted in the MITT Study Area during the reporting period on 13 September 2016.

Table 1-iv-1. SINKEX information for event on 13 September 2016.

(A) Vessels and aircraft involved
*
(B) Location (operating area)
Mariana Islands Range Complex
(C) Chronological list of events
*
(D) Visibility/weather
Visibility – Unrestricted Wind – 8-13 KTS Wave height – 2-4 FT, sea state 3 Cloud cover – mostly cloudy at 3,000 FT
(E) Aircraft surveys
1x P-8; cleared surface to 23,000 FT; speed 400 KTS; 45,200 square miles surveyed 1x MH-60R; cleared surface to 10,000 FT; speed 100 KTS 1x E-2C; cleared to 23,000 FT; speed 250 KTS
(F) Passive acoustic monitoring
No sonobuoys were used during the event
(G) Individual marine mammal sighting information
No marine mammals were reported during the event
(H) Ordnance used and net explosive weight (NEW)
7x AGM-154 (192 lb NEW) 2x AGM-114 (15 lb NEW) 6x AGM-88 (146 lb NEW) ¹ 3x Harpoon (488 lb NEW) Total NEW: 3,714 lbs

* Information is presented in the classified version of this report

¹ non-surface explosion

(2) MITT – Summary of Sources Used

(i) Total annual usage of each type of sound source

This section summarizes total annual usage of each type of non-impulsive and impulsive source bin within MITT.

Table 2-i-1. Training and Testing source usage within the MITT Study Area by source bin.

Authorized sound sources 50 CFR §218.95	Authorized Amount (03Aug16- 02Aug17)	Actual Usage (03Aug16- 02Aug17)	% Used of Authorized Amount
(A) Annual Non-impulsive Sources Used During Training and Testing			
LF4	123 hours	*	*
LF5	11 hours	*	*
LF6	40 hours	*	*
MF1	1,872 hours	*	*
MF2	625 hours	*	*
MF3	192 hours	*	*
MF4	214 hours	*	*
MF5	2,588 items	*	*
MF6	33 items	*	*
MF8	123 hours	*	*
MF9	47 hours	*	*
MF10	231 hours	*	*
MF11	324 hours	*	*

MF12		656 hours	*	*
HF1		113 hours	*	*
HF4		1,060 hours	*	*
HF5		336 hours	*	*
HF6		1,173 items	*	*
ASW1		144 hours	*	*
ASW2		660 items	*	*
ASW3		3,935 hours	*	*
ASW4		32 items	*	*
TORP1		115 items	*	*
TORP2		62 items	*	*
M3		112 hours	*	*
SD1		2,341 hours	*	*
(B) Annual Number of Impulsive Source Detonations During Training and Testing				
E1	0.1 lb to 0.25 lb NEW	10,140 detonations	*	*
E2	0.26 lb to 0.5 lb NEW	106 detonations	*	*
E3	>0.5 lb to 2.5lb NEW	932 detonations	*	*
E4	>2.5 lb to 5 lb NEW	420 detonations	*	*
E5	>5 lb to 10 lb NEW	684 detonations	*	*
E6	>10 lb to 20 lb NEW	76 detonations	*	*
E8	>60 lb to 100 lb NEW	16 detonations	*	*
E9	>100 lb to 250 lb NEW	4 detonations	*	*
E10	>250 lb to 500 lb NEW	12 detonations	*	*
E11	>500 lb to 650 lb NEW	6 detonations	*	*
E12	>650 lb to 1,000 lb NEW	184 detonations	*	*

*Information is presented in the classified version of this report
 AGM-154 Joint Standoff Weapon net explosive weight is 192 lb (bin E9), expenditure counted in bin E10

Table 2-i-2. 5-year cumulative source usage within the MITT Study Area by source bin.

Sound Source Bin	Year 1 Actual Usage (03Aug15-02Aug16)	Year 2 Actual Usage (03Aug16-02Aug17)	5-yr Authorized Amount (03Aug15-02Aug20)	5-yr Cumulative Actual Usage (03Aug15-02Aug20)	% Used of 5-yr Authorized Amount
(A) Non-impulsive Sources Used During Annual Training					
LF4	*	*	615 hours	*	*
LF5	*	*	55 hours	*	*
LF6	*	*	200 hours	*	*
MF1	*	*	9,360 hours	*	*
MF2	*	*	3,125 hours	*	*
MF3	*	*	960 hours	*	*
MF4	*	*	1,070 hours	*	*
MF5	*	*	12,940 items	*	*
MF6	*	*	165 items	*	*
MF8	*	*	615 hours	*	*
MF9	*	*	235 hours	*	*
MF10	*	*	1,155 hours	*	*
MF11	*	*	1,620 hours	*	*
MF12	*	*	3,280 hours	*	*
HF1	*	*	565 hours	*	*
HF4	*	*	5,300 hours	*	*
HF5	*	*	1,680 hours	*	*
HF6	*	*	5,865 items	*	*
ASW1	*	*	720 hours	*	*

ASW2	*	*	3,300 items	*	*
ASW3	*	*	19,675 hours	*	*
ASW4	*	*	160 items	*	*
TORP1	*	*	575 items	*	*
TORP2	*	*	310 items	*	*
M3	*	*	560 hours	*	*
SD1	*	*	11,705 hours	*	*
(B) Impulsive Source Detonations During Annual Training					
E1	*	*	50,700 detonations	*	*
E2	*	*	530 detonations	*	*
E3	*	*	4,660 detonations	*	*
E4	*	*	2,100 detonations	*	*
E5	*	*	3,420 detonations	*	*
E6	*	*	380 detonations	*	*
E8	*	*	80 detonations	*	*
E9	*	*	20 detonations	*	*
E10	*	*	60 detonations	*	*
E11	*	*	30 detonations	*	*
E12	*	*	920 detonations	*	*

*Information is presented in the classified version of this report

(2)(C) Improved Extended Echo-Ranging System (IEER) sonobuoy summary

IEER sonobuoys were not used within the MITT. IEER buoys have been phased out of the training inventory, and are no longer planned or anticipated to be used in MITT. However, they could possibly be used in future years.

(3) MITT – Geographic Testing Information Presentation

The precise locations and frequency of sonar use is classified. There is currently no method to declassify the sensitivity of this data in order to publish this type of information in an unclassified report. For this reason the only available method for this information to be disseminated for the foreseeable future is in the classified version of this report.