

**FINDING OF NO SIGNIFICANT IMPACT
FOR THE ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION
TO TGS-NOPEC GEOPHYSICAL COMPANY ASA TO TAKE MARINE MAMMALS
BY HARASSMENT INCIDENTAL TO CONDUCTING OPEN-WATER 2D SEISMIC SURVEYS
IN THE CHUKCHI SEA**

NATIONAL MARINE FISHERIES SERVICE

BACKGROUND

On December 3, 2012, The National Marine Fisheries Service (NMFS) received an application from TGS-NOPEC Geophysical Company ASA (TGS) requesting an authorization for the harassment of small numbers of marine mammals incidental to its open-water 2D seismic survey activities in the Chukchi Sea off Alaska. After addressing comments from NMFS, TGS modified its application and submitted a revised application on April 1, 2013, and a revised marine mammal monitoring and mitigation plan on April 15, 2013.

In response to receipt of the request from TGS, NMFS proposes to issue an IHA that authorizes takes by level B harassment of marine mammals pursuant to section 101(a)(5)(D) of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. §§ 1631 *et seq.*), and the regulations governing the taking and importing of marine mammals (50 Code of Federal Regulations (CFR) Part 216).

Pursuant to the MMPA, authorization for incidental taking shall be granted provided that NMFS: (1) determines that the action would have a negligible impact on the affected species or stocks of marine mammals; (2) finds the action would not have an unmitigable adverse impact on the availability of those species or stocks of marine mammals for taking for subsistence uses; and (3) sets forth, where applicable, the permissible methods of taking, other means of effecting the least practicable impact on affected species and stocks and their habitat, and requirements pertaining to the mitigation, monitoring, and reporting of such takes.

In accordance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. §§ 4321 *et seq.*), NMFS has prepared an Environmental Assessment (EA) titled, "*Issuance of Incidental Harassment Authorizations to Take Marine Mammals by Harassment Incidental to Conducting Open-water Marine and Seismic Surveys in the Beaufort and Chukchi Seas*," (hereinafter, the EA). NMFS proposes to issue the IHA with the initially proposed mitigation measures, as described in Alternative 2 of the EA.

ANALYSIS

The National Oceanic and Atmospheric Administration Administrative Order (NAO) 216-6 contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. § 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in

combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in Fishery Management Plans (FMP)?

Response: The proposed action (i.e., issuing an IHA to TGS as described in Alternative 2 of the EA) is not reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH). The underlying action of TGS' 2D seismic surveys would result in only relatively short-term exposure to seismic sounds (up to 90 days, not including weather delays) within a limited area, which is not likely to have a significant impact on the marine environment. To date, fish mortalities associated with seismic operations are thought to be slight. Behavioral changes in fish associated with sound exposures are expected to be minor (e.g., temporary abandonment of the ensonified area). Therefore, impacts would add an incremental degree of adverse impacts to fish resources, but these impacts would not be significant.

EFH for five species of Pacific salmon (pink [humpback], chum [dog], sockeye [red], chinook [king], and coho [silver]) occurring in Alaska has been identified in the action area. The issuance of an IHA for TGS' Chukchi Sea 2D seismic surveys in 2013 is not anticipated to have any adverse effects on EFH.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: The proposed action is not expected to have a substantial impact on biodiversity and/or ecosystem functions in the vicinity of the proposed open-water seismic surveys in the Chukchi Sea because NMFS does not expect the issuance of the IHA to TGS to significantly (1) affect the susceptibility of any of the animals found in the vicinity of the project area to predation, (2) alter dietary preferences or foraging behavior, (3) change distribution or abundance of predators or prey, or (4) significantly disturb marine mammal behavior.

The impacts of the underlying action on marine mammals are limited to disturbance of marine mammals from being exposed to seismic airgun impulses during survey activities. TGS will implement a variety of mitigation measures such as ramping-up seismic airguns, establishing and monitoring exclusion zones and implementing power-down and shutdown measures. Neither injury nor mortality of marine mammals is anticipated and will not be authorized. These acoustic disturbances are not expected to result in substantial impacts to marine mammals or to their role in the ecosystem.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response: The proposed action is not reasonably expected to have a substantial adverse impact on public health or safety because the authorized activity does not pose a risk to public health or human safety. The seismic surveys in the Chukchi Sea are part of routine oil and gas exploration activities that are performed by industry worldwide on a regular basis. No hazardous material would be produced and/or discharged from vessels involved in the seismic survey activities.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: The proposed action is not reasonably expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species. The IHA will not authorize injury or mortality of marine mammals. NMFS Office of Protected Resources has preliminarily determined that the take of marine mammals incidental to these open-water marine and seismic surveys would have negligible effects on the species and stocks of marine mammals in the action area. Further, NMFS Alaska Regional Office has concluded that the issuance of an IHA is: (1) not likely to jeopardize the continued existence of the ESA-listed bowhead, humpback, and fin whales, and ringed and bearded seals; and (2) not likely to adversely modify or destroy critical habitat, as the proposed seismic survey area is neither within nor nearby designated critical habitat for ESA-listed species. Therefore, NMFS has determined that issuance of an IHA for this activity would not lead to any effects to listed marine mammal species beyond those that were considered in the ESA consultation.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: NMFS does not expect the issuance of an IHA to TGS to result in significant social or economic impacts interrelated with natural or physical environmental effects. Effects of the open-water seismic surveys in the Chukchi Sea would be limited to the short-term harassment of marine mammals as authorized by the permit. Authorization of the proposed seismic surveys could result in a low level of economic benefit to the local economy. However, such impacts would likely be negligible and on a regional or local level.

The activities authorized would not substantially impact use of the environment or use of natural or depletable resources, such as might be expected from large scale oil and gas development or resource extraction activities. Further, issuance of the IHA would not result in inequitable distributions of environmental burdens or access to environmental goods.

NMFS has determined that issuance of the IHA will not adversely affect low-income or minority populations. There will be no unmitigable adverse impact resulting from the activity on the availability of the species or stocks of marine mammals for subsistence uses, as necessary mitigation measures would be implemented to eliminate any impacts that would have significant effects on the subsistence use of such resources. In addition, TGS has prepared a Plan of Cooperation and worked with the native communities to further mitigate potential impacts to subsistence use of marine mammal resources.

6) Are the effects on the quality of the human environment likely to be highly controversial?

Response: The effects of issuing an IHA to TGS as described in Alternative 2 of the EA on the quality of the human environment are not likely to be highly controversial because: (1) there is no substantial dispute regarding the size, nature, or effect of the proposed action; and (2) there is no known scientific controversy over the potential impacts of the proposed action.

To allow other agencies and the public the opportunity to review and comment on the actions, NMFS published a notice of receipt of the TGS application and proposed IHA in the *Federal Register* on June 12, 2013 (78 FR 35508). During the 30-day comment period, NMFS received comments from the Marine Mammal Commission; the Alaska Eskimo Whaling Commission; the North Slope Borough, the Alaska Wilderness League, Center for Biological Diversity, Earthjustice,

Greenpeace, International Fund for Animal Welfare, Natural Resources Defense Council, Northern Alaska Environmental Center, Ocean Conservation Research, Oceana, Redoil, and Sierra Club (collectively "AWL"), and two private citizens. All comments will be addressed in the *Federal Register* notice for the issuance of the IHA.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

Response: The proposed action is not reasonably expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas because none of these are found in the project areas. Similarly, as described in the response to question 1 above, no substantial impacts to EFH, designated critical habitat (DCH) or ecologically critical areas are expected as the proposed open-water seismic surveys would have a limited footprint for a short duration.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: The action of issuing an IHA to TGS for the incidental take, by Level B harassment only, of small numbers of marine mammals is not expected to have effects on the human environment that would be highly uncertain or involve unique unknown risks. Similar marine and seismic surveys for oil and gas exploration in open-water areas have been performed routinely and without incidence.

While NMFS' judgments on impact thresholds for marine mammals in the vicinity of the project area are based on limited data, the risks are known and would involve the temporary harassment of marine mammals. No deaths or injuries to animals have been documented due to past open-water marine and seismic surveys using airgun arrays and other active acoustic sources. The most common response to seismic airgun noise is for marine mammals to vacate the survey area temporarily.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: The proposed action to issue an IHA to TGS is not related to other actions with individually insignificant, but cumulatively significant impacts. While the Environmental Assessment supporting this FONSI covers NMFS' proposed issuance of three separate IHAs, the actions are not related because each IHA will be issued to a separate and unrelated applicant and NMFS has the discretion over how to approve or deny each IHA application.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources?

Response: The issuance of an IHA is not expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources either because such resources do not exist within the project area or are not expected to be adversely affected. In particular, the areas in the Chukchi Sea where TGS' proposed open-water seismic surveys are

planned do not contain sites listed in or eligible for listing in the National Register of Historic Places.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: The issuance of an IHA is not reasonably expected to lead to the introduction or spread of any non-indigenous species into the environment because the activities associated with the proposed project are not likely to introduce or spread any non-indigenous species.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or does it represent a decision in principle about a future consideration?

Response: The issuance of an IHA is not expected to set a precedent for future actions with significant effects nor represent a decision in principle regarding future considerations. The issuance of an IHA to take marine mammals incidental to open-water marine and seismic surveys in the Arctic is a routine process under the MMPA. To ensure compliance with statutory and regulatory standards, NMFS' actions under section 101(a)(5)(D) of the MMPA must be considered individually and be based on the best available information, which is continuously evolving. Issuance of an IHA to a specific individual or organization for a given activity does not guarantee or imply that NMFS will authorize others to conduct similar activities. Subsequent requests for incidental take authorizations would be evaluated upon their own merits relative to the criteria established in the MMPA, ESA, and NMFS implementing regulations on a case-by-case basis.

TGS' proposed open-water seismic survey project has no unique aspect that would suggest it would be a precedent for any future actions. For these reasons, the issuance of an IHA to TGS to conduct the open-water seismic surveys is not precedent setting.

13) Can the proposed action reasonably be expected to violate any Federal, State, or local law or requirements imposed for the protection of the environment?

Response: The issuance of an IHA would not violate any federal, state, or local laws for environmental protection. NMFS has fulfilled its section 7 responsibilities under the ESA (see response to Question 4) and NEPA analysis.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: Based on our analysis in the Environmental Assessment, the issuance of an IHA is not expected to result in any significant cumulative adverse effects that could have a substantial effect on target or non-target species because the minor and short-term stresses (separately and cumulatively when added to other stresses experienced by the marine mammals in the vicinity of the open-water seismic surveys area) resulting from the open-water seismic surveys in the Chukchi Sea would be expected to be minimal.

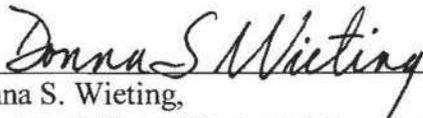
While the marine mammals in the vicinity of TGS' open-water seismic survey area have the potential to be impacted by other human activities in the Arctic Ocean (i.e., other marine and seismic surveys by the oil and gas industry in the Chukchi and Beaufort Seas and subsistence activities), as described in the cumulative impacts analysis in the EA, these activities are generally separated both geographically and temporally from TGS' proposed seismic surveys. Any short-term stress (separately and cumulatively when added to other stresses experienced by the marine

mammals in the vicinity of TGS' open-water seismic survey area) resulting from the proposed open-water seismic surveys by TGS would be expected to be minimal. Thus, NMFS concluded that the impacts of issuing an IHA to TGS for the incidental take, by Level B harassment only, of small numbers of marine mammals are expected to be no more than minor and short-term.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Final Environmental Assessment titled, "*Issuance of Incidental Harassment Authorizations to Take Marine Mammals by Harassment Incidental to Conducting Open-water Marine and Seismic Surveys in the Beaufort and Chukchi Seas*," prepared by NMFS, it is hereby determined that the issuance of an IHA for the take, by harassment, of small numbers of marine mammals incidental to TGS' proposed open-water seismic surveys in the Chukchi Sea, will not significantly impact the quality of the human environment, as described in this document and in the EA.

In addition, all beneficial and adverse impacts of the action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.



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

JUL 23 2013

Date