



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

AUG 14 2015

Charlie Kominas
Alaska LNG Safety, Security, Health, and Environment Manager
ExxonMobil Development Company
3201 C Street; Suite 506
Anchorage, AK 99501

Dear Mr. Kominas:

Enclosed is an Incidental Harassment Authorization (IHA) issued to the ExxonMobil Alaska LNG LLC under the authority of section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*), to harass small numbers of marine mammals, by Level B harassment, incidental to the marine geotechnical and geophysical survey in Cook Inlet from August 14, 2015 through August 13, 2016.

You are required to comply with the conditions contained in the IHA. In addition, you must submit reports to the National Marine Fisheries Service's (NMFS) Office of Protected Resources on a weekly and monthly basis during the survey and within 90 days of its completion. The IHA requires monitoring of marine mammals by qualified individuals before, during, and after seismic activities and reporting of marine mammal observations, including species, numbers, and behavioral modifications potentially resulting from this activity.

If you have any questions concerning the IHA or its requirements, please contact Sara Young, Office of Protected Resources, NMFS, at 301-427-8484.

Sincerely,

Donna S. Wieting
Director
Office of Protected Resources

Enclosures



AUG 14 2015

Incidental Harassment Authorization

Exxon Mobil Alaska LNG LLC (EMALL), 3201 C Street; Suite 506, Anchorage, Alaska 99501, is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)), to harass small numbers of marine mammals incidental to specified activities associated with a marine geophysical and geotechnical survey in Cook Inlet, Alaska, contingent upon the following conditions:

1. This Authorization is valid from August 14, 2015, through August 13, 2016.
2. This Authorization is valid only for EMALL's activities associated with survey operations that shall occur within the areas denoted as Marine Terminal Survey Area and Pipeline Survey Area as depicted in the attached Figure 1 of EMALL's April 2015 application to the National Marine Fisheries Service (airgun, chirp, boomer, vibracore).

3. Species Authorized and Level of Take

(a) The incidental taking of marine mammals, by Level B harassment only, is limited to the following species in the waters of Cook Inlet:

- (i) Odontocetes: see Table 1 (attached) for authorized species and take numbers.
- (ii) Pinnipeds: see Table 1 (attached) for authorized species and take numbers.

(iii) If any marine mammal species are encountered during activities that are not listed in Table 1 (attached) for authorized taking and are likely to be exposed to sound pressure levels (SPLs) greater than or equal to 160 dB re 1 μ Pa (rms) for impulsive sound or 120 dB re 1 μ Pa (rms) for continuous sound, then the Holder of this Authorization must alter speed or course or shut-down the sound source to avoid take.

(b) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in Table 1 or the taking of any other species of marine mammal is prohibited and may result in the modification, suspension or revocation of this Authorization.

(c) If the number of detected takes of any marine mammal species listed in Table 1 is met or exceeded, EMALL shall immediately cease survey operations involving the use of active sound sources (e.g., airguns, boomer, chirp, and vibracore) and notify NMFS.

4. The authorization for taking by harassment is limited to the following acoustic sources (or sources with comparable frequency and intensity) absent an amendment to this Authorization:

- (a) EdgeTech3200 Sub-bottom profiler chirp;
- (b) Applied Acoustics AA301 Sub-bottom profiler boomer;



- (c) A 60 in³ airgun;
- (d) Alpine vibracore

5. The taking of any marine mammal in a manner prohibited under this Authorization must be reported immediately to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS or her designee at (301) 427-8401.

6. The holder of this Authorization must notify the Chief of the Permits and Conservation Division, Office of Protected Resources, or her designee at least 48 hours prior to the start of survey activities (unless constrained by the date of issuance of this Authorization in which case notification shall be made as soon as possible) at 301-427-8484 or to Sara.Young@noaa.gov.

7. Mitigation and Monitoring Requirements: The Holder of this Authorization is required to implement the following mitigation and monitoring requirements when conducting the specified activities to achieve the least practicable impact on affected marine mammal species or stocks:

(a) Utilize a minimum of two NMFS- qualified PSOs per source vessel (one on duty and one off-duty) to visually watch for and monitor marine mammals near the aforementioned acoustic source vessels during daytime operations (from nautical twilight-dawn to nautical twilight-dusk) and before and during start-ups of sound sources day or night, and also continuing for 30 minutes after sound sources shut down. PSOs shall have access to reticle binoculars (7x50) and long-range binoculars (40x80). PSO shifts shall last no longer than 4 hours at a time. PSOs shall also make observations during daytime periods when the sound sources are not operating for comparison of animal abundance and behavior, when feasible. When practicable, as an additional means of visual observation, EMALL's vessel crew may also assist in detecting marine mammals.

(b) Record the following information when a marine mammal is sighted:

(i) Species, group size, age/size/sex categories (if determinable), behavior when first sighted and after initial sighting, heading (if consistent), bearing and distance from source vessel, sighting cue, apparent reaction to the airguns or vessel (e.g., none, avoidance, approach, paralleling, etc.), and behavioral pace;

(ii) Time, location, heading, speed, activity of the vessel (including type of equipment operating), Beaufort sea state and wind force, visibility, and sun glare; and

(iii) The data listed under Condition 7(d)(ii) shall also be recorded at the start and end of each observation watch and during a watch whenever there is a change in one or more of the variables.

(c) Establish the relevant 120 dB or 160 dB re 1 μ Pa (rms) "disturbance zone" for belugas, and groups of five or more harbor porpoises and killer whales as well as a 180 dB re 1 μ Pa (rms) and 190 dB re 1 μ Pa (rms) "exclusion zone" (EZ) for cetaceans and pinnipeds respectively before equipment is in operation.

(d) Visually observe the entire extent of the EZ (180 dB re 1 μ Pa [rms] for cetaceans and 190 dB re 1 μ Pa [rms] for pinnipeds) using NMFS-qualified PSOs, for at least 30 minutes (min)

prior to starting the survey (day or night) or extended shutdown periods of 15 minutes or greater. If the PSO finds a marine mammal within the EZ, EMALL must delay the authorized acoustic sources until the marine mammal(s) has left the area. If the PSO sees a marine mammal that surfaces, then dives below the surface, the PSO shall wait 30 min. If the PSO sees no marine mammals during that time, they should assume that the animal has moved beyond the EZ. If for any reason the entire radius cannot be seen for the entire 30 min (i.e., rough seas, fog, darkness), or if marine mammals are near, approaching, or in the EZ, the sound sources may not be started.

(e) Alter speed or course during survey operations if a marine mammal, based on its position and relative motion, appears likely to enter the relevant EZ. If speed or course alteration is not safe or practicable, or if after alteration the marine mammal still appears likely to enter the EZ, further mitigation measures, such as a shutdown, shall be taken.

(f) Shutdown the sound source(s) if a marine mammal is detected within, approaches, or enters the relevant EZ. A shutdown means all operating sound sources are shut down (i.e., turned off).

(g) Survey activity shall not resume until the PSO has visually observed the marine mammal(s) exiting the EZ and is not likely to return, or has not been seen within the EZ for 15 min for species with shorter dive durations (small odontocetes and pinnipeds) or 30 min for species with longer dive durations (large odontocetes, including killer whales and beluga whales).

(h) Marine geophysical surveys may continue into night and low-light hours if such segment(s) of the survey is initiated when the entire relevant EZs can be effectively monitored visually (i.e., PSO(s) must be able to see the extent of the entire relevant EZ).

(i) No initiation of survey operations involving the use of sound sources is permitted from a shutdown position at night or during low-light hours (such as in dense fog or heavy rain).

(j) If a beluga whale is visually sighted approaching or within the relevant 120-dB or 160-dB disturbance zone, survey activity will not commence or the sound source(s) shall be shut down until the animals are no longer present within the relevant 120-dB or 160-dB zone.

(h) Whenever aggregations or groups of killer whales and/or harbor porpoises are detected approaching or within the 160-dB disturbance zone, survey activity will not commence or the sound source(s) shall be shut-down until the animals are no longer present within the 160-dB zone. An aggregation or group of whales/porpoises shall consist of five or more individuals of any age/sex class.

(i) EMALL must not operate within 10 miles (16 km) of the mean lower low water (MLLW) line of the Susitna Delta (Beluga River to the Little Susitna River) between April 15 and October 15 (to avoid any effects to belugas in an important feeding and breeding area).

(j) Survey operations involving the use of airguns, sub-bottom profiler chirp and boomer, or vibrocore must cease if takes of any marine mammal are met or exceeded.

8. Reporting Requirements: The Holder of this Authorization is required to:

(a) Submit a weekly field report, no later than close of business (Alaska time) each Thursday during the weeks when in-water survey activities take place. The field reports will summarize species detected, in-water activity occurring at the time of the sighting, behavioral reactions to in-water activities, and the number of marine mammals taken.

(b) Submit a monthly report, no later than the 15th of each month, to NMFS' Permits and Conservation Division for all months during which authorized in-water survey activities occur. These reports must contain and summarize the following information:

(i) Dates, times, locations, heading, speed, weather, sea conditions (including Beaufort sea state and wind force), and associated activities during all operations and marine mammal sightings;

(ii) Species, number, location, distance from the vessel, and behavior of any marine mammals, as well as associated activity (type of equipment in use and number of shutdowns), observed throughout all monitoring activities;

(iii) An estimate of the number (by species) of: (A) pinnipeds that have been exposed to the activity (based on visual observation) at received levels greater than or equal to relevant 120dB or 160 dB re 1 μ Pa (rms) and/or 190 dB re 1 μ Pa (rms) with a discussion of any specific behaviors those individuals exhibited; and (B) cetaceans that have been exposed to the activity (based on visual observation) at received levels greater than or equal to 120 dB or 160 dB re 1 μ Pa (rms) and/or 180 dB re 1 μ Pa (rms) with a discussion of any specific behaviors those individuals exhibited.

(iv) A description of the implementation and effectiveness of the: (A) terms and conditions of the Biological Opinion's Incidental Take Statement; and (B) mitigation measures of this Authorization. For the Biological Opinion, the report shall confirm the implementation of each Term and Condition, as well as any conservation recommendations, and describe their effectiveness, for minimizing the adverse effects of the action on Endangered Species Act-listed marine mammals.

(c) Submit a draft Technical Report on all activities and monitoring results to NMFS' Permits and Conservation Division within 90 days of the completion of the survey. The Technical Report will include the following information:

(i) Summaries of monitoring effort (e.g., total hours, total distances, and marine mammal distribution through the study period, accounting for sea state and other factors affecting visibility and detectability of marine mammals);

(ii) Analyses of the effects of various factors influencing detectability of marine mammals (e.g., sea state, number of observers, and fog/glare);

(iii) Species composition, occurrence, and distribution of marine mammal sightings, including date, water depth, numbers, age/size/gender categories (if determinable), group sizes, and ice cover;

(iv) Analyses of the effects of survey operations; and

(v) Sighting rates of marine mammals during periods with and without survey activities (and other variables that could affect detectability), such as: (A) initial sighting distances versus survey activity state; (B) closest point of approach versus survey activity state;

(C) observed behaviors and types of movements versus survey activity state; (D) numbers of sightings/individuals seen versus survey activity state; (E) distribution around the source vessels versus survey activity state; and (F) estimates of take by Level B harassment based on presence in the relevant 120 dB or 160 dB harassment zone.

(d) Submit a final report to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, within 30 days after receiving comments from NMFS on the draft report. If NMFS decides that the draft report needs no comments, the draft report shall be considered to be the final report.

(e) EMALL must immediately report to NMFS if 10 belugas are detected within the relevant 120 dB or 160 dB re 1 μ Pa (rms) disturbance zone during survey operations to allow NMFS to consider making necessary adjustments to monitoring and mitigation.

9. (a) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this Authorization, such as an injury (Level A harassment), serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), EMALL shall immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, or her designees by phone or email (telephone: 301-427-8401 or Sara.Young@noaa.gov), the Alaska Regional Office (telephone: 907-271-1332 or Barbara.Mahoney@noaa.gov), and the Alaska Regional Stranding Coordinators (telephone: 907-586-7248 or Aleria.Jensen@noaa.gov or Barbara.Mahoney@noaa.gov). The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the incident;
- (ii) The name and type of vessel involved;
- (iii) The vessel's speed during and leading up to the incident;
- (iv) Description of the incident;
- (v) Status of all sound source use in the 24 hours preceding the incident;
- (vi) Water depth;
- (vii) Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- (viii) Description of marine mammal observations in the 24 hours preceding the incident;
- (ix) Species identification or description of the animal(s) involved;
- (x) The fate of the animal(s); and
- (xi) Photographs or video footage of the animal (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with EMALL to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. EMALL may not resume their activities until notified by NMFS via letter or email, or telephone.

(b) In the event that EMALL discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), EMALL will immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, her designees, and the NMFS Alaska Stranding Hotline

(see contact information in Condition 9(a)). The report must include the same information identified in the Condition 9(a) above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with EMALL to determine whether modifications in the activities are appropriate.

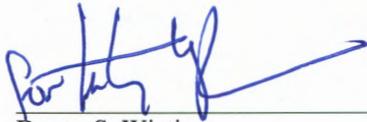
(c) In the event that EMALL discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in Condition 2 of this Authorization (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), EMALL shall report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, her designees, the NMFS Alaska Stranding Hotline (1-877-925-7773), and the Alaska Regional Stranding Coordinators within 24 hours of the discovery (see contact information in Condition 9(a)). EMALL shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. Activities may continue while NMFS reviews the circumstances of the incident.

10. EMALL is required to comply with the Reasonable and Prudent Measures and Terms and Conditions of the ITS corresponding to NMFS' Biological Opinion issued to both U.S. Army Corps of Engineers and NMFS' Office of Protected Resources.

11. A copy of this Authorization and the ITS must be in the possession of all contractors and PSOs operating under the authority of this Incidental Harassment Authorization.

12. Penalties and Permit Sanctions: Any person who violates any provision of this Incidental Harassment Authorization is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA.

13. This Authorization may be modified, suspended or withdrawn if the Holder fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals, or if there is an unmitigable adverse impact on the availability of such species or stocks for subsistence uses.



Donna S. Wieting
Director, Office of Protected Resources
National Marine Fisheries Service

AUG 14 2015

Date

Table 1. Authorized Take Numbers for Each Marine Mammal Species in Cook Inlet

Species	Authorized Take in the Cook Inlet Action Area
Odontocetes	
Beluga whale <i>(Delphinapterus leucas)</i>	24
Killer whale <i>(Orcinus orca)</i>	5
Harbor porpoise <i>(Phocoena phocoena)</i>	20
Pinnipeds	
Harbor seal <i>(Phoca vitulina richardsi)</i>	1168