



MARINE MAMMAL COMMISSION

18 December 2020

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 Application No. 23554
(Colleen Reichmuth, Ph.D.,
University of California Santa Cruz)

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 request with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Dr. Reichmuth proposes to conduct research on captive pinnipeds during a five-year period—permit 18902 authorized similar activities.

Dr. Reichmuth proposes to conduct research on captive California sea lions and Pacific harbor, spotted, ringed, bearded, and Hawaiian monk seals housed at Long Marine Laboratory (LML) in Santa Cruz, California, and the Alaska SeaLife Center (ASLC) in Seward, Alaska. She would observe, photograph/videotape¹, measure/weigh, restrain, transport², sedate, sample, mark/tag, instrument, and/or conduct procedures on³ one individual monk seal and up to four individuals of each of the other species per year (see take table for specifics). The purpose of the research is to investigate (1) cognition, (2) sensory biology, (3) behavior, (4) physiology and health, (5) and the effects of sound on pinnipeds. Dr. Reichmuth requests up to two mortalities⁴ of any species during the permit duration, as well as authorization to export samples. Her Institutional Animal Care and Use Committee has reviewed and approved the research protocols. Both LML and ASLC also currently hold appropriate licenses issued by the U.S. Department of Agriculture (USDA). Dr. Reichmuth would abide by the requirements and regulations set forth by USDA and the International Air Transport Association when transporting animals between facilities. She would

¹ Including using unmanned aircraft systems (UAS). The Commission informally noted that Dr. Reichmuth specified in the application that photographs or videos could be taken “without disturbance” to animals even though takes resulting from such activities had been requested. While this phrase was removed in reference to digital single-lens reflex cameras, it remains in reference to UAS. As such, NMFS should remove the phrase “without disturbance” in reference to collecting UAS footage of captive seals from the final application.

² Between LML and ASLC.

³ Including (1) conducting cognitive experiments, ultrasound, passive acoustic monitoring, and active acoustic playback activities, (2) using a metabolic hood, and (3) administering Evan’s blue dye and collecting serial blood samples.

⁴ Including euthanasia for humaneness purposes.

implement various measures to minimize impacts on pinnipeds and also would be required to abide by the National Marine Fisheries Service's (NMFS) standard permit conditions.

Personnel qualifications

During its informal review of Dr. Reichmuth's application, the Commission noted a few issues with the personnel table and qualification forms (QFs) of several co-investigators (CIs). First, the qualifications did not appear to support the duties listed in the personnel table, as the QFs lacked sufficient detail regarding the experience of the CIs to conduct or supervise some of the procedures for which they would be authorized. For example, several CIs would be authorized to conduct blood sampling, yet based on inconsistencies in their QFs, it was unclear whether they had sufficient prior experience to perform the activity under the permit. Even though each CI indicated that his or her level of experience with blood sampling was at least a 2⁵, each also stated that he or she had previously only assisted with, observed, or trained animals for the procedure⁶, which would imply a Level 1. In addition, the Commission noted that several CIs had listed their levels of experience with procedures as a range (e.g., 2–3) or decimal numbers (e.g., 3.5), leading to confusion over the actual level of experience. The Commission requested that Dr. Reichmuth (1) clarify the duties that each CI would conduct and supervise under the permit and (2) ensure that each CI provides sufficient details in their QF, including listing a whole number from 1 to 4 consistent with those details for the level of experience with a procedure⁷, to verify that he or she has qualifications commensurate with his or her duties.

Based on the revised personnel table and QFs provided to the Commission, it was evident that NMFS or the applicant had misinterpreted some of the Commission's comments, as personnel would now be authorized to either (1) "supervise and perform" or (2) "perform under supervision" various procedures. Moreover, many of the CIs that the Commission noted had not specified in their QFs sufficient qualifications to conduct the various invasive procedures were now listed to conduct those procedures under supervision under the permit, which is not necessary. Finally, the levels of experience in the revised QFs were still specified as both ranges and decimal numbers, and thus it was not clear whether NMFS had provided the Commission's comment on this issue to Dr. Reichmuth.

NMFS's 2016 application instructions explicitly state that CIs "are individuals who are qualified and authorized to conduct or directly supervise procedures under a permit," which is in conflict with designating personnel as CIs to perform procedures under supervision, as the applicant has indicated. Specifically, the personnel table is intended to delineate which research personnel can conduct a procedure unsupervised or supervise others conducting the procedure—it is not intended

⁵ Level 1 experience denotes having assisted or received education/training in performing the procedure, but **not having successfully performed** the procedure. Level 2 experience denotes having performed the procedure while **under the supervision of or training** by an expert (e.g., principal investigator (PI), CI, or veterinarian). Level 3 experience denotes having performed the procedure **without supervision** by a PI or CI. Level 4 experience denotes being considered an **expert** in performing the procedure, and having **supervised or trained** others in conducting it.

⁶ In the QF, NMFS instructs research personnel to avoid using phrases such as "assisted with," or "participated in" when describing their qualifications to conduct a procedure, as those terms do not adequately convey a researcher's ability to conduct a task independently.

⁷ Consistent with NMFS's 2016 application instructions.

to specify who is able to conduct the various procedures supervised⁸. NMFS should have informed Dr. Reichmuth that the personnel table does not need to stipulate who would be conducting the various procedures while supervised and any such entries should be removed.

As the Commission discussed in its [14 November 2019 letter](#) on NMFS's revised application instructions and in numerous other letters⁹, being able to conduct a procedure as a PI or CI implies that one has experience conducting that procedure under supervision (Level 2 or greater) and thus is qualified to be authorized to conduct it unsupervised. Being able to supervise a procedure, particularly those that are invasive, implies that one has experience conducting the procedure without supervision (Level 3 or greater). A researcher that is not qualified to formally conduct an activity under a permit can instead continue gaining experience performing the activity under supervision until he or she has sufficient experience to conduct it unsupervised. These standards are not impractical, nor do they limit personnel from gaining additional experience, as needed. They follow a basic step-wise approach to ensure compliance with NMFS's implementing regulations that require individuals conducting procedures authorized under the permit to possess qualifications commensurate with their duties and responsibilities or to be under the direct supervision of a person with such qualifications (50 C.F.R. § 216.35(g)).

For those research personnel designated to supervise and conduct procedures under the permit, all demonstrated sufficient qualifications in their QFs to allow them to be authorized to do so. For those researchers inappropriately designated to conduct procedures under supervision, some demonstrated sufficient qualifications in their QFs to conduct certain procedures and be authorized accordingly as a CI¹⁰, while others did not¹¹.

For each researcher to be authorized under the permit, the Commission recommends that NMFS (1) only authorize him or her to (a) supervise and conduct or (b) conduct procedures unsupervised rather than conduct procedures under supervision, (2) authorize him or her to conduct only invasive procedures that he or she has at least performed under supervision (Level 2 or greater) and (3) to supervise and conduct only procedures that he or she has at least performed without supervision (Level 3 or greater). In addition, the Commission recommends that NMFS instruct applicants to ensure that whole numbers are provided in the QFs of research personnel to indicate his or her level of experience with a procedure.

⁸ This approach also is inconsistent with other research permits issued by NMFS.

⁹ e.g., its 9 December 2020 letter on Marine Mammal Lab's (MML) permit 23858, its [31 July 2020 letter](#) on Dr. Costa's permit 23188, and its [31 March 2020 letter](#) on MML's permit 23283.

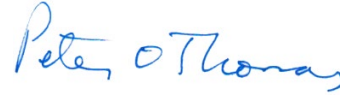
¹⁰ e.g., Jones and Thometz indicated in their QFs that each has prior experience performing standard morphometric measurements and transport of pinnipeds, respectively.

¹¹ e.g., several researchers designated to conduct blood sampling who did not provide evidence of sufficient experience to do so in their QFs, as discussed previously.

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The Commission believes that the proposed activities are consistent with the purposes and policies of the MMPA. Please contact me if you have any questions concerning the Commission's recommendation.

Sincerely,

A handwritten signature in blue ink that reads "Peter O. Thomas". The signature is written in a cursive style with a large initial "P" and "T".

Peter O. Thomas, Ph.D.
Executive Director