



# MARINE MAMMAL COMMISSION

20 October 2009

Mr. 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

Re: Permit Application No. 14534 (National Marine  
Fisheries Service, Office of Science and Technology)

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act.

The applicant is requesting authorization to take by harassment beaked whales and various other odontocetes, baleen whales, and pinniped species by conducting playback experiments using received sound levels of up to 180 dB re 1 $\mu$  Pa. The purpose of the study is to determine what characteristics of sounds (including mid-frequency sonar) evoke behavioral responses in beaked whales and other deep-diving cetaceans. Authorization also is requested to tag individual cetaceans with digital archival recording tags using suction cups and to import and export skin samples collected during tag retrieval. The proposed research would be conducted over five years in waters within the U.S. Navy's Southern California Range Complex and in the vicinity of San Clemente Island. The applicant anticipates that it may seek amendment of the permit, if issued, to include additional locations at a later date.

## RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service—

- defer further action on this application until the permit applicant demonstrates that the proposed research has been reviewed and approved by an Institutional Animal Care and Use Committee ; and
- defer consideration of any other scientific permit applications and amendment requests submitted from within the agency that involve any invasive procedure or other activity that might harm or materially alter the behavior of the animals under study until such a committee has been established and has found the proposed research to be consistent with Animal Welfare Act requirements.

Upon review and approval of the proposed research by an Institutional Animal Care and Use Committee, the Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested permit, provided that the Service—

- specify that tagging not be conducted on calves less than six months of age, as estimated by their size, or on females accompanied by calves;
- consult with the applicant to identify steps to be taken to monitor (and, if possible, assist) any animal that appears to become disoriented or injured during the playback experiments;
- require that the investigator stop an activity if observations indicate that the introduced sound may lead to serious injury or death;
- require that an activity be suspended, pending review and authorization to proceed, if it appears that an animal may have been injured or killed during that activity;
- consult with the applicant to identify steps to be taken to recover and necropsy any animal that dies as a result of the activities;
- take steps to ensure that activities to be conducted under this permit and those of other permit holders who might be carrying out research on the same species in the same areas are coordinated to avoid unnecessarily duplicative research and unnecessary disturbance of animals;
- ensure that the applicant obtains all necessary permits under the Convention on International Trade in Endangered Species of Wild Fauna and Flora before importing samples into or exporting them out of the United States; and
- specify in the permit whether the tagging of pinnipeds is authorized under this permit or under some other permit (e.g., Permit No. 87-1851, held by Daniel Costa, Ph.D., one of the applicant's co-investigators).

## **RATIONALE**

The primary objective of the proposed research is to determine how human-produced sounds, including active sonar signals, affect marine mammals. The Commission supports such research (see the Commission's 12 May 2009 letter, enclosed, regarding an application for authorization to conduct similar activities). However, as noted in that letter, studies designed to test the tolerance of marine mammals to various types and levels of sound may invoke biologically significant responses. For purposes of scientific accuracy and animal well-being, researchers should use well-considered research methods and should be able to monitor and document animals' responses to introduced sounds and to halt or curtail an experiment before it has irreversible consequences (i.e., serious injury or death) for the animals being studied. Review by an Institutional Animal Care and Use Committee should facilitate such a cautious approach.

The application states that "WHOI's IACUC has reviewed previous research projects that involved either tagging or the kinds of playbacks proposed here" and that "[t]his project will only be undertaken in accordance with IACUC review for the relevant participating organizations, which will be sent as soon as it is completed for each specific project." The application does not state

Mr. P. Michael Payne  
20 October 2009  
Page 3

whether the applicant is proposing to use Woods Hole Oceanographic Institution's Institutional Animal Care and Use Committee to review the proposed research or to establish a committee on an interim basis to do so, or somehow is using past Institutional Animal Care and Use Committee review of similar activities as a substitute for review of the activities being proposed by this applicant. The fact that the proposed research methods were reviewed previously by an institutional animal care and use committee is helpful, but it is not a basis for dismissing the need for further review. Previous consideration should help streamline the process but, for such a new experimental approach, the committee should be interested in feedback regarding possible new information or insights regarding the safety of the research methods.

The application seems to imply that Institutional Animal Care and Use Committee approvals will be sent to the Permits Office once the committee's reviews are completed for each specific project (i.e., approvals of individual projects will be submitted after the permit is issued). This proposed approach is not consistent with current procedure, which requires that Institutional Animal Care and Use Committee approval be provided before a permit is issued.

The Service has for some time recognized the need for permit applicants to comply with Animal Welfare Act requirements if they propose invasive procedures or procedures that can harm or materially alter the behavior of the animals under study. As you indicated in a letter sent to the Commission 14 months ago (14 August 2008), the Service is committed to ensuring that its Science Centers are brought into compliance with those requirements pertaining to the establishment and use of Institutional Animal Care and Use Committees. According to the schedule set forth in that letter, all Science Centers were to have established an Institutional Animal Care and Use Committee by 1 October 2009. The Commission has received repeated assurances since then that the Service was on track to meet the 1 October deadline.

As we have indicated in previous letters commenting on permit applications from scientists within the National Marine Fisheries Service, establishing such committees should not take more than one year. As noted in our letters of 31 July and 28 August 2009 (enclosed and incorporated here by reference), the Service was able to establish an animal care and use committee fairly quickly on an interim basis when it decided to review research activities related to its Marine Mammal Health and Stranding Response Program. The Service should be able to (1) extend the interim committee's term to enable it to review the research being proposed by this applicant and that proposed in other recent applications and amendment requests submitted by Service scientists or (2) create other committees, even on an interim basis, to conduct such reviews.

Commission staff recently attended a review of permitting requirements and procedures presented by the Permits, Conservation, and Education Division at the biennial conference of the Society for Marine Mammalogy. That presentation specifically described compliance with the provisions of the Animal Welfare Act as one of the requirements for obtaining a permit. The Service requires all other applicants to demonstrate compliance with these requirements, and it is unacceptable for agency scientists to be given special treatment. Therefore, the Marine Mammal Commission recommends that the National Marine Fisheries Service defer further action on this application until the permit applicant demonstrates that the proposed research has been reviewed

and approved by an Institutional Animal Care and Use Committee. The Commission further recommends that the Service defer consideration of any other scientific permit applications and amendment requests submitted from within the agency that involve any invasive procedure or other activity that might harm or materially alter the behavior of the animals under study until such a committee has been established and has found the proposed research to be consistent with Animal Welfare Act requirements.

Because behavioral response studies such as those proposed in this application are relatively new in the field of marine mammal science, the Commission also believes that they should be conducted initially in a relatively cautious manner and then expanded as researchers learn more about which experimental approaches are safe and which pose unacceptable risks. To that end, the Marine Mammal Commission recommends that, upon review and approval of the proposed research by an Institutional Animal Care and Use Committee, the National Marine Fisheries Service issue the requested permit, provided that tagging not be conducted on calves less than six months of age as estimated by their size or females accompanied by such calves; steps be identified and taken to monitor (and, if possible, assist) any animal that appears to become disoriented or injured during the playback experiments; an activity be stopped if observations indicate that the introduced sound may lead to serious injury or mortality; an activity be suspended, pending review and authorization to proceed, if observations indicate that an animal may have been injured or killed during that activity; steps be identified and taken to recover and necropsy any animal that may have died as a result of the activities; steps be taken to ensure that activities to be conducted under this permit and those of other permit holders who might be carrying out research on the same species in the same areas are coordinated to avoid unnecessarily duplicative research and unnecessary disturbance of animals; and the applicant obtain all necessary permits under the Convention on International Trade in Endangered Species of Wild Fauna and Flora before importing samples into or exporting them out of the United States.

With regard to tagging calves and females with calves, the investigator plans to avoid groups of cetaceans containing mother-calf pairs. The Commission agrees with this approach until researchers have been able to characterize responses by animals that likely are less vulnerable. However, as discussed in our 12 May 2009 letter, understanding how mother-calf pairs respond to anthropogenic acoustic sources, including mid-frequency sound, eventually will be necessary to ensure that mitigation measures are developed to provide them with adequate protection. The Commission therefore believes that, in time, research on the effects of human-related sound on marine mammals would benefit from the inclusion of carefully developed experimental designs and procedures that include mother-calf pairs.

Finally, the application states that “[p]inniped tagging will be covered under and are [sic] described in another NMFS permit (No. 87-1851) held by one of the co-investigators in this research program (D. Costa) and/or under a subsequent major amendment to the current permit application.” However, authorization to tag pinnipeds is already requested in the current application. The Marine Mammal Commission recommends that, before issuing the permit, the Service specify whether the tagging of pinnipeds is authorized under this new permit or under some other permit (e.g., No. 87-1851, held by Daniel Costa, Ph.D., one of the applicant’s co-investigators).

Mr. P. Michael Payne  
20 October 2009  
Page 5

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act.

Please contact me if you have any questions concerning these comments and recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.  
Executive Director

Enclosures