

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

17 July 2008

Mr. P. Michael Payne
Chief, Permits Division
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application from PGS Onshore, Inc., (under contract to ENI Petroleum) for an incidental harassment authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act. The applicant is seeking authorization to take by harassment small numbers of bowhead, gray, and beluga whales and ringed, spotted, and bearded seals incidental to a 3-D, ocean bottom cable seismic survey in the Nikaitchuq lease block area of the Beaufort Sea. The Commission also has reviewed the National Marine Fisheries Service's 17 June 2008 *Federal Register* notice announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

The Service has preliminarily determined that, with the incorporation of the identified monitoring and mitigation measures, the proposed seismic survey will (1) result only in the taking of marine mammals by harassment, (2) have no more than a negligible impact on the affected marine mammal stocks, and (3) have no unmitigable adverse impact on the availability of marine mammal species or stocks for subsistence uses. The Service states that its determinations are based on the information provided in the application and in the Minerals Management Service's 2006 final programmatic environmental assessment for seismic surveys in the Beaufort and Chukchi Seas and on mitigation measures to be contained in the incidental harassment authorization. Those mitigation measures would be determined by the Service and be based, in part, on a conflict avoidance agreement between PGS and the Alaska Eskimo Whaling Commission and village whaling captains.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service approve the incidental harassment authorization request, provided that—

- the Service require the applicant to implement all described monitoring and mitigation measures to protect bowhead whales and other marine mammals from disturbance associated with the proposed survey;
- inasmuch as observers will unlikely be able to detect all marine mammals within the safety zones under conditions of low visibility, the Service require operations to be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and if that death or injury could be attributable to the applicant's activities. Any suspension should remain in place until the Service (1) has reviewed the situation and

- determined that further deaths or serious injuries are unlikely to occur or (2) has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act;
- issuance be contingent on a requirement that the applicant implement all practicable monitoring and mitigation measures that will ensure that the proposed activities do not adversely affect the availability of bowhead whales and other marine mammals to subsistence hunters; and
 - the Service, in consultation with appropriate parties, promptly develops and implements a broad-based population monitoring and impact assessment program to collect baseline population information sufficient to detect changes and identify their possible causes and to verify that planned oil and gas-related activities, in combination with other risk factors, are not individually or cumulatively having any significant adverse population-level effects on marine mammals or having an unmitigable adverse effect on the availability of marine mammals for subsistence uses by Alaska Natives.

RATIONALE

The application has requested authorization involving seismic surveys between 1 July and 15 September 2008. The surveys would be conducted north of Oliktok Point, Alaska. The proposed 3-D ocean bottom cable survey would require the use of two source vessels, each equipped with a 10-airgun array to be used sequentially (one being active while the other travels to the next survey position), and several other vessels for various tasks, including cable deployment and recovery, recording, and supply. Each airgun array has a total discharge volume of 880 in³ with an estimated source level of approximately 250 dB re 1 μ Pa.

Mitigation and Monitoring

The survey would be conducted outside the barrier islands (Thetis, Spy, and Leavitt Islands) from early July to 5 August. To avoid disruption of the bowhead whale fall migration and annual hunt, survey operations would then be moved to inside the barrier islands where they would continue until 15 September.

Proposed mitigation measures include conducting surveys within 5 km (3 mi) of the coastline, speed and course alterations, avoiding bowhead whale migration routes, conducting operations in shallow waters that are not considered whale habitat, visual monitoring by a minimum of two trained observers, acoustic monitoring, aerial surveys, ramp-up, and power-down and shutdown procedures if marine mammals are sighted within or about to enter safety zones (190 dB for pinnipeds and 180 dB for cetaceans). Using 250 dB as the source output and with additional information provided by the applicant, the Service calculates the radii for the 160-, 170-, 180-, and 190-dB isopleths as 2,894 m (1.8 mi), 1,194 m (0.74 mi), 492 m (0.31 mi), and 203 m (0.13 mi), respectively. The barrier islands are expected to serve as a barrier for the sound, and modeling results suggest that the 120-dB radius (estimated at 10–15 km [6–9 mi]) will not extend beyond or penetrate across the islands. If, however, field measurements at the onset of the surveys indicate that the 120-dB radius could extend into the bowhead whale migration corridor, additional mitigation

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measures will be established in consultation with the Service, the North Slope Borough, and the Alaska Eskimo Whaling Commission.

The Marine Mammal Commission recommends that the Service require the applicant to implement all described monitoring and mitigation measures to protect bowhead whales and other marine mammals from disturbance associated with the proposed survey. However, the Commission also does not expect that observers will be able to detect all marine mammals within the safety zones under conditions of low visibility. For that reason, the Marine Mammal Commission recommends that the surveys not be conducted during periods of low visibility. Further, the Marine Mammal Commission recommends that the Service require operations to be suspended immediately if a dead or seriously injured marine mammal is found in the vicinity of the operations and if that death or injury could be attributable to the applicant's activities. Any suspension should remain in place until the Service (1) has reviewed the situation and determined that further deaths or serious injuries are unlikely to occur or (2) has issued regulations authorizing such takes under section 101(a)(5)(A) of the Act.

The *Federal Register* notice states that the applicant, in cooperation with Pioneer Natural Resources, Inc., and ENI, and in coordination with Shell Offshore, Inc., plans to conduct an offshore monitoring program from mid-August until mid- to late September 2008. The proposed program includes (1) using four autonomous seafloor acoustic recorders to monitor in-water sound both near and distant from Pioneer's Oooguruk drill site, ENI's Spy Island drill pad, and vessel operations; (2) using autonomous seafloor recorders and directional autonomous seafloor acoustic recorders (DASARs) to monitor and characterize sounds produced by the shallow-depth seismic survey planned by PGS; (3) using an array of DASARs positioned north and northwest of the Pioneer and ENI projects to detect and localize marine mammal vocalizations; and (4) using visual observations and aerial surveys to search for bowhead whales along the Beaufort Sea coast and characterize the behavior of those animals observed. The applicant is working with Shell to begin aerial surveys on 25 August 2008. The Commission commends the applicant and Shell for undertaking this cooperative monitoring program.

The Service's *Federal Register* notice also states that the applicant is meeting with Native subsistence users to develop a plan of cooperation and a conflict avoidance agreement to identify those measures that have been or will be taken to minimize adverse effects on the availability of marine mammals for subsistence uses. The notice further states that, in the absence of a signed conflict avoidance agreement, the Service will determine if additional mitigation measures are necessary to ensure that the activity will not have an unmitigable adverse impact on the subsistence use of marine mammals. The Marine Mammal Commission recommends that issuance of the requested incidental harassment authorization be contingent on the Service requiring the applicant to implement all practicable monitoring and mitigation measures that will ensure that the proposed activities do not adversely affect the availability of bowhead whales and other marine mammals to subsistence hunters. Such measures should reflect the provisions of any conflict avoidance agreements between Alaska Native hunters and the applicant and be sufficient to meet the requirements of the Marine Mammal Protection Act.

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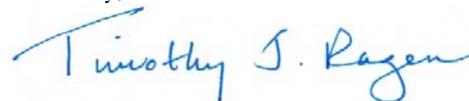
Cumulative Impacts

As we have noted in previous letters to the Service regarding similar oil and gas activities, the Commission believes that a long-term monitoring and mitigation program is needed to ensure that oil and gas-related activities do not have more than a negligible impact on marine mammal populations—particularly in view of climate-related ecosystem changes that are occurring in the Arctic. Data on changes in the density, abundance, reproductive rates, foraging patterns, distribution, health and condition, and contaminant levels of marine mammal stocks in areas where oil and gas exploration, development, and production occur are essential for evaluating whether subtle, individually insignificant changes occurring over short periods of time (i.e., a season or a year) are having non-negligible cumulative effects over longer time periods. Adequate monitoring programs also should include an assessment of our ability to detect significant effects when they occur.

The Marine Mammal Commission therefore recommends that the National Marine Fisheries Service, in consultation and cooperation with appropriate parties, promptly develop and implement a broad-based population monitoring and impact assessment program to collect baseline population information sufficient to detect changes and identify their possible causes and to verify that ongoing and planned oil and gas-related activities, in combination with other risk factors, are not individually or cumulatively having any significant adverse population-level effects on marine mammals or having an unmitigable adverse effect on the availability of marine mammals for subsistence uses by Alaska Natives. As we have stated in the past, the Commission would welcome the opportunity to discuss with the Service and interested parties how best to develop such a program (for example, through cosponsorship of a workshop).

If you or your staff has any questions concerning these comments or recommendations, please contact me.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director