

Dated: January 26, 2010.

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*Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.*

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

RIN 0648-XS20

#### Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Conducting Air-to-Surface Gunnery Missions in the Gulf of Mexico

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; issuance of an incidental harassment authorization.

**SUMMARY:** In accordance with the Marine Mammal Protection Act (MMPA) regulations, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the U.S. Air Force (USAF), Eglin Air Force Base (Eglin AFB), to take marine mammals, by harassment, incidental to conducting air-to-surface (A-S) gunnery missions in the Gulf of Mexico (GOM). The USAF's activities are considered military readiness activities.

**DATES:** Effective January 27, 2010, through January 26, 2011.

**ADDRESSES:** A copy of the authorization, the application containing a list of the references used in this document, and NMFS' 2008 Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) may be obtained by writing to Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225, telephoning the contact listed below (see **FOR FURTHER INFORMATION CONTACT**), or visiting the internet at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

**FOR FURTHER INFORMATION CONTACT:** Candace Nachman, Office of Protected Resources, NMFS, (301) 713-2289, ext 156.

**SUPPLEMENTARY INFORMATION:**

## Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the U.S. can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization.

The National Defense Authorization Act (NDAA) (Public Law 108-136) removed the "small numbers" and "specified geographical region" provisions and amended the definition of "harassment" as it applies to a "military readiness activity" to read as follows (Section 3(18)(B) of the MMPA):

(i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

## Summary of Request

NMFS originally received an application on February 13, 2003, from Eglin AFB for the taking, by harassment, of marine mammals incidental to programmatic mission activities within the Eglin Gulf Test and Training Range (EGTTR). The EGTTR is described as the airspace over the GOM that is controlled by Eglin AFB. A notice of receipt of Eglin AFB's application and Notice of Proposed IHA and request for 30-day public comment published on January 23, 2006 (71 FR 3474). A 1-year IHA was subsequently issued to Eglin AFB for this activity on May 3, 2006 (71 FR 27695, May 12, 2006).

On January 29, 2007, NMFS received a request from Eglin AFB for a renewal of its IHA, which expired on May 2, 2007. This application addendum requested revisions to three components of the IHA requirements: protected species surveys; ramp-up procedures; and sea state restrictions. A Notice of Proposed IHA and request for 30-day public comment published on May 30, 2007 (72 FR 29974). A 1-year IHA was subsequently issued to Eglin AFB for this activity on December 11, 2008 (73 FR 78318, December 22, 2008).

On February 17, 2009, NMFS received a request from Eglin AFB for a renewal of its IHA, which expired on December 10, 2009. No modifications to the activity location, the mission activities, or the mitigation and monitoring measures required under the 2008-2009 IHA were requested by Eglin AFB. Therefore, these activities are identical to what has been described previously (73 FR 78318, December 22, 2008). A-S gunnery operations may potentially impact marine mammals at or near the water surface. Marine mammals could potentially be harassed, injured, or killed by exploding and non-exploding projectiles, and falling debris (USAF, 2002). However, based on analyses provided in the USAF's 2002 Final Programmatic EA (PEA), Eglin's Supplemental Information Request (2003), and NMFS' 2008 EA, as well as for reasons discussed in the Notice of Proposed IHA (74 FR 53474, October 19, 2009) and later in this document, NMFS concurs with Eglin AFB that gunnery exercises are not likely to result in any injury or mortality to marine mammals. Potential impacts resulting from A-S test operations include direct physical impacts (DPI) resulting from ordnance. Sixteen marine mammal species or stocks are authorized for taking by Level B harassment incidental to Eglin AFB's A-S activities and include: Bryde's whale (*Balaenoptera brydei*); sperm whale (*Physeter macrocephalus*); dwarf

sperm whale (*Kogia simus*); pygmy sperm whale (*K. breviceps*); Atlantic bottlenose dolphin (*Tursiops truncatus*); Atlantic spotted dolphin (*Stenella frontalis*); pantropical spotted dolphin (*S. attenuata*); Cuvier's beaked whale (*Ziphius cavirostris*); Clymene dolphin (*S. clymene*); spinner dolphin (*S. longirostris*); striped dolphin (*S. coeruleoalba*); false killer whale (*Pseudorca crassidens*); pygmy killer whale (*Feresa attenuata*); Risso's dolphin (*Grampus griseus*); rough-toothed dolphin (*Steno bredanensis*); and short-finned pilot whale (*Globicephala macrorhynchus*).

#### Description of the Specified Activity

A-S gunnery missions, a "military readiness activity" as defined under 16 U.S.C. 703 note, involve surface impacts of projectiles and small underwater detonations with the potential to affect cetaceans that may occur within the EGTTTR. These missions typically involve the use of 25-mm (0.98-in), 40-mm (1.57-in), and 105-mm (4.13-in) gunnery rounds containing, 0.0662 lb (30 g), 0.865 lb (392 g), and 4.7 lbs (2.1 kg) of explosive, respectively. Live rounds must be used to produce a visible surface splash that must be used to "score" the round (the impact of inert rounds on the sea surface would not be detected). The USAF has developed a 105-mm training round (TR) that contains less than 10 percent of the amount of explosive material (0.35 lb; 0.16 kg) as compared to the "Full-Up" (FU) 105-mm (4.13 in) round. The TR was developed as one method to mitigate effects on marine life during nighttime A-S gunnery exercises when visibility at the water surface is poor. However, the TR cannot be used in the daytime since the amount of explosive material is insufficient to be detected from the aircraft.

Water ranges within the EGTTTR that are typically used for the gunnery operations are located in the GOM offshore from the Florida Panhandle (areas W-151A, W-151B, W-151C, and W-151D as shown in Figure 1-2 in Eglin's 2003 application). Data indicate that W-151A (Figure 1-3 in Eglin's application) is the most frequently used water range due to its proximity to Hurlburt Field, but activities may occur anywhere within the EGTTTR.

Eglin AFB proposes to conduct these mission activities year round during both daytime and nighttime hours. Therefore, NMFS has made the IHA effective for an entire year from January 27, 2010, through January 26, 2011. However, it should be noted that the level of activity has been far lower over the past few years than that predicted to

be conducted by the USAF and by NMFS in this document for two reasons. First, many of the training crew members have been engaged in other activities in other parts of the world recently. Second, land ranges are the preferred method of live-fire training. In the last year, the USAF crews have not used the water ranges due to the excellent availability of land ranges. However, at some point in the future, land ranges may become more difficult to acquire, so water ranges are needed to ensure that aircrews can be fully trained. A detailed overview of the activity was provided in the Notice of Proposed IHA (74 FR 53474, October 19, 2009). No changes have been made to the proposed activities.

#### Comments and Responses

A notice of receipt of Eglin AFB's application and NMFS' proposal to issue an IHA to the USAF, Eglin AFB, published in the **Federal Register** on October 19, 2009 (74 FR 53474). During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission (MMC) and a member of the public. The comment from the private citizen opposed the issuance of an authorization without any specific substantiation for why such an authorization should not be issued. For the reasons set forth in this document, NMFS has determined that issuance of the authorization is appropriate. Following are the comments from the MMC and NMFS' responses.

*Comment 1:* The MMC continues to question NMFS' conviction that temporary threshold shift (TTS), in all instances, constitutes no more than Level B harassment. The MMC recommends that NMFS revise its interpretation of TTS to indicate that it constitutes a temporary loss of function with consequences that may vary widely from negligible to biologically significant (e.g., compromised ability to forage, respond to reproductive cues, detect predators) depending on a variety of circumstances at the time the loss occurs, including the nature of the structural and functional hearing loss, the animals' behavioral response to the stimulus, its history, and environmental conditions; as such, and under certain circumstances, TTS may constitute Level A harassment.

*Response:* NMFS agrees with the MMC that additional information regarding the range of effects from TTS should be added to the analysis of potential effects from the A-S gunnery mission exercises. That information has been added to the "Potential Effects of the Specified Activity on Marine

Mammals" section found later in this document.

Regarding the MMC's assertion that under certain circumstances TTS may constitute Level A harassment, this issue has been addressed several times by NMFS in the past (see for example 70 FR 48675, August 19, 2005; and 66 FR 22450, May 4, 2001). As stated in those documents, the best scientific information available concludes that TTS is not an auditory injury, but is a temporary physiological reaction on the part of mammals to avoid an injury. The MMC, however, argues for considering TTS as both Level A harassment and Level B harassment based on conjecture on what might occur if a marine mammal with compromised hearing was at a disadvantage for survival. As noted previously, it is likely that marine mammals evolved certain behavioral responses to address natural loud noises in the environment (for example, billions of lightning strikes per year on the ocean at about 260 dB peak) by changes in conspecific spatial separation. For a more detailed analysis of why TTS is not considered Level A harassment, please refer to the **Federal Register** citations provided here, as well as Southall *et al.* (2007) for information on this subject.

*Comment 2:* The MMC recommends that NMFS conduct a thorough review of the considerable information available on behavioral responses of marine mammals to sound before it moves forward with proposed regulations tied to the narrow findings of Schlundt *et al.* (2000) as the basis for estimating the number of animals likely to exhibit behavioral responses.

*Response:* NMFS used the findings in Schlundt *et al.* (2000), as it was the best available science when developing the pressure criterion and estimating the level of take. However, NMFS will review any additional literature suggested by the MMC during the development of proposed regulations.

*Comment 3:* The MMC reiterates its concern over the conclusion that no animals could be killed over the course of a year of such exercises. The MMC recommends that NMFS require performance testing of mitigation measures to assess their actual effectiveness at detecting marine mammals. The Navy is being asked to conduct similar evaluation programs, and doing so seems essential if our collective approach to such matters is to be considered science-based.

*Response:* Since the MMC did not make any specific recommendations regarding the performance testing of mitigation measures to assess their actual effectiveness at detecting marine

mammals, NMFS is uncertain as to what exactly it is the MMC is recommending be done in this instance. Regarding the evaluation programs being conducted by the Navy, NMFS assumes that the MMC is referring to the effectiveness of visual observations by vessel-based marine mammal observers based on years of experience. The Navy's evaluation monitoring is in no way comparable to the activities being conducted here by Eglin AFB.

The application addendum submitted by Eglin AFB in January 2007 explained in detail the advantages and improved effectiveness of using the Infrared Detection Sets (IDS) system over typical night-vision devices and other visual observation systems. The IDS system is capable of detecting differences in temperature from thermal energy (heat) radiated from living bodies or from reflected and scattered thermal energy. Visible light is not necessary for object detection. This system is equally effective during day or night use. For a full explanation on the IDS system and its effectiveness, please refer to the 2008 IHA Notice of Issuance (73 FR 78318, December 22, 2008), Eglin AFB's 2007 application addendum, or NMFS' 2008 EA (see ADDRESSES). These documents also describe the effectiveness of this system at 6,000 ft (1,829 m) altitude, which was a requested change by the USAF due to safety concerns for personnel if protected species surveys were flown at lower altitudes.

Aircraft crew members are required to scan the testing area prior to the commencement of all A-S gunnery mission activities, for which optical and electronic sensors are required to be employed for target detection. If any marine mammals are detected within the AC-130's orbit circle, either during initial clearance or after commencement of live firing, the mission will be immediately halted and relocated as necessary or suspended until the marine mammal has left the area. If relocated to another target area, the clearance procedures must be repeated. Based on the analysis of effectiveness of the observation systems, NMFS has determined that flying the pre-mission surveys at an altitude of 6,000 ft (1,829 m) is a sufficient altitude to detect the presence of marine mammals. Since activities will not have occurred prior to these surveys, any sighted marine mammals will be assumed to either be alive or dead from a cause other than Eglin AFB's A-S activities.

Regarding the effectiveness of differentiating between a live and a dead marine mammal during post-mission protected species surveys, unless there is significant physical

damage, the operators/systems are not capable of determining between a non-moving live animal and a dead animal with no apparent physical damage. Typically, marine mammals do not exhibit the same levels of energy/heat transfer back into the environment that is associated with land animals due to their insulating fat layers. However, the USAF has stated that they would be able to see a wounded or recently killed marine mammal on or near the surface that is bleeding externally or with significant open wounds, as this would provide a heat signature that can be detected quite well by the IDS system.

Additionally, the size of the wound, time elapsed since the injury was incurred, and orientation of the animal/wound are all factors determining whether or not one could see the gunnery-type wounds (such as bullet holes or fragmentation wounds). However, the weapons used during A-S exercises detonate on or very near the surface. According to the USAF, even if the weapon failed to detonate, gun-type projectiles lose lethal velocity within a few feet of the surface. Lastly, if a marine mammal enters the exercise area during a live-fire event, exercises would cease immediately, and the activity would either remain suspended until the area was determined to be clear of marine mammals or moved to a new area, where pre-mission surveys would be conducted before recommencing live-fire events.

*Comment 4:* The MMC states that until data are available that demonstrate the effectiveness of electronic detection techniques in higher sea states, authorizing incidental taking during operations conducted in such conditions is premature. Therefore, the MMC recommends that NMFS work with the USAF to design and conduct the necessary performance verification testing for electronic detection devices under the pertinent sea state conditions.

*Response:* For the 2008 IHA, NMFS increased the sea state restriction from 3 to 4. The reasoning for increasing the sea state limitation was fully explained in the 2008 IHA Notice of Issuance (73 FR 78318, December 22, 2008) and NMFS' 2008 EA. Readers should refer to those documents for the explanation.

USAF subject matter experts have determined based on in-the-field experience, the airborne systems adequately function in a sea state of 4. Research conducted by Baldacci *et al.* (2005) indicated a sea state of 2 or 3 was pushing their system capabilities. However, Baldacci *et al.* (2005) were looking horizontally along the surface of the water, whereas the USAF is looking nearly straight down, thus improving

system capabilities in higher sea states. Specific system capabilities/limitations are classified and cannot be publicly provided.

Sensor Operators are continuously scanning the area for traffic, boats, marine mammals, etc. when transiting to and from the water exercise ranges. The USAF will instruct the Sensor Operators to begin gathering additional data, such as sea state and level of difficulty in detecting objects at the different sea states, during those transits for comparison purposes, as long as doing so does not interfere with mission training activities. Beyond this new data collection effort, NMFS is uncertain what the MMC intended, as they did not provide any specific details on the types of data that should be collected or collection methods.

*Comment 5:* The MMC recommends that NMFS review its overall strategy for managing risks associated with such testing and training activities and consider how its existing strategy might be modified to be both more precautionary but also more likely to lead to scientific advancement in this field of research.

*Response:* Pursuant to section 101(a)(5)(D) of the MMPA, NMFS may issue an IHA if it finds that the activity will have a negligible impact on the affected species or stock and that such taking will not have an unmitigable adverse impact on the affected species or stock for subsistence uses (where relevant). Additionally, NMFS must prescribe means of effecting the least practicable impact on the affected species or stocks and their habitats. In this case, NMFS reviewed and analyzed the activity and the mitigation measures proposed by USAF to determine whether there would be a negligible impact on the affected species and stocks and whether they constitute the means of effecting the least practicable impact. NMFS has made both these determinations.

The USAF is currently using the results of a recent habitat/species abundance survey in order to limit exercises in areas during times of year when high marine species abundance is anticipated. In 2007, Dr. Lance Garrison, NMFS Southeast Fisheries Science Center, conducted a marine species habitat modeling survey in the EGTTR as part of the Department of Defense Legacy Resource Management Program. In this project, the researchers developed habitat models using new aerial survey line transect data collected during the winter and summer of 2007. In combination with remotely sensed habitat parameters (i.e., sea surface temperature and chlorophyll), these

data were used to develop spatial density models for bottlenose dolphins and several sea turtle species within continental shelf and coastal waters of the eastern GOM. The “species-environment” relationship describes the environmental preferences and tolerances of the target species. This relationship is then projected spatially to provide a finer-scale prediction of areas within a region where animal density is expected to be highest. Similarly, the relationship can be used to predict the density of animals outside of the time period or area when survey data are collected. Although there are some limitations to the results of Dr. Garrison’s study, the data are used by training crews at Eglin AFB to help determine the best locations for training missions in the EGTR so that areas with high abundances of marine mammals and sea turtles can be avoided. Such scientific studies are being used to reduce impacts to marine mammals (and other protected species) in the EGTR.

#### Description of Marine Mammals in the Area of the Specified Activity

There are 29 species of marine mammals documented as occurring in Federal waters of the GOM. Of these 29 species of marine mammals, approximately 21 may be found within the proposed action area, the EGTR. These species are the Bryde’s whale, sperm whale, dwarf sperm whale, pygmy sperm whale, Atlantic bottlenose dolphin, Atlantic spotted dolphin, pantropical spotted dolphin, Blainville’s beaked whale (*Mesoplodon densirostris*), Cuvier’s beaked whale, Gervais’ beaked whale (*M. europaeus*), Clymene dolphin, spinner dolphin, striped dolphin, killer whale (*Orcinus*

*orca*), false killer whale, pygmy killer whale, Risso’s dolphin, Fraser’s dolphin (*Lagenodelphis hosei*), melon-headed whale (*Peponocephala electra*), rough-toothed dolphin, and short-finned pilot whale. Of these species, only the sperm whale is listed as endangered under the Endangered Species Act (ESA) and as depleted throughout its range under the MMPA. While some of the other species listed here have depleted status under the MMPA, none of the GOM stocks of those species are considered depleted. More detailed information on these species can be found in Wursig *et al.* (2000), NMFS’ 2008 EA (see ADDRESSES), and in the NMFS U.S. Atlantic and GOM Stock Assessment Reports (Waring *et al.*, 2009). This latter document is available at: <http://www.nefsc.noaa.gov/publications/tm/tm210/>. The West Indian manatee (*Trichechus manatus*) is managed by the U.S. Fish and Wildlife Service and is not considered further in this document.

The species most likely to occur in the area of Eglin AFB’s proposed activities include: Atlantic bottlenose dolphin; Atlantic spotted dolphin; pantropical spotted dolphin; spinner dolphin; striped dolphin; Risso’s dolphin; Clymene dolphin; and dwarf and pygmy sperm whales. Blainville’s beaked whale, Gervais’ beaked whale, killer whale, Fraser’s dolphin, and melon-headed whales are rare in the project area and are not anticipated to be impacted by the A-S gunnery mission activities. Therefore, these five species are not considered further.

Cetacean abundance estimates for the study area are derived from GulfCet II (Davis *et al.*, 2000) aerial surveys of the continental shelf within the Minerals Management Service’s Eastern Planning Area, an area of 70,470 km<sup>2</sup>. Texas A&M

University and NMFS conducted the surveys from 1996 to 1998. A complete discussion on the abundance and density data can be found in the Notice of Proposed IHA (74 FR 53474, October 19, 2009) and Eglin AFB’s 2003 application.

#### Potential Effects of the Specified Activity on Marine Mammals

A-S gunnery operations may potentially impact marine mammals at or near the water surface. Marine mammals could potentially be harassed, injured or killed by exploding and non-exploding projectiles, and falling debris (USAF, 2002). However, based on analyses provided in the USAF’s Final PEA, Eglin’s Supplemental Information Request (2003), and NMFS’ 2008 EA, NMFS concurs with Eglin AFB that A-S gunnery exercises are not likely to result in any injury or mortality to marine mammals.

Explosive criteria and thresholds for assessing impacts of explosions on marine mammals were discussed by NMFS in detail in its issuance of an IHA for Eglin’s Precision Strike Weapon testing activity (70 FR 48675, August 19, 2005) and are not repeated here. Please refer to that document for this background information. However, one part of the analysis has changed since that time. That information was provided in the Notice of Proposed IHA (74 FR 53474, October 19, 2009) and is not repeated here. Table 1 in this document outlines the acoustic criteria used by NMFS when addressing noise impacts from explosives. These criteria remain consistent with criteria established for other activities in the EGTR and other acoustic activities authorized under sections 101(a)(5)(A) and (D) of the MMPA.

TABLE 1. CURRENT NMFS ACOUSTIC CRITERIA WHEN ADDRESSING HARASSMENT FROM EXPLOSIVES

Level B Behavior	177 dB re 1 $\mu\text{Pa}^2\text{-sec}$ 1/3 Octave SEL (sound energy level)
Level B TTS Dual Criterion	182 dB re 1 $\mu\text{Pa}^2\text{-sec}$ 1/3 Octave SEL
Level B TTS Dual Criterion	23 psi
Level A PTS (permanent threshold shift)	205 dB re 1 $\mu\text{Pa}^2\text{-sec}$ SEL
Level A Injury (non-hearing related)	13 psi-msec
Mortality	30.5 psi-msec

TTS can disrupt behavioral patterns by inhibiting an animal’s ability to communicate with conspecifics and interpret other environmental cues important for predator avoidance and prey capture. However, depending on the degree (elevation of threshold in

dB), duration (i.e., recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious. For example, a marine mammal may be able to readily compensate for a brief,

relatively small amount of TTS in a non-critical frequency range that takes place during a time when the animal is traveling through the open ocean, where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and

longer duration of TTS sustained during a time when communication is critical for successful mother/calf interactions could have more serious impacts if it were in the same frequency band as the necessary vocalizations and of a severity that it impeded communication.

The following physiological mechanisms are thought to play a role in inducing auditory fatigue: effects to sensory hair cells in the inner ear that reduce their sensitivity; modification of the chemical environment within the sensory cells; residual muscular activity in the middle ear; displacement of certain inner ear membranes; increased blood flow; and post-stimulatory reduction in both efferent and sensory neural output. Ward (1997) suggested that when these effects result in TTS rather than permanent threshold shift (PTS), they are within the normal bounds of physiological variability and tolerance and do not represent a physical injury. Additionally, Southall *et al.* (2007) indicate that although PTS is a tissue injury, TTS is not, because the reduced hearing sensitivity following exposure to intense sound results primarily from fatigue, not loss, of cochlear hair cells and supporting structures and is reversible. Accordingly, NMFS classifies TTS (when resulting from exposure to underwater detonations) as Level B Harassment, not Level A Harassment (injury).

#### *Direct Physical Impacts (DPI)*

Potential impacts resulting from A-S test operations include DPI resulting from ordnance. DPI could result from inert bombs, gunnery ammunition, and shrapnel from live missiles falling into the water. However, the possibility of DPI to marine mammals is considered highly unlikely. Therefore, the risk of injury or mortality is low. The Notice of Proposed IHA (74 FR 53474, October 19, 2009) contained a complete discussion of possible impacts from DPI on marine mammals. Impacts to marine mammals from Eglin AFB's activities are anticipated to be limited to Level B harassment in the form of temporary changes in behavior or temporary changes in hearing thresholds (i.e., TTS).

#### *Anticipated Effects on Habitat*

The primary source of marine mammal habitat impact is noise resulting from gunnery missions. However, the noise does not constitute a long-term physical alteration of the water column or bottom topography, as the occurrences are of limited duration and are intermittent in time. Other sources that may affect marine mammal

habitat were considered and potentially include the introduction of fuel, chaff, debris, ordnance, and chemical residues into the water column. A full description of anticipated effects on habitat was provided in the Notice of Proposed IHA (74 FR 53474, October 19, 2009). Based on that information, NMFS has determined that the A-S gunnery mission activities will not have any impact on the food or feeding success of marine mammals in the northern GOM. Additionally, no loss or modification of the habitat used by cetaceans in the GOM is expected. The activity is not expected to have any habitat-related effects that could cause significant or long-term consequences for individual marine mammals or on the food sources that they utilize.

#### **Mitigation**

In order to issue an incidental take authorization (ITA) under Section 101(a)(5)(A) and (D) of the MMPA, NMFS must, where applicable, set forth the permissible methods of taking pursuant to such activity and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant). The NDAA of 2004 amended the MMPA as it relates to military readiness activities and the ITA process such that "least practicable impact" shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the "military readiness activity". The training activities described in Eglin AFB's application are considered military readiness activities.

The mitigation measures included in this IHA are the same as those required in the 2008–2009 IHA (73 FR 78318, December 22, 2008), which are also virtually identical to the mitigation measures that were required in the 2006 IHA (71 FR 27695, May 12, 2006). There were only three differences in the mitigation and monitoring measures between the 2006 and 2008 IHAs. Eglin AFB's 2007 application addendum requested revisions to three components of the IHA requirements: protected species surveys, ramp-up procedures, and sea state restrictions. A discussion of the differences in the requirements can be found in the 2008 IHA Notice of Issuance (73 FR 78318, December 22, 2008) and NMFS' 2008 EA (see **ADDRESSES**). The revisions to those three requirements are also included in this IHA. However, the explanations as to why Eglin AFB requested the changes

and NMFS' determinations specific to those three requirements are not repeated in this document. Readers should refer to either the 2008 IHA Notice of Issuance (73 FR 78318, December 22, 2008) or NMFS' 2008 EA (see **ADDRESSES**) for the full explanation.

#### *Development of the Training Round (TR)*

The largest type of ammunition used during typical gunnery missions is the 105-mm (4.13-in) round containing 4.7 lbs (2.1 kg) of high explosive (HE). This is several times more HE than that found in the next largest round (40 mm/1.57 in). As a mitigation technique, the USAF developed a 105-mm TR that contains only 0.35 lb (0.16 kg) of HE. The TR was developed to dramatically reduce the risk of harassment at night and Eglin AFB anticipates a 96 percent reduction in impact by using the 105-mm TR.

#### *Visual Mitigation*

Areas to be used in gunnery missions are visually monitored for marine mammal presence from the AC-130 aircraft prior to commencement of the mission. If the presence of one or more marine mammals is detected, the target area will be avoided. In addition, monitoring will continue during the mission. If marine mammals are detected at any time, the mission will halt immediately and relocate as necessary or be suspended until the marine mammal has left the area. Daytime and nighttime visual monitoring will be supplemented with infrared (IR) and low-light television (TV) monitoring. As nighttime visual monitoring is generally considered to be ineffective at any height, the EGTRR missions will incorporate the TR.

#### *Ramp-up Procedures*

The rationale for requiring ramp-up procedures is that this process may allow animals to perceive steadily increasing noise levels and to react, if necessary, before the noise reaches a threshold of significance. The AC-130 gunship's weapons are used in two activity phases. First, the guns are checked for functionality and calibrated. This step requires an abbreviated period of live fire. After the guns are determined to be ready for use, the mission proceeds under various test and training scenarios. This second phase involves a more extended period of live fire and can incorporate use of one or any combination of the munitions available (25-, 40-, and 105-mm rounds). The ramp-up procedure is required for the initial gun calibration, and, after this phase, the guns may be

fired in any order. Eglin and NMFS believe this process will allow marine species the opportunity to respond to increasing noise levels. If an animal leaves the area during ramp-up, it is unlikely to return while the live-fire mission is proceeding. This protocol allows a more realistic training experience. In combat situations, gunship crews would not likely fire the complete ammunition load of a given caliber gun before proceeding to another gun. Rather, a combination of guns would likely be used as required by an evolving situation. An additional benefit of this protocol is that mechanical or ammunition problems on an individual gun can be resolved while live fire continues with functioning weapons. This also diminishes the possibility of a lengthy pause in live fire, which, if greater than 10 min, would necessitate Eglin's re-initiation of protected species surveys.

#### *Other Mitigation*

In addition to the development of the TR, the visual mitigation, and the ramp-up procedures already described in this document, additional mitigation measures to protect marine life were included in the 2006 and 2008 IHAs and are also required in the 2010 IHA. These requirements are:

(1) If daytime weather and/or sea conditions preclude adequate aerial surveillance for detecting marine mammals and other marine life, A-S gunnery exercises must be delayed until adequate sea conditions exist for aerial surveillance to be undertaken. Daytime test firing will be conducted only when sea surface conditions are sea state 4 or less on the Beaufort scale.

(2) Prior to each firing event, the aircraft crew will conduct a visual survey of the 5-nm (9.3-km) wide prospective target area to attempt to sight any marine mammals that may be present (the crew will do the same for sea turtles and Sargassum rafts). The AC-130 gunship will conduct at least two complete orbits at a minimum safe airspeed around a prospective target area at a maximum altitude of 6,000 ft (1,829 m). Provided marine mammals (and other protected species) are not detected, the AC-130 can then continue orbiting the selected target point as it climbs to the mission testing altitude. During the low altitude orbits and the climb to testing altitude, the aircraft crew will visually scan the sea surface within the aircraft's orbit circle for the presence of marine mammals. Primary emphasis for the surface scan will be upon the flight crew in the cockpit and personnel stationed in the tail observer bubble and starboard viewing window.

The AC-130's optical and electronic sensors will also be employed for target clearance. If any marine mammals are detected within the AC-130's orbit circle, either during initial clearance or after commencement of live firing, the aircraft will relocate to another target and repeat the clearance procedures. If multiple firing events occur within the same flight, these clearance procedures will precede each event.

(3) The aircrews of the A-S gunnery missions will initiate location and surveillance of a suitable firing site immediately after exiting U.S. territorial waters (less than or equal to 12 nm (22 km)). This would potentially restrict most gunnery activities to the shallower continental shelf waters of the GOM where marine mammal densities are typically lower, and thus potentially avoid the slope waters where the more sensitive species (e.g., endangered sperm whales) typically reside.

(4) Observations will be accomplished using all-light TV, IR sensors, and visual means for at least 60 min prior to each exercise.

(5) Aircrews will utilize visual, night vision goggles, and other onboard sensors to search for marine mammals while performing area clearance procedures during nighttime pre-mission activities.

(6) If any marine mammals are sighted during pre-mission surveys or during the mission, activities will be immediately halted until the area is clear of all marine mammals for 60 min or the mission location relocated and resurveyed.

(7) If post-detonation surveys determine that an injury or lethal take of a marine mammal has occurred, the test procedure and the monitoring methods must be reviewed with NMFS and appropriate changes must be made, prior to conducting the next A-S gunnery exercise.

NMFS carefully evaluated the applicant's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and

- The practicability of the measure for applicant implementation, including consideration of personnel safety, practicability of implementation, and impact on the effectiveness of the military-readiness activity.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has determined that the required mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, while also considering personnel safety, practicability of implementation, and impact on the effectiveness of the military-readiness activity.

#### **Monitoring and Reporting**

In order to issue an ITA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must, where applicable, set forth "requirements pertaining to the monitoring and reporting of such taking". The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the action area.

The Incidental Take Statement in NMFS' Biological Opinion on this action required certain monitoring measures to protect marine life. NMFS also imposed these same requirements, as well as additional ones, under Eglin AFB's 2006 and 2008 IHAs as they related to marine mammals. NMFS has included these same measures in the 2010 IHA. They are:

(1) The A-S gunnery mission aircrews will participate in the marine mammal species observation training. Designated crew members will be selected to receive training as protected species observers. Observers will receive training in protected species survey and identification techniques.

(2) Aircrews will initiate the post-mission clearance procedures beginning at the operational altitude of approximately 15,000 to 20,000 ft (4,572 to 6,096 m) elevation, and then initiate a spiraling descent down to an observation altitude of approximately 6,000 ft (1,829 m) elevation. Rates of descent will occur over a 3 to 5 min time frame.

(3) Eglin will track their use of the EGTTTR for test firing missions and

protected species observations, through the use of mission reporting forms.

(4) A-S gunnery missions will coordinate with next-day flight activities to provide supplemental post-mission observations for marine mammals in the operations area of the previous day.

(5) A summary annual report of marine mammal observations and A-S activities will be submitted to the NMFS Southeast Regional Office (SERO) and the Office of Protected Resources either at the time of a request for renewal of an IHA or 90 days after expiration of the current IHA if a new IHA is not requested. This annual report must include the following information: (i) Date and time of each A-S gunnery exercise; (ii) a complete description of the pre-exercise and post-exercise activities related to mitigating and monitoring the effects of A-S gunnery exercises on marine mammal populations; (iii) results of the monitoring program, including numbers by species/stock of any marine mammals noted injured or killed as a result of the gunnery exercises and number of marine mammals (by species if possible) that may have been harassed due to presence within the 5-nm activity zone; and (iv) a detailed assessment of the effectiveness of sensor-based monitoring in detecting marine mammals in the area of A-S gunnery operations.

(6) If any dead or injured marine mammals are observed or detected prior to testing, or injured or killed during live fire, a report must be made to NMFS by the following business day.

(7) Any unauthorized takes of marine mammals (i.e., injury or mortality) must be immediately reported to NMFS and to the respective stranding network representative.

#### **Estimated Take by Incidental Harassment**

As it applies to a "military readiness activity", the definition of harassment is (Section 3(18)(B) of the MMPA):

(i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

Only take by Level B harassment is anticipated as a result of and authorized for the A-S gunnery mission activities. The exercises are expected to only affect animals at or very near the surface of the

water. Cetaceans in the vicinity of the exercises may incur temporary changes in behavior and/or temporary changes in their hearing thresholds. Based on the mitigation and monitoring measures required to be implemented (described earlier in this document), no injury or mortality of marine mammals is anticipated as a result of or authorized for the A-S gunnery mission activities.

The Notice of Proposed IHA (74 FR 53474, October 19, 2009) included an in-depth discussion of the methodology used by Eglin AFB and NMFS to estimate take by harassment incidental to the A-S gunnery exercises and the numbers of cetaceans that might be affected by the exercises. A summary is provided here.

DPI are only anticipated to affect marine species at or very near the ocean surface. As a result, in order to calculate impacts, Eglin used corrected species densities (see Table 4–23 in the USAF's Final PEA) to reflect the surface interval population, which is approximately 10 percent of densities calculated for distribution in the total water column. The impacts to marine mammals swimming at the surface that could potentially be injured or killed by projectiles and falling debris was determined to be an average of 0.2059 marine mammals per year. However, NMFS believes that the required mitigation measures would significantly reduce even these low levels.

In addition to small arms, Eglin calculated the potential for other non-explosive items (bombs, missiles, and drones) to impact marine mammals. As shown in the 2002 Final PEA and the Notice of Proposed IHA (74 FR 53474, October 19, 2009), the potential for any non-small arms/non-gunnery DPI to marine mammals is extremely remote and can, therefore, be discounted.

Similar to non-small arms/non-gunnery DPI, DPI from gunnery activities may also affect marine mammals in the surface zone. Again, DPI are anticipated to affect only marine mammals at or near the ocean surface. Accordingly, the density estimates have been adjusted to indicate surface animals only being potentially affected. DPI from gunnery activities are extremely remote and can be discounted. Using the largest round (105 mm), it would take approximately 120 yr to impact a marine mammal from daytime gunnery activities and approximately 27 yr to impact a marine mammal from nighttime gunnery activities.

Estimating the impacts to marine mammals from underwater detonations is difficult due to complexities of the physics of explosive sound under water

and the limited understanding with respect to hearing in marine mammals. Detailed assessments were made in the notice for the 2006 and 2008 IHAs on this action (71 FR 27695, May 12, 2006; 73 FR 78318, December 22, 2008), as well as the Notice of Proposed IHA (74 FR 53474, October 19, 2009) and are summarized in this document. These assessments used, and improved upon, the criteria and thresholds for marine mammal impacts that were developed for the shock trials of the *USS SEAWOLF* and the *USS Winston S. Churchill* (DDG–81) (Navy, 1998; 2001). The criteria and thresholds used in those actions were adopted by NMFS for use in calculating incidental takes from explosives. Criteria for assessing impacts from Eglin AFB's A-S gunnery exercises include: (1) mortality, as determined by exposure to a certain level of positive impulse pressure (expressed as pounds per square inch per millisecond or psi-msec); (2) injury, both hearing-related and non-hearing related; and (3) harassment, as determined by a temporary loss of some hearing ability and behavioral reactions.

Permanent hearing loss is considered an injury and is termed PTS. NMFS, therefore, categorizes PTS as Level A harassment. Temporary loss of hearing ability is termed TTS, meaning a temporary reduction of hearing sensitivity which abates following noise exposure. TTS is considered non-injurious and is categorized as Level B harassment. NMFS recognizes dual criteria for TTS, as well as for Level A harassment, one based on peak pressure and one based on the greatest 1/3 octave sound exposure level (SEL) or energy flux density level (EFDL), with the more conservative (i.e., larger) of the two criteria being selected for impacts analysis (note: SEL and EFDL are used interchangeably, but with increasing scientific preference for SEL). The peak pressure metric used in previous shock trials to represent TTS was 12 pounds per square inch (psi) which, for the net explosive weight used, resulted in a zone of possible Level B harassment approximately equal to that obtained by using a 182 decibel (dB) re 1 microPa2–s, total EFDL/SEL metric. The 12-psi metric is largely based on anatomical studies and extrapolations from terrestrial mammal data (see Ketten, 1995; Navy, 1999 (Appendix E, Churchill FEIS; and 70 FR 48675 (August 19, 2005)) for background information). However, the results of a more recent investigation involving marine mammals suggest that, for small charges, the 12-psi metric is not an adequate predictor of the onset of TTS

but that one should use 23 psi. This explanation was provided in the Notice of Proposed IHA (74 FR 53474, October 19, 2009).

Table 1 (earlier in this document) summarizes the relevant thresholds for

levels of noise that may result in Level A harassment (injury) or Level B harassment via TTS or behavioral disturbance to marine mammals. Mortality and injury thresholds are designed to be conservative by

considering the impacts that would occur to the most sensitive life stage (e.g., a dolphin calf). Table 2 provides the estimated ZOI radii for the EGTTT ordnance.

TABLE 2. ESTIMATED RANGE FOR A ZONE OF IMPACT (ZOI) DISTANCE FOR THE EGTTT ORDNANCE.

Expendable	Level A Harassment-Injurious (205 dB) EFD (m)	Level B Harassment Non-Injurious (182 dB) EFD For TTS (m)	Level B Harassment Non-injurious (23 psi) For TTS (m)	Level B Harassment-Non-injurious (177 dB) EFD For Behavior (m)
105 mm FU	0.79	11.1	216	22.1
105-mm TR	0.22	3.0	90	6.0
40-mm HE	0.33	4.7	122	9.4
25-mm HE	0.11	1.3	49	2.6

FU=Full-up; TR=Training Round; HE=High Explosive

Based on the detailed discussion contained in the Notice of Proposed IHA (74 FR 53474, October 19, 2009), Table 3 in this **Federal Register** document provides Eglin AFB's estimates of the annual number of marine mammals, by species, potentially taken by Level B harassment, by the gunnery mission noise. It should be noted that these estimates are derived without consideration of the effectiveness of the required mitigation measures (except use of the TR), which are discussed earlier in this document. As indicated in Table 3, Eglin AFB and NMFS estimate that up to 271 marine mammals may incur Level B (TTS) harassment annually. Because these gunnery exercises result in multiple detonations, they have the potential to also result in a temporary modification in behavior by marine mammals at levels below TTS. Based on NMFS' estimates, up to 25 marine mammals may experience a behavioral response to these exercises during the time frame of an IHA (see Table 3). Finally, while one would generally expect the threshold for behavioral modification to be lower than that causing TTS, due to a lack of empirical information and data, a dual criteria for Level B behavioral harassment cannot be developed. However, to ensure that takings are covered by this IHA, NMFS estimates that approximately 1,000 marine mammals of 16 stocks may incur Level B (harassment) takes during the 1-year period of an IHA. NMFS has determined that this number will be significantly lower due to the expected effectiveness of the mitigation measures required in the IHA. Additionally, mortality resulting from either DPI or the resulting sounds generated into the water column from detonations was determined to be highly unlikely.



TABLE 3. YEARLY ESTIMATED NUMBER OF MARINE MAMMALS AFFECTED BY THE GUNNERY MISSION NOISE

Species	Adjusted Density (#/km <sup>2</sup> )	Level A Harassment Injurious 205 dB* EFD For Ear Rupture	Level B Harassment Injurious 182 dB* EFD For TTS	Level B Harassment Non-Injurious 23 psi For TTS	Level B Harassment Non-Injurious 177 dB* EFD For Behavior
Bryde's whale	0.007	<0.001	0.010	0.4	0.041
Sperm whale	0.011	<0.001	0.016	0.0	0.064
Dwarf/pygmy sperm whale	0.024	<0.001	0.035	1.5	0.139
Cuvier's beaked whale	0.10	<0.001	0.015	0.6	0.058
Mesoplodon spp.	0.019	<0.001	0.028	1.2	0.110
Pygmy killer whale	0.030	<0.001	0.044	1.9	0.174
False killer whale	0.026	<0.001	0.038	1.6	0.151
Short-finned pilot whale	0.027	<0.001	0.039	1.7	0.157
Rough-toothed dolphin	0.028	<0.001	0.041	1.7	0.163
Bottlenose dolphin	0.810	0.006	1.177	50.1	4.706
Risso's dolphin	0.113	0.001	0.164	7.0	0.657
Atlantic spotted dolphin	0.677	0.005	0.984	41.9	3.934
Pantropical spotted dolphin	1.077	0.008	1.565	66.7	6.258
Striped dolphin	0.237	0.002	0.344	14.7	1.377
Spinner dolphin	0.915	0.007	1.330	56.6	5.316
Clymene dolphin	0.253	0.002	0.368	15.7	1.470
Unidentified dolphin**	0.053	<0.001	0.077	3.3	0.308
Unidentified whale	0.008	<0.001	0.012	0.5	0.046
All marine mammals	4.325	0.032	6.29	271.1	25.13

km<sup>2</sup> = square kilometers; NA = not applicable\*dB= dB re 1 Pa<sup>2</sup>-s

\*\*Bottlenose dolphin/Atlantic spotted dolphin

### Negligible Impact Determination

NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." In making a negligible impact determination, NMFS considers: (1) the number of anticipated mortalities; (2) the number and nature of anticipated injuries; (3) the number, nature, and intensity, and duration of Level B harassment; and (4) the context in which the takes occur.

No injuries or mortalities are anticipated to occur as a result of Eglin AFB's A-S gunnery mission activities, and none are authorized. Takes will be limited to Level B harassment in the form of behavioral disturbance and TTS. Although activities would be permitted to occur year-round and can last for approximately 5 to 6 hours at a time, the actual live-fire portion of the exercise usually only lasts for 90 to 120 min. Additionally, it should also be noted that anticipated the level of activity has been far lower over the past few years than that predicted and estimated in this document. Those reasons were discussed earlier in this document. It is possible that some individuals may be taken more than once if those individuals are located in the exercise area on two different days when exercises are occurring. However, multiple exposures are not anticipated to have effects beyond Level B harassment.

Of the 16 marine mammal species or stocks that may be impacted by Eglin AFB's A-S gunnery mission activities, only the sperm whale is listed as endangered under the ESA and as depleted under the MMPA. No mortality or injury is expected to occur and due to the nature, degree, and context of the Level B harassment anticipated, the activity is not expected to impact rates of recruitment or survival.

Additionally, the mitigation and monitoring measures required to be implemented (described earlier in this document) are expected to minimize even further the potential for injury or mortality. The protected species surveys require Eglin AFB to search the area for marine mammals, and if any are found in the live fire area, then the exercise must be suspended until the animal(s) has left the area or the activity relocated. Moreover, the aircrews of the A-S gunnery missions will initiate location and surveillance of a suitable firing site immediately after exiting U.S. territorial waters (less than or equal to 12 nm (22

km)). This would potentially restrict most gunnery activities to the shallower continental shelf waters of the GOM where marine mammal densities are typically lower, and thus potentially avoid the slope waters where the more sensitive species (e.g., endangered sperm whales) typically reside.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS finds that Eglin AFB's A-S gunnery mission exercises will result in the incidental take of marine mammals, by Level B harassment only, and that the total taking from the A-S gunnery mission exercises will have a negligible impact on the affected species or stocks.

### Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action.

### Endangered Species Act (ESA)

A Biological Opinion issued by NMFS on October 20, 2004, concluded that the A-S gunnery exercises in the EGTTR are unlikely to jeopardize the continued existence of species listed under the ESA that are within the jurisdiction of NMFS or destroy or adversely modify critical habitat. NMFS has determined that this action, including the modifications to the mitigation and monitoring measures in the 2008 IHA and included in the 2010 IHA, does not have effects beyond that which was analyzed in that previous consultation, it is within the scope of that action, and reinitiation of consultation is not necessary. A new Incidental Take Statement has been issued for this action.

### National Environmental Policy Act (NEPA)

The USAF prepared a Final PEA in November 2002 for the EGTTR activity. NMFS made the USAF's 2002 Final PEA available upon request on January 23, 2006 (71 FR 3474). In accordance with NOAA Administrative Order 216-6 (Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999), NMFS reviewed the information contained in the USAF's 2002 Final PEA, and, on May 1, 2006, determined that the document accurately and completely described the proposed action, the alternatives to the proposed action, and the potential impacts on marine mammals, endangered species,

and other marine life that could be impacted by the preferred alternative and the other alternatives. Accordingly, NMFS adopted the USAF's 2002 Final PEA under 40 CFR 1506.3 and made its own FONSI on May 16, 2006. The NMFS FONSI also took into consideration updated data and information contained in NMFS' **Federal Register** document noting issuance of an IHA to Eglin AFB for this activity (71 FR 27695, May 12, 2006), and previous notices (71 FR 3474 (January 23, 2006); 70 FR 48675 (August 19, 2005)).

As the issuance of the 2008 IHA to Eglin AFB amended three of the mitigation measures for reasons of practicality and safety, NMFS reviewed the USAF's 2002 Final PEA and determined that a new EA was warranted to address: (1) the proposed modifications to the mitigation and monitoring measures; (2) the use of 23 psi as a change in the criterion for estimating potential impacts on marine mammals from explosives; and (3) a cumulative effects analysis of potential environmental impacts from all GOM activities (including Eglin mission activities), which was not addressed in the USAF's 2002 Final PEA. Therefore, NMFS prepared a new EA in December 2008 and issued a FONSI for its action on December 9, 2008. Based on those findings, NMFS determined that it was not necessary to complete an environmental impact statement for the issuance of an IHA to Eglin AFB for this activity. NMFS has determined that this activity is within the scope of NMFS' 2008 EA and FONSI.

### Authorization

As a result of these determinations, NMFS has issued an IHA to the USAF, Eglin AFB, for the take of several species of marine mammals incidental to the A-S gunnery mission activities in the GOM provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: January 25, 2010.

**Helen M. Golde,**

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