December 23, 2003

Peter J. Stein, Ph.D.
Scientific Solutions, Inc.
99 Perimeter Road
Nashua, New Hampshire 03063-1325

Dear Dr. Stein:

Enclosed is Permit No. 1048-1717-00 which authorizes you to conduct research to validate and improve the ability of whale-finder sonar systems to detect marine mammals without adversely affecting them. The permit authorizes you to expose gray whales (*Eschrictius robustus*) to the whale-finder sonar sounds to gather data on the reflectivity of gray whales, determine the probability of detection of gray whales out to one mile, and determine what, if any, reaction the gray whales may have to high frequency active sonars designed to detect marine mammals. A variety of other marine mammals as listed in Table 1 of the permit may be incidentally exposed to the whale-finder sonar sounds during the conduct of your research. Please review the Permit and all attachments to ensure that you fully understand what is authorized and that you comply with the Research and General Conditions.

Please note that we have determined that your research, as proposed in your application and pursuant to the terms and conditions of the permit, is not likely to affect any marine mammals or sea turtles listed under the Endangered Species Act. Therefore, the permit has not included authorization for research-related takes of threatened or endangered species. The likelihood of an endangered whale (blue, fin, humpback, sei, or sperm whale), threatened pinniped (Guadalupe fur seal or Steller sea lion) or listed sea turtle being present in the action area at the time of your research is small. To further ensure that threatened and endangered marine mammals will not be affected, Condition B.2.d requires that the whale-finder sonars be turned off if an endangered animal is sighted within one mile of the research vessel.

Although your proposed research does not involve activities that may pose a risk of death or injury to marine mammals, in the event that one is killed or seriously injured as a result of activities conducted under your permit, Special Condition B.1.b requires that research be suspended, pending review of the experimental protocol.

Part C requires that you contact the appropriate National Marine Fisheries Service (NOAA Fisheries) regional administrator at least 2 weeks in advance to coordinate the specific dates and locations of the authorized activities. Two week notice for the first two weeks following permit issuance is waived. Upon receipt of this Permit, you may notify the appropriate Region immediately prior to research by phone or fax of your intended dates, location(s), and personnel.

The Reporting Conditions (Part D) of all NOAA Fisheries permits require both a tabular and narrative format be submitted to the Permits, Conservation and Education Division. It is essential that annual and final reports from Permit Holders are current and accurate. These reports are the only means the Service has of evaluating the potential impacts of research activities on marine mammals. Specifically, the reports we receive from researchers are used to: 1) coordinate permit activities to ensure that unnecessarily duplicative and potentially cumulative harassments are kept to a minimum; 2) supplement the baseline information used in Section 7 consultations; and 3) evaluate the Holder's file when a new application for scientific research is received.

Part E involves conditions for use of commercial/documentary film taken during research. If a documentary or commercial film crew wants to accompany you to film your research, you must submit a request for approval to this Office. Please allow sufficient time for processing the request.

As Holder and Principal Investigator (PI) of this Permit, you are ultimately responsible for all activities of any individual operating under its authority. All personnel involved in the conduct of the research must perform a function directly supportive of and necessary for the research, or be one of a reasonable number of support personnel. The Permits, Conservation and Education Division must approve in advance any additional co-investigators not named in the application. Approval is based on submission and review of the researcher's curriculum vitae. Moreover, research activities must be conducted under the direct supervision of the PI or a Co-investigator (CI) identified in the Permit (50 CFR 216.41(c)(1)(iii)).

The Marine Mammal Commission has recommended that you collect information on the response of marine mammals to the ramp-up procedure whenever possible. We note that, as discussed in your application and the Environmental Assessment prepared by NOAA Fisheries on issuance of your permit, no reactions are anticipated to the whale-finder sonar sounds. Nevertheless, you are encouraged to make note of any observed responses that may be related to your research and report them in your annual reports pursuant to Condition D of the permit.

As discussed during the processing of your application, this permit only authorizes conduct of the study offshore of central California between mid-December and mid-February of each year the permit is valid. Should you wish to conduct this study at other times of year or in additional geographic locations, you will need to request an amendment to the permit. Please contact our office for information on submitting a request for a permit amendment.

The original permit and a file copy of the signature page are enclosed. After reviewing the Permit and all attachments to ensure that you understand what is authorized, please sign and date both signature pages, and return the page marked **"file copy"** to our office to validate your permit. Please note that this Permit is not valid until our office receives the signed page marked "file copy." You may submit the copy by facsimile to 301-713-0376 and confirm it by mail. If you have any problems or questions, please contact Dr. Tammy Adams at 301/713-2289.

Sincerely,

Stephen L. Leathery
Chief, Permits, Conservation
and Education Division
Office of Protected Resources

Enclosure

Permit No. 1048-1717-00
Expiration Date: December 31, 2008

# SCIENTIFIC RESEARCH PERMIT TO TAKE MARINE MAMMALS

## Authorization

**Dr. Peter J. Stein, Scientific Solutions, Inc., Nashua, New Hampshire,** is hereby authorized to take marine mammals in the manner specified below for the purpose of scientific research, subject to the provisions of the Marine Mammal Protection Act of 1972 (16 U.S.C 1361 *et seq.*) and the Regulations Governing the Taking and Importing of Marine Mammals (50 CFR part 216). Researchers may conduct activities by the means and for the purposes described in the application except as limited by the terms and conditions of this Permit.

## Abstract

Dr. Stein requested a permit to expose gray whales (*Eschrtictius robustus*) migrating offshore of central California to low-powered high-frequency active sonar, henceforth referred to as "whale-finder sonar systems," while simultaneously recording any reactions of the animals to the sound. In addition to the target species, which is not listed under the ESA, the applicant also requests authorization for unintentional "takes" of non-target marine mammals that may be within the range of the whale-finder sonar systems. The objectives of the research are to gather data on the reflectivity of whales, determine the probability of detection out to one mile, and determine what, if any, reaction the animals may have to high frequency active sonars designed to detect marine mammals. The purpose of the research is to validate and improve the ability of whale-finder sonar systems to detect marine mammals without adversely affecting them.

A. Number and Kind(s) of Marine Mammals and Location(s) [50 CFR 217.36(a)(i)]

1. Table 1 outlines the number of marine mammals authorized to be taken and the activities authorized to be performed on each animal. The Researchers [Permit Holder, Principal Investigator (PI), and/or Co-Investigator(s) (CI(s))] may conduct research activities in waters offshore of central California.

Table 1: Maximum annual number of marine mammals that may be exposed to whale-finder sonar sounds. For all species listed, all ages and both sexes may be exposed.

| Species | Max. # individuals exposed |
|---|---|
| Gray whale (*Eschrictius robustus*) | 1200 |
| Minke whale (*B. acutorostrata*) | 200 |
| Harbor porpoise (*Phocoena phocoena*) | 150 |
| Dall's porpoise (*Phocoenoides dalli*) | 150 |
| Pacific white-sided dolphin (*Lagenorhynchus obliquidens*) | 400 |
| Bottlenose dolphin (*Tursiops truncatus*) | 150 |
| Risso's dolphin (*Grampus griseus*) | 2000 |
| Short-beaked common dolphin (*Delphinus delphis*) | 2000 |
| Northern right whale dolphin (*Lissodephis borelais*) | 1200 |
| Killer whale (*Orcinus orca*) | 200 |
| Short-finned pilot whale (*Globicephala macrorhynchus*) | 200 |
| Baird's beaked whale (*Berardius bairdii*) | 30 |
| Mesoplodont beaked whales (*Mesoplodon* spp.) | 30 |
| Cuvier's beaked whale (*Ziphius cavirostris*) | 30 |
| California sea lion (*Zalophus californianus*) | 500 |
| Harbor seal (*Phoca vitulina*) | 500 |
| Northern elephant seal (*Mirounga angustirostris*) | 500 |
| Northern fur seal (*Callorhinus ursinus*) | 200 |

B. Research Conditions [50 CFR 216.36(b)]

1. General:

a. The following individuals may participate in the conduct of the research authorized herein: Principal Investigator – Dr. Peter Stein; Co-Investigators – Dr. Adam Frankel and Dr. Chrsitopher Clark; Research Assistants – Mr. Michael Birman, Mr. Michael Fitzgerald, and Mr. Douglas Anderson.

b. If a marine mammal is killed or seriously injured as a result of the authorized activities, research must be suspended and the protocol reviewed and, if necessary, revised to the satisfaction of NMFS in consultation with the Marine Mammal Commission. Be advised that any serious injury or death that could have been caused by the presence or actions of the researchers includes, but is not limited to, deaths of calves by starvation following the research-related death of a lactating female, and deaths resulting from infections related to intrusive procedures or injuries sustained by animals attempting to evade researchers. If researchers are uncertain about whether a death

was related to the research, they should consult with the NOAA Fisheries Permits, Conservation and Education Division. Within two weeks of the incident, unless other arrangements have been made, the Permit Holder must submit a written report that includes a complete description of the events surrounding the incident and identification of steps that will be taken to reduce the potential for additional accidents. The Permit Holder must send this report to the Chief, Permits, Conservation and Education Division, F/PR1, 1315 East-West Highway, Silver Spring, MD 20910. Research may recommence upon review of that information and authorization by the Chief, Permits, Conservation and Education Division.

c. This Permit specifically does not authorize the conduct of research activities aboard or in cooperation with organizations that do both research and whale watching and any vessel or aircraft engaged in commercial whale watching or other commercial recreational activities. Further, this Permit does not authorize the cooperation with any vessel or aircraft carrying any nonessential passengers (i.e., not essential for the conduct of the research) who either pay a fee in return for being allowed onboard the vessel or aircraft or who, prior to or after the trip, give "donations" to the Holder(s), principal investigator(s), Co-investigators, or research assistant(s).

2. Specific:

a. When calves or females with calves are in the study area, researchers must immediately terminate efforts if there is any evidence that the activity may be interfering with pair-bonding or nursing;

b. If any marine mammal exhibits behaviors indicating a strong reaction to the whale-finder sonars, either during or immediately after exposure to the sounds, research activities directed at that animal must be discontinued;

c. The whale-finder sonars will be operated according to the following characteristics: frequency greater than 20 kHz; maximum source level at or less than 220 dB re 1 μPa at 1 m; pulse length less than one (1) second; and duty cycle less than 10%;

d. The source level of the whale-finder sonars will drop to 180 dB re 1 μPa at 1 m if a marine mammal is detected within 100 m of the vessel and will be turned off for 30 minutes if an endangered whale or threatened pinniped is sighted within one mile of the vessel;

e. When first turned on, the whale-finder sonars will utilize a ramp-up procedure where the source level starts no higher than 180 dB re 1 μPa

at 1 m and increases no faster than 5 dB per minute. Whenever possible, information will be collected on the response of marine mammals to the ramp-up procedure;

f. Although sea turtles are unlikely to be present in the study area and are not believed able to hear in the frequencies of the whale-finder sonar, the sonar will be turned off if a sea turtle is sighted, and will remain off for 30 minutes thereafter to ensure sea turtles will not be exposed.

3. Expiration Date: Researchers may conduct activities authorized by this Permit through December 31, 2008.

C. Notification and Coordination Conditions

1. Notification: For NMFS to coordinate activities authorized herein with other research that may be occurring in the same area, the Permit Holder must notify the Regional Administrator, Southwest Region, NMFS, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802-4213; phone (562)980-4001; fax (562)980-4018, at least two weeks prior to initiation of the research. This notification must include specific dates, locations, and participants (i.e., all CIs and research assistants) involved in the study.

2. NMFS observers: NMFS Regional Offices are responsible for coordinating research activities within their jurisdictions and reserve the right to place observer(s) on research vessels and/or aircraft to monitor the effects of authorized activities on the animals and provide the Permit Holder with sufficient notice to ensure that adequate accommodations will be provided to the observer(s).

3. Coordination: In order to avoid unnecessary duplicative research and unnecessary disturbance of animals, the Permit Holder must coordinate research authorized herein with other researchers conducting the same or similar studies on the same species, in the same locations and at the same time. Please refer to the attached list of contact information for the Permit Holders/Principal Investigators of current permits.

D. Reporting Conditions

1. Annual Reports: Each year the Permit is valid, the Permit Holder must submit an annual report by December 31, describing the specific activities that have been conducted. The annual report must be both tabular and narrative in nature. A blank table is amended to this Permit for your use.

a. The annual report must include, in tabular form:

1) Species, age, sex;

2) Activities;

3) Number of animals taken by each activity;

4) Number of times each activity was performed on each animal; and

5) Location(s).

b. The annual report must also include, in narrative form:

1) How the results of this reporting period demonstrate the accomplishments of your research goal and, if applicable, how such goals pertain to the species conservation plan;

2) Based on your response to the above question, whether the Permit, as currently structured, allows for the further accomplishment of your research goals;

3) A description of when or if any results have been published or otherwise made public during the reporting period;

4) A description of the animals' reactions to the activities and steps taken, if necessary, to minimize disturbance.

5) A description of the activities planned for the forthcoming year, and steps that have been and will be taken to coordinate the research activities with the NMFS Regional Administrator(s) and other researchers.

2. Final Reports: The Researchers must submit a final report within 180 days after completion of the research. The report must include:

a. A reiteration of the objectives and a summary of the results of the research and how they pertain to or further the research goals stated in the permit applications and NMFS conservation plans; and

b. An indication of where and when the research results will be published.

3. The Researchers must submit to the Director, Office of Protected Resources, NMFS, 1315 East-West Highway, Suite 13705, Silver Spring, MD 20910, all reports, and any papers or publications resulting from the research authorized herein.

E. Photography and Filming Conditions [216.36(b)]

1. The Permit Holder and all researchers working under this Permit must obtain prior approval by the NMFS Permits, Conservation and Education Division for the following:

   a. Non-research related use of photographs, video and/or film that were taken to achieve the research objectives; and

   b. All activities not essential to achieving the research objectives (e.g. still photography, videotaping, motion picture film making). Such activities must not influence the conduct of research in any way.

2. The Permit Holder and researchers are hereby notified that failure to obtain NMFS approval prior to conducting or facilitating such activities will be considered a violation of the Permit. The Permit Holder and researchers must agree, upon request by NMFS, to make space available on the vessel or aircraft for a NMFS observer during any trips where activities identified in E.1.b. may be conducted.

3. Any commercial/documentary film approved for use must include a credit, acknowledgment, or caption indicating that the research was conducted under a permit issued by NMFS under the authority of the MMPA and/or the ESA.

F. General Conditions [50 CFR 216.35]

1. The Permit Holder is ultimately responsible for all activities of any individual who is operating under the authority of the Permit. The PI shares this responsibility.

2. The qualifications and experience of the personnel participating in the research under this Permit must be commensurate with their assigned responsibilities. The PI or a CI must be on site during any research conducted under this permit. Research Assistants must be under the direct and on-site supervision of the PI or a CI.

3. CIs are individuals identified by the Holder or PI, and approved by the NOAA Fisheries, who are qualified to conduct research activities authorized by the Permit without the on-site supervision of the Holder or PI.

   a. CI designation: The Holder or PI must submit a CI designation request to the Chief, Permits, Conservation and Education Division, Office of Protected Resources. The request must include the individuals' resume,

curriculum vitae, or bio-sketch, and duty(ies) to be performed. Approval by NOAA Fisheries is based on the individual's qualifications to perform the requested activity(ies). To expedite this process, the letter and CV may be submitted by facsimile (301/713-0376) followed by mail confirmation.

4. Research Assistants (RA) are individuals who work under the direct on-site supervision of the PI or CI(s). In general, RAs are individuals authorized to participate in activities such as recording data and assisting in monitoring and restraining animals, but not qualified or experienced enough to conduct intrusive procedures without the on site supervision of the PI or a CI. Thus, RAs are not authorized to perform intrusive procedures (including, but not limited to blood sampling, biopsy , flipper tagging, and branding) unless they are under the direct on-site supervision of the PI or a CI.

   a. Restrictions: Research Assistants are NOT authorized to carry out underwater observations and/or photography or to operate vessels unless they are professional and/or experienced photographers/videographers (see 3.b. below) or licensed and/or experienced boat operators. Paying interns are not authorized to operate vessels for research purposes under any circumstances.

   b. Photographer/videographer: A professional and/or experienced videographer/photographer under the direct, on-site supervision of the Researchers [Holder, PI, or CI(s)], may conduct research activities requiring underwater observations and/or photography. The Holder, PI, or CI(s) must be present at all times when research is being conducted.

5. Persons who require state or Federal licenses to conduct activities authorized under the Permit must be duly licensed when undertaking such activities.

6. The PI and CI(s) cannot transfer or assign the Permit to any other person. The PI may request authorization to add a person to this Permit, but the PI cannot accept any direct or indirect compensation from the individual, in exchange for doing so.

7. The PI and CI(s) and all other researchers operating under the authority of this Permit must possess a copy of Permit No. 1048-1717-00 when engaged in a permitted activity, and as applicable, when a marine mammal is in transit incidental to such activity, and whenever marine mammals or marine mammal parts are in the possession of the Permit Holder, PI or CI(s). The Permit Holder, PI, or CI(s) must affix a copy of the Permit to any container, package, enclosure, or other means of containment, in which the marine mammals or marine mammal parts are placed for purposes of transit, supervision, or care. Any storage facility repositing marine mammal parts must keep a copy of the Permit on file.

8. Inspection: Upon request of NMFS enforcement agents or personnel designated by the Director, Office of Protected Resources, the Permit Holder, PI and/or CI(s) must make available for inspection: records; facilities; marine mammals; marine mammal parts; copies of photographs, motion picture films, and/or video tapes; and any other information related to any inspection of records associated with this Permit.

9. Permit Amendments: The Director, Office of Protected Resources, National Marine Fisheries Service may amend the provision of this Permit in response to or independent of a request from the Permit Holder. Please allow at least 6 months to process major amendment requests, with additional time where endangered species are involved.

10. NMFS shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this Permit. The Holder is on notice that if the Holder is unsure whether an activity is within the scope of the Permit, the Holder should contact the NMFS Permits, Conservation and Education Division for verification before conducting the activity. Failure to verify, where NMFS subsequently determines that the activity was outside the scope of the Permit, may be used as evidence of a violation of the Permit, the MMPA, and the ESA in any enforcement actions.

11. The Permit Holder, in signing this Permit and reading and understanding the "Definitions" (Attachment 1), have accepted and will comply with the provisions of this Permit, applicable Regulations (50 CFR Parts 216 and 222.308), the ESA and the MMPA.

G. Penalties and Permit Sanctions (216.40)

1. Any person who violates any provision of this Permit is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA or 15 CFR part 904 [Civil Procedures].

2. Any falsification of information pertaining to the permitted activities, including information provided to NOAA personnel, will be considered a violation of the Permit.

3. All permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR part 904.

Donna Wieting (for)

Laurie K. Allen
Director
Office of Protected Resources
National Marine Fisheries Service

DEC 24 2003
Date

Peter J. Stein, Ph.D.
President, Scientific Solutions, Inc.
Permit Holder/Principal Investigator

Date Dec 24, 2003

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## Appendix A: Format for submitting annual and final reports for NMFS Marine Mammal Permits

### I. Annual Reports

Each year the Permit is valid, the Permit Holder must submit an annual report, describing the specific activities that have been conducted. The annual report must be both tabular and narrative in nature. Although Annual Reports are primarily used by the Permits, Conservation and Education Division to ensure compliance of research with the terms and conditions of the Permit, they are also used for assessing the cumulative effects of permitted research on a given species, and are sent to the same team of reviewers, including the Marine Mammal Commission, as the application. Thus, it is important for Annual Reports to be complete and self-contained documents that concisely summarize the takes for the previous year, as well as the effects of the research on the animals. Annual reports shall, therefore, contain the following information in the order listed.

INTRODUCTION

State the objective(s) of the study for which the Permit was used, and the hypotheses being tested. It is not necessary to restate the background information provided in your permit application in support of the study.

METHODS

It is not necessary to describe in full detail all the take activities, but they should be briefly discussed, particularly if there were things that didn't work as planned. Also discuss any measures you think could be taken in the future to further minimize potential adverse effects on individual animals and the population/stock/species. It is important to give the exact dates and locations (with latitude and longitude where possible) of each activity. If vessel or aerial surveys were part of the permitted research, include a map of the survey transect(s). Also discuss the number of personnel involved in the takes and explain the functions of the various individuals.

RESULTS

**Do not submit raw data.** In the narrative portion of this section, summarize the number of takes by activity for each species, age class, sex, and reproductive condition. Describe, in detail, the reaction of animals to the various take activities. For example, if individual whales were closely approached for photo-identification, describe the reactions of individual whales. If a large pinniped rookery was surveyed from an airplane, describe the general effect on the majority of animals. If individual animals were captured and subjected to intrusive procedures, describe the reaction of the individual animal, including any data collected on vital rates (heart rate, respiration) or other indicators of stress. If there was no discernable response, that should also be noted. Accidental mortalities, whether or not covered by special reporting conditions in the permit, must also be noted in this report. Also discuss measures that were taken by researchers to minimize disturbance, stress, pain, and suffering.

In the tabular portion of this section, **do not submit raw data**. Provide a table (or tables, if needed for clarity) that clearly demonstrate the takes by activity, date, and location for each

species by age, sex, and reproductive condition. Where individual animals were subjected to more than one type of take, list all activities that were performed per animal. Make certain you include the number of times a given activity was performed on individual animals. For example, if an animal was captured, tagged, and had tissue samples taken, and was then re-captured at a later date for repeat tissue sampling, make certain this is reflected in the table(s). If tissue samples were shared with cooperators and/or other non-permitted researchers, they should be identified.

CONCLUSION
Briefly explain how the results of this reporting period demonstrate the accomplishments of your research goal and, if applicable, how such goals pertain to the species conservation plan. Describe the activities planned for the forthcoming year, and steps that have been and will be taken to coordinate the research activities with the NMFS Regional Administrator(s) and other researchers. Finally, describe when or if any results have been published or otherwise made public during the reporting period, including technical reports and memorandum, conference presentations, etc. Don't forget to send copies of all reports, publications, etc., resulting from the research conducted under the permit to the NMFS Division of Permits, Conservation and Education. If any non-research related used of images (including still photographs and video footage) was authorized during the reporting period, remember to submit copies of these, if the copies were not previously provided, to the Permits Division as well.

**II. Final Reports**
Researchers must submit a final report within 180 days after completion of the research, or expiration date of the permit, whichever occurs first. As with the Annual Reports, the Final Report is used to ensure compliance with the terms and conditions of the Permit, as well as the evaluate eligibility for future permits. Final Reports are distributed to the same reviewers, including the Marine Mammal Commission, as the Annual Reports. The Final Report must follow the format outlined below.

INTRODUCTION
Same as for Annual Reports

METHODS
Same as for Annual Reports

RESULTS
Because the Final Report serves as the Annual Report for the last year of the permit, it is important in this section to clearly and separately enumerate both the takes for the last year of the permit and the cumulative takes over the duration of the permit, as described above for Annual Reports.

CONCLUSION
As with Annual Reports, briefly explain how the results of this reporting period demonstrate the accomplishments of your research goal and, if applicable, how such goals

pertain to the species conservation plan. Also explain how the results over the duration of the permit demonstrate these things. Indicate where and when the research results will most likely be published. Don't forget to send a copy of any publications, including technical reports, to the Permits Division to complete your permit file. Although they are not considered peer-reviewed publications, copies of any conference abstracts or presentations related to activities authorized in the permit should also be provided.

Attachment 1 : Definitions

**DEFINITION OF TERMS COMMONLY FOUND IN SCIENTIFIC RESEARCH PERMITS**

acute behavioral response - Repeated, prolonged or excessive instances of behavior, brought on by any act or omission of the researcher and manifested by, among other actions on the part of the whale, a rapid change in direction or speed; escape tactics such as prolonged diving, underwater course changes, underwater exhalation, or evasive swimming patterns; interruptions of breeding, nursing, or resting activities, attempts by a whale to shield a calf from a vessel or human observer by tail swishing or by other protective movement; or the abandonment of a previously frequented area.

approach - a continuous sequence of maneuvers (episode) involving a vessel, aircraft, or researcher's body in the water, including drifting, directed toward a whale or group of whales for the purposes of conducting authorized research which involves one or more instances of coming closer than 100 yards to that whale or group of whales.

attempt - An effort made to accomplish some permitted activity. For example, a tag or biopsy dart deployment from either a crossbow, airgun or pole.

bona fide research - Scientific research on marine mammals conducted by qualified personnel, the results of which: 1) likely would be accepted for publication in a refereed scientific journal; 2) are likely to contribute to the basic knowledge of marine mammal biology or ecology; or 3) are likely to identify, evaluate or resolve conservation problems. Research that is not on marine mammals, but that may incidentally take marine mammals, is not included in this definition.

Co-Investigator, CI - The on-site representative of a principal investigator who has qualifications comparable to the PI.

harass(ment) - To disrupt the normal behavior or prior activity of a whale by any act or omission. This disruption of normal behavior may be manifested by, among other actions on the part of the whale, a rapid change in direction or speed; escape tactics such as prolonged diving, underwater course changes, underwater exhalation, or evasive swimming patterns; interruptions of breeding, nursing, or resting activities, attempts by a whale to shield a calf from a vessel or human observer by tail swishing or by other protective movement; or the abandonment of a previously frequented area.

hard parts - Any bone, tooth, baleen, treated pelt, or other part of a marine mammal that is relatively solid or durable.

humane - The method of taking, import, export, or other activity which involves the least possible degree of pain and suffering practicable to the animal involved.

intrusive research - A procedure conducted for bona fide scientific research involving: A break in or cutting of the skin or equivalent, insertion of an instrument or material into an orifice, introduction of a substance or object into the animal's immediate environment that is likely either to be ingested or to contact and directly affect animal tissue (i.e., chemical substances), or a stimulus directed at animals that may involve a risk to health or welfare or that may have an impact on normal function or behavior (i.e., audio broadcasts directed at animals that may affect behavior). For captive animals, this definition does not include: 1) A procedure conducted by the professional staff of the holding facility or an attending veterinarian for purposes of animal husbandry, care, maintenance, or treatment, or a routine medical procedure that, in the reasonable judgement of the attending veterinarian, would not constitute a risk to the health or welfare of the captive animal; or 2) A procedure involving either the introduction of a substance or object (i.e., as described in this definition) or a stimulus directed at animals that, in the reasonable judgement of the attending veterinarian, would not involve a risk to the health or welfare of the captive animal.

Level A harassment - Any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild.

Level B harassment - Any act of pursuit, torment, or annoyance which 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 by which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

Permit Holder - Person, institution, or agency who is ultimately for all activities of any individual who is operating under the authority of the permit.

Ports, Designated and Border -

Designated Ports - U.S. Customs ports of entry that are designated for the importation or exportation of wildlife; they are:

1) Los Angeles, CA
2) San Francisco, CA
3) Miami, FL
4) New York, NY
5) Dallas/Fort Worth, TX
6) Portland, OR
7) Baltimore, MD
8) New Orleans, LA
9) Honolulu, HI
10) Chicago, IL
11) Seattle, WA
12) Boston, MA
13) Atlanta, GA

Border Ports - Wildlife whose country of origin is Canada or the United States may be imported or exported at any of the following U.S. Customs ports of entry or “border ports”. Authorization from a “designated port” is needed before entry.

1) Alaska - Alcon
2) Idaho - Eastport

3) Maine - Calais, Houlton, Jackman
4) Massachusetts - Boston
5) Michigan - Detroit, Port Huron, Sault Sainte Marie
6) Minnesota - Grand Portage, International Falls, Minneapolis-St. Paul
7) Montana - Raymond, Sweetgrass
8) New York - Buffalo-Niagra Falls, Champlain
9) North Dakota - Dunseith, Pembina, Portal
10) Ohio - Cleveland
11) Vermont - Derby Line, Highgate Springs
12) Washington - Blaine, Sumas

Wildlife whose country of origin is Mexico or the United States may be imported or exported at any of the following U.S. Customs ports of entry or "border ports":

1) Arizona - Lukeville, Nogales
2) California - Calexico, San Diego-San Ysidro
3) Texas - Brownsville, El Paso, Laredo

Wildlife lawfully taken by U.S. residents in the United States, Canada or Mexico and imported or exported for noncommercial purposes, may be imported or exported at any U.S. Customs port of entry.

Principal Investigator, PI - The individual primarily responsible for the taking, importation, exportation, and any related activities conducted under a permit issued for scientific research or enhancement purposes. The PI must have qualifications, knowledge and experience relevant to the type of research activities authorized by the permit.

rehabilitation - Treatment of beached and stranded marine mammals taken with the intent of restoring the marine mammal's health and, if necessary, behavioral patterns.

Research Assistant, RA - Individual who works under the direct supervision of the CI or PI, and who is authorized to record data and/or serve as safety observer and/or boat tender. The RA is not authorized to carry out underwater observations and/or photography. The qualifications and experiences of the RA must be commensurate with his/her assigned responsibilities. If the RA is to operate a boat, they must be licensed and/or professionally trained and experienced in maneuvering vessels around marine mammals.

soft parts - Any marine mammal part that is not a hard part, e.g. blood, blubber, or other tissue samples. Soft parts do not include urine or fecal material.

stranded marine mammal - A marine mammal specimen under the jurisdiction of the Secretary of Commerce, if: 1) the specimen is dead and is on a beach or shore, or is in the water within the Exclusive Economic Zone of the U.S.; or 2) the specimen is alive, and is on a beach or shore and is unable to return to the water, or is in the water within the Exclusive Economic Zone of the U.S. where the water is so shallow that the specimen is unable to return to its natural habitat under its own power.

take - To harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal (as defined in the MMPA). To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (as defined in the ESA). This includes, without limitation, any of the following: The collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild.

take table - An outline, by species, age, and sex, of the type of activity(ies) authorized, the number of takes per activity, the number of takes per individual, and the location of takes and activity(ies).

Attachment 2: Annual Report Table 1: Number of marine mammals that were exposed to whale-finder sonar sounds. For all species listed, all ages and both sexes may be exposed.

| Species | Max. # individuals exposed |
|---|---|
| Gray whale (*Eschrictius robustus*) | |
| Minke whale (*B. acutorostrata*) | |
| Harbor porpoise (*Phocoena phocoena*) | |
| Dall's porpoise (*Phocoenoides dalli*) | |
| Pacific white-sided dolphin (*Lagenorhynchus obliquidens*) | |
| Bottlenose dolphin (*Tursiops truncatus*) | |
| Risso's dolphin (*Grampus griseus*) | |
| Short-beaked common dolphin (*Delphinus delphis*) | |
| Northern right whale dolphin (*Lissodephis borelais*) | |
| Killer whale (*Orcinus orca*) | |
| Short-finned pilot whale (*Globicephala macrorhynchus*) | |
| Baird's beaked whale (*Berardius bairdii*) | |
| Mesoplodont beaked whales (*Mesoplodon* spp.) | |
| Cuvier's beaked whale (*Ziphius cavirostris*) | |
| California sea lion (*Zalophus californianus*) | |
| Harbor seal (*Phoca vitulina*) | |
| Northern elephant seal (*Mirounga angustirostris*) | |
| Northern fur seal (*Callorhinus ursinus*) | |

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CC: chron, PHF,