



MARINE MAMMAL COMMISSION

9 November 2015

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Re: Permit Amendment Application No. 16239
(Dan Engelhaupt, Ph.D.,
HDR EOC)

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit amendment application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Dr. Engelhaupt is seeking to amend permit 16239 that authorizes him to conduct research on marine mammals in the Atlantic and Pacific Oceans—the permit expires on 30 September 2018.

Dr. Engelhaupt and co-investigators (CIs) are authorized to conduct systematic vessel- and aerial-based line transect surveys year-round for marine mammals in waters subject to U.S. jurisdiction and on the high seas in the Atlantic (including the Gulf of Mexico and Caribbean and Sargasso Seas) and Pacific (including Gulf of Alaska and waters of the Marianas Islands, Japan, and Australia) Oceans. Individuals of all age classes and either sex could be harassed. He also is authorized to collect sloughed skin and feces. The purpose of the research is to investigate abundance, genetic variation, and habitat use of marine mammals and to monitor behavioral changes during activities associated with the U.S. Navy, renewable energy, oil and gas exploration and production¹, and pier-based construction.

Dr. Engelhaupt is requesting multiple changes to his permit (see the Take Tables for specifics), including—

- (1) increasing the number of incidental harassment takes for certain species during aerial and vessel surveys;
- (2) collecting biopsy samples to document genetic variation within populations, sex, foraging patterns, and stress levels—calves less than 1 year of age and females in close proximity (20 m) to those calves would not be biopsy sampled, and groups with neonate calves would not be approached and individuals would not be sampled unless there is a separation of 20 m; and

¹ Renewable energy and oil and gas exploration and production are referred to herein as industry.

- (3) instrumenting various species of cetaceans with multiple tag types² to document movement patterns, foraging ecology, habitat use, and social and population structure—calves less than 1 year of age and females in close proximity (20 m) to those calves would not be tagged, and groups with neonate calves would not be approached and individuals would not be tagged unless there is a separation of 20 m.

Dr. Engelhaupt is proposing to instrument only individuals greater than 1 year of age with implantable tags³. He proposed to instrument numerous mysticetes (including minke, Antarctic minke, Bryde's, Omura's, Eden's, and unidentified rorqual whales) and odontocetes (including unidentified *Kogia*, unidentified *Mesplodon*, unidentified narwhal and beluga, unidentified pilot, and unidentified toothed whales). Dr. Engelhaupt has since indicated that he would remove all requests for Level A taking of unidentified groups from the take tables based on the understanding that if he and CIs are in close proximity to an animal, its species identification would be possible. The Commission concurs with that change. However, for similar previous requests regarding implantable tags and based on associated Commission recommendations, NMFS has not authorized the tagging of either killer whales or minke whales with such tags. The Commission recently made a similar recommendation to not authorize instrumenting Bryde's whales with such tags and notes that Omura's and Eden's whales are smaller than Bryde's whales. That applicant withdrew the request to instrument Bryde's whales with implantable tags, thus NMFS did not authorize such taking.

The Commission is concerned with the request to deploy implantable tags on minke, Bryde's, and Omura's and Eden's whales, which are smaller than Bryde's whales. The concern continues to be that, although those tags are designed to penetrate the body and anchor in the fascia between the muscle and blubber, the tags could strike a vertebra or rib or cut deeply into the muscle layer causing undue harm and adversely affecting the individual. Dr. Engelhaupt indicated that the maximum depth of tag penetration would be 30 cm depending on the species, but did not specify the maximum penetration depth of the tags for each species nor did he specify the blubber (or muscle) depth of those species. As such, the Commission remains concerned that undue harm to the whales could result from instrumenting them with implantable tags.

In addition, neither the PI nor any of the CIs have experience instrumenting any species of cetaceans with those implantable tags. Dr. Engelhaupt indicated that tagging plans are likely to either include Dr. Bruce Mate or members of his team in the actual tagging or involve him or others in a consulting role on permitted activities before tagging commences to ensure maximum safety and maximum success with regards to implantable tag deployment operations. The Commission does not believe that consulting on the use of implantable tags is sufficient to assure that the PI and CIs would be adequately trained to deploy those tags. Therefore, the Commission recommends that the National Marine Fisheries Service (NMFS) condition the permit to prohibit the (1) use of implantable tags on minke, Antarctic minke, Bryde's, Omura's, and Eden's whales until Dr. Engelhaupt can provide information regarding the thickness of the skin and blubber layers of those whales relative to the maximum penetrating depth of the tags to be used and can provide assurance that the tags would not pose risk of accidentally hitting a vertebra or rib and (2) PI and CIs from

² Including suction-cup, dart (e.g., LIMPET and Z-tags), and/or deep-penetrating, implantable (implantable) tags (including the new Advanced Dive Behavior tags).

³ That is, tags that are cylindrical in shape that are meant to be fully implanted with only the antenna protruding from the animal.

instrumenting any cetacean species with implantable tags until they have been trained to deploy such tags or unless Dr. Mate or other researchers with sufficient experience deploying implantable tags can deploy the tags for them.

With respect to experience of the PI and CIs, the Commission also notes that the CVs of Dr. Engelhaupt, Ms. Jessica Aschettino, and Mr. Michael Richlen do not provide sufficient justification for them to be authorized to instrument cetaceans with tags. Dr. Engelhaupt's and Mr. Richlen's CVs did not mention experience in deploying tags on cetaceans, and Ms. Aschettino's CV indicated that she has been trained to deploy satellite tags but did not specify which type of tags (i.e., suction-cup or dart) or on what species. The Commission believes that PIs and CIs should not be authorized to conduct any proposed activity until they can demonstrate that they have experience conducting that activity or are trained to conduct it. The Commission notes that different levels of experience are necessary to instrument cetaceans with various tag types (i.e., suction-cup and dart tags) and to instrument smaller odontocetes⁴ with dart tags in general. Accordingly, the Commission recommends that NMFS prohibit Dr. Engelhaupt, Ms. Aschettino, and Mr. Richlen from instrumenting cetaceans with any type of tag until either they provide documentation that they have sufficient experience deploying the multiple types of tags (i.e., suction-cup and dart tags) on the various cetacean species or are trained to do so. The Commission further recommends that NMFS include in the final permit a table specifying what types of tags the PI and CIs are authorized to deploy and on which species.

While the Commission recognizes that the proposed takes in Dr. Engelhaupt's application and the authorized takes in similar permits are for vast expanses of the Pacific and Atlantic Oceans, including the Gulf of Mexico (GoMex) and the Caribbean Sea, some small populations such as North Pacific right whales (NPRWs), North Atlantic right whales (NARWs), and Bryde's whales in GoMex could be unduly impacted. The intention to undertake targeted research on small populations generally is noted in permit applications and/or is managed through section 7 consultations under the Endangered Species Act, but it is important for NMFS to continue to be alert to the need to minimize risk to such populations.

Although Dr. Engelhaupt proposed to biopsy sample and tag up to 110 NPRWs⁵ and 140 Bryde's whales⁶ and tag up to 60 NARWs⁷ per year⁸, the Commission understands that NMFS plans to authorize lesser numbers of takes. Specifically, Dr. Engelhaupt requested to deploy more dart tags on NPRWs than any other permitted researcher and more dart tags on NARWs than all permitted researchers combined. Thus, NMFS plans to reduce the number of dart tags to be deployed on NPRWs and NARWs from 30 to 10 for each species. Further, Dr. Engelhaupt indicated he would voluntarily reduce the number of procedures to be conducted on Bryde's whales to (1) 20 biopsy samples, 10 suction-cup/dart tags⁹, and 10 implantable tags in GoMex and (2) 30 biopsy samples, 10 suction-cup tags, 10 dart tags, and 10 implantable tags in the western North Atlantic Ocean and

⁴ e.g., *Kogia* spp., false killer whales, melon-headed whales, and various delphinids.

⁵ Includes 50 biopsy samples, 30 suction-cup tags, and 30 dart tags.

⁶ Includes 50 biopsy samples, 30 suction-cup tags, 30 dart tags, and 30 implantable tags in western North Atlantic Ocean (including the Sargasso Sea), Caribbean Sea, and GoMex.

⁷ Includes 30 suction-cup tags and 30 dart tags.

⁸ Whales were estimated to be taken up to three times during attempts to biopsy sample or tag them, equating to the various total takes delineated in the Take Tables.

⁹ Suction-cup and/or dart tags.

Caribbean Sea (WNAO). Given that the Commission has recommended herein to prohibit the use of implantable tags on Bryde's whales, the Commission expects that NMFS would not authorize those takes. The Commission also understands that NMFS plans to further reduce Dr. Engelhaupt's revised number of procedures to be conducted on Bryde's whales to 20 biopsy samples and 10 suction-cup/dart tags in WNAO due to the rarity of that species in areas where the Navy and industry operate. Thus, up to 20 Bryde's whales could be biopsy sampled and 10 could be suction-cup/dart tagged in both GoMex and WNAO. The Commission concurs with those approaches and recommends that NMFS include all those revised takes¹⁰ in the amended permit accordingly.

In addition, Dr. Engelhaupt indicated in his amendment application, and NMFS indicated in its *Federal Register* notice, that he proposes to increase the number of Level B harassment takes for certain species during aerial and vessel surveys. However, nowhere does the application or the *Federal Register* notice indicate what increases are being proposed or considered. Specifically, none of the Take Tables appear to have been amended to reflect that objective—the rows associated with Level B harassment takes remain unchanged from what currently is authorized in the permit. It is unclear if Dr. Engelhaupt intended to request an increase in the number of Level B harassment takes authorized during aerial and vessel surveys or not. Furthermore, Dr. Engelhaupt has not requested additional takes for non-target animals harassed incidental to biopsy sampling and tagging of target animals. For example, as mentioned previously, he proposed to biopsy sample and tag up to 110 NPRWs¹¹ in the Pacific Ocean and 140 Bryde's whales in WNAO, but only 3 Level B harassment takes of NPRWs and 3 Level B harassment takes of Bryde's whales are authorized. Since NMFS considers any approach¹² of a cetacean a take regardless of whether the animal reacts, Dr. Engelhaupt could reach his allotted takes by approaching an individual in a group twice to take a biopsy sample. The Commission is not convinced the stated numbers of takes are sufficient to allow the proposed activities to be conducted successfully. Therefore, the Commission recommends that NMFS consult with Dr. Engelhaupt to ascertain whether he intended to request authorization of additional Level B harassment takes during aerial and vessel surveys and if so, what those additional species- or group-specific takes would be. The Commission further recommends that, given the request to biopsy sample and tag target individuals, NMFS consult with Dr. Engelhaupt regarding increasing the number of Level B harassment takes for the various species or groups to ensure the numbers of authorized takes of non-target individuals are sufficient. If the additional takes are significantly greater than what is currently authorized or requested in the amendment application, additional public notice and opportunity to comment should be provided.

Finally, HDR does not have an Institutional Animal Care and Use Committee (IACUC), so its research protocols have not been reviewed or approved as required under the Animal Welfare Act (the AWA). The AWA requires that research on animals involving invasive procedures (i.e., Level A harassment under the MMPA) be reviewed by an IACUC, irrespective of whether an applicant has established such a committee. Therefore, the Commission recommends that NMFS inform Dr. Engelhaupt of the need to have an IACUC—which can be associated with one of his

¹⁰ (1) Up to 10 dart tags for both NPRWs and NARWs and (2) up to 20 biopsy samples and 10 suction-cup/dart tags for Bryde's whales in both GoMex and WNAO.

¹¹ Includes 50 biopsy samples, 30 suction-cup tags, and 30 dart tags.

¹² Which includes drifting or directly approaching a cetacean or group of cetaceans closer than 100 yards for baleen whales and sperm whales and 50 yards for all other odontocetes.

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CIs, a local university, or some other appropriate research facility—review and approve the research protocols prior to conducting the proposed Level A harassment activities.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the MMPA. Kindly contact me if you have any questions concerning the Commission's recommendations.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is written in a cursive style with a large initial "R".

Rebecca J. Lent, Ph.D.
Executive Director