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National Oceanic and Atmospheric Administration

National Marine Fisheries Service  
Southwest Region  
Protected Resources Division  
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FAX TRANSMISSION

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TO:

FROM:

NAME: MIKE FISHER

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SUBJECT/COMMENTS: \_\_\_\_\_

Mike - here is your IHA.

However, note on the first page, the date for  
June is not specified. HDATA's has not been  
able to locate the file in Ken's<sup>H's</sup> directory; so  
we will have to fax you that page when we're  
able to make the change (to June 7, 1999)

Sorry about the delay. Call me if questions.

TINA FAHY



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, Maryland 20910

JUN 3 1999

Dr. William R. Normark  
Coastal and Marine Geology Team  
U.S. Geological Survey, MS 999  
345 Middlefield Road  
Menlo Park, California 94025

Dear Dr. Normark:

Enclosed is an Incidental Harassment Authorization (IHA) issued to the U.S. Geological Survey, under the authority of Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), to take small numbers of marine mammals by harassment incidental to conducting marine seismic surveys off southern California.

You are required to comply with the conditions contained in this Authorization. In addition, you must cooperate with any Federal, State or local agency monitoring the impacts of your activities. The IHA requires monitoring the presence of marine mammals, mitigating adverse impacts to the lowest level practicable, and reporting any behavioral modifications resulting from your activity as observed by qualified individuals.

If you have any questions concerning the Authorization or its requirements, please contact Kenneth Hollingshead, Office of Protected Resources, NMFS at (301) 713-2055.

Sincerely,

Hilda Diaz-Soltero  
Director  
Office of Protected Resources

Enclosure



DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL MARINE FISHERIES SERVICE

Incidental Harassment Authorization

The U.S. Geological Survey, is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1371(a)(5)(D)) to harass a small number of marine mammals incidental to the operations of seismic surveys within the Southern California Bight, off California, contingent upon the following conditions:

1. This Authorization is valid from June xx, 1999 through July 31, 1999.

2. This Authorization is valid only for activities associated with conducting seismic surveys in the Pacific Ocean off Southern California.

3. The taking by incidental harassment only, is limited to the species listed below. The taking by serious injury or death of these species or the taking by harassment, injury or death of any other species of marine mammal is prohibited and may result in the modification, suspension or revocation of this authorization.

4. The species of marine mammals authorized for takings by incidental harassment are: bottlenose dolphins (Tursiops truncatus), common dolphin (Delphinus delphis), killer whale (Orcinus orca), Pacific white-sided dolphin (Lagenorhynchus obliquidens), northern right whale dolphin (Lissodelphis borealis), Risso's dolphin (Grampus griseus), Dall's porpoise (Phocoenoides dalli), minke whale (Balaenoptera acutorostrata), Pacific harbor seal (Phoca vitulina), northern elephant seal (Mirounga angustirostris), California sea lion (Zalophus californianus), and northern fur seal (Callorhinus ursinus).

5. The holder of this Authorization is required to cooperate with the National Marine Fisheries Service and any other Federal, state or local agency monitoring the impacts of the activity on marine mammals. The holder must notify the Administrator, Southwest Region, National Marine Fisheries Service (562-980-4001) at least 48 hours prior to starting the

level equal to, or greater than 160 dB, and (2) to record marine mammal activity as described in condition 8. below.

(c). During daytime, observers must be equipped with 7x50 binoculars with internal compasses and reticules, to record the horizontal and vertical angle to sightings. At night, observers must use an infrared night vision scope or equivalent viewing equipment.

(d). At all times, but specifically during nighttime surveys, the crew must be instructed to keep watch for marine mammals. If any are sighted, the watch-stander must immediately notify one of the biological observers.

(e). Observations, by those individuals described in condition 7.a. above, on marine mammal presence and activity will begin a minimum of 30 minutes prior to the time that the seismic source will be turned on and/or powered up. Each sighting record will include as many of the following that can be determined: species, group size, age classes, sex, behavior, travel velocity, distance and orientation from the survey vessel, location, and time. In addition, observers will record data on effort, such as individuals on duty and weather, and data on the vessel track.

(f). The National Marine Fisheries Service must be informed immediately of any changes in plans for monitoring.

#### 8. Reporting.

(a). A draft monitoring report must be submitted to the Administrator, Southwest Region, NMFS, and the Office of Protected Resources, within 90 days after completion of the work described in this Authorization. This report must contain the following information:

- (1) Dates of the survey from start to termination;
- (2) Specifications of the survey including, but not limited to, a complete description of the seismic sources and total power output;
- (3) Results of the vessel monitoring program including: (a) Information on the numbers (by species) of marine mammals observed during the survey; (b) the estimated number of marine mammals (by species) that may have been harassed as a result of the seismic sources through noted behavioral change; (c) marine mammal behavior patterns observed whenever the seismic source is off (speed, direction, submergence time, respiration, etc.); and (d) any behavioral responses or modifications of these behavioral indicators due either to the seismic array's or vessel's noise.

seismic survey in order, at the discretion of National Marine Fisheries Service, for a National Marine Fisheries Service biologist to board the vessel(s) to observe marine mammal behavior.

6. Mitigation. The holder of this Authorization is required to:

(a). Establish a safety zone for the protection of marine mammals that has a radius no less than 100 m (328 ft) around the source for those species listed in condition 4 above.

(b). Establish a safety zone for mysticetes (other than minke whales) and sperm whales that has a radius no less than 250 m (820 ft) around the source in order to avoid harassing these species incidental to the activity.

(c). Either shut off or power down the GI-gun and the Huntec system acoustic sources to a maximum of 160 dB (re 1  $\mu$ Pa-m) when any marine mammal approaches the safety zone designated for that species.

(d). Conduct an emergency shut-down of the seismic source if either observations are made, or notification is provided by NMFS, that one or more marine mammals of any species are attempting to beach themselves when the seismic source is operating in the vicinity of the beaching, or are indicating acute distress. The seismic sources must be immediately shut off and the Administrator, Southwest Region, NMFS, contacted.

(e). Not conduct seismic surveys with the GI-gun during night-time hours when visibility limits marine mammal detection within the designated safety zone.

7. Monitoring.

(a). The holder of this Authorization must designate a sufficient number of biologically-trained on-site individual(s), approved in advance by the National Marine Fisheries Service, to record the effects of seismic surveys and the resulting noise on marine mammals. A minimum of three observers must be aboard seismic vessel or associated vessel to conduct observations during times when either the GI-gun or the Huntec system is operating.

(b). Monitoring must be conducted by the biological observer(s) at all times that the seismic airgun or Huntec system are operating, in particular, whenever the sources are being powered up in order to (1) ensure that no marine mammals enter the safety zone while the seismic source is at a sound pressure

(4) Aerial survey data must be analyzed and summarized for distribution, movement patterns (spatial and temporal), abundance indices and estimated numbers in the area during the survey; and

(5) Results of any research conducted on the effects of seismic airgun noise on marine mammals, including any measurements made of attenuation rates.

(b). A comprehensive report must be submitted to the Administrator, Southwest Region, NMFS, within 90 days after completion of the work described in the beginning of this authorization. This report must contain the following information:

(1). Dates of the seismic survey from start to termination and the dates and times of any delays greater than 4 hours;

(2). Specifications of the survey including, but not limited to, a description of the seismic array, total power output, etc.

(3). Results of the monitoring program, including:

(a). Information on the numbers (by species) of marine mammals observed during the survey;

(b). The estimated number of marine mammals (by species) that may have been harassed as a result of the seismic array through noted behavioral change;

(c). Marine mammal behavior patterns observed whenever the seismic source is off (speed, direction, submergence time, respiration, etc.); and

(d). Any behavioral responses or modifications of these behavioral indicators due either to the seismic source's or vessel's noise.

(4). Results of any research conducted on the effects of seismic airgun noise on marine mammals, including any measurements made of attenuation rates.

(c). Both draft and final reports will be subject to review and comment by NMFS. Any recommendations made by NMFS must be addressed in the final comprehensive report prior to acceptance by National Marine Fisheries Service.

9. Activities related to the monitoring described in this Authorization do not require a separate scientific research



permit issued under section 104 of the Marine Mammal Protection Act.

10. A copy of this Authorization must be in the possession of the operator of each vessel or aircraft operating under the authority of this Incidental Harassment Authorization.

Hilda Diaz-Soltero  
Hilda Diaz-Soltero  
Director, Office of Protected Resources  
National Marine Fisheries Service

3 June 99  
Date