

p.m. and Friday, May 11, 2007, from 8:30 a.m. to 12 p.m. The primary purpose of this meeting is to discuss NEHRP program activities. The NEHRP Advisory Committee will also discuss its annual report to the NIST Director. The agenda may change to accommodate Committee business. The final agenda will be posted on the NEHRP Web site at <http://nehrrp.gov/>.

**DATES:** The meeting will convene on May 10, 2007, at 9:30 a.m. and will adjourn at 5:45 p.m. on May 10, 2007. The meeting will resume on May 11, 2007 at 8:30 a.m. and end at 12 p.m. The meeting will be open to the public.

**ADDRESSES:** The meeting will be held in the Employee Lounge, in the Administration Building at NIST, Gaithersburg, Maryland. Please note admittance instructions under the **SUPPLEMENTARY INFORMATION** section of this notice.

**FOR FURTHER INFORMATION CONTACT:** Dr. Jack Hayes, National Earthquake Hazards Reduction Program Director, National Institute of Standards and Technology, 100 Bureau Drive, Mail Stop 8600, Gaithersburg, Maryland 20899-8600. Dr. Hayes' e-mail address is [jack.hayes@nist.gov](mailto:jack.hayes@nist.gov) and his phone number is (301) 975-5640.

**SUPPLEMENTARY INFORMATION:** The Committee was established in accordance with the requirements of Section 103 of the NEHRP Reauthorization Act of 2004 (Pub. L. 108-360). The Committee is composed of 15 members appointed by the Director of NIST who were selected for their technical expertise and experience, established records of distinguished professional service, and their knowledge of issues affecting the National Earthquake Hazards Reduction Program. In addition, the Chairperson of the United States Geological Survey (USGS) Scientific Earthquake Studies Advisory Committee (SESAC) will serve in an ex officio capacity on the Committee. *The Committee will assess:*

- Trends and developments in the science and engineering of earthquake hazards reduction;
- The effectiveness of NEHRP in performing its statutory activities (improved design and construction methods and practices; land use controls and redevelopment; prediction techniques and early-warning systems; coordinated emergency preparedness plans; and public education and involvement programs);
- Any need to revise NEHRP; and
- The management, coordination, implementation, and activities of NEHRP.

Background information on NEHRP and the Advisory Committee is available at <http://nehrrp.gov/>.

Pursuant to the Federal Advisory Committee Act, 5 U.S.C. app. 2, notice is hereby given that the National Earthquake Hazards Reduction Program (NEHRP) Advisory Committee on Earthquake Hazards Reduction (ACEHR), will meet Thursday, May 10, 2007, at 9:30 a.m. and will adjourn at 5:45 p.m. on May 10, 2007. The meeting will resume on Friday, May 11, 2007 at 8:30 a.m. and end at 12 p.m. The meeting will be held at NIST headquarters in Gaithersburg, Maryland.

The primary purpose of this meeting is to discuss NEHRP program activities. The NEHRP Advisory Committee will also discuss its annual report to the NIST Director. The meeting will be open to the public. The final agenda will be posted on the NIST Web site at <http://nehrrp.gov/>.

Individuals and representatives of organizations who would like to offer comments and suggestions related to the Committee's affairs are invited to request a place on the agenda. On May 10, 2007, approximately one-half hour will be reserved for public comments, and speaking times will be assigned on a first-come, first-serve basis. The amount of time per speaker will be determined by the number of requests received, but is likely to be about 3 minutes each. Questions from the public will not be considered during this period. Speakers who wish to expand upon their oral statements, those who had wished to speak but could not be accommodated on the agenda, and those who were unable to attend in person are invited to submit written statements to the NEHRP Advisory Committee, National Institute of Standards and Technology, 100 Bureau Drive, MS 8610, Gaithersburg, Maryland 20899-8610, via fax at (301) 975-4032, or electronically by e-mail to [info@nehrrp.gov](mailto:info@nehrrp.gov).

All visitors to the NIST site are required to pre-register to be admitted. Anyone wishing to attend this meeting must register by close of business Thursday, May 3, 2007, in order to attend. Please submit your name, time of arrival, e-mail address and phone number to Amber Stillrich and she will provide you with instructions for admittance. Non-U.S. citizens must also submit their country of citizenship, title, employer/sponsor, and address. Ms. Stillrich's e-mail address is [amber.stillrich@nist.gov](mailto:amber.stillrich@nist.gov) and her phone number is (301) 975-3777.

Dated: April 4, 2007.

**William Jeffrey,**  
Director.

[FR Doc. E7-6746 Filed 4-9-07; 8:45 am]

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[I.D. 030907B]

#### Taking of Marine Mammals Incidental to Specified Activities; An On-ice Marine Geophysical Research and Development Program in the Beaufort Sea

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

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

**SUMMARY:** In accordance with provisions of the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to conducting an on-ice marine geophysical research and development (R&D) program in the U.S. Beaufort Sea, has been issued to Shell Offshore, Inc. (SOI) for a period between March and May 2007.

**DATES:** This authorization is effective from March 30 until May 31, 2007.

**ADDRESSES:** A copy of the application, IHA, an Environmental Assessment (EA) on the *Proposed OCS Lease Sale 202 Beaufort Sea Planning Area* by the Mineral Management Service (MMS), and/or a list of references used in this document may be obtained by writing to P. Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225, or by telephoning one of the contacts listed here (see **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Shane Guan, Office of Protected Resources, NMFS, (301) 713-2289, ext 137 or Brad Smith, Alaska Region, NMFS, (907) 271-5006.

#### SUPPLEMENTARY INFORMATION:

##### Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of marine mammals

by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

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

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Except for certain categories of 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].

Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny issuance of the authorization.

### Summary of Request

On January 17, 2007, NMFS received an application from SOI for the taking, by harassment, of three species of marine mammals incidental to conducting an on-ice marine geophysical R&D program.

The proposed R&D program would occur on the U.S. Minerals Management Service (MMS) Outer Continental Shelf (OCS) lease blocks located offshore from Oliktok Point, Milne Point, West Dock, or Endeavor Islands, in the Alaskan Beaufort Sea. This on-ice R&D will

consist of 35 linear miles (56 km) of surveying within a 16 km<sup>2</sup> (6.2 mi<sup>2</sup>) area. The prospective locations have been selected on the basis of suitability for the scientific testing and proximity to facilities to help minimize impact on the region. The water depth at each location is less than 20 m (66 ft); deep enough that the ice is not grounded. Ice conditions within the proposed survey area will determine the area selected, and SOI will consult with MMS and NMFS before the selection is made. The proposed program is expected to begin in March and last until May, 2007.

Sources and receivers would be placed above and below the ice in attempts to find pairings that provide the best mitigation of seismic noise in a shallow marine environment where conventional seismic vessels cannot operate. A variety of instruments will be used to create a complete catalogue of data for development of noise mitigation techniques. Sources include standard and lightweight vibrators, accelerated weight drop (impact) sources on the ice, and small volume airgun arrays deployed through holes augered in the ice. Receivers will be deployed both on the ice surface, as well as below the ice suspended in the water column and on the ocean floor. The program will also require a temporary camp facility geared to accommodate up to 100 people. A detailed description of these activities was published in the **Federal Register** on February 6, 2007 (72 FR 5421). No changes have been made to these proposed R&D activities.

### Comments and Responses

A notice of receipt and request for public comment on the application and proposed authorization was published on February 6, 2007 (72 FR 5421). During the 30-day public comment period, NMFS received the following comments from one private citizen, the North Slope Borough (NSB), the Inupiat Community of the Arctic Slope (ICAS), and the Marine Mammal Commission (Commission). Overall, the NSB supports the efforts to collect geological data from the ice instead of during the open water period when bowhead whales (*Balaena mysticetus*) and other marine mammals might be present and significant subsistence activity takes place. The Commission recommends that NMFS issue the IHA provided that the proposed monitoring and mitigation measures are carried out as described in the application and the previous **Federal Register** notice (72 FR 5421, February 6, 2007), with the exception of the proposed adjustment of the initial exclusion zone around active seal

structures (see Commission comments below).

*Comment 1:* One private citizen opposes the project out of concern that marine mammals would be killed by the proposed project in Beaufort Sea.

*NMFS Response:* As described in detail in the **Federal Register** notice of receipt of the application (72 FR 5421, February 6, 2007), no marine mammals will be killed or injured as a result of the proposed on-ice seismic R&D program by SOI. The project would only result in Level B behavioral harassment of a small number of ringed seals and bearded and spotted seals. No take by Level A harassment (injury) or death is anticipated or authorized from this project.

*Comment 2:* The NSB questions the statement SOI stated in its application that it wants to "... create a complete catalogue of data for development of noise mitigation techniques." NSB mentions that it is not clear what this statement means given that SOI would be using an airgun and vibrators, which would create noise, not mitigate it.

*SOI Response:* The proposed on-ice work is being conducted in an effort to develop mitigative alternatives to open water seismic acquisition. Several technologies are being evaluated both for their efficacy for acquiring subsurface data and for reducing environmental impacts of seismic operations. By evaluating multiple technologies during an on-ice experiment, it is hoped that a mitigative alternative to open water seismic surveys can be identified or developed.

*Comment 3:* The NSB points out that in the SOI's application, it stated that the geophysical program would occur in a 16 km<sup>2</sup> (6.2 mi<sup>2</sup>) area. However, the accompanying map shows a much larger area of approximately 15 by 60 miles (24 x 97 km) in size. The NSB questions in which portion of this larger area the proposed on-ice R&D program would be conducted.

*SOI Response:* The included map depicts general regions being considered for project placement. Final location will depend on a combination of suitable ice conditions, operational efficiency, and locations away from permit restrictions (e.g., seal lairs, etc.). SOI will consult with NMFS and MMS regarding the selection of the final location. Nonetheless, the project footprint is 16 km<sup>2</sup> (6.2 mi<sup>2</sup>).

*Comment 4:* The NSB states that in discussion with SOI, it appears that the company has already conducted considerable work for the establishment of a camp on the ice and perhaps has even already set up the camp or begun geophysical work. This is peculiar given

that an IHA has not yet been issued and that comments are due on the application on March 8, 2007. If SOI is already conducting operations, especially seismic, it is likely they are already taking ringed seals. The NSB suggests that NMFS investigate SOI's operations for the taking of marine mammals if those operations have already begun.

*SOI Response:* SOI's contractor, Veritas DGC has been performing ice profiling reconnaissance visits to measure ice thickness. These visits were necessary to assess at which location ice is thick enough to safely execute the project. Veritas DGC conducted these flights under the coverage of a USFWS Letter of Authorization for the incidental take of polar bears. Arnold Brower, Sr. accompanied Veritas DGC on these flights to provide wildlife observations and traditional knowledge on ice thicknesses based on his observations of surface ice conditions. No marine mammals were observed during these ice thickness assessments during which ice was bored and thicknesses measured. No marine mammals were taken.

*NMFS Response:* NMFS Office of Protected Resources has contacted the Office for Law Enforcement (OLE) in the Alaska Division regarding NSB's comment. The OLE has initiated an investigation on this issue.

*Comment 5:* The NSB states that it agrees with NMFS and SOI's assessment on the potential take of ringed, bearded, and spotted seas, and further states that it's extremely unlikely that any spotted seal will be in the project vicinity. However, the NSB is concerned that bowhead whales and belugas (*Delphinapterus leucas*) could be potentially taken as a result of the proposed action. NSB states that bowheads and belugas typically begin passing by Barrow in mid-April, and that in a typical year, bowheads and belugas could be off the project area by mid-April within several days of passing Barrow. The NSB further states that in 2007, ice is very light and there are considerable areas of open water between Barrow and the Beaufort Sea.

*NMFS Response:* The nature of the proposed on-ice seismic R&D program would require ice thickness of at least 50 in (1.3 m) to support the heavy equipment and personnel, and the nearest lead would be at least 10 mi (16 km) away. This is not typical habitat for cetacean species, including bowhead and beluga whales, thus, no cetacean species is likely to be found in the vicinity of the project area. Therefore, NMFS does not believe the proposed project would affect bowhead or beluga

whales. Due to safety concerns, SOI will not operate in an area where the ice condition is thin enough to allow an open lead to develop. As stated in the previous **Federal Register** notice (72 FR 5421, February 6, 2007), SOI will consult with NMFS and MMS before camp mobilization within the project area based on ice conditions and safety of access to ice.

*Comment 6:* The NSB states that the propagation data from the open water period is not sufficient for establishing safety or disturbance zones. The NSB states that while the sea ice is likely to dampen some frequencies of sound, there is also the likelihood that the ice may channel sounds, especially just below the ice.

*NMFS Response:* It is well supported by scientific research that a major source of low-frequency loss in the Arctic is conversion of acoustic waves into flexural waves of the ice sheet, thus attenuating acoustic propagation under ice (Richardson 3, 1995). Thus, NMFS does not believe there are sound channeling effects caused by ice in the proposed project area. In particular, the NSB did not provide any scientific support for its comment regarding "ice channeling sounds."

In the Arctic region, the axis of the deep sound channel may exist at or near the surface, which is due to cold temperature at the surface that causes the sound ray to refract upward, but it is not induced by ice-cover and it only occurs in area where the ocean is sufficiently deep (Urlick, 1983). The proposed project area is only 20 m (66 ft), therefore, it is highly unlikely an arctic surface channel will form in the proposed project area.

Although Richardson *et al.* (1995) noted that smooth annual ice may enhance propagation of high-frequency sounds under-ice at compared with open water conditions, those sounds are not a major component from the proposed seismic program. In addition, the safety zone for seismic surveys by airgun will be empirically verified to match the 190 dB *re*: 1 microPa rms for pinnipeds to prevent any impacts on marine mammals from sound pressure levels higher than that.

*Comment 7:* The NSB states that ambient sounds are often lower during periods of ice cover compared to the open water period. Thus, the NSB is concerned that if channeling occurs and ambient levels under ice are lower than open water, marine mammals may be subjected to louder SPLs at farther distances than suggested by data collected during the open water period.

*NMFS Response:* Contrary to what the NSB claims in the comment, sea ice

noise contributes a large part of the ambient sound level at high latitudes. Sea ice noise often results from (1) thermal stress, in which temperature changes induce cracking; and (2) mechanical stress, in which ice deformation under pressure from wind and currents; and causes significant noise at low frequencies (Richardson *et al.*, 1995). It was noted that a pressure ridge active over a 3-day period produced tones at frequencies of 4 - 200 Hz. Although ambient noise levels have been found lower under certain types of stable sea ice, it is actually a result from the dampening effects by ice, where there is 100 percent ice cover and no waves or surf are present (Richardson *et al.*, 1995). As mentioned in *Response to Comment 6*, this dampening effect would reduce noise levels from the proposed project as well.

Regarding the "ice channeling effects," please refer to NMFS *Response to Comment 6*.

*Comment 8:* The NSB is further concerned that if channeling occurs and leads in the Beaufort Sea are relatively near shore, bowheads and belugas could also be taken.

*NMFS Response:* Regarding the "ice channeling affects," please refer to NMFS *Response to Comment 6*.

Also, as mentioned in *Response to Comment 6* that although smooth annual ice may enhance propagation of high-frequency sounds under-ice at compared with open water conditions, with increased cracking, ridging, and other forms of roughness, transmission losses generally become higher than when the water is open (Richardson *et al.*, 1995). In addition, as mentioned in *Response to Comment 5*, no seismic program will be conducted within 10 mi (16 km) of open lead for safety concerns. As a result, NMFS believes that, because channeling in shallow waters of the nearshore Beaufort Sea is unlikely, no cetaceans are likely to be taken by this activity.

*Comment 9:* The NSB points out that the most recent information about spotted seal abundance in the Beaufort Sea was not included in the SOI's application and NMFS **Federal Register** notice (72 FR 5421, February 6, 2007). Citing R. Suydam's personal communication, the NSB states that there is a haul out area for spotted seals in Dease Inlet, in addition to the spotted seal haul out area in the Colville Delta discussed in the notice. The NSB suggests that NMFS consider this information about spotted seal numbers in the Beaufort Sea in future assessments of industrial impacts.

*NMFS Response:* NMFS has determined, and the NSB concurred (see

*Comment 5*), that few, if any, spotted seals would be taken by Level B behavioral harassment as a result of the SOI's on-ice geophysical R&D program.

Nonetheless, the information NMFS uses for making a determination whether the issuance of an IHA is consistent with the requirements of section 101(a)(5)(D) of the MMPA is based on the best scientific information available. This best scientific information is usually in the form of peer-reviewed material and scientific publications resulted from empirical research. Personal communications are sometimes considered when there is a lack of other information for making a determination. In such case, NMFS would contact the information source and assess whether the information acquired based on personal communications is scientifically supported before such information is used in decision making. NMFS encourages the NSB to provide information regarding spotted seal population abundance in the Dease Inlet region.

*Comment 10:* The NSB is concerned that not all the seal breathing holes or lairs will be located prior to SOI's on-ice program. The NSB points out that the description of how lairs and breathing holes will be located is not adequate to assess whether all lairs will be located. Citing a personal communication with Tom Smith, the NSB also points out that the contractor that SOI is planning to use to locate lairs would only locate 80 percent of the lairs unless repeated surveys are conducted.

*NMFS Response:* A detailed seal breathing holes and lairs survey protocol by 3 trained dogs by transects that are spaced 250 m (820 ft) apart was described in the **Federal Register** notice (72 FR 5421, February 6, 2007), and is not repeated here. A more detailed report using seal lair-detecting dogs by Smith (2006) is available upon request. This reported states that at distances of more than 0.25 miles (400 m, or 1,320 ft) the dogs can detect 80 percent or more of the seal structures in an area. Since the seal structure transects are more closely spaced for the SOI's on-ice program (250 m, or 820 ft), the detection rate will be over 90 percent (T. Smith, Eco Marine, Pers. Comm. March, 2007). In addition, this project will use 3 dogs, which would further increase the detection rate. It is also important to understand that even though 100 percent ringed seals would not be detected within the 16 km<sup>2</sup> (6.2 mi<sup>2</sup>) R&D project area, the site where the equipment will be placed and the route where vehicles travel will be adequately

surveyed and marked so that Level A harassment will be prevented.

*Comment 11:* The NSB states that ringed seals could also sustain hearing damage without understanding how sound may be channeled under the ice. NSB is concerned that female ringed seals will likely remain near their pups even with considerable amounts of human activities, therefore could be within the 190 dB zone of seismic activities if not all lairs are found or sound propagates farther than during the open water period.

*NMFS Response:* Please refer to *NMFS Response to Comment 6* regarding "ice channeling effects." As stated in the **Federal Register** notice (72 FR 5421, February 6, 2007), during active seismic and impact source testing, an on-ice 500-m (1,640-ft) exclusion zone will be established. This 500-m (1,640-ft) exclusion zone is much larger than the 180 dB re: 1 microPa isopleth (modeled at 330 m, or 1,083 ft). The modeled 190 dB re: 1 microPa coincides to a safety zone of 120 m (394 ft) in radius, which is easily surveyed for the presence of seals, and will be monitored throughout the seismic operations by qualified NMFS-approved marine mammal observers (MMOs). The presence of any marine mammals will be detected first by dog surveys, and then by continued monitoring during the operations. Therefore, NMFS does not believe any marine mammals will be exposed to SPLs higher than 190 dB re: 1 microPa.

*Comment 12:* The NSB points out that the data SOI used for ringed seal density estimates (Stirling *et al.*, 1982; Kingsley, 1986) are quite old. The NSB suggests that more recent data from BP's Northstar development island and from recent work conducted by either Tom Smith or Brendon Kelly be used (references not provided).

*NMFS Response:* In reviewing and making determination on the issuance of an IHA to SOI for its proposed on-ice R&D project, NMFS used the most recent available scientific data regarding ringed seal density in the proposed project area from works conducted by Kelly and Quakenbush (1990), Frost and Lowry (1999), and Moulton *et al.*, (2002), which was based from studies at the Northstar development. Earlier ringed seal density estimates reported by Stirling *et al.* (1982) and Kingsley (1986) were not included in NMFS' analysis. Please refer to **Federal Register** notice (72 FR 5421, February 6, 2007) for a detailed description.

*Comment 13:* The NSB points out that SOI's statement that "[t]here has been no major displacement of seals away from on-ice seismic operations" is a

misinterpretation of Frost *et al.*'s (1988) paper. Citing personal communication with K. Frost, the NSB states that surveys for seals in the mid-1980s occurred too far after on-ice seismic had occurred to make any conclusions about impacts from on-ice seismic on ringed seal distribution. The NSB suggests that NMFS requires SOI to conduct adequate studies to further the knowledge of impacts of seismic activities on ringed seals.

*NMFS Response:* NMFS concurs with the NSB's comment that SOI's assessment regarding impacts of on-ice seismic operations on ringed seals based on research conducted in mid-1980s is inadequate. Nonetheless, the most recent studies by Moulton *et al.* (2005) and Williams *et al.* (2006) did show that effects of oil and gas development on local distribution of seals and seal lairs are no more than slight, and are small relative to the effects of natural environmental factors. A detailed description is provided in the February 6, 2007, **Federal Register** notice (72 FR 5421).

Although Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to institute requirements to grantees of incidental take authorizations pertaining to mitigation, monitoring, and reporting, NMFS has no clear legislative authority to require SOI to conduct studies to further the knowledge of impacts of seismic activities on ringed seals.

*Comment 14:* The NSB points out that SOI relied on outdated ringed seal density data for calculating the number of seals for harassment. The NSB states that site-specific data area needed on seal density, and that if data are not available for assessing and mitigating impacts to seals, then SOI should be required to collect data during this season so that a reasonable assessment of takes of ringed seals and other marine mammals is possible and adequate mitigation measures are available for reducing impacts in the future.

*NMFS Response:* NMFS concurs with the NSB that outdated ringed seal density data were used by SOI in calculating take estimates for the proposed on-ice R&D project. Nonetheless, these data were not used by NMFS in the analysis of the IHA issuance and the estimate of take numbers. NMFS used the most recent data regarding ringed seal abundance in the proposed project area from works conducted by Kelly and Quakenbush (1990), Frost and Lowry (1999), and Moulton *et al.*, (2002) to calculate the estimated take number. Please refer to **Federal Register** notice (72 FR 5421,

February 6, 2007) for detailed description and calculation of estimated take levels.

*Comment 15:* The Commission recommends that the safety zone for pinnipeds be enlarged to the 180 dB re: 1 microPa rms isopleth. The Commission believes that a more conservative approach should be taken and that less drastic changes to the exclusion zone should be contemplated. The Commission states that this is because the susceptibility of seals to sounds when in lairs may be higher and their options for avoiding sound sources more limited.

*NMFS Response:* The 190 dB re: 1 microPa rms is used in estimating the onset of temporary threshold shift (TTS) for pinniped hearing underwater when exposed to pulse sounds from airguns during seismic surveys. Based on the best available scientific information, this criteria is conservative in terms of preventing TTS occurrence in pinnipeds. Although it is tempting to set a larger safety zone to achieve a lower SPL for noise exposure, doing so often compromises the effectiveness of monitoring since a much larger area would have to be observed. Therefore, a larger safety zone based on 180 dB re: 1 microPa rms will not necessarily provide extra protection for seals.

Regarding the possibility of seals in the lairs being exposed to higher SPLs, NMFS does not believe that will occur under the proposed on-ice seismic R&D program. First, the work site will be surveyed by up to 3 trained dogs looking for seal structure prior to seismic operations. As a result, any work location will be at least 500 m (1,640 ft) away from the nearest seal structure, which corresponds to a zone with sound pressure levels below 180 dB re: 1 microPa on its outer boundary. Second, even if there were seals in lairs within the safety zone, most acoustic energies from the airgun are emitted under the water and may not even be audible by seals in lairs. Third, if audible and annoying, ringed seals have a number of lairs and breathing holes available in their area. As noted in previous **Federal Register** notices, ringed seals, and even new born pups, move frequently from lair to lair for various biological reasons. If sounds from an acoustic source are annoying to the ringed seal, with or without a pup, these animals can easily move to a new location, a Level B harassment. Therefore, NMFS does not believe it is beneficial to enlarge the safety zone to 180 dB re: 1 microPa rms isopleth.

*Comment 16:* The ICAS points out that the proposed project area is known to get a lot of ice pressure ridges and a

few open leads during the project period, and that the ice may only be 3.5 ft (1 m) in thickness from the short time the ocean is frozen. The ICAS states that the early break-up of ice in recent years indicates that the proposed project may be jeopardized from unforeseen ice surges and movements. The ICAS is concerned that SOI may not be able to retrieve its heavy equipment if there is an early spring break-up, and that the sinking of any equipment into the ocean would affect bowhead migration later on.

*NMFS Response:* As discussed in *Response to Comment 5*, the proposed on-ice seismic R&D program would require ice thickness of at least 50 in (1.3 m) to support the heavy equipment and personnel, and the nearest lead would be at least 10 mi (16 km) away. Due to safety concerns, SOI will not operate in an area where ice is thin enough to allow an open lead. As stated in the previous **Federal Register** notice (72 FR 5421, February 6, 2007), SOI will consult with NMFS and MMS before camp mobilization within the project area based on ice conditions and safety of access to ice.

*Comment 17:* The ICAS recommends to SOI additional stipulations:

- (1) that SOI employ 4 subsistence representatives for safety of the group from possible sudden ice surges and look out for opening of new lead to warm SOI personnel by contract or internal hire from SOI of this project;
- (2) that the camp's solid waste be transported daily, to prevent the added attraction from polar bears and foxes;
- (3) additional two night watchmen to look for open leads during down time of project;
- (4) two snow machines for the open lead watchman for quick travel; and
- (5) no fuel storage out on the ice road or ice pads.

*NMFS Response:* SOI has informed NMFS of the following:

- (1) SOI, through its geophysical contractor, Veritas DGC, will employ 4 Inupiat subsistence representatives, 2 per 12-hour shift, to scout ice conditions and observe wildlife while the activities of the on-ice seismic project are conducted.
- (2) All solid waste will be incinerated on site.
- (3) Other than adverse weather days, there will be no down time on the project. Two Inupiat subsistence representatives will be on each shift scouting for open leads, in addition to observations of wildlife.
- (4) Veritas DGC will transport subsistence advisors via a Tucker or Hauglund from the project camp site to

and from the watchmen's on-ice shift duties.

(5) Veritas DGC has permitted for fuel storage facilities at camp, as per NSB Permit 07-176 and Alaska Department of Natural Resources, Division of Oil and Gas Permit MLUP/NS 06-14.

#### **Description of Marine Mammals Affected by the Activity**

Four marine mammal species are known to occur within the proposed survey area: ringed seal (*Phoca hispida*), bearded seal (*Erignathus barbatus*), spotted seal (*Phoca larghs*), and polar bear (*Ursus maritimus*). Although polar bears are now proposed to be listed as threatened, none of these species are listed under the Endangered Species Act (ESA) as endangered or threatened species. Other marine mammal species that seasonally inhabit the Beaufort Sea, but are not anticipated to occur in the project area during the proposed R&D program, include bowhead whales and beluga whales (*Delphinapterus leucas*). SOI will seek a take Authorization from the U.S. Fish and Wildlife Service (USFWS) for the incidental taking of polar bears because USFWS has management authority for this species. A detailed description of these species can be found in Angliss and Outlaw (2005), which is available at the following URL: <http://www.nmfs.noaa.gov/pr/pdfs/sars/ak2005.pdf>. A more detailed description of these species and stocks within the proposed action area provided in the February 6, 2007, **Federal Register** (72 FR 5421). Therefore, it is not repeated here.

#### **Potential Effects on Marine Mammals and Their Habitat**

Seismic surveys using acoustic energy, such as airguns and weigh drop impact sources, may have the potential to adversely impact marine mammals in the vicinity of the activities (Gordon *et al.*, 2004). The sound source level of the GL airgun to be used in the proposed project is 228 dB re: 1 microPa at 1 m, which is strong enough to cause hearing threshold shift (TS) in pinnipeds when exposed for an extended duration (Kastak *et al.*, 1999).

However, it is extremely unlikely that any animals would be exposed to a sound pressure level (SPL) of this magnitude since acoustic energy is attenuated as it propagates through the water column. Preliminary results of the acoustic modeling, which did not take the ice effects into consideration, shows that the received sound pressure levels (SPLs) dropped down to 190, 180, and 160 dB re: 1 microPa root mean square (RMS) at distances of 120 m (394 ft), 330

m (1,083 ft), and 2.22 km (1.38 mi), respectively. However, with the sea ice dampening effects, actual received SPLs at these distances are expected to be lower (Richardson *et al.*, 1995). In addition, most acoustic energy from an airgun is directed downward, and the short duration of each pulse limits the total energy (Richardson *et al.*, 1995).

Intense acoustic signals from seismic surveys are also known to cause behavioral alteration in marine mammals such as reduced vocalization rates (Goold, 1996), avoidance (Malme *et al.*, 1986, 1988; Richardson *et al.*, 1995; Harris *et al.*, 2001), and changes in blow rates (Richardson *et al.*, 1995) in several marine mammal species. One controlled exposure experiment using small airguns (source level: 215 224 dB re: 1 microPa peak-to-peak (p-p)) was conducted on harbor seals (*Phoca vitulina*) and gray seals (*Halichoerus grypus*) that had been fitted with telemetry devices showed fright responses in two harbor seals when playback started (Thompson *et al.*, 1998). Their heart rate dropped dramatically from 35 45 beats/min to 5 10 beats/min. However, these responses were short-lived and following a typical surfacing tachycardia; there were no further dramatic drops in heart rate. Harbor seals showed strong avoidance behavior, swimming rapidly away from the source. Stomach temperature tags revealed that they ceased feeding during this time. Only one seal showed no detectable response to the airguns and approached to within 300 m (984 ft) of the sound source. The behavior of harbor seals seemed to return to normal soon after the end of each trial. Similar avoidance responses were also documented in gray seals. By contrast, sighting rates of ringed seals from a seismic vessel in shallow Arctic waters showed no difference between periods with the full array, partial array, or no airguns firing (Harris *et al.*, 2001).

Incidental harassment to marine mammals could also result from physical activities associated with on-ice seismic operations, which have the potential to disturb and temporarily displace some seals. Pup mortality could occur if any of these animals were nursing and displacement were protracted. However, it is unlikely that a nursing female would abandon her pup given the normal levels of disturbance from the proposed activities, potential predators, and the typical movement patterns of ringed seal pups among different holes. Seals also use as many as four lairs spaced as far as 3,437 m (11,276 ft) apart. In addition, seals have multiple breathing holes. Pups may use more holes than

adults, but the holes are generally closer together than those used by adults. This indicates that adult seals and pups can move away from seismic activities, particularly since the seismic equipment does not remain in any specific area for a prolonged time. Given those considerations, combined with the small proportion of the population potentially disturbed by the proposed activity, impacts are expected to be negligible for the ringed, bearded, and spotted seal populations.

The seismic surveys would only introduce acoustic energy into the water column and no objects would be released into the environment. In addition, the total footprint of the proposed seismic survey area covers approximately 16 km<sup>2</sup> (6.2 mi<sup>2</sup>), which represents only a small fraction of the Beaufort Sea pinniped habitat. Sea-ice surface rehabilitation is often immediate, occurring during the first episode of snow and wind that follows passage of the equipment over the ice.

There is a relative lack of knowledge about the potential impacts of seismic energy on marine fish and invertebrates. Available data suggest that there may be physical impacts on eggs and on larval, juvenile, and adult stages of fish at very close range (within meters) to seismic energy source. Considering typical source levels associated with seismic arrays, close proximity to the source would result in exposure to very high energy levels. Where eggs and larval stages are not able to escape such exposures, juvenile and adult fish most likely would avoid them. In the cases of eggs and larvae, it is likely that the numbers adversely affected by such exposure would be very small in relation to natural mortality. Studies on fish confined in cages that were exposed under intense sound for extended period showed physical or physiological impacts (Scholik and Yan, 2001; 2002; McCauley *et al.*, 2003; Smith *et al.*, 2004). While limited data on seismic surveys regarding physiological effects on fish indicate that impacts are short-term and are most apparent after exposure at very close range (McCauley *et al.*, 2000a; 2000b; Dalen *et al.*, 1996), other studies have demonstrated that seismic guns had little effect on the day-to-day behavior of marine fish and invertebrates (Knudsen *et al.*, 1992; Wardle *et al.*, 2001). It is more likely that fish will swim away upon hearing the seismic impulses (Engas *et al.*, 1996).

Limited studies on physiological effects on marine invertebrates showed that no significant adverse effects from seismic energy were detected for Squid

and cuttlefish (McCauley *et al.*, 2000) or in snow crabs (Christian *et al.*, 2003).

Based on the foregoing discussion, NMFS finds preliminarily that the proposed seismic surveys would not cause any permanent impact on the physical habitats and marine mammal prey species in the proposed project area.

#### **Number of Marine Mammals Expected to Be Taken**

NMFS estimates that up to 30 ringed seals and much fewer bearded and spotted seals could be taken by Level B harassment as a result of the proposed on-ice geophysical R&D program. The estimate take number is based on consideration of the number of ringed seals that might be disturbed within the 16 km<sup>2</sup> proposed project area plus up to 13 km (8 mi) travel route from camp site to work site (travel route is estimated to be 0.1 km wide), calculated from the adjusted ringed seal density of 1.73 seal per km<sup>2</sup> (Kelly and Quakenbush, 1990). This number represents approximately 0.17 percent of the total ringed seal population (estimated at 18,000) for the Beaufort Sea (Angliss and Outlaw, 2005).

Due to the unavailability of reliable bearded and spotted seals densities within the proposed project area, NMFS is unable to estimate take numbers for these two species. However, it is expected much fewer bearded and spotted seals would be subject to takes by Level B harassment since their occurrence is much lower within the proposed project area, especially during spring (Moulton and Lawson, 2002; Treacy, 2002a; 2002b; Bengtson *et al.*, 2005). Consequently, the levels of take of these 2 pinniped species by Level B harassment within the proposed project area would represent only small fractions of the total population sizes of these species in Beaufort Sea.

In addition, NMFS expected that the actual take of Level B harassment by the proposed geophysical program would be much lower with the implementation of the proposed mitigation and monitoring measures discussed below. Therefore, NMFS believes that any potential impacts to ringed, bearded, and spotted seals to the proposed on-ice geophysical seismic program would be insignificant, and would be limited to distant and transient exposure.

#### **Potential Effects on Subsistence**

Residents of the village of Nuiqsut are the primary subsistence users in the activity area. The subsistence harvest during winter and spring is primarily ringed seals, but during the open-water period both ringed and bearded seals are

taken. Nuiqsut hunters may hunt year round; however, most of the harvest has been in open water instead of the more difficult hunting of seals at holes and lairs (McLaren, 1958; Nelson, 1969). Subsistence patterns may be reflected through the harvest data collected in 1992, when Nuiqsut hunters harvested 22 of 24 ringed seals and all 16 bearded seals during the open water season from July to October (Fuller and George, 1997). Harvest data for 1994 and 1995 show 17 of 23 ringed seals were taken from June to August, while there was no record of bearded seals being harvested during these years (Brower and Opie, 1997). Only a small number of ringed seals was harvested during the winter to early spring period, which corresponds to the time of the proposed on-ice seismic operations.

Based on harvest patterns and other factors, on-ice seismic operations in the activity area are not expected to have an unmitigable adverse impact on subsistence uses of ringed and bearded seals because:

(1) Operations would end before the spring ice breakup, after which subsistence hunters harvest most of their seals.

(2) The area where seismic operations would be conducted is small compared to the large Beaufort Sea subsistence hunting area associated with the extremely wide distribution of ringed seals.

In order to ensure the least practicable adverse impact on the species and the subsistence use of ringed seals, SOI has notified and provided the affected subsistence community with a draft plan of cooperation. SOI held community meeting with the affected Beaufort Sea communities in mid-October 2006 and held meetings again in early 2007 to discuss proposed activities and to resolve potential conflicts regarding any aspects of either the operation or the plan of cooperation.

#### Mitigation and Monitoring

The following mitigation and monitoring measures are required for the subject on-ice seismic surveys. All activities shall be conducted as far as practicable from any observed ringed seal lair and no energy source will be placed over a seal lair.

To further reduce potential impact to pinniped habitat, no ice road will be built between the mobile camp and work site. Travel between mobile camp and work site will be done by vehicles driving through snow road, which is about 4 - 8 mi (6 - 13 km) depending on camp location.

SOI will employ trained seal lair sniffing dogs to locate seal structures

under snow (subnivean) in the proposed work area and camp site before the seismic program begins. The recommended prospective area for the proposed project will be surveys for the subnivean seal structures using 3 trained dogs running together. Transects will be spaced 250 m (820 ft) apart and oriented 90° to the prevailing wind direction. The search tracks of the dogs will be recorded by GPS units on the dogs and the tracks will be downloaded daily. Subnivean structures located will be probed by steel rod to check if each is open (active), or frozen (abandoned). Structures will be categorized by size, structure and odor to ascertain whether the structure is a birth lair, resting lair, resting lair of rutting male seals, or a breathing hole. Locations of seal structures will be marked and monitored and adjustment to the seismic operation will be made to avoid the lairs.

SOI will also use trained dogs to survey the snow road and establish a route where no seal structure presents. The surveyed road will be entered into GPS and flagged for vehicles to follow.

Vehicles must avoid any pressure ridges, ice ridges, and ice deformation areas where seal structures are likely to be present.

Seismic sources for the program will be recorded into 5 sensor groups: analog surface receivers, digital surface receivers, hydrophones in the water column, and 3 different types of 4-component ocean bottom sensors on the seafloor. Each source will be recorded into the 5 receiver groups. Water column monitoring of SPLs will be most directly accomplished by monitoring SPLs from the hydrophones. Density of receivers is very high, with spacing of 5 m (16.4 ft), so a detailed characterization of the SPLs can be accomplished. A range of receiver offsets will be available up to the maximum program offset of 4,000 m (13,123 ft). Additionally, the surface and ocean bottom sensors can be used as supplemental information in the determination of source levels and propagation distances for the experiment.

A 500-m (1,640-ft) exclusion zone will be established around all located active subnivean seal structures, within which no seismic or impact surveys will be conducted. During active seismic and impact source testing an on-ice 500-m (1,640-ft) safety zone will be established. The size of the safety zone shall then be adjusted to match the 190 dB re: 1 microPa rms isopleth based on seismic source monitoring. On ice monitoring must be conducted by a trained, NMFS-approved marine

mammal observer (MMO) for entry by any marine mammal. No seismic or impact surveys will be conducted if a marine mammal is observed entering the monitored safety zone.

To further reduce the potential impacts to marine mammals, SOI must implement soft-start (ramp-up) procedure when starting operations of the airgun or impact sources. Airgun and impact sources will be initiated at 50 percent of its full level and slowly (not more than 6 dB per 5 minutes) increase their power to full capacity.

#### Reporting

A final report must be submitted to NMFS within 90 days of completing the project. The report must contain detailed description of any marine mammal, by species, number, age class, and sex if possible, that is sighted in the vicinity of the proposed project area; location and time of the animal sighted; whether the animal exhibits a behavioral reaction to any on-ice activities or is injured or killed; and the context of the behavior change.

Endangered Species Act (ESA)  
NMFS has determined that no species listed as threatened or endangered under the ESA will be affected by issuing an incidental harassment authorization under section 101(a)(5)(D) of the MMPA to SOI for the proposed on-ice seismic survey.

#### National Environmental Policy Act (NEPA)

The information provided in the EA on the *Proposed OCS Lease Sale 202 Beaufort Sea Planning Area* by the MMS in August 2006 led NMFS to conclude that implementation of either the preferred alternative or other alternatives identified in the EA would not have a significant impact on the human environment. Therefore, an Environmental Impact Statement was not prepared. The proposed action discussed in this document is not substantially different from the 2006 actions, and a reference search has indicated that no significant new scientific information or analyses have been developed that would warrant new NEPA documentation. NMFS has prepared a Finding of No Significant Impact statement.

#### Determinations

For the reasons discussed in this document and in the identified supporting documents, NMFS has determined that the impact of the on-ice seismic R&D program would result, at worst, in the Level B harassment of small numbers of ringed seals, and that such taking will have no more than a



negligible impact on this species. In addition, NMFS has determined that bearded and spotted seals, if present within the vicinity of the project area could also be taken incidentally, by no more than Level B harassment and that such taking would have a negligible impact on such species or stocks. Although there is not a specific number assessed for the taking of bearded and spotted seals due to their rare occurrence in the project area, NMFS believes that any take would be significantly lower than those of ringed seals. NMFS also finds that the action will not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence uses.

In addition, no take by Level A harassment (injury) or death is anticipated or authorized, and harassment takes should be at the lowest level practicable due to incorporation of the mitigation measures described in this document.

#### Authorization

NMFS has issued an IHA to SOI for the potential Level B harassment of small number of ringed seals, and potential Level B harassment of bearded and spotted seals incidental to conducting on-ice seismic R&D program in the U.S. Beaufort Sea, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: March 30, 2007.

Angela Somma,

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

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[I.D. 040307B]

#### Small Takes of Marine Mammals Incidental to Specified Activities; Low-Energy Marine Seismic Survey in the Northeastern Indian Ocean, May-August 2007

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

**ACTION:** Notice; proposed incidental take authorization; request for comments.

**SUMMARY:** NMFS has received an application from Scripps Institute of Oceanography (SIO) for an Incidental

Harassment Authorization (IHA) to take marine mammals incidental to conducting a low-energy marine seismic survey in the northeastern Indian Ocean during May-August 2007. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to SIO to incidentally take, by Level B harassment only, several species of marine mammals during the aforementioned activity.

**DATES:** Comments and information must be received no later than May 10, 2007.

**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 20910-3225. The mailbox address for providing email comments is PR1.040307B@noaa.gov. NMFS is not responsible for e-mail comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size.

A copy of the application containing a list of the references 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#applications>.

Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

**FOR FURTHER INFORMATION CONTACT:** Jolie Harrison, Office of Protected Resources, NMFS, (301) 713-2289, ext 166.

#### SUPPLEMENTARY INFORMATION:

##### Background

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

Authorization shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses

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

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by 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].

Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either approve or deny the authorization.

#### Summary of Request

On January 5, 2007, NMFS received an application from SIO for the taking, by Level B harassment only, of 32 species of marine mammals incidental to conducting, with research funding from the National Science Foundation (NSF), a low-energy marine seismic survey in the northeastern Indian Ocean from May-August 2007. The purpose of the research program is to conduct a scientific rock-dredging, magnetic, bathymetric, and seismic survey program at nine sites on the Ninety East Ridge in the northeastern Indian Ocean. The results will be used to (1) determine the morphology, structure, and tectonics of ridge volcanoes to see whether they reflect centralized (plume) or distributed (crack) eruptions; (2) infer the magmatic evolution of the ridge, whether it fits the plume hypothesis, and its connection to existing hotspots; (3) examine the duration of volcanism at the various sites and along the ridge to see whether the age progression fits the simple plume model; and (4) survey broad characteristics of seafloor in