

MARINE MAMMAL COMMISSION
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

27 May 2008

Mr. P. Michael Payne
Chief, Permits Division
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway, Room 13635
Silver Spring, MD 20910

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by the Arctic Slope Regional Corporation Energy Services under section 101(a)(5)(D) of the Marine Mammal Protection Act. The applicant is seeking authorization to take by Level B harassment small numbers of bowhead, gray, humpback, minke, beluga, and killer whales, harbor porpoises, and bearded, ringed, spotted, and ribbon seals incidental to shallow hazard and site clearance surveys in the Chukchi Sea over a 100-day period between July and November 2008. The Commission also has reviewed the National Marine Fisheries Service's 26 April 2008 *Federal Register* notice announcing receipt of the application and requesting comments on it and on the agency's proposal to issue the authorization, subject to certain conditions.

The principal means of taking would be by noise generated by seismic sources, including airgun operations and side-scan sonar. The Service has preliminarily determined that the proposed activities would result, at most, in a temporary modification in the behavior of small numbers of the identified species and stocks of marine mammals and therefore would have a negligible impact. The Service expects that there will be no takes by death or injury and that the potential for temporary or permanent hearing impairment will be avoided through the incorporation of the mitigation measures. The Service bases its preliminary determination on (1) the expectation that, given slow ship speeds and ramp-up of the acoustic equipment, marine mammals will move away from an annoying noise source before it becomes potentially injurious, (2) its belief that temporary threshold shifts are unlikely to occur, especially in odontocetes, at levels below 180 dB re 1 micro Pa (rms SPL); and (3) the fact that potentially injurious sound levels are expected to occur only very near the survey vessel. The Service's *Federal Register* notice indicates that the applicant is developing a Plan of Cooperation with Native communities to ensure that there are no unmitigable adverse impacts on the availability of the affected marine mammal species for subsistence use.

RECOMMENDATION

The Marine Mammal Commission recommends that the National Marine Fisheries Service issue the requested authorization, provided that—

- the proposed mitigation and monitoring activities are carried out as described in the Service's 28 April 2008 *Federal Register* notice, and
- operations be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and the death or injury could have occurred incidental to those operations.

RATIONALE

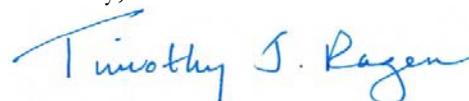
The application and the Service's *Federal Register* notice indicate that the sonar equipment to be used for the proposed project generates high sound energy at frequencies beyond the effective hearing range of the marine mammals that are likely to be encountered (i.e., >100 kHz). However, at least part of the time, the seismic profiling equipment operates at frequencies within the hearing range of baleen whales, toothed whales, and pinnipeds (i.e., <1 kHz). The GeoChirp II seismic profiling system is the most intense sound source to be used, and it has a measured root mean square source pressure level (SPL) of 214 dB and an estimated peak of 224 dB SPL (frequency range of 0.5 to 13 kHz). Based on this source level and a "15 Log R" cylindrical spreading rate model, the calculated distance to the 180 dB isopleth is approximately 185 m (607 ft) and the distance to the 190 dB isopleth is about 40 m (131 ft). Because these values are not based on field measurements during actual operations, the Service is proposing to require, as a precautionary measure, safety radii of 250 m (820 ft) for baleen whales and 75 m (246 ft) for toothed whales and pinnipeds. To implement these safety zones, the Service is proposing to require vessel-based visual monitoring by qualified, NMFS-approved marine mammal observers and vessel-to-shore communications to increase the awareness by vessel operators of both marine mammals and subsistence activity in the area. The Service also would require the adoption of other mitigation measures, including—

- vessel speed or course alteration (provided that doing so will not compromise operational safety) if a marine mammal is detected outside the relevant safety zone but appears likely to enter it;
- acoustic equipment shutdown if a marine mammal is detected within, or appears likely to enter, the relevant safety zone and if vessel course and/or speed changes are impractical or ineffective; and
- acoustic source ramp-up when operations begin after a specified period without operations (i.e., 30 minutes).

The Commission concurs with the Service's initial finding that, if the proposed mitigation measures are carried out as described, the proposed shallow hazard and site clearance surveys are unlikely to have more than a negligible, short-term impact on the potentially affected marine mammal species and stocks. The Marine Mammal Commission therefore recommends that the National Marine Fisheries Service issue the requested authorization, provided that it requires that operations be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and the death or injury could have occurred incidental to those operations.

Please contact me if you or your staff has any questions concerning this recommendation.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director