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## DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XA567

Taking and Importing Marine Mammals: Taking Marine Mammals Incidental to Navy Training Exercises in the Mariana Islands Range Complex

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

ACTION: Notice; proposed renewal of letter of authorization; request for comments.

SUMMARY: NMFS has received an application from the U.S. Navy (Navy) for a Letter of Authorization (LOA) to take marine mammals, by harassment, incidental to conducting training exercises within the Navy's Mariana Islands Range Complex (MIRC) in the Pacific Ocean between August 12, 2012 and August 3, 2015. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS requests comments on its proposal to issue an LOA to the Navy that includes the use of time delayed firing devices (TDFDs), which have not been explicitly addressed previously, to incidentally take marine mammals by harassment during the specified activity.

DATES: Comments and information must be received no later than [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Comments on the application should be addressed to Jolie Harrison, Incidental Take Program Supervisor, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. The mailbox address for providing email comments is ITP.Hopper@noaa.gov. NMFS is not

responsible for e-mail comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size.

Instructions: All comments received are a part of the public record and will generally be posted to <http://www.nmfs.noaa.gov/pr/permits/incidental.htm> without change. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

A copy of the application used in this document may be obtained by writing to the address specified above, 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: Brian D. Hopper, Office of Protected Resources, NMFS, (301) 427-8401.

#### SUPPLEMENTARY INFORMATION:

##### Background

Section 101(a)(5) of the MMPA (16 U.S.C. 1361 *et seq.*) directs the Secretary of Commerce to allow, upon request, the incidental, but not intentional taking of marine mammals by U.S. citizens who engage in a military readiness activity if certain findings are made and 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 may be granted for periods of 5 years or less if NMFS finds that the taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse

impact on the availability of the species or stock(s) for certain subsistence uses. In addition, NMFS must prescribe regulations that include permissible methods of taking and other means effecting the least practicable adverse impact on the species and its habitat, and on the availability of the species for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance. The regulations also must include requirements pertaining to the monitoring and reporting of such taking.

Regulations governing the taking of marine mammals incidental to the U.S. Navy's training activities in the MIRC were published on August 3, 2010 (75 FR 45527) and remain in effect through August 3, 2015. They are codified at 50 CFR 218.100. These regulations include mitigation, monitoring, and reporting requirements for the incidental taking of marine mammals by the Navy's range complex training exercises. For detailed information on these actions, please refer to the August 3, 2010 Federal Register notice and 50 CFR 218.100.

A final rule was issued on February 1, 2012 (77 FR 4917) to allow certain flexibilities concerning Navy training activities and allow for multi-year LOAs in 12 range complexes, including MIRC.

#### Summary of LOA Request

On March 15, 2012, NMFS received a LOA renewal application to take marine mammals incidental to training activities in the MIRC between August 12, 2012 and August 3, 2015. The LOA application included a request from the U.S. Navy for LOA modifications. Specifically, the Navy requests that NMFS modify the LOA to include taking of marine mammals incidental to mine neutralization training using TDFD within the MIRC, along with revised mitigation measures, to ensure that effects to marine mammals resulting from these activities will not exceed what was originally analyzed in the Final Rule for this Range Complex (75 FR 45527).

The potential effects of mine neutralization training on marine mammals were comprehensively analyzed in the final regulations for this Range Complex and mine neutralization training has been included in the specified activity in the associated 2010 and 2011 LOAs. However, the use of TDFD and the associated mitigation measures have not been previously contemplated, which is why NMFS believes it is appropriate to provide the proposed modifications to the LOA to the public for review.

On March 4, 2011, three dolphins were suspected to be killed by the Navy's mine neutralization training event using TDFDs in its Silver Strand Training Complex. In short, a TDFD device begins a countdown to a detonation event that cannot be stopped, for example, with a 10-min TDFD, once the detonation has been initiated, 10 minutes pass before the detonation occurs and the event cannot be cancelled during that 10 minutes. Although a previous Federal Register notice (76 FR 68734; November 7, 2011) stated that using TDFDs is believed to have likely resulted in the death of five dolphins, further discussion with the Navy and reviewing of reports concerning the incident showed that there is no concrete evidence that more than three dolphins were killed. Following the March 4<sup>th</sup> event, the Navy initiated an evaluation of mine neutralization events occurring throughout Navy Range Complexes and realized that TDFDs were being used at the VACAPES, JAX, and CHPT Range Complexes. According to the Navy, less than 3% of all MINEX events would not use TDFD. As a result, the Navy subsequently suspended all underwater explosive detonations using TDFDs during training. While this suspension was in place, the Navy worked with NMFS to develop a more robust monitoring and mitigation plan to ensure that marine mammal mortality and injury would not occur during mine neutralization training activities using TDFDs. After the Navy and NMFS developed a monitoring and mitigation plan for mine neutralization activities using TDFDs, the LOAs for

VACAPES, JAX, and CHPT Range Complexes were modified and issued to the Navy after public notice and comment (77 FR 2040, January 13, 2012). Because testing and training activities in the MIRC also include mine neutralization using TDFDs, NMFS now engages in a similar process for renewing the LOA for MIRC. The following sections provide detailed descriptions regarding the mine neutralization training activities, the mitigation measures contained in the current LOA, and the Navy's proposed revisions to mitigation measures that are intended to prevent mortality and injury to marine mammals.

The Navy requests the revised LOA remain valid until August 2015. A detailed description of the Navy's LOA modification request can be found on NMFS website:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>.

Description of the Need for Time-Delay Firing Devices in MINEX Training

**Overall Operational Mission:**

Explosive Ordnance Disposal (EOD) personnel require realistic training before conducting high risk, real-world operations. Such real-world operations include those similar to recent world events requiring movement of assets from sea to land and back to sea. These real-world operations involve non-permissive environments (i.e., mine fields, enemy ships, aircraft, etc.) that require Sailors to carry out their mission undetected and with reduced risk. Proficiency in EOD training generally, and use of TDFDs as described above, specifically, is critical for ensuring the mission of a real-world operation is accomplished safely and Sailors return unharmed. Substitutes to using TDFDs are contradictory to realistic training and are inadequate at satisfying military readiness requirements.

EOD personnel detect, identify, evaluate, neutralize, raise, tow, beach, and exploit mines. Neutralizing an influence mine (e.g., a mine that could be triggered by a magnetic, pressure, or

acoustic signature) is an essential part of the EOD Mine Countermeasures (MCM) mission.

Neutralization ensures the safety of the men and women of EOD in the recovery and exploitation phase of an influence mine. The EOD mission is typically to locate, neutralize, recover, and exploit mines after they are initially located by another source, such as a MCM or Mine Hunting Class (MHC) ship or an MH-53 or MH-60 helicopter. Once the mine shapes are located, EOD divers are deployed to further evaluate and “neutralize” the mine.

During a mine neutralization exercise, if the mine is located on the water’s surface, then EOD divers are deployed via helicopter. If the mine is located at depth, then EOD divers are deployed via small boat. The neutralization of mines in the water is normally executed with an explosive device and may involve detonation of up to 20 pounds net explosive weight of explosives. The charge is set with a TDFD since this is the method of detonating the charge in a real-world event.

TDFDs are the safest and most operationally sound method of initiating a demolition charge on a floating mine or mine at depth. TDFDs are used because of their ease of employment, light weight, low magnetic signature, and because they completely eliminate the need to re-deploy swimmers from a helicopter to recover equipment used with positive control firing devices, i.e., detonating the charge without any time-delay. Most importantly, the TDFD also allows EOD personnel to make their way outside of the detonation plume radius/human safety buffer zone.

By using electronic devices as an alternative to a TDFD, such as positive control devices that do not include a delay, additional metal is unnecessarily introduced into an influence ordnance operating environment, which means an environment that includes mines equipped with firing circuits (an “influence firing circuit”) that may be actuated by magnetic, pressure, or

acoustic influences. While positive control devices do allow for instantaneous detonation of the charge, they introduce operationally unsound tactics, thereby increasing risks to the dive team. It is essential that the platoons train like they operate by using TDFDs. In a live mine field, MCM platoons expect there to be additional risks, such as unknown mines with different types of influence firing circuits that can be in close proximity to the mine they are prosecuting. The use of a TDFD reduces these risks by limiting the possibility of unintentionally triggering the influence firing circuits.

A Radio Firing Device (RFD), a type of positive control device, can be used to initiate the charge on a bottom mine, but it is not normally used as a primary firing device due to hazards of electromagnetic radiation to ordnance concerns of the electric detonator, Operational Risk Management (ORM) (i.e., safety) considerations, and established tactical procedures; therefore, they are not considered a practicable alternative.

Adding a positive control firing device to a TDFD as a primary means of detonation is not practicable due to ORM considerations. It is not sound ORM or good demolition practice to combine different firing circuits to a demolition charge. In an open ocean environment this practice would greatly increase the risk of misfire by putting unnecessary stress on all the needed connections and devices (600 – 1,000 ft of firing wire, an improvised, bulky, floating system for the RFD receiver, 180 ft of detonating cord, and 10 ft TDFD). Underwater demolition needs to be kept as simple and streamlined as possible, especially when divers and influence ordnance are added to the equation. ORM must ensure the safety of Sailors conducting these high risk training evolutions in addition to protection of marine life.

Mine neutralization training, as described in the regulations, involves neutralizing either a simulated mine on the surface or at depth. The ratio between surface detonations and bottom

detonations (at depth) for EOD is about 50/50. This is dependent mainly on range availability and weather conditions. During neutralization of a surface mine, EOD divers are deployed and retrieved via helicopter. However, when helicopter assets are unavailable, a small boat is used as is done with neutralization of a mine at depth. During training exercises, regardless of whether a helicopter or small boat is used, a minimum of two small boats participate in the exercise.

For a surface mine neutralization training event involving a helicopter or a boat, the minimum time-delay that is reasonable for EOD divers to make their way outside of the detonation plume radius/human safety buffer zone (typically 1000 ft (334 yd)) is 10 min. For mine neutralization training events at depth using small boats, the time-delay can be minimized to 5 min. However, this would require the instructors to handle initiation of the detonation and therefore would result in decreased training value for students.

The range area and associated support equipment are required for a 6 - 8 hour window. Training exercises are conducted during daylight hours for safety reasons.

The Navy proposes to conduct MINEX activities using TDFDs. The number and description of MINEX events would remain otherwise unchanged from the 2011 Request for Letter of Authorization (DoN 2011) for MIRC.

Current and Proposed Modifications to Mitigation and Monitoring Measures Related to Mine Neutralizing Training

#### Current Mitigation Measures

Current mitigation measures for Demolition and Mine Countermeasure (MCM) training (up to 10 lbs) as required under the August 2011 LOA issued to the Navy in the MIRC included:

(A) Exclusion Zones: Explosive charges shall not be detonated if a marine mammal is detected within 700 yards (640 m) of the detonation site.

(B) Pre-Exercise Surveys: For MCM training activities, the Navy shall conduct a pre-exercise survey within 30 minutes prior to the commencement of the scheduled explosive event. The survey may be conducted from the surface, by divers, and/or from the air. If a marine mammal is detected within the survey area, the exercise shall be suspended until the animal voluntarily leaves the area.

(C) Post-Exercise Surveys: Surveys within the same radius shall also be conducted within 30 minutes after the completion of the explosive event.

(D) Reporting: Any evidence of marine mammals injured or killed by the Navy's action shall be reported to NMFS.

(E) Mine Laying Training: Though mine laying training operations involve aerial drops of inert training shapes on floating targets, measures A, B, and C for Demolitions and Mine Countermeasures (above) will apply to mine laying training. To the maximum extent feasible, the Navy shall retrieve inert mine shapes dropped during Mine Laying Training.

#### Proposed Modification to Mitigation and Monitoring Measures

NMFS worked with the Navy and developed a series of modifications to improve monitoring and mitigation measures so that take of marine mammals will be minimized and that no risk of injury and/or mortality to marine mammal would result from the Navy's use of TDFD mine neutralization training exercises. The following proposed modifications to the mitigation and monitoring measures are specific to MCM training exercises involving TDFDs conducted within the MIRC.

##### (A) Visual Observation and Exclusion Zone Monitoring

The estimated potential for marine mammals to be exposed during demolitions and mine countermeasure training events is not expected to change with the use of TDFDs, as the same

amount of explosives will be used and the same area ensonified/pressurized regardless of whether TDFDs are involved. This is due to the fact that estimated exposures are based on the probability of the animals occurring in the area when a training event is occurring, and this probability does not change because of a time-delay. However, what does change is the potential effectiveness of the current mitigation that is implemented to reduce the risk of exposure.

The locations selected for mine neutralization training within the MIRC are all close to shore (~3 – 12 nm) and in shallow water (~ 10 – 20 m). Based on the training location, description of the area, and data from recent monitoring surveys, large whales and species that prefer deep or offshore waters are not expected to occur in this area with any regularity. With the potential for protected species to be in the vicinity, the buffer zones need to be revised to further reduce potential impacts to these species when using a TDFD. However, mitigation measures apply to all species and will be implemented if any marine mammal species is sighted.

The rationale used to develop new monitoring zones to reduce potential impacts to marine mammals when using a TDFD is as follows: The Navy has identified the distances at which the sound and pressure attenuate below NMFS injury criteria (i.e., outside of that distance from the explosion, marine mammals are not expected to be injured). Here, the Navy identifies the distance that a marine mammal is likely to travel during the time associated with the TDFD's time delay, and that distance is added to the injury distance. If this enlarged area is effectively monitored, animals would be detected at distances far enough to ensure that they could not swim to the injurious zone within the time of the TDFD. Using an average swim speed of 3 knots (102 yd/min) for a delphinid, the Navy provided the approximate distance that an animal would typically travel within a given time-delay period (Table 1). Based on acoustic propagation modeling conducted as part of the NEPA analyses for this Range Complex, there is potential for

injury to a marine mammal within 106 yd of a 5-lb detonation and within 163 yd of a 10-lb detonation. The buffer zones were calculated based on average swim speed of 3 knots (102 yd/min). The specific buffer zones based on charge size and the length of time delays are presented in Table 2.

Table 1. Potential Distance Based on Swim speed and Length of Time-Delay

Species Group	Swim Speed	Time-delay	Potential Distance Traveled
Delphinid	102 yd/min	5 min	510 yd
		6 min	612 yd
		7 min	714 yd
		8 min	816 yd
		9 min	918 yd
		10 min	1,020 yd

Table 2. Buffer Zone Radius (yd) for TDFDs Based on Size of Charge and Length of Time-Delay

		Time-delay					
		5 min	6 min	7 min	8 min	9 min	10 min
Charge Size	5-lb	616 yd	718 yd	820 yd	922 yd	1,024 yd	1,126 yd
	10-lb	673 yd	775 yd	877 yd	979 yd	1,081 yd	1,183 yd

However, it is possible that some animals may travel faster than the average swim speed noted above, thus there may be a possibility that these faster swimming animals would enter the buffer zone during time-delayed to detonation. In order to compensate for the swim distance potentially covered by faster swimming marine mammals, an additional correction factor was applied to increase the size of the buffer zones radii. Specifically, two sizes of buffer zones are proposed for the ease of monitoring operations based on size of charge (e.g., 5-lb and 10-lb) and length of time-delay, with an additional buffer added to account for faster swim speed. These revised buffer zones are shown in Table 3. As long as animals are not observed within the buffer zones before the time-delay detonation is set, then the animals would be unlikely to swim into the injury zone from outside the area within the time-delay window.

Table 3. Updated Buffer Zone Radius (yd) for TDFDs Based on Size of Charge and Length of Time-Delay, with Additional Buffer Added to Account for Faster Swim Speeds

		Time-delay					
		5 min	6 min	7 min	8 min	9 min	10 min
Charge Size	5-lb	1,000 yd	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd
	10-lb	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd	1,400 yd

1,000 yds: minimum of 2 observation boats

1,400/1,450 yds: minimum of 3 observation boats or 2 boats and 1 helicopter

The current mitigation measure specifies that parallel tracklines will be surveyed at equal distances apart to cover the buffer zone. Considering that the buffer zone for protection of a delphinid may be larger than specified in the current mitigation, a more effective and practicable method for surveying the buffer zone is for the survey boats to position themselves near the mid-point of the buffer zone radius (but always outside the detonation plume radius/human safety zone) and travel in a circular pattern around the detonation location surveying both the inner (toward detonation site) and outer (away from detonation site) areas of the buffer zone, with one observer looking inward toward the detonation site and the other observer looking outward. When using 2 boats, each boat will be positioned on opposite sides of the detonation location, separated by 180 degrees. When using more than 2 boats, each boat will be positioned equidistant from one another (120 degrees separation for 3 boats, 90 degrees separation for 4 boats, etc.). Helicopters will travel in a circular pattern around the detonation location when used.

During mine neutralization exercises involving surface detonations, a helicopter deploys personnel into the water to neutralize the simulated mine. The helicopter will be used to search for any marine mammals within the buffer zone. Use of additional Navy aircraft beyond those participating in the exercise was evaluated. Due to the limited availability of Navy aircraft and logistical constraints, the use of additional Navy aircraft beyond those participating directly in the exercise was deemed impracticable. A primary logistical constraint includes coordinating the

timing of the detonation with the availability of the aircraft at the exercise location. Exercises typically last most of the day and would require an aircraft to be dedicated to the event for the entire day to ensure proper survey of the buffer zone 30 minutes prior to and after the detonation. The timing of the detonation may often shift throughout the day due to training tempo and other factors, further complicating coordination with the aircraft.

Based on the above reasoning, the modified monitoring and mitigation for visual observation is proposed as the following:

A buffer zone around the detonation site will be established to survey for marine mammals. Events using positive detonation control will use a 700 yd radius buffer zone. Events using time-delay firing devices will use the table below to determine the radius of the buffer zone. Time-delays longer than 10 minutes will not be used. Buffer zones less than 1,400 yds shall use a minimum of 2 boats to survey for marine mammals. Buffer zones greater than 1,400 yds radius shall use 3 boats or 1 helicopter and 2 boats to conduct surveys for marine mammals. Two dedicated observers in each of the boats will conduct continuous visual survey of the buffer zone for marine mammals for the entire duration of the training event. The buffer zone will be surveyed from 30 minutes prior to the detonation and for 30 minutes after the detonation. Other personnel besides the observers can also maintain situational awareness on the presence of marine mammals and sea turtles within the buffer zone to the best extent practical given dive safety considerations. If available, aerial visual survey support from Navy helicopters can be utilized, so long as to not jeopardize safety of flight.

When conducting the survey, boats will position themselves at the mid-point of the buffer zone radius (but always outside the detonation plume radius/human safety zone) and travel in a circular pattern around the detonation location surveying both the inner (toward detonation site)

and outer (away from detonation site) areas of the buffer zone. To the extent practicable, boats will travel at 10 knots to ensure adequate coverage of the buffer zone. When using 2 boats in a less than 1,400 yds buffer zone, each boat will be positioned on opposite sides of the detonation location at 500 yds from the detonation point, separated by 180 degrees. When using 3 boats in a 1,400 yds or greater buffer zone, each boat will be positioned equidistant from one another (120 degrees separation) at 700 yds respectively from the detonation point. Helicopter pilots will use established Navy protocols to determine the appropriate pattern (e.g., altitude, speed, flight path, etc.) to search and clear the buffer zone of turtles and marine mammals.

(B) Mine neutralization training shall be conducted during daylight hours only.

(C) Maintaining Buffer Zone for 30 Minutes Prior to Detonation and Suspension of Detonation

Visually observing the mitigation buffer zone for 30 min prior to the detonation allows for any animals that may have been submerged in the area to surface and therefore be observed so that mitigation can be implemented. Based on average dive times for the species groups that are most likely expected to occur in the areas where mine neutralization training events take place, (i.e., delphinids), 30 minutes is an adequate time period to allow for submerged animals to surface. Allowing a marine mammal to leave of their own volition if sighted in the mitigation buffer zone is necessary to avoid harassment of the animal.

It is not possible to suspend the detonation after a TDFD is initiated due to safety risks to personnel. Therefore, the portion of the measure that requires suspension of the detonation cannot be implemented when using a TDFD and should be removed, noting that revised mitigation measures will make it unnecessary to have to suspend detonation within the maximum of ten minutes between setting the TDFD and detonation.

Based on the above reasoning, the modified monitoring and mitigation for pre-detonation observation is proposed as the following:

If a marine mammal is sighted within the buffer zone, the animal will be allowed to leave of its own volition. The Navy will suspend detonation exercises and ensure the area is clear for a full 30 minutes prior to detonation.

When required to meet training criteria, time-delay firing devices with up to a 10 minute delay may be used. The initiation of the device will not start until the area is clear for a full 30 minutes prior to initiation of the timer.

(D) The requirement in the current LOA that “no detonation shall be conducted using time-delayed devices” is proposed to be deleted as the improved monitoring and mitigation measures will minimize the potential impacts to marine mammals and greatly reduce the likelihood of injury and/or mortality to marine mammals using TDFDs.

The availability of additional technological solutions that would enable suspension of the detonation when using a TDFD was evaluated. Currently there are no devices that would stop the timer if a marine mammal was sighted within the buffer zone after initiation of the timer.

The Navy states that procurement of new technology can take many years to be fielded. Joint service procurement can take approximately 3 years, with an additional 6 months when an item needs to go through the WSESRB (Weapon System Explosive Safety Review Board). For example, the Acoustic Firing System (AFS) has been in development for 10 years. It was fielded “as is” to the Fleet in 2011, with the understanding that it has not met the minimum standards put forth. Once fielded, it will remain in the Product Improvement Process (PIP), which can take up to five years to have a finished product. This AFS will not be considered a true positive control

firing device because current technology prevents a shorter time-delay than one minute in the firing cycle.

In 2012 another Radio Firing Device (RFD) will be fielded to the Fleet through a new program called the Special Mission Support Program. This RFD has a disposable receiver that can function in an Electronic Counter Measure (ECM) environment. Navy will evaluate and consider the use of the AFS and the new RFD for potential use as mitigation once they are fielded, but currently they are not options that can be implemented. Without further evaluation, it is not clear whether the new RFD could be used to replace TDFD at this moment.

(E) Diver and Support Vessel Surveys

The Navy recommends, and NMFS concurs, revising this measure to clarify that it applies to divers only. The intent of the measure is for divers to observe the immediate, underwater area around the detonation site for marine mammals while placing the charge.

The modified mitigation measures is provided below:

Divers placing the charges on mines will observe the immediate, underwater area around the detonation site for marine mammals and will report any sightings to the surface observers.

(F) Personnel shall record any protected species observations during the exercise as well as measures taken if species are detected within the zone of influence (ZOI).

Take Estimates

There is no change for marine mammal take estimates from what were analyzed in the final rule (75 FR 45527, August 3, 2010) for mine neutralization training activities in all this Range Complex. Take estimates were based on marine mammal densities and distribution data in the action area, computed with modeled explosive sources and the sizes of the buffer zones.

The Comprehensive Acoustic System Simulation/Gaussian Ray Bundle (OAML, 2002)

model, modified to account for impulse response, shock-wave waveform, and nonlinear shock-wave effects, was run for acoustic-environmental conditions derived from the Oceanographic and Atmospheric Master Library (OAML) standard databases. The explosive source was modeled with standard similitude formulas, as in the Churchill FEIS. Because all the sites are shallow (less than 50 m), propagation model runs were made for bathymetry in the range from 10 m to 40 m.

Estimated zones of influence (ZOIs; defined as within which the animals would experience Level B harassment) varied with the explosive weights, however, little seasonal dependence was found in MIRC. Generally, in the case of ranges determined from energy metrics, as the depth of water increases, the range shortens. The single explosion TTS-energy criterion (182 dB re 1 microPa<sup>2</sup>-sec) was dominant over the pressure criteria and therefore used to determine the ZOIs for the Level B exposure analysis.

The total ZOI, when multiplied by the animal densities and total number of events, provides the exposure estimates for that animal species for each specified charge in the MIRC (Table 4). Take numbers were estimated without considering marine mammal monitoring and mitigation measures, therefore, the additional monitoring and mitigation measures and the use of TDFD for mine neutralization training would not change the estimated takes from the original final rule for MIRC (75 FR 45527, August 3, 2010).

Table 4. Estimated Takes of Marine Mammals that Could Result from MCM Training

Species	Potential Exposures @ 182 dB re 1 $\mu\text{Pa}^2\text{-s}$ or 23 psi	Potential Exposures @ 205 dB re 1 $\mu\text{Pa}^2\text{-s}$ or 13 psi	Potential Exposures @ 30.5 psi
Cuvier's beaked whale	2	0	0
Dwarf/Pygmy sperm whale	2	0	0
Fraser's dolphin	2	0	0

Melon-headed whale	2	0	0
Pantropical spotted dolphin	2	0	0
Risso's dolphin	4	0	0

### Analysis and Negligible Impact Determination

Pursuant to NMFS' regulations implementing the MMPA, an applicant is required to estimate the number of animals that will be "taken" by the specified activities (i.e., takes by harassment only, or takes by harassment, injury, and/or death). This estimate informs the analysis that NMFS must perform to determine whether the activity will have a "negligible impact" on the species or stock. Level B (behavioral) harassment occurs at the level of the individual(s) and does not assume any resulting population-level consequences, though there are known avenues through which behavioral disturbance of individuals can result in population-level effects. A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), or any of the other variables mentioned in the first paragraph (if known), as well as the number and nature of estimated Level A takes, the number of estimated mortalities, and effects on habitat.

The aforementioned additional mitigation and monitoring measures will increase the buffer zone to account for marine mammal movement and increase marine mammal visual monitoring efforts to ensure that no marine mammal would be in a zone where injury and/or mortality could occur as a result of time-delayed detonation.

In addition, the estimated exposures are based on the probability of the animals occurring in the area when a training event is occurring, and this probability does not change based on the use of TDFDs or implementation of mitigation measures (i.e., the exposure model does not account for how the charge is initiated and assumes no mitigation is being implemented). Therefore, the potential effects to marine mammal species and stocks as a result of the proposed mine neutralization training activities are the same as those analyzed in the final rules governing the incidental takes for these activities. Consequently, NMFS believes that the existing analyses in the final rules do not change as a result of the proposed LOA to include mine neutralization training activities using TDFDs.

Further, there will be no increase of marine mammal takes as analyzed in previous rules governing NMFS issued incidental takes that could result from the Navy's training activities within these Range Complexes by using TDFDs.

Based on the analyses of the potential impacts from the proposed mine countermeasure training exercises conducted within the MIRC, especially on the proposed improvement on marine mammal monitoring and mitigation measures, NMFS has preliminarily determined that the modification of the Navy's current LOA to include taking of marine mammals incidental to mine neutralization training using TDFD within the MIRC will have a negligible impact on the marine mammal species and stocks present in these action areas, provided that additional mitigation and monitoring measures are implemented.

#### ESA

There are five marine mammal species that are listed as endangered under the ESA with confirmed or possible occurrence in the MIRC: humpback whale, blue whale, fin whale, sei whale, and sperm whale.

Pursuant to Section 7 of the ESA, NMFS has begun consultation internally on the issuance of the modified LOAs under section 101(a)(5)(A) of the MMPA for these activities. Consultation will be concluded prior to a determination on the issuance of the modified LOAs.

#### National Environmental Policy Act (NEPA)

NMFS participated as a cooperating agency on the Navy's Final Environmental Impact Statements (FEIS's) for the MIRC. NMFS subsequently adopted the Navy's EIS's for the purpose of complying with the MMPA. For the modification of the LOA, which include TDFDs, but also specifically add monitoring and mitigation measures to minimize the likelihood of any additional impacts from TDFDs, NMFS has determined that there are no changes in the potential effects to marine mammal species and stocks as a result of the proposed mine neutralization training activities using TDFDs. Therefore, no additional NEPA analysis will be required, and the information in the existing EIS's remains sufficient.

## Preliminary Determination

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat and dependent upon the implementation of the mitigation measures, NMFS preliminarily finds that the total taking from Navy mine neutralization training exercises utilizing TDFDs in the MIRC will have a negligible impact on the affected marine mammal species or stocks. NMFS has proposed issuing the modified LOA to allow takes of marine mammals incidental to the Navy's mine neutralization training exercises using TDFDs, provided that the proposed improvements to the monitoring and mitigation measures are implemented.

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