DATES: Written, telefaxed, or email comments must be received on or before December 7, 2011.

ADDRESSES: The application and related documents are available for review by selecting ''Records Open for Public Comment'' from the *Features* box on the Applications and Permits for Protected Species home page, *https://apps.nmfs.noaa.gov,* and then selecting File No. 14676 from the list of available applications.

These documents are also available upon written request or by appointment in the following offices:

Permits and Conservation Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; *phone* (301) 427–8401; *fax* (301) 713–0376; and

Southwest Region, NMFS, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802–4213; *phone* (562) 980–4001; *fax* (562) 980–4018.

Written comments on this application should be submitted to the Chief, Permits, Conservation and Education Division, at the address listed above. Comments may also be submitted by facsimile to (301) 713–0376, or by email to *NMFS.Pr1Comments@noaa.gov.* Please include the File No. in the subject line of the email comment.

Those individuals requesting a public hearing should submit a written request to the Chief, Permits, Conservation and Education Division at the address listed above. The request should set forth the specific reasons why a hearing on this application would be appropriate.

FOR FURTHER INFORMATION CONTACT: Tammy Adams or Amy Sloan, (301) 427–8401.

SUPPLEMENTARY INFORMATION: The subject amendment to Permit No. 14676 is requested under the authority of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*), and the regulations governing the taking and importing of marine mammals (50 CFR part 216).

Permit No. 14676, issued on January 13, 2010 (75 FR 4046), authorizes the permit holder to capture up to 10 California sea lions (*Zalophus californianus*) annually on San Nicolas Island off the coast of California for attachment and retrieval of instruments to study the role of blood oxygen store depletion in the dive behavior and foraging ecology of California sea lions. The permit also authorizes harassment of up to 6,000 California sea lions, 500 harbor seals (*Phoca vitulina*), 1,000 northern elephant seals (*Mirounga angustirostris*), and 150 northern fur seals (*Callorhinus ursinus*) annually incidental to the capture operations. The permit is valid until February 1, 2015.

The permit holder is requesting the permit be amended to include authorization for an additional procedure, deployment of a heart rate/stroke rate recorder, on up to 30 animals over the two field seasons. For this procedure, the holder requests permission to capture an additional 5 animals per year, for a total of 15 per year. The amendment would be valid through the expiration date of the original permit. The objective of this additional procedure is to further investigate the relationship of heart rate and flipper stroke rate patterns to the arterial and venous blood oxygen profiles during deep versus shallow dives.

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), an initial determination has been made that the activity proposed is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Concurrent with the publication of this notice in the **Federal Register**, NMFS is forwarding copies of this application to the Marine Mammal Commission and its Committee of Scientific Advisors.

Dated: November 2, 2011.

P. Michael Payne,

Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2011–28780 Filed 11–4–11; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA507

Takes of Marine Mammals Incidental to Specified Activities; Low-Energy Marine Geophysical Survey in the Western Tropical Pacific Ocean, November to December 2011

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

ACTION: Notice; issuance of an incidental take authorization (ITA).

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA) regulation, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to Scripps Institution of Oceanography (SIO) to take marine mammals, by Level B harassment, incidental to conducting a low-energy marine geophysical (i.e., seismic) survey in the western tropical Pacific Ocean, November to December 2011.

DATES: Effective November 5, 2011 through January 31, 2012.

ADDRESSES: A copy of the IHA and application are available by writing to P. Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910 or by telephoning the contacts listed here.

A copy of the IHA application containing a list of the references used in this document may be obtained by writing to the above address, telephoning the contact listed here (see **FOR FURTHER INFORMATION CONTACT**) or visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications*.

The following associated documents are also available at the same Internet address: ''Environmental Assessment Pursuant to the National Environmental Policy Act, 42 U.S.C. 4321, *et seq.* and Executive Order 12114, Marine Geophysical Survey by the R/V *Thompson* in the western tropical Pacific Ocean, November-December 2011 (EA)'' prepared by the National Science Foundation (NSF), and ''Environmental Assessment of a Low-Energy Marine Geophysical Survey by the R/V *Thompson* in the Western Tropical Pacific Ocean, November-December 2011,'' prepared by LGL Ltd., Environmental Research Associates (LGL), on behalf of NSF. The NMFS Biological Opinion will be available online at: *http://www.nmfs.noaa.gov/pr/consultation/opinions.htm.* Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Howard Goldstein or Jolie Harrison, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(D) of the MMPA (16 U.S.C. 1371(a)(5)(D)) directs the Secretary of Commerce (Secretary) to authorize, upon request, the incidental, but not intentional, taking of small numbers of marine mammals of a species or population stock, by United States citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for the incidental taking of small numbers of marine mammals shall be granted 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 subsistence uses (where relevant). The authorization must set forth the permissible methods of taking, other means of effecting the least practicable impact on the species or stock and its habitat, and requirements pertaining to the mitigation, monitoring and reporting of such takings. 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 United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) of the MMPA 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 small numbers of marine mammals. Within 45 days of the close of the public comment period, NMFS must either issue or deny the authorization.

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as:

any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Summary of Request

NMFS received an application on June 14, 2011, from SIO for the taking by harassment, of marine mammals, incidental to conducting a low-energy marine seismic survey in the western tropical Pacific Ocean. SIO, a part of the University of California San Diego, in collaboration with University of Washington (UW), Woods Hole Oceanographic Institution (WHOI), Texas A&M University (TAMU), and Kutztown University, plans to conduct a magnetic and seismic study of the Hawaiian Jurassic crust onboard an oceanographic research vessel in the western tropical Pacific Ocean north of the Marshall Islands for approximately 32 days. The survey will use a pair of Generator Injector (GI) airguns each with a discharge volume of 105 cubic inches (in^3). SIO plans to conduct the survey from approximately November 5 to December 17, 2011. The seismic survey will be conducted partly in international waters and partly in the Exclusive Economic Zone (EEZ) of Wake Island (U.S.), and possibly in the EEZ of the Republic of the Marshall Islands. On July 29, 2011, NMFS published a notice in the **Federal Register** (76 FR 45518) making preliminary determinations and proposing to issue an IHA. The notice initiated a 30-day public comment period.

SIO plans to use one source vessel, the R/V *Thomas G. Thompson* (*Thompson*) and a seismic airgun array to collect seismic reflection and refraction profiles from the Hawaiian Jurassic crust in the western tropical Pacific Ocean. In addition to the operations of the seismic airgun array, SIO intends to operate a multibeam echosounder (MBES) and a sub-bottom profiler (SBP) continuously throughout the survey.

Acoustic stimuli (i.e., increased underwater sound) generated during the operation of the seismic airgun array may have the potential to cause a short-term behavioral disturbance for marine mammals in the survey area. This is the principal means of marine mammal taking associated with these activities and SIO has requested an authorization to take 19 species of marine mammals by Level B harassment. Take is not expected to result from the use of the MBES or SBP, for reasons discussed in this notice; nor is take expected to result from collision with the vessel because it is a single vessel moving at a relatively slow speed during seismic acquisition within the survey, for a relatively short period of time (approximately 39 days). It is likely that any marine mammal would be able to avoid the vessel.

Description of the Specified Activity

SIO's planned seismic survey in the western tropical Pacific Ocean, as part of an integrated magnetic and seismic study of the Hawaiian Jurassic crust, will take place for approximately 32 days in November to December 2011 (see Figure 1 of the IHA application). The seismic survey will take place in water depths ranging from approximately 2,000 to 6,000 meters (m) (6,561.7 to 19,685 feet [ft]) and consist of approximately 1,600 kilometers (km) (863.9 nautical miles [nmi]) of transect lines in the study area. The survey will take place in the area 13° to 23° North, 158° to 172° East, just north of the Marshall Islands. The project is scheduled to occur from approximately November 5 to December 17, 2011. Some minor deviation from these dates is possible, depending on logistics and weather.

The goal of the research is to define the global nature and significance of variations in intensity and direction of the Earth's magnetic field during the Jurassic time period (approximately 145 to 180 million years ago), which appears to have been a period of sustained low intensity and rapid directional changes or polarity reversals compared to other periods in Earth's magnetic field history. Access to Jurassic-aged crust with good magnetic signals is very limited, with the best continuous records in ocean crust, but only one area of the ocean floor has been measured to date: The western Pacific Japanese magnetic lineations. To properly assess the global significance of the variations and to eliminate local crustal and tectonic complications, it is necessary to measure Jurassic magnetic signals in a different area of the world. The study will attempt to verify the unusual behavior of the Jurassic geomagnetic field and test whether it was behaving in a globally coherent way by conducting a near-bottom marine magnetic field survey of Pacific Hawaiian Jurassic crust located between Hawaii and Guam.

Widespread, younger, Cretaceous-aged (65 to 140 million years ago) volcanism overprinted much of the western Pacific, so it is important to know the extent of Cretaceous-aged volcanic crust. This will be assessed by carrying out a seismic reflection and refraction survey of the Hawaiian Jurassic crust. First, the autonomous underwater vehicle (AUV) *Sentry* and a simultaneously deployed deep-towed magnetometer system will acquire two parallel profiles of the near-bottom crustal magnetic field 10 km (5.4 nmi) apart and approximately 800 km (432 nmi) long. More information on the AUV *Sentry* is available at *http://www.whoi.edu/page.do?pid=38098*. Second, the seismic survey will be conducted using airguns, a hydrophone streamer, and sonobuoys directly over the same profile as the AUV magnetic survey.

The survey will involve one source vessel, the *Thompson*. For the seismic component of the research program, the *Thompson* will deploy an array of two low-energy Sercel Generator Injector

(GI) airguns as an energy source (each with a discharge volume of 105 in^3) at a tow depth of 3 m (9.8 ft). The acoustic receiving system will consist of an 800 m (2,624.7 ft), 48 channel hydrophone streamer and directional, passive sonobuoys. Over the course of the seismic operations, 50 Ultra Electronics AN/SSQ–53D(3) directional, passive sonobuoys will be deployed from the vessel. The sonobuoys consist of a hydrophone, electronics, and a radio transmitter. As the airgun is towed along the survey lines, the hydrophone streamer and sonobuoys will receive the returning acoustic signals and transfer the data to the on-board processing system. The seismic signal is measured by the sonobuoy's hydrophone and transmitted by radio back to the source vessel. The sonobuoys are expendable, and after a pre-determined time (usually eight hours), they self-scuttle and sink to the ocean bottom.

The survey lines will be within the area enclosed by red lines in Figure 1 of the IHA application, but the exact locations of the survey lines will be determined during transit after observing the location of the appropriate magnetic lineation by surface-towed magnetometer. Magnetic and seismic data acquisition will alternate on a daily basis; seismic surveys will take place while the AUV used to collect magnetic data is on deck to recharge its batteries. In addition to the operations of the airgun array, a Kongsberg EM300 MBES and ODEC Bathy-2000 SBP will also be operated from the *Thompson* continuously throughout the cruise. There will be additional seismic operations associated with equipment testing, start-up, and possible line changes or repeat coverage of any areas where initial data quality is sub-standard. In SIO's calculations, 25% has been added for those contingency operations.

All planned geophysical data acquisition activities will be conducted by technicians provided by SIO, with on-board assistance by the scientists who have planned the study. The Principal Investigators are Drs. Masako Tominaga, Maurice A. Tivey, Daniel Lizarralde of WHOI, William W. Sager of TAMU, and Adrienne Oakley of Kutztown University. The vessel will be self-contained, and the crew will live aboard the vessel for the entire cruise.

Description of the Dates, Duration, and Specified Geographic Region

The *Thompson* is expected to depart Honolulu, Hawaii, on November 5, 2011 and spend approximately 7 days in transit to the survey area, 32 days alternating between acquiring magnetic and seismic data, and approximately 3 days in transit, arriving at Apra Harbor, Guam, on December 17, 2011. Seismic operations will be conducted for a total of approximately 16 days. Some minor deviation from this schedule is possible, depending on logistics and weather. The survey will encompass the area approximately 13° to 23° North, approximately 158° to 172° East, just north of the Marshall Islands (see Figure 1 of the IHA application). Water depths in the survey area generally range from approximately 2,000 to 6,000 m (6,561.7 to 19,685 ft); Wake Island is included in the survey area. The seismic survey will be conducted partly in international waters and partly in the EEZ of Wake Island (U.S.), and possibly in the EEZ of the Republic of the Marshall Islands.

NMFS outlined the purpose of the program in a previous notice for the proposed IHA (76 FR 45518, July 29, 2011). The activities to be conducted have not changed between the proposed IHA notice and this final notice announcing the issuance of the IHA. For a more detailed description of the authorized action, including vessel and acoustic source specifications, the reader should refer to the proposed IHA notice (76 FR 45518, July 29, 2011), the IHA application, EA, and associated documents referenced above this section.

Comments and Responses

A notice of proposed IHA for the SIO seismic survey was published in the **Federal Register** on July 29, 2011 (76 FR 45518). During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission (Commission) and approximately 72 private citizens. Several of the private citizens' comments were non-substantive and/or opposed the issuance of an IHA without providing any specific rationale for that position. NMFS, therefore, is not providing a substantive response to those comments. The Commission's and private citizens' comments are online at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm*. Following are their substantive comments and NMFS's response:

Comment 1: The Commission recommends that NMFS require SIO to re-estimate the proposed exclusion and buffer zones for the two airgun array and associated numbers of marine mammal takes using operational and site-specific environmental parameters. If the exclusion zones (EZ) and buffer zones are not re-estimated for the two airgun array, require SIO to provide a detailed justification for basing the EZs and buffer zones for the proposed survey in the western tropical Pacific Ocean on modeling that relies on measurements from the GOM.

Response: NMFS is satisfied that the data supplied are sufficient for NMFS to conduct its analysis and make any determinations and therefore no further effort is needed by the applicant. While exposures of marine mammals to acoustic stimuli are difficult to estimate, NMFS is confident that the levels of take provided by SIO in their IHA application and EA, and authorized herein are estimated based upon the best available scientific information and estimation methodology.

Received sound levels have been modeled by L–DEO for a number of airgun configurations, including two 105 in^3 (210 in^3 total volume) GI airguns, in relation to distance and direction from the airguns (see Figure 2 of the IHA application). The model does not allow for bottom interactions, and is most directly applicable to deep water. Based on the modeling, estimates of the maximum distances from the source where sound levels are predicted to be 190, 180, and 160 dB re 1 μPa (rms) in deep water were determined (see Table 3 below).

Empirical data concerning the 190, 180, and 160 dB (rms) distances were acquired for various airgun arrays based on measurements during the acoustic verification studies conducted by L–DEO in the northern GOM in 2003 (Tolstoy *et al.,* 2004) and 2007 to 2008 (Tolstoy *et al.,* 2009). Results of the 36 airgun array are not relevant for the two GI airguns to be used in the survey. The empirical data for the 6, 10, 12, and 20 airgun arrays indicate that, for deep water, the L–DEO model tends to overestimate the received sound levels at a given distance (Tolstoy *et al.,* 2004). Measurements were not made for the two GI airgun array in deep water, however, SIO proposes to use the EZ predicted by L–DEO's model for the GI airgun operations in deep water, although they are likely conservative given the empirical results for the other arrays.

NMFS is confident in the peer-reviewed results of L–DEO's seismic calibration studies, which although viewed as conservative, were used to determine the sound radii for the mitigation airgun for this cruise and which factor into exposure estimates. NMFS had determined that these reviews are the best scientific data available for review of the IHA application and to support the necessary analyses and determinations under the MMPA, Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*), and NEPA. Further, the 160 dB (i.e., buffer) zone used to estimate exposure is appropriate and sufficient for purposes of supporting NMFS's analysis and determinations required under section 101(a)(5)(D) of the MMPA and its implementing regulations.

Although, the L–DEO model does not account for site-specific environmental conditions, sound propagation varies notably less between deep water sites than it would between shallow water sites (because of the reduced significance of bottom interaction), thus decreasing the importance of deep water site-specific estimates, such as in this seismic survey. Further, the calibration study of the L–DEO model predicted that using site-specific information may actually provide less conservative EZs at greater distances. At this point in time, the alternative method of conducing site-specific attenuation measurements in the water depths that the survey is to be conducted is neither warranted nor practical for the applicant, both logistically and financially. Should the applicant endeavor to undertake a sound source verification study in the future, confidence in the results is necessary to ensure that appropriate monitoring and mitigation measures are implemented; therefore inappropriate or poorly executed efforts should be avoided and discouraged.

Based on NMFS's analysis of the likely effects of the specified activity on marine mammals and their habitat, NMFS has determined that the EZs identified in the IHA are appropriate for the survey and that additional field measurement is not necessary at this time. While exposures of marine mammals to acoustic stimuli are difficult to estimate, NMFS is confident that the levels of take authorized herein are estimated based upon the best available scientific information and estimation methodology. The 160 dB zone used to estimate exposure is appropriate and sufficient for purposes of supporting NMFS's analysis and determinations required under section 101(a)(5)(D) of the MMPA and its implementing regulations. The IHA issued to SIO provides monitoring and mitigation requirements to protect marine mammals from injury (Level A harassment), serious injury, or mortality. SIO is required to comply with the IHA's requirements.

Comment 2: The Commission recommends that NMFS require SIO to use operational and site-specific environmental parameters to estimate the EZ, buffer zone, and number of marine mammal takes associated with use of the SBP and to incorporate those EZ and buffer zones into the same type of mitigation and monitoring measures for the SBP as are proposed for the two airgun array.

Response: The notice of the proposed IHA included a discussion of the acoustic source specifications and the potential effect of the MBES and SBP. The MBES and SBP have anticipated radii of influence significantly less than that for the airgun array. The 160 dB (rms) and 180 dB (rms) isopleths of the MBES and SBP are very small and the acoustic beams are very narrow, making the duration of the exposure and the potential for taking marine mammals by Level B harassment small to non-existent. NMFS believes that it is unlikely that marine mammals would be affected by SBP signals whether operating alone or in conjunction with other acoustic devices, since the animals would need to swim adjacent to the vessel or directly under the vessel. Therefore, operation of the SBP does not warrant take requests, or consultation, under the MMPA. SIO will already be monitoring and mitigating the EZ for the two airgun array which would encompass the small EZ for the SBP, therefore it is not logical to use sparse agency resources to perform additional, unwarranted modeling.

Comment 3: The Commission recommends that NMFS condition the IHA to prohibit a 15 min pause and require a longer pause before ramping-up after a power-down or shut-down of the airguns, based on the presence of a mysticete or large odontocete in the EZ and the *Thompson's* movement (speed and direction).

Response: Although power-down procedures are often standard operating practice for seismic surveys, power-downs from two airguns to one airgun will not be implemented as a mitigation measure for this particular seismic survey, as it will only make a small difference in the 180 or 190 dB (rms) radius—probably not enough to allow continued single airgun operations if a marine mammal came within the EZ for two airguns.

During periods of active seismic operations, there are occasions when the airguns need to be temporarily shut-down (for example due to equipment failure, maintenance, or shut-down). In these instances, should the airguns be inactive for more than 15 min, then SIO would follow the ramp-up procedures identified in the ''Mitigation'' section of this document (see below) and IHA where airguns will be re-started beginning with a single GI airgun (105 in^3) and the second GI airgun (105 in^3) will be added after five min. The extended period of 15 min before ramping-up after a shut-down of the airguns is operationally motivated. Protected Species Observers (PSOs) are primarily concerned with marine mammals entering the EZs. However, their visual observations go to the horizon or as far as they can practically watch. The horizon is approximately 6 nmi at the height of the PSOs watch station. The planned survey speed for the cruise is 5 knots; the ship would move 2.3 km (1.25 nmi) in 15 min, or roughly ⅕ the distance to the horizon. An alert PSO should be able to say with a reasonable degree of confidence whether a marine mammal would be encountered within this distance. Thus, a routine ramp-up within 15 min and with the PSO on watch should pose little risk to marine mammals.

Operationally, it would take 15 min or longer to locate the second PSO and get him or her into position on the ship's deck to monitor for the initial ramp-up procedure or 30 min of observation by two PSOs prior to energizing the sound source; thus, the use of an extended shut-down period of 15 min before requiring an initial ramp-up procedure.

Comment 4: The Commission recommends that NMFS extend the 30 min monitoring period following a marine mammal sighting in the EZ to cover the full dive times of all species likely to be encountered.

Response: NMFS recognizes that several species of deep-diving cetaceans are capable of remaining underwater for more than 30 min (e.g., sperm whales, Cuvier's beaked whales, Longman's beaked whales, Blainville's beaked whales, and Ginkgo-toothed beaked whales); however, for the following reasons NMFS believes that 30 min is an adequate length for the monitoring period prior to the ramp-up of airguns:

(1) Because the *Thompson* is required to monitor before ramp-up of the airgun array, the time of monitoring prior to the start-up of the two GI airgun array is effectively longer than 30 min (ramp-up will begin with one airgun and the second airgun will be added five min later);

(2) In many cases PSOs are observing during times when SIO is not operating the seismic airguns and would observe the area prior to the 30-min observation period;

(3) The majority of the species that may be exposed do not stay underwater more than 30 min; and

(4) All else being equal and if deep-diving individuals happened to be in the area in the short time immediately prior to the pre-ramp-up monitoring, if an animal's maximum underwater dive time is 45 min, then there is only a one in three chance that the last random surfacing would occur prior to the beginning of the required 30 min

monitoring period and that the animal would not be seen during that 30 min period.

Finally, seismic vessels are moving continuously (because of the long, towed array and streamer) and NMFS believes that unless the animal submerges and follows at the speed of the vessel (highly unlikely, especially when considering that a significant part of their movement is vertical [deep-diving]), the vessel will be far beyond the length of the EZ within 30 min, and therefore it will be safe to start the airguns again.

The effectiveness of monitoring is science-based, and monitoring and mitigation measures must be ''practicable.'' NMFS believes that the framework for visual monitoring will: (1) Be effective at spotting almost all species for which take is requested; and (2) that imposing additional requirements, such as those suggested by the Commission, would not meaningfully increase the effectiveness of observing marine mammals approaching or entering the EZs and thus further minimize the potential for take.

Comment 5: The Commission recommends that NMFS condition the IHA to require SIO to monitor, document, and report observations during all ramp-up procedures.

Response: The IHA requires that PSOs on the *Thompson* make observations for 30 min prior to ramp-up, during all ramp-ups, and during all daytime seismic operations and record the following information when a marine mammal is sighted:

(i) Species, group size, age/size/sex categories (if determinable), behavior when first sighted and after initial sighting, heading (if consistent), bearing and distance from the seismic vessel, sighting cue, apparent reaction of the airguns or vessel (e.g., none, avoidance, approach, paralleling, etc., and including responses to ramp-up), and behavioral pace; and

(ii) Time, location, heading, speed, activity of the vessel (including number of airguns operating and whether in state of ramp-up or shut-down), Beaufort wind force and sea state, visibility, and sun glare.

Comment 6: The Commission recommends that NMFS work with NSF to analyze data on ramp-up procedures to help determine the effectiveness of those procedures as a mitigation measure for geophysical surveys after the data are compiled and quality control measures have been completed.

Response: One of the primary purposes of monitoring is to result in ''increased knowledge of the species'' and the effectiveness of required monitoring and mitigation measures; the effectiveness of ramp-up as a mitigation measure and marine mammal reaction to ramp-up would be useful information in this regard. NMFS has asked NSF and SIO to gather all data that could potentially provide information regarding the effectiveness of ramp-up as a mitigation measures. However, considering the low numbers of marine mammal sightings and low numbers of ramp-ups, it is unlikely that the information will result in any statistically robust conclusions for this particular seismic survey. Over the long term, these requirements may provide information regarding the effectiveness of ramp-up as a mitigation measure, provided animals are detected during ramp-up.

Comment 7: Numerous private citizens state that NMFS's proposed IHA for the take, by Level B harassment, of 19 species of marine mammals incidental to SIO's low-energy seismic survey in the western tropical Pacific Ocean is extremely negligent and disturbing considering today's knowledge about the impact sound has on ocean inhabitants, and particularly marine mammals like whales and dolphins. One private citizen interested in marine mammal and seismic issues stated many of the potential threats and impacts (i.e., avoidance, fleeing important habitat, stress, shifts in migration routes, other forms of behavioral responses, and physical damage) from seismic exploration (for scientific research or oil and gas purposes) to marine mammals as well as to cephalopods, crustaceans, sea turtles, and fishing. The private citizen also noted the lack of knowledge and difficulties in studying the biology of marine mammals and estimating the impacts of noise on these animals.

Last year, NMFS issued Letters of Authorization (LOAs) to the U.S. Navy for the incidental take of millions of marine mammals. Since these LOAs were issued, multiple stranding incidents of marine mammals have occurred along U.S. coastlines due to explosives, sonar, and now this seismic survey. There have been other incidents in this area that have not been made public and others that are undocumented.

In addition to this specified activity, the cetaceans of the western tropical Pacific Ocean are impacted from explosives, sonar, pollution, fishing nets and trawls, ship collisions, noise produced by ships, and other scientific and military activities. Whales and dolphins, many species which are already endangered, are essential to the oceans biodiversity, health, and safety. Also, sound pollution should start being reduced as it contaminates the ocean and interferes with the ability of sea creatures to persist. Leading scientific research institutions, such as SIO, should be aware of information regarding the current and increasing anthropogenic impacts upon ocean ecosystems. The private citizens oppose the issuance of an IHA to SIO for conducting a low-energy marine seismic survey in the western tropical Pacific Ocean. One private citizen states that NOAA must prevent by denial, all applications that cause intrusive sound waves into an already confusing and damaging array of anthropogenic created wave forms.

Response: As noted above, the purpose of the seismic survey is to support research activities to define the global nature and significance of variations in intensity and direction of the Earth's magnetic field during the Jurassic time period (approximately 145 to 180 million years ago), which appears to have been a period of sustained low intensity and rapid directional changes or polarity reversals compared to other period in Earth's magnetic field history. SIO's seismic survey is neither oil and gas-related exploration nor a military readiness activity.

Although several commenter's cited many of the potential negative aspects of the introduction of anthropogenic sound in the marine environment, specific issues related to the content of this IHA request were not necessarily made and therefore proves challenging for NMFS to provide a response. The notice of the proposed IHA (76 FR 45518, July 29, 2011) included a discussion of the effects of sounds from airguns on mysticetes, odontocetes, and pinnipeds including tolerance, masking, behavioral disturbance, hearing impairment, and other non-auditory physical effects. Also, NMFS included a detailed discussion of the potential effects of this action on marine mammal habitat, including physiological and behavioral effects on marine fish, fisheries, and invertebrates. While NMFS anticipates that the specified activity may result in marine mammals avoiding certain areas due to temporary ensonification, this impact to habitat is temporary and reversible which NMFS considered in further detail in the notice of the proposed IHA (76 FR 45518, July 29, 2011) as behavioral modification. The main impact associated with the activity would be temporarily elevated noise levels and the associated direct effects on marine mammals. NMFS refers the reader to SIO's application and EA for additional information on the potential behavioral reactions (or lack thereof) by all types of marine mammals to seismic research activities.

The U.S. Navy's training operations are considered military readiness activities. The National Defense Authorization Act of 2004 (NDAA) (Pub. L. 108–36) modified the MMPA by removing the ''small numbers'' and ''specified geographic region'' limitations and amended the definition of ''harassment'' as it applies to a ''military readiness activity.'' NMFS is unaware of marine mammal strandings along U.S. coastlines since these LOAs were issued that have been directly associated with to the U.S. Navy's use of sonar or from seismic airguns operated by academic institutions. NMFS's Marine Mammal Health and Stranding Response Program responds to marine mammals that have stranded along the U.S. coastline and assesses trends in marine mammal health and how these trends correlate with environmental data.

To meet NEPA requirements, NSF prepared an ''Environmental Assessment Pursuant to the National Environmental Policy Act, 42 U.S.C. 4321, *et seq.* and Executive Order 12114, Marine Geophysical Survey by the R/V *Thompson* in the western tropical Pacific Ocean, November-December 2011,'' which incorporated an ''Environmental Assessment of a Low-Energy marine Geophysical Survey by the R/V *Thompson* in the Western Tropical Pacific Ocean, November-December 2011,'' prepared by LGL, which included an analysis on the cumulative impacts on the environment that result from a combination of past, existing, and reasonably foreseeable projects and human activities. Human activities in and near the survey area include commercial vessel traffic (including collisions with vessels and vessel noise), U.S. military training exercises, commercial fishing (entanglement in fishing gear), and coastal development associated with military requirements.

Generally, under the MMPA, NMFS shall authorize the harassment of small numbers of marine mammals incidental to an otherwise lawful activity, provided NMFS finds that the taking will have a negligible impact on the species or stock, will not have an unmitigable adverse impact on the availability of the species or stock 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 to achieve the least practicable adverse impact. SIO has applied for an IHA and has met the necessary requirements for issuance of an IHA for small numbers of marine mammals, by Level B harassment, incidental to the low-energy marine seismic survey in the western tropical Pacific Ocean.

No injuries, serious injuries, or mortalities are anticipated to occur as a result of SIO's planned low-energy marine seismic survey in the western tropical Pacific Ocean, and none are authorized by NMFS in IHA issued to SIO. Only short-term, behavioral disturbance is anticipated to occur due to the brief and sporadic duration of the survey activities. NMFS has determined, provided that the mitigation and monitoring measures described below are implemented, that the impact of conducting a marine seismic survey in the western tropical Pacific Ocean, November to December, 2011, may result, at worst, in a temporary modification in behavior and/or low-level physiological effects (Level B harassment) of small numbers of certain species of marine mammals.

Based on the analysis contained in the IHA application, notice of the proposed IHA (76 FR 45518, July 29, 2011), and this document, of the likely effects of the specified activity on marine mammals and their habitat, which is based on the best scientific information available, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS finds that SIO's planned research activities, will result in the incidental take of small numbers of marine mammals, by Level B harassment only, and that the total taking from the marine seismic survey will have a negligible impact on the affected species or stocks of marine mammals; and that impacts to affected species or stocks of marine mammals have been mitigated to the lowest level practicable. Therefore, NMFS shall issue the IHA to SIO.

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

Twenty-six marine mammal species (19 odontocetes, 6 mysticetes, and one pinniped) are known to or could occur in the Marshall Islands Marine Eco-region (MIME) study area. Several of these species are listed as endangered under the U.S. Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*), including the humpback (*Megaptera novaeangliae*), sei (*Balaenoptera borealis*), fin (*Balaenoptera physalus*), blue (*Balaenoptera musculus*), and sperm (*Physeter macrocephalus*) whales, as well as the Hawaiian monk seal (*Monachus schauinslandi*). The North Pacific right whale (*Eubalaena japonica*), listed as endangered under the ESA, was historically distributed throughout the North Pacific Ocean north of 35° North and occasionally occurred as far south as 20° North. Whaling records indicate that the MIME was not part of its range (Townsend, 1935).

The dugong (*Dugong dugon*), also listed as endangered under the ESA, is distributed in shallow coastal waters throughout most of the Indo-Pacific region between approximately 27° North and South of the equator (Marsh, 2008). Its historical range extended to the Marshall Islands (Nair *et al.,* 1975). However, the dugong is declining or extinct in at least one third of its range and no longer occurs in the MIME (Marsh, 2008). The dugong is managed by the U.S. Fish and Wildlife Service (USFWS) and is not considered further in this analysis; all others are managed by NMFS.

The marine mammals that occur in the survey area belong to three taxonomic groups: Odontocetes (toothed cetaceans, such as dolphins), mysticetes (baleen whales), and pinnipeds (seals, sea lions, and walrus). Cetaceans are the subject of the IHA application to NMFS.

Table 1 (below) presents information on the abundance, distribution, population status, conservation status, and density of the marine mammals that may occur in the survey area during November to December 2011.

TABLE 1—THE HABITAT, REGIONAL ABUNDANCE, AND CONSERVATION STATUS OF MARINE MAMMALS THAT MAY OCCUR IN OR NEAR THE SEISMIC SURVEY AREA IN THE WESTERN TROPICAL PACIFIC OCEAN

[See text and Tables 2 to 3 in SIO's application for further details]

Species	Habitat	Regional abundance [4]	ESA [1]	MMPA [2]	Density (#/1,000 km^2) CNMI, Hawaii, and mean [3]
Mysticetes:					

TABLE 1—THE HABITAT, REGIONAL ABUNDANCE, AND CONSERVATION STATUS OF MARINE MAMMALS THAT MAY OCCUR IN OR NEAR THE SEISMIC SURVEY AREA IN THE WESTERN TROPICAL PACIFIC OCEAN—Continued

[See text and Tables 2 to 3 in SIO's application for further details]

Species	Habitat	Regional abundance [4]	ESA [1]	MMPA [2]	Density (#/1,000 km²) CNMI, Hawaii, and mean [3]
Humpback whale (*Megaptera novaeangliae*).	Mainly nearshore, banks.	20,800 [5]	EN	D	0 0 0
Minke whale (*Balaenoptera acutorostrata*).	Pelagic and coastal	25,000 [6]	NL	NC	0 0 0
Bryde's whale (*Balaenoptera edeni*)	Pelagic and coastal	20,000 to 30,000	NL	NC	0.41 0.21 0.3
Sei whale (*Balaenoptera borealis*)	Primarily offshore, pelagic.	7,260 to 12,620 [9]	EN	D	0.29 0 0.13
Fin whale (*Balaenoptera physalus*)	Continental slope, pelagic.	13,620 to 18,680 [9]	EN	D	0 0 0
Blue whale (*Balaneoptera musculus*)	Pelagic, shelf, coastal	NA	EN	D	0 0 0
Odontocetes:					
Sperm whale (*Physeter macrocephalus*)	Pelagic, deep sea	29,674 [10]	EN	D	1.23 3.03 2.22
Pygmy sperm whale (*Kogia breviceps*)	Deep waters off the shelf.	NA	NL	NC	0 3.19 1.76
Dwarf sperm whale (*Kogia sima*)	Deep waters off the shelf.	11,200	NL	NC	0 7.82 4.30
Cuvier's beaked whale (*Ziphius cavirostris*).	Pelagic	20,000	NL	NC	0 6.80 3.74
Longman's beaked whale (*Indopacetus pacificus*).	Deep water	NA	NL	NC	0 0.45 0.25
Blainville's beaked whale (*Mesoplodon densirostris*).	Pelagic	25,300 [11]	NL	NC	0 1.28 0.7
Ginkgo-toothed beaked whale (*Mesoplodon ginkgodens*).	Pelagic	NA	NL	NC	0 0 0
Rough-toothed dolphin (*Steno bredanensis*).	Deep water	146,000	NL	NC	0.29 3.12 1.85
Bottlenose dolphin (*Tursiops truncatus*)	Coastal, oceanic, shelf break.	243,500	NL	NC D—Western North Atlantic coastal	0.21 1.23 0.77
Pantropical spotted dolphin (*Stenella attenuata*).	Coastal and pelagic	800,000 [12]	NL	NC D (Northeastern offshore)	22.6 2.10 11.32
Spinner dolphin (*Stenella longirostris*)	Coastal and pelagic	800,000 [13]	NL	NC D—Eastern	3.14 0.83 1.87
Striped dolphin (*Stenella coeruleoalba*)	Off continental shelf	1,000,000 [14]	NL	NC	6.16 5.57 5.84
Fraser's dolphin (*Lagenodelphis hosei*)	Deep water	289,000	NL	NC	0 4.57 2.51
Risso's dolphin (*Grampus griseus*)	Deep water, seamounts.	175,000	NL	NC	0 0.83 0.46
Melon-headed whale (*Peponocephala electra*).	Oceanic	45,000	NL	NC	4.28 1.32 2.67
Pygmy killer whale (*Feresa attenuata*)	Deep, pantropical waters.	39,000	NL	NC	0.14 0 0.06
False killer whale (*Pseudorca crassidens*).	Pelagic	40,000	NL Proposed EN—insular Hawaiian	NC	1.11 0.11 0.57
Killer whale (*Orcinus orca*)	Pelagic, shelf, coastal	8,500	NL EN—Southern resident)	NC D—Southern resident, AT1 transient	0 0.16 0.09

TABLE 1—THE HABITAT, REGIONAL ABUNDANCE, AND CONSERVATION STATUS OF MARINE MAMMALS THAT MAY OCCUR IN OR NEAR THE SEISMIC SURVEY AREA IN THE WESTERN TROPICAL PACIFIC OCEAN—Continued

[See text and Tables 2 to 3 in SIO's application for further details]

Species	Habitat	Regional abundance [4]	ESA [1]	MMPA [2]	Density (#/1,000 km²) CNMI, Hawaii, and mean [3]
Short-finned pilot whale (*Globicephala macrorhynchus*).	Pelagic, shelf coastal	500,000 [14]	NL	NC	1.59 2.54 2.11
Pinnipeds:					
Hawaiian monk seal (*Monachus schauinslandi*).	Coastal and pelagic ...	1,129 [15]	EN	D	NA

N.A. Not available or not assessed.
[1] U.S. Endangered Species Act: EN = Endangered, T = Threatened, NL = Not listed.
[2] U.S. Marine Mammal Protection Act: D = Depleted, NC = Not Classified.
[3] CNMI, Hawaii, and mean density estimates as listed in Table 3 of the application.
[4] Eastern Tropical Pacific in 1986 to 1990 (Wade and Gerrodette, 1993) unless otherwise indicated.
[5] North Pacific (Barlow *et al.,* 2009).
[6] Northwest Pacific and Okhotsk Sea (IWC, 2007a).
[7] North Pacific (Jefferson *et al.,* 2008).
[8] North Pacific (Tillman, 1977).
[9] North Pacific (Ohsumi and Wada, 1974).
[10] Western North Pacific (Whitehead, 2002a).
[11] Eastern Tropical Pacific (ETP); all *Mesoplodon* spp. (Wade and Gerrodette, 1993).
[12] Western/Southern Offshore Stock in ETP in 2000 (Jefferson *et al.,* 2008).
[13] ETP in 2000 (Jefferson *et al.,* 2008).
[14] ETP (Jefferson *et al.,* 2008).
[15] Entire species (Caretta *et al.,* 2010).

Refer to section III and IV of SIO's application for detailed information regarding the abundance and distribution, population status, and life history and behavior of these species and their occurrence in the project area. The application also presents how SIO calculated the estimated densities for the marine mammals in the survey area. NMFS has reviewed these data and determined them to be the best available scientific information for the purposes of the IHA.

Potential Effects on Marine Mammals

Acoustic stimuli generated by the operation of the airguns, which introduce sound into the marine environment, may have the potential to cause Level B harassment of marine mammals in the survey area. The effects of sounds from airgun operations might include one or more of the following: Tolerance, masking of natural sounds, behavioral disturbance, temporary or permanent hearing impairment, or non-auditory physical or physiological effects (Richardson *et al.,* 1995; Gordon *et al.,* 2004; Nowacek *et al.,* 2007; Southall *et al.,* 2007).

Permanent hearing impairment, in the unlikely event that it occurred, would constitute injury, but temporary threshold shift (TTS) is not an injury (Southall *et al.,* 2007). Although the possibility cannot be entirely excluded, it is unlikely that the project would result in any cases of temporary or permanent hearing impairment, or any significant non-auditory physical or physiological effects. Based on the available data and studies, some behavioral disturbance is expected, but NMFS expects the disturbance to be localized and short-term.

The notice of the proposed IHA (76 FR 45518, July 29, 2011) included a discussion of the effects of sounds from airguns on mysticetes, odontocetes, and pinnipeds including tolerance, masking, behavioral disturbance, hearing impairment, and other non-auditory physical effects. NMFS refers the reader to SIO's application and EA for additional information on the behavioral reactions (or lack thereof) by all types of marine mammals to seismic vessels.

Anticipated Effects on Marine Mammal Habitat, Fish, Fisheries, and Invertebrates

NMFS included a detailed discussion of the potential effects of this action on marine mammal habitat, including physiological and behavioral effects on marine fish, fisheries, and invertebrates in the notice of the proposed IHA (76 FR 45518, July 29, 2011). While NMFS anticipates that the specified activity may result in marine mammals avoiding certain areas due to temporary ensonification, this impact to habitat is temporary and reversible which NMFS considered in further detail in the notice of the proposed IHA (76 FR 45518, July 29, 2011) as behavioral modification. The main impact associated with the activity would be temporarily elevated noise levels and the associated direct effects on marine mammals.

Recent work by Andre *et al.* (2011) purports to present the first morphological and ultrastructural evidence of massive acoustic trauma (i.e., permanent and substantial alterations of statocyst sensory hair cells) in four cephalopod species subjected to low-frequency sound. The cephalopods, primarily cuttlefish, were exposed to continuous 40 to 400 Hz sinusoidal wave sweeps (100% duty cycle and 1 s sweep period) for two hours while captive in relatively small tanks (one 2,000 liter [L, 2 m³] and one 200 L [0.2 m³] tank). The received SPL was reported as 157 ± 5 dB re 1 μPa, with peak levels at 175 dB re 1 μPa. As in the McCauley *et al.* (2003) paper on sensory hair cell damage in pink snapper as a result of exposure to seismic sound, the cephalopods were subjected to higher sound levels than they would be under natural conditions, and they were unable to swim away from the sound source.

Mitigation

In order to issue an ITA under section 101(a)(5)(D) of the MMPA, NMFS must 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 the availability of such species or stock for taking for subsistence uses.

SIO has based the mitigation measures described herein, to be implemented for the seismic survey, on the following:

(1) Protocols used during previous SIO seismic research cruises as approved by NMFS;

(2) Previous IHA applications and IHAs approved and authorized by NMFS; and

(3) Recommended best practices in Richardson *et al.* (1995), Pierson *et al.* (1998), and Weir and Dolman, (2007).

To reduce the potential for disturbance from acoustic stimuli associated with the activities, SIO and/or its designees shall implement the following mitigation measures for marine mammals:

(1) Exclusion zones;

(2) Speed or course alteration;

(3) Shut-down procedures; and

(4) Ramp-up procedures.

Exclusion Zones—Received sound levels have been modeled by L–DEO for a number of airgun configurations, including two 105 in^3 GI airguns, in relation to distance and direction from the airguns (see Figure 2 of the IHA application). The model does not allow for bottom interactions, and is most directly applicable to deep water. Based on the modeling, estimates of the maximum distances from the source where sound levels are predicted to be 190, 180, and 160 dB re 1 μPa (rms) in deep water were determined (see Table 2 below).

Empirical data concerning the 190, 180, and 160 dB (rms) distances were acquired for various airgun arrays based on measurements during the acoustic verification studies conducted by L–DEO in the northern GOM in 2003 (Tolstoy *et al.,* 2004) and 2007 to 2008 (Tolstoy *et al.,* 2009). Results of the 36 airgun array are not relevant for the two GI airguns to be used in the survey. The empirical data for the 6, 10, 12, and 20 airgun arrays indicate that, for deep water, the L–DEO model tends to overestimate the received sound levels at a given distance (Tolstoy *et al.,* 2004). Measurements were not made for the two GI airgun array in deep water, however, SIO proposes to use the EZ predicted by L–DEO's model for the GI airgun operations in deep water, although they are likely conservative give the empirical results for the other arrays.

The 180 and 190 dB radii are shut-down criteria applicable to cetaceans and pinnipeds, respectively, as specified by NMFS (2000); these levels were used to establish the EZs. If the PSO detects marine mammal(s) within or about to enter the appropriate EZ, the airguns will be shut-down, immediately.

Table 2 summarizes the predicted distances at which sound levels (160, 180, and 190 dB [rms]) are expected to be received from the two GI airgun array operating in deep water depths. Table 2. Distances to which sound levels ≥ 190, 180, and 160 dB re 1 μPa (rms) could be received in deep water during the seismic survey in the western tropical Pacific Ocean, November to December, 2011. Distances are based on model results provided by L–DEO.

Source and volume	Tow depth (m)	Water depth (m)	Predicted RMS radii distances (m)		
			190 dB	180 dB	160 dB
Two GI airguns (105 in^3)	3	Deep (≥ 1,000)	20	70	670

Speed or Course Alteration—If a marine mammal is detected outside the EZ and, based on its position and the relative motion, is likely to enter the EZ, the vessel's speed and/or direct course could be changed. This would be done if operationally practicable while minimizing the effect on the planned science objectives. The activities and movements of the marine mammal (relative to the seismic vessel) will then be closely monitored to determine whether the animal is approaching the applicable EZ. If the animal appears likely to enter the EZ, further mitigative actions will be taken, i.e., either further course alterations or a shut-down of the seismic source. Typically, during seismic operations, the source vessel is unable to change speed or course and one or more alternative mitigation measures will need to be implemented.

Shut-down Procedures—If a marine mammal is seen outside the EZ for the airgun(s), and if the vessel's speed and/or course cannot be changed to avoid having the animal enter the EZ, the seismic source will be shut-down before the animal is within the EZ. If a marine mammal is already within the EZ when first detected, the seismic source will be shut-down immediately.

Following a shut-down, SIO will not resume airgun activity until the marine mammal has cleared the EZ. SIO will consider the animal to have cleared the EZ if:

- A PSO has visually observed the animal leave the EZ, or
- A PSO has not sighted the animal within the EZ for 15 min for species with shorter dive durations (i.e., small odontocetes or pinnipeds), or 30 min for species with longer dive durations (i.e., mysticetes and large odontocetes, including sperm, killer, and beaked whales).

Ramp-up Procedures—SIO will follow a ramp-up procedure when the airgun array begins operating after a specified period without airgun operations or when a shut-down has exceeded that period. SIO proposes that, for the present cruise, this period would be approximately 15 min. SIO has used similar periods (approximately 15 min) during previous SIO surveys.

Ramp-up will begin with a single GI airgun (105 in^3). The second GI airgun (105 in^3) will be added after five min. During ramp-up, the Protected Species Observers (PSOs) will monitor the EZ, and if marine mammals are sighted, SIO will implement a shut-down as though both GI airguns were operational.

If the complete EZ has not been visible for at least 30 min prior to the start of operations in either daylight or nighttime, SIO will not commence the ramp-up. If one airgun has operated, ramp-up to full power will be permissible at night or in poor visibility, on the assumption that marine mammals will be alerted to the approaching seismic vessel by the sounds from the single airgun and could move away if they choose. A ramp-up from a shut-down may occur at night, but only where the EZ is small enough to be visible. SIO will not initiate a ramp-up of the airguns if a marine mammal is sighted within or near the applicable EZs during the day or close to the vessel at night.

NMFS has carefully evaluated the applicant's mitigation measures and has 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. NMFS's evaluation of potential measures included consideration of the following factors in relation to one another:

(1) The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;

(2) The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and

(3) The practicability of the measure for applicant implementation.

Based on NMFS's evaluation of the applicant's measures, as well as other measures considered by NMFS or recommended by the public, NMFS has determined that the mitigation measures provide the means of effecting the least practicable impacts on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must 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 IHAs 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.

Monitoring

SIO will sponsor marine mammal monitoring during the present project, in order to implement the mitigation measures that require real-time monitoring, and to satisfy the monitoring requirements of the IHA. SIO's ''Monitoring Plan'' is described below this section. The monitoring work described here has been planned as a self-contained project independent of any other related monitoring projects that may be occurring simultaneously in the same regions. SIO is prepared to discuss coordination of its monitoring program with any related work that might be done by other groups insofar as this is practical and desirable.

Vessel-Based Visual Monitoring

SIO's PSOs will be based aboard the seismic source vessel and will watch for marine mammals near the vessel during daytime airgun operations and during any ramp-ups at night. PSOs will also watch for marine mammals near the seismic vessel for at least 30 min prior to the ramp-up of airgun operations after an extended shut-down (i.e., greater than approximately 15 min for this cruise). When feasible, PSOs will conduct observations during daytime periods when the seismic system is not operating for comparison of sighting rates and behavior with and without airgun operations and between acquisition periods. Based on PSO observations, the airguns will be shut-down when marine mammals are observed within or about to enter a designated EZ. The EZ is a region in which a possibility exists of adverse effects on animal hearing or other physical effects.

During seismic operations in the western tropical Pacific Ocean, at least three PSOs will be based aboard the *Thompson.* SIO will appoint the PSOs with NMFS's concurrence. At least one PSO will monitor the EZs during seismic operations. Observations will take place during ongoing daytime operations and nighttime ramp-ups of the airguns. PSO(s) will be on duty in shifts of duration no longer than 4 hr. The vessel crew will also be instructed to assist in detecting marine mammals.

The *Thompson* is a suitable platform for marine mammal observations. Two locations are likely as observation stations onboard the *Thompson.* At one station on the bridge, the eye level will be approximately 13.8 m (45.3 ft) above sea level and the location will give the PSO a good view around the entire vessel (i.e., 310° for one PSO and a full 360° when two PSOs are stationed at different vantage points). A second observation site is the 03 deck where the PSOs eye level will be 10.8 m (35.4 ft) above sea level. The 03 deck offers a view of 330° for the two PSOs.

During daytime, the PSOs will scan the area around the vessel systematically with reticle binoculars (e.g., 7 x 50 Fujinon), Big-eye binoculars (25 x 150), optical range finders and with the naked eye. During darkness, night vision devices (NVDs) will be available, when required. The PSOs will be in wireless communication with the vessel's officers on the bridge and scientists in the vessel's operations laboratory, so they can advise promptly of the need for avoidance maneuvers or seismic source shut-down. When marine mammals are detected within or about to enter the designated EZ, the airguns will immediately be shut-down if necessary. The PSO(s) will continue to maintain watch to determine when the animal(s) are outside the EZ by visual confirmation. Airgun operations will not resume until the animal is confirmed to have left the EZ, or if not observed after 15 min for species with shorter dive durations (small odontocetes and pinnipeds) or 30 min for species with longer dive durations (mysticetes and large odontocetes, including sperm, killer, and beaked whales).

PSO Data and Documentation

PSOs will record data to estimate the numbers of marine mammals exposed to various received sound levels and to document apparent disturbance reactions or lack thereof. Data will be used to estimate numbers of animals potentially ''taken'' by harassment (as defined in the MMPA). They will also provide information needed to order a shut-down of the airguns when a marine mammal is within or near the EZ. Observations will also be made during daytime periods when the *Thompson* is underway without seismic operations (i.e., transits to, from, and through the study area) to collect baseline biological data.

When a sighting is made, the following information about the sighting will be recorded:

1. Species, group size, age/size/sex categories (if determinable), behavior when first sighted and after initial sighting, heading (if consistent), bearing and distance from seismic vessel, sighting cue, apparent reaction to the airguns or vessel (e.g., none, avoidance, approach, paralleling, etc.), and behavioral pace.
2. Time, location, heading, speed, activity of the vessel, Beaufort sea state, visibility, and sun glare.

The data listed under (2) will also be recorded at the start and end of each observation watch, and during a watch whenever there is a change in one or more of the variables.

All observations as well as information regarding shut-downs of the seismic source, will be recorded in a standardized format. The data accuracy will be verified by the PSOs at sea, and preliminary reports will be prepared during the field program and summaries forwarded to the operating institution's shore facility and to NSF weekly or more frequently.

Vessel-based observations by the PSO will provide:

1. The basis for real-time mitigation (airgun shut-down).
2. Information needed to estimate the number of marine mammals potentially taken by harassment, which must be reported to NMFS.
3. Data on the occurrence, distribution, and activities of marine mammals in the area where the seismic study is conducted.
4. Information to compare the distance and distribution of marine mammals relative to the source vessel at times with and without seismic activity.
5. Data on the behavior and movement patterns of marine mammals seen at times with and without seismic activity.

SIO will submit a report to NMFS and NSF within 90 days after the end of the cruise. The report will describe the operations that were conducted and sightings of marine mammals near the operations. The report will provide full documentation of methods, results, and interpretation pertaining to all monitoring. The 90-day report will summarize the dates and locations of seismic operations, and all marine mammal sightings (dates, times, locations, activities, associated seismic survey activities). The report will also include estimates of the number and nature of exposures that could result in potential ''takes'' of marine mammals by harassment or in other ways.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), SIO will immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS at (301) 427–8401 and/or by email to *Michael.Payne@noaa.gov* and *Howard.Goldstein@noaa.gov,* and the NMFS Pacific Islands Regional Office Stranding Coordinator at (808) 944–2269 (*David.Schofield@noaa.gov*). The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with SIO to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. SIO may not resume their activities until notified by NMFS via letter or email, or telephone.

In the event that SIO discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), SIO will immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at (301) 427–8401, and/or by email to *Michael.Payne@noaa.gov* and *Howard.Goldstein@noaa.gov,* and the NMFS Pacific Islands Regional Office (808) 944–2269) and/or by email to the Pacific Islands Regional Stranding Coordinator (*David.Schofield@noaa.gov*). The report must include the same information identified in the paragraph above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with SIO to determine whether modifications in the activities are appropriate.

In the event that SIO discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), SIO will report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at (301) 427–8401, and/or by email to *Michael.Payne@noaa.gov* and *Howard.Goldstein@noaa.gov,* and the NMFS Pacific Islands Regional Office (808) 944–2269), and/or by email to the Pacific Islands Regional Stranding Coordinator (*David.Schofield@noaa.gov*), within 24 hours of discovery. SIO will provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as:

> Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Only take by Level B harassment is anticipated and authorized as a result of the marine geophysical survey in the western tropical Pacific Ocean. Acoustic stimuli (i.e., increased underwater sound) generated during the operation of the seismic airgun array may have the potential to cause marine mammals in the survey area to be exposed to sounds at or greater than 160 dB or cause temporary, short-term changes in behavior. There is no evidence that the planned activities could result in injury, serious injury, or mortality within the specified geographic area for which NMFS has issued the IHA. Take by injury, serious injury, or mortality is thus neither anticipated nor authorized. NMFS has determined that the required mitigation and monitoring measures will minimize any potential risk for injury, serious injury, or mortality.

The following sections describe SIO's methods to estimate take by incidental harassment and present the applicant's estimates of the numbers of marine mammals that could be affected during the seismic program. The estimates are based on a consideration of the number of marine mammals that could be disturbed appreciably by operations with the two GI airgun array to be used during approximately 1,600 km of survey lines in the western tropical Pacific Ocean.

SIO assumes that, during simultaneous operations of the airgun array and the other sources, any marine mammals close enough to be affected by the MBES and SBP would already be affected by the airguns. However, whether or not the airguns are operating simultaneously with the other sources, marine mammals are expected to exhibit no more than short-term and inconsequential responses to the MBES and SBP given their characteristics (e.g., narrow, downward-directed beam) and other considerations described previously. Such reactions are not considered to constitute ''taking'' (NMFS, 2001). Therefore, SIO provides no additional allowance for animals that could be affected by sound sources other than airguns.

Extensive systematic ship-based surveys have been conducted by NMFS Southwest Fisheries Science Center (SWFSC) for marine mammals in the eastern, but not the western tropical Pacific Ocean. A systematic vessel-based marine mammal survey was conducted approximately 2,500 km (1,349.9 nmi) west of the planned survey area in the Commonwealth of the Northern Mariana Islands (CNMI) for the U.S. Navy during January to April, 2007 (SRS-Parsons *et al.,* 2007; Fulling *et al.,* in press). The cruise area was defined by the boundaries 10° to 18° North, 142° to 148° East, encompassing an area approximately 585,000 km^2 (170,558.7 nmi^2) including the islands of Guam and the southern CNMI. The survey was conducted using standard line-transect protocols developed by NMFS SWFSC. Observers visually surveyed 11,033 km (5,957.3 nmi) of trackline, mostly in high sea states (88% of the time in Beaufort Sea states four to six). Another survey was conducted by SWFSC approximately 3,500 km

(1,889.8 nmi) east of the survey area in the EEZ around Hawaii during August to November, 2002; survey effort was 3,550 km (1,916.8 nmi) in the ''Main Island stratum,'' which had a surface area of 2,240,024 km² (653,086.5 nmi²) (Barlow, 2006).

SIO used densities that were the effort-weighted means for the CNMI (Fulling *et al.,* in press) and the outer EEZ stratum of Hawaii (Barlow, 2006). The densities had been corrected, by the original authors, for trackline detection probability bias, and for data from Hawaii, for availability bias. Trackline detection probability bias is associated with diminishing sightability with increasing lateral distance from the trackline, and is measured by $f(0)$. Availability bias refers to the fact that there is less-than-100% probability of sighting an animal that is present along the survey trackline $f(0)$, and it is measured by $g(0)$. Fulling *et al.* (in press) did not correct the CNMI densities for availability bias (i.e., it was assumed that $g(0) = 1$), which resulted in underestimates of density. The densities are given in Table 3 of SIO's IHA application.

There is some uncertainty about the representativeness of the data and the assumptions used in the calculations, for example:

(1) The timing of most of the surveys was different, the CNMI survey was from January to April, the Hawaii survey was from August to November, and the SIO survey is from November to December;

(2) Locations were also different, with the survey area approximately 2,500 km east of the CNMI and approximately 3,500 km west of Hawaii; and

(3) Most of the Marianas survey was in high sea states that would have prevented detection of many marine mammals, especially cryptic species such as beaked whales and *Kogia* spp.

However, the approach used here is believed to be the best available approach.

SIO's estimates of exposures to various sound levels assume that the surveys will be fully completed; in fact, the ensonified areas calculated using the planned number of line-km have been increased by 25% to accommodate turns, lines that may need to be repeated, equipment testing, etc. As is typical during offshore ship surveys, inclement weather and equipment malfunctions are likely to cause delays and may limit the number of useful line-kilometers of seismic operations that can be undertaken. Furthermore, any marine mammal sightings within or near the designated EZs will result in the shut-down of seismic operations as a mitigation measure. Thus, the following estimates of the numbers of marine mammals potentially exposed to sound levels of 160 dB re 1 μPa (rms) are precautionary and probably overestimate the actual numbers of marine mammals that might be involved. These estimates also assume that there will be no weather, equipment, or mitigation delays, which is highly unlikely.

SIO estimated the number of different individuals that may be exposed to airgun sounds with received levels greater than or equal to 160 dB re 1 μPa (rms) on one or more occasions by considering the total marine area that would be within the 160 dB radius around the operating airgun array on at least one occasion, along with the expected density of marine mammals in the area. The seismic lines do not run parallel to each other in close proximity and the ensonified areas do not overlap, thus an individual mammal that was stationary would be exposed once during the survey.

The numbers of different individuals potentially exposed to greater than or equal to 160 dB (rms) were calculated by multiplying the expected species density times the anticipated area to be ensonified. The area was determined by entering the planned survey lines into a MapInfo GIS, using the GIS to identify the relevant areas by ''drawing'' the applicable 160 dB buffer (see Table 1 of the IHA application) around each seismic line, and then calculating the total area within the buffers. For this survey, there were no areas of overlap because of crossing lines.

Applying the approach described above, approximately 2,144 km² (625.1 nmi²) (approximately 2,680 km² [781.4 nmi²] including the 25% contingency) would be within the 160 dB isopleth on one or more occasions during the survey. Because this approach does not allow for turnover in the marine mammal populations in the study area during the course of the survey, the actual number of individuals exposed could be underestimated, although the conservative (i.e., probably overestimated) line-kilometer distances used to calculate the area may offset this. Also, the approach assumes that no cetaceans will move away from or toward the trackline as the *Thompson* approaches in response to increasing sound levels prior to the time the levels reach 160 dB. Another way of interpreting the estimates that follow is that they represent the number of individuals that are expected (in the absence of a seismic program) to occur in the waters that will be exposed to greater than or equal to 160 dB re 1 μPa (rms).

Table 3 (Table 4 of the IHA application) shows the estimates of the number of different individual marine mammals that potentially could be exposed to greater than or equal to 160 dB re 1 μPa (rms) during the seismic survey if no animals moved away from the survey vessel. The requested take authorization is given in Table 3 (below; the far right column of Table 4 of the IHA application). For ESA listed species, the requested take authorization has been increased to the mean group size in the CNMI (Fulling *et al.,* in press) for the particular species in cases where the calculated number of individuals exposed was between 0.05 and the mean group size (i.e., for the sei whale). For species not listed under the ESA that could occur in the study area, the requested take authorization has been increased to the mean group size in the CNMI (Fulling *et al.,* in press) or, for species not sighted in the CNMI survey, Hawaii (Barlow, 2006) for the particular species in cases where the calculated number of individuals exposed was between 1 and the mean group size.

The estimate of the number of individual cetaceans that could be exposed to seismic sounds with received levels greater than or equal to 160 dB re 1 μPa (rms) during the survey is 632 animals (118 individual cetaceans were estimated Table 4 of the IHA application). That total includes 2 Bryde's whale, 2 sei whales, 25 sperm whales, 5 pygmy sperm whales, 12 dwarf sperm whales, 10 Cuvier's beaked whales, 18 Longman's beaked whale, 2 Blainville's beaked whales, 20 rough-toothed dolphins, 20 bottlenose dolphins, 64 pantropical spotted dolphins, 98 spinner dolphins, 27 striped dolphins, 182 Fraser's dolphins, 15 Risso's dolphin, 95 melon-headed whales, 10 false killer whales, 7 killer whales, and 18 short-finned pilot whales which would represent less than 0.01%, 0.03%, 0.08%, NA, 0.11%, 0.05%, NA, less than 0.01%, 0.01%, less than 0.01%, less than 0.01%, 0.01%, less than 0.01%, 0.06%, less than 0.01%, 0.21%, 0.03%, 0.08%, and less than 0.01% of the regional populations, respectively. Most (58.2%) of the cetaceans potentially exposed are delphinids; pantropical spotted, striped, and Fraser's dolphins, as well as melon-headed whales, are estimated to be the most common species in the study area. The authorized incidental take numbers of Bryde's (2), sei (2), sperm (25), Longman's beaked (18), melon-headed (95), false killer (10), killer (7), and short-finned pilot whales (18) as well as rough-toothed (20), bottlenose (20), pantropical spotted (64), spinner (98), striped (27), Fraser's (182), and Risso's (15) dolphins has been increased from the original IHA application to account for possible exposure of mother-calf pairs, mean group size in the Commonwealth of the Northern Mariana Islands (CNMI) (Fulling *et al.,* in press) or Hawaii (Barlow, 2006), or for best available estimate of group size (Jaquet and Gendron, 2009).

TABLE 3—ESTIMATES OF THE POSSIBLE NUMBERS OF MARINE MAMMALS EXPOSED TO DIFFERENT SOUND LEVELS ≥ 160 dB DURING SIO'S SEISMIC SURVEY IN THE WESTERN TROPICAL PACIFIC OCEAN DURING NOVEMBER TO DECEMBER 2011

Species	Estimated number of individuals exposed to sound levels ≥160 dB re 1 μPa [1]	Authorized take requested	Incidental take authorized	Approximate percent of regional population [2]
Mysticetes:				
Humpback whale	0	0	0	0
Minke whale	0	0	0	0
Bryde's whale	1	[3] 1	2	0.01
Sei whale	0	[3] 1	2	0.03
Fin whale	0	0	0	0
Blue whale	0	0	0	0
Odontocetes:				
Sperm whale	6	6	25	0.08
Pygmy sperm whale	5	5	5	NA
Dwarf sperm whale	12	12	12	0.11
Cuvier's beaked whale	10	10	10	0.05
Longman's beaked whale	1	18	18	NA
Blainville's beaked whale	2	2	2	< 0.01
Ginkgo-toothed beaked whale	0	0	0	0
Rough-toothed dolphin	5	[3] 9	20	0.01
Bottlenose dolphin	2	[3] 2	20	< 0.01
Pantropical spotted dolphin	30	[3] 64	64	< 0.01
Spinner dolphin	5	[3] 98	98	0.01
Striped dolphin	16	[3] 27	27	< 0.01
Fraser's dolphin	7	[4] 182	182	0.06
Risso's dolphin	1	[4] 15	15	< 0.01
Melon-headed whale	7	[3] 95	95	0.21
Pygmy killer whale	0	0	0	0
False killer whale	2	[3] 10	10	0.03
Killer whale	0	[4] 7	7	0.08
Short-finned pilot whale	6	[3] 18	18	< 0.01
Pinnipeds:				
Hawaiian monk seal	0	0	0	0

[1] Estimates are based on densities from Table 1 (Table 3 of the IHA application) and ensonified areas (including 25% contingency) for 160 dB of 2,680 km^2.
[2] Regional population size estimates are from Table 1 (see Table 2 of the IHA application); NA means not available.
[3] Increased to mean group size in the CNMI (Fulling *et al.* in press).
[4] Increased to mean group size in Hawaii (Barlow, 2006).

Encouraging and Coordinating Research

SIO and NSF will coordinate the planned marine mammal monitoring program associated with the seismic survey in the western tropical Pacific Ocean with any parties that may have or express an interest in the seismic survey. UW will work with the U.S. Department of State to obtain the necessary approvals for operating in the foreign EEZ of the Republic of the Marshall Islands.

Negligible Impact and Small Numbers Analysis and 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 evaluated factors such as:

(1) The number of anticipated injuries, serious injuries, or mortalities;

(2) The number, nature, and intensity, and duration of Level B harassment (all relatively limited);

(3) The context in which the takes occur (i.e., impacts to areas of significance, impacts to local populations, and cumulative impacts when taking into account successive/contemporaneous actions when added to baseline data);

(4) The status of stock or species of marine mammals (i.e., depleted, not depleted, decreasing, increasing, stable, and impact relative to the size of the population);

(5) Impacts on habitat affecting rates of recruitment/survival; and

(6) The effectiveness of monitoring and mitigation measures (i.e., the manner and degree in which the measure is likely to reduce adverse impacts to marine mammals, the likely effectiveness of the measures, and the practicability of implementation).

For reasons stated previously in this document, and in the notice of the proposed IHA (76 FR 45518, July 29, 2011), the specified activities associated with the marine seismic survey are not likely to cause PTS, or other non-auditory injury, serious injury, or death because:

(1) The likelihood that, given sufficient notice through relatively slow ship speed, marine mammals are expected to move away from a noise source that is annoying prior to its becoming potentially injurious;

(2) The potential for temporary or permanent hearing impairment is

relatively low and would likely be avoided through the incorporation of the required monitoring and mitigation measures (described above);

(3) The fact that pinnipeds would have to be closer than 20 m (65.6 ft) in deep water when the two GI airgun array is in use at 3 m (9.8 ft) tow depth from the vessel to be exposed to levels of sound believed to have even a minimal chance of causing PTS;

(4) The fact that cetaceans would have to be closer than 70 m (229.7 ft) in deep water when the two GI airgun array is in 3 m tow depth from the vessel to be exposed to levels of sound believed to have even a minimal chance of causing PTS; and

(5) The likelihood that marine mammal detection ability by trained PSOs is high at close proximity to the vessel.

No injuries, serious injuries, or mortalities are anticipated to occur as a result of SIO's planned marine seismic survey, and none are authorized by NMFS. Only short-term, behavioral disturbance is anticipated to occur due to the brief and sporadic duration of the survey activities. Table 3 in this document outlines the number of Level B harassment takes that are anticipated as a result of the activities. Due to the nature, degree, and context of Level B (behavioral) harassment anticipated and described (see ''Potential Effects on Marine Mammals'' section above) in this notice, the activity is not expected to impact rates of recruitment or survival for any affected species or stock. Additionally, the seismic survey will not adversely impact marine mammal habitat.

Many animals perform vital functions, such as feeding, resting, traveling, and socializing, on a diel cycle (i.e., 24 hr cycle). Behavioral reactions to noise exposure (such as disruption of critical life functions, displacement, or avoidance of important habitat) are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al.,* 2007). While seismic operations are anticipated to occur on consecutive days, the entire duration of the survey is not expected to last more than 32 days and the *Thompson* will be continuously moving along planned tracklines that are geographically spread-out (i.e., two parallel lines, 5.4 nmi [10 km] apart and 432 nmi [800 km] long). Therefore, the seismic survey will be increasing sound levels in the marine environment in a small area surrounding the vessel, which is constantly traveling over far distances, for a relatively short time period (i.e., several weeks) in the study area.

Of the 26 marine mammal species under NMFS jurisdiction that are known to or likely to occur in the study area, six are listed as threatened or endangered under the ESA: Humpback, sei, fin, blue, and sperm whales, and Hawaiian monk seals. These species are also considered depleted under the MMPA. Of these ESA-listed species, incidental take has been authorized for sei and sperm whales. The Hawaiian monk seal population has generally been decreasing (the main Hawaiian islands population appears to be increasing). There is generally insufficient data to determine population trends for the other depleted species in the study area. To protect these animals (and other marine mammals in the study area), SIO must cease or reduce airgun operations if animals enter designated zones. No injury, serious injury, or mortality 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.

As mentioned previously, NMFS estimates that 19 species of marine mammals under its jurisdiction could be potentially affected by Level B harassment over the course of the IHA. For each species, these numbers are small (each less than one percent) relative to the regional population size. The population estimates for the marine mammal species that may be taken by Level B harassment were provided in Table 1 of this document.

NMFS's practice has been to apply the 160 dB re 1 μPa (rms) received level threshold for underwater impulse sound levels to determine whether take by Level B harassment occurs. Southall *et al.* (2007) provide a severity scale for ranking observed behavioral responses of both free-ranging marine mammals and laboratory subjects to various types of anthropogenic sound (see Table 4 in Southall *et al.* [2007]).

NMFS has determined, provided that the aforementioned mitigation and monitoring measures are implemented, that the impact of conducting a marine geophysical survey in the western tropical Pacific Ocean, November to December, 2011, may result, at worst, in a temporary modification in behavior and/or low-level physiological effects (Level B harassment) of small numbers of certain species of marine mammals. See Table 3 (above) for the requested authorized take numbers of cetaceans.

While behavioral modifications, including temporarily vacating the area during the operation of the airgun(s), may be made by these species to avoid the resultant acoustic disturbance, the availability of alternate areas within these areas and the short and sporadic duration of the research activities, have led NMFS to determine that this action will have a negligible impact on the species in the specified geographic region.

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 SIO's planned research activities, will result in the incidental take of small numbers of marine mammals, by Level B harassment only, and that the total taking from the marine seismic survey will have a negligible impact on the affected species or stocks of marine mammals; and that impacts to affected species or stocks of marine mammals have been mitigated to the lowest level practicable.

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

Section 101(a)(5)(D) also requires NMFS to determine that the authorization will not have an unmitigable adverse effect on the availability of marine mammal species or stocks for subsistence use. There are no relevant subsistence uses of marine mammals in the study area (offshore waters of the western tropical Pacific Ocean) that implicate MMPA section 101(a)(5)(D).

Endangered Species Act

Of the species of marine mammals that may occur in the survey area, several are listed as endangered under the ESA, including the humpback, sei, fin, blue, and sperm whales, as well as the Hawaiian monk seal. Under section 7 of the ESA, NSF initiated formal consultation with the NMFS, Office of Protected Resources, Endangered Species Act Interagency Cooperation Division, on this seismic survey. NMFS's Office of Protected Resources, Permits and Conservation Division, initiated formal consultation under section 7 of the ESA with NMFS's Office of Protected Resources, Endangered Species Act Interagency Cooperation Division, to obtain a Biological Opinion (BiOp) evaluating the effects of issuing the IHA on threatened and endangered marine mammals and, if appropriate, authorizing incidental take. In November, 2011, NMFS issued a BiOp and concluded that the action and issuance of the IHA are not likely to jeopardize the continued existence of humpback, sei, fin, blue, and sperm whales, or the Hawaiian monk seal. NSF and SIO must comply with the Relevant Terms and Conditions of the Incidental Take Statement (ITS) corresponding to NMFS's BiOp issued to NSF, SIO, and NMFS's Office of Protected Resources. SIO must comply with the mitigation and monitoring requirements included in the IHA in order to be exempted under the ITS in the BiOp from the prohibition on take of listed endangered marine mammal species otherwise prohibited by section 9 of the ESA.

National Environmental Policy Act

NSF prepared an ''Environmental Assessment Pursuant to the National Environmental Policy Act, 42 U.S.C. 4321, *et seq.* and Executive Order 12114, Marine Geophysical Survey by the R/V *Thompson* in the western tropical Pacific Ocean, November–December 2011,'' which incorporated an ''Environmental Assessment of a Low-Energy marine Geophysical Survey by the R/V *Thompson* in the Western Tropical Pacific Ocean, November–December 2011,'' prepared by LGL. NMFS conducted an independent review and evaluation of the document for sufficiency and compliance with the Council on Environmental Quality regulations and NOAA Administrative Order (NAO) 216–6 § 5.09(d) and determined that issuance of the IHA is not likely to result in significant impacts on the human environment. Consequently, NMFS has adopted NSF's EA and prepared a Finding of No Significant Impact (FONSI) for the issuance of the IHA. An Environmental Impact Statement is not required and will not be prepared for the action.

Authorization

NMFS has issued an IHA to SIO for the take, by Level B harassment, of small numbers of marine mammals incidental to conducting a marine seismic survey in the western tropical Pacific Ocean, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: October 31, 2011.

James H. Lecky,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2011–28782 Filed 11–4–11; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA627

Taking and Importing Marine Mammals: Taking Marine Mammals Incidental to Navy Training Exercises in Three East Coast Range Complexes

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

ACTION: Notice; proposed modification to letters of authorization; request for comments.

SUMMARY: NMFS has received an application from the U.S. Navy (Navy) for modification of three Letters of Authorizations (LOAs) NMFS issued to take marine mammals, by harassment, incidental to conducting training exercises within the Navy's Virginia Capes (VACAPES), Jacksonville (JAX), and Cherry Point (CHPT) Range Complexes off the East Coast of the U.S. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue three modified LOAs to the Navy to incidentally take marine mammals by harassment during the specified activity. These three LOAs, if issued, would supersede those issued on June 1, 2011, but would maintain the same expiration date (May 31, 2012).

DATES: Comments and information must be received no later than December 7, 2011.

ADDRESSES: Comments on the application should be addressed 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. The mailbox address for providing email comments is *ITP.Guan@noaa.gov.* NMFS is not responsible for email comments sent to addresses other than the one provided here. Comments sent via email, 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: Shane Guan, Office of Protected Resources, NMFS, (301) 427–8418.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(A) 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.

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 at the Navy's VACAPES, JAX, and Cherry Point range complexes were published on June 15, 2009 (VACAPES: 74 FR 28328; JAX: 74 FR 28349; CHPT: 74 FR 28370) and remain in effect through June 4, 2014. They are codified at 50 CFR part 218 subpart A (for VACAPES Range Complex), subpart B (for JAX Range Complex), and subpart C (for Cherry Point Range Complex). 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 June 15, 2009 **Federal Register** Notices and 50 CFR part 218 subparts A, B, and C.

An interim final rule was issued on May 26, 2011 (76 FR 30552) to allow