MARINE MAMMAL COMMISSION

30 June 2010

Mr. J. F. Bennett, Chief
Branch of Environmental Assessment
Minerals Management Service (MS-4042)
381 Elden Street
Herndon, Virginia 20170

Re: Notice of Intent to Prepare and Scope an Environmental Impact Statement for the Outer Continental Shelf Oil and Gas Leasing Program for 2012–2017 (75 Fed. Reg. 16828)

Dear Mr. Bennett:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Minerals Management Service's request for comments regarding the subject notice of intent. When appropriate, the Commission will comment in more detail on environmental impact statements and specific lease sales associated with this program and the possible risks to marine mammals and the marine ecosystems of which they are a part. For now, the Commission offers the following recommendations and rationale.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the Minerals Management Service—

- work with the Department of Energy to develop a long-term national energy strategy and integrate its new 5-year oil and gas leasing program into that strategy;
- include in its 2012–2017 environmental impact statement a clear, detailed, and systematic description of the phases of oil and gas production and the infrastructure or equipment involved. Such a description is necessary to provide a basis for a systematic review of risks in the environmental consequences section of the environmental impact statement;
- consult with the National Marine Fisheries Service, Fish and Wildlife Service, and Marine Mammal Commission to develop a set of standards for baseline information to be obtained prior to the initiation of new energy-related operations;
- include in its 2012–2017 environmental impact statement a more detailed description of the data and methods used in its ecosystem sensitivity analysis to allow readers to follow the line of reasoning that leads to a particular conclusion;
- expand Secretary Salazar's directive to the U.S. Geological Survey to evaluate the resilience all U.S. marine ecosystems where oil and gas operations are being conducted, planned, or contemplated, and incorporate that information in the 2012–2017 environmental impact statement if the evaluation can be completed in time; and
- use the environmental consequences section of the environmental impact statement to integrate all of the information in the preceding sections and systematically describe the risks associated with each phase of oil and gas development/production and each component of the related infrastructure, including support operations.

RATIONALE

National Environmental Policy Act regulations describe the required components of an environmental impact statement, as indicated by the subheadings below.

Purpose and Need

On 15 June 2010 President Obama spoke to the nation about the Deepwater Horizon oil spill. Among other things, he described the implications of the spill and the need for a new national energy strategy. Despite our increasing dependence on foreign oil, our growing demand for energy, and our now extended history of spills, the United States still lacks a coherent national energy strategy. On 15 September 2008 and again on 21 September 2009, the Commission wrote to the Minerals Management Service noting that—

> The United States has faced an impending energy crisis for decades but has neither responded with adequate foresight and commitment to address the crisis in its earlier stages nor shown the foresight to reduce our national dependence on hydrocarbons and minimize the production of greenhouse gases. Records of the production and use of oil and gas since the enactment of the Outer Continental Shelf Lands Act in 1953 illustrate historical patterns in oil and gas production and use, as do similar records for other energy sources. Those historical records, combined with anticipated population and economic growth, should be sufficient to project future patterns and potential consequences of continuing with a "business as usual" approach. A thoughtful and farsighted plan is needed to move the nation beyond efforts simply to find the next oil field. If left unchanged, the present course would have a number of undesirable consequences, including the acceleration of climate change and its multitude of adverse effects.

The Deepwater Horizon spill highlights the potential severity of such undesirable consequences. In the Commission's view, the purpose and need for the 2012–2017 leasing program can best be explained in the context of a long-term national energy strategy. That view has been reinforced by the Deepwater Horizon spill. Therefore, the Marine Mammal Commission again recommends that the Minerals Management Service work with the Department of Energy to develop a long-term national energy strategy and integrate its new 5-year oil and gas leasing program into that strategy.

Among other things, the strategy should include (a) a projection of the country's long-term energy needs based on expected population growth and economic expansion, (b) a description of all existing and potential sources of energy and trends in the development of those sources, (c) alternative approaches for meeting projected needs, including conservation, and the potential environmental impacts associated with those alternatives, and (d) a significant large-scale program aimed at reducing per capita energy demand, achieving greater efficiency in ongoing energy use, developing alternate energy sources, and reducing greenhouse gas production. Without such context,

the alternatives available to decision makers and the public are unnecessarily limited to those involving oil and gas activities when the initial decision should focus on the type or source of energy to be developed.

The Alternatives

The alternatives should encompass a range of approaches for obtaining energy, and oil and gas operations must be included. The Deepwater Horizon incident and response efforts reveal the complex nature of oil and gas operations in the marine environment and, judging from the news as this spill developed, both decision makers and the public have a limited understanding of those operations. The environmental impact statement for the 2012–2017 leasing program provides an opportunity to educate all interested parties regarding the processes and risks involved.

In both a temporal and a technological sense, oil and gas development in the marine environment is a linear process—that is, it proceeds in a predictable sequence, each phase or step with its own purpose and risks. Temporally, the phases of oil and gas development begin with seismic studies to explore for oil and gas reserves and evaluate ocean bottom conditions. These activities are followed by exploratory drilling and, if suitable reserves are found, construction of drilling platforms and preparation of transport systems (e.g., construction of pipelines, contracting of vessels). Production can then proceed with the drilling of multiple wells, extraction of crude oil and gas from the reservoir, and transport of the oil to refineries and the gas to markets either directly through pipelines or in tankers after being liquefied. Seismic studies are repeated on a regular basis to guide drilling and monitor changes in the reservoir. When economic conditions and conditions within the reservoir dictate, drilling and extraction are discontinued and the platform and associated infrastructure are decommissioned (e.g., platforms shut down and removed, pipelines emptied of oil, sealed, and buried). All of these operational phases require various support activities, which are also an important part of oil and gas development and should be included in the description of the alternatives. From start to finish, oil and gas development at a particular site may occur over a period of several decades.

During production (i.e., drilling, extraction, and transportation) the movement of oil also follows a linear or directional process. The oil flows through a series of pipelines and other equipment and, again, each component serves a certain function and adds certain risks. A clear and systematic description of this equipment and their functions should help identify areas where additional attention is needed to prevent or reduce the probability of accidents or respond more effectively to them when they occur. Had such a systematic approach been used in evaluating the Deepwater Horizon operation, it might have led to questions about potential problems at the wellhead and the industry's ability to address those problems at a depth of 5,000 feet. With that in mind, the Marine Mammal Commission recommends that the Minerals Management Service include in its 2012–2017 environmental impact statement a clear, detailed, and systematic description of the phases of oil and gas production and the infrastructure or equipment involved. Such a description is necessary to provide a basis for a systematic review of risks in the environmental consequences section of the environmental impact statement.

The Affected Environment

The purpose of this section of the environmental impact statement is to describe the environment that might be affected by the proposed oil and gas operations and any alternatives to the proposed action. This description should include, among other things, all pertinent physical properties and biological communities that may be affected by oil and gas operations.

Physical properties: The environmental impact statement should describe all of the various physical properties of the marine environment that may have important implications for oil and gas development including, but not limited to, subsea faults and gas deposits, benthic substrate and obstructions, water depth, proximity to shore, currents, presence of ice, winds, exposure to storms, tides, and freshwater input. These and other features of the marine environment may have important implications for construction and maintenance of drilling and production infrastructure and also may be important determinants of the effects of accidents (e.g., determine the trajectory of spilled oil).

Biological communities: The environmental impact statement should describe all of the biological components of the marine environment that may be affected by oil and gas operations. These components should include organisms present on a year-round or seasonal basis and associated with the ocean bottom, mid and upper water column, and surface. The description should include organisms that may be affected by normal operations as well as those that may be affected by accidents. It should include particularly sensitive populations (e.g., those listed as depleted, threatened, or endangered) as well as particularly sensitive areas (e.g., existing local, state, and federal marine protected areas, national monuments, essential fish habitats, designated critical habitats for rare, depleted, endangered, or otherwise protected species, and biological hotspots—that is, areas of particular biological richness).

Baseline information: In recent years the Marine Mammal Commission has written to the Minerals Management Service to recommend that it work with the oil and gas industry, the National Marine Fisheries Service, and the Fish and Wildlife Service to collect better baseline information for the purpose of determining if oil and gas activities (or activities associated with alternative energy sources) have significant effects on marine mammals and their habitat. The Service made considerable effort to do so for marine mammal species in several regions, such as for multiple species off California, Oregon, and Washington in the 1970s, surveys for cetaceans and turtles off the northeast coast in the late 1970s and early 1980s, surveys for cetaceans in the Gulf of Mexico in the mid-1990s, and, more recently, for the sperm whale in the Gulf of Mexico and bowhead and beluga whales in the Alaska region. These efforts have provided useful information regarding distribution and abundance of marine mammals, but they do not provide sufficient baseline information for such things as contaminant loads carried by cetaceans prior to oil and gas development. Indeed, baseline information should be collected in all cases where before and after comparisons would provide important information for assessing the impacts of development, including spills. Given the need for such baseline information and the growing demand for oil and gas resources, the most useful approach would be to develop a set of information standards that

would guide the Service's efforts related to energy development. In a 21 September 2009 letter to the Minerals Management Service regarding the then-proposed 2010–2015 leasing program, the Commission recommended that the Service consult with the National Marine Fisheries Service, the Fish and Wildlife Service, and the Marine Mammal Commission to develop a set of standards for baseline information to be obtained prior to the initiation of new energy-related operations. The Marine Mammal Commission repeats that recommendation here.

Ecosystem sensitivity and resilience: To determine where oil and gas operations will be allowed to proceed, the Minerals Management Service also will need broadscale measures of ecosystem sensitivity and resilience. In a 7 May 2010 letter, the Commission noted the progress being made by the Minerals Management Service in developing broadscale sensitivity analyses. The analyses compare relative sensitivity to oil- and gas-related risks across a wide range of habitats and ecosystems in multiple marine regions under U.S. jurisdiction. For that reason, they may provide a framework for balancing resource extraction with associated risks on a national rather than regional scale. Such analyses are an essential part of planning for the 2012–2017 leasing program. However, the presentation of the environmental sensitivity analysis for 2007–2012 leasing program (75 Fed. Reg. 16833) did not provide enough detail on methods and data sources to allow decision makers and the public to judge the appropriateness of its conclusions. Therefore, it was not as useful as it might have been in informing decisions regarding which planning areas to use. For that reason, the Marine Mammal Commission repeats its 7 May 2010 recommendation that the Minerals Management Service include in its 2012–2017 environmental impact statement a more detailed description of the data and methods used in its ecosystem sensitivity analysis to allow readers to follow the line of reasoning that leads to a particular conclusion.

The Commission supports Secretary Salazar's recent directive to the U.S. Geological Survey to evaluate the resilience of Arctic coastal and marine ecosystems to resource extraction activities, and the additional information needed to better understand that resilience. However, the Commission believes that a similar evaluation is needed for all marine ecosystems that are under U.S. jurisdiction and may be subject to the effects of oil and gas development. With that in mind, the Marine Mammal Commission recommends that the Minerals Management Service, on behalf of the Secretary, expand the directive to the U.S. Geological Survey to evaluate the resilience of all U.S. marine ecosystems where oil and gas operations are being conducted, planned, or contemplated and incorporate that information in the 2012–2017 environmental impact statement if the evaluation can be completed in time.

Environmental Consequences

The environmental consequences section is the heart of the environmental impact statement. The Marine Mammal Commission recommends that the Minerals Management Service use this section to integrate all of the information in the preceding sections and systematically describe the risks associated with each phase of oil and gas development/production and each component of the related infrastructure, including support operations. It should describe the prevention measures to reduce or eliminate each risk and the response measures when accidents are imminent or occur. It

should provide a realistic appraisal of the risks of failure and the efficacy of prevention, mitigation, backup, and response measures (including how that efficacy will be maintained over time), and it should describe the basis for the appraisal. It should make use of the best available information on similar oil and gas operations or it should explain why that information is not relevant. It should describe the full range of risks from relatively small spills (e.g., < 1 barrel) to large, prolonged spills (e.g., worst-case scenarios). It should describe the risks in terms of their probability of occurrence and the potential consequences if they occur. It also should describe the potential for human error and means to minimize such error.

Experience during the Deepwater Horizon spill indicates that response measures might have been more effective if the industry or Minerals Management Service had anticipated problems before drilling began and made adequate preparations to address those problems. Plugging the riser pipe is perhaps the most obvious example of a solution that should have been developed in advance, but a number of additional steps or studies might have been undertaken prior to drilling, such as better characterization of the oil, testing of dispersants, experiments with dispersants at depth or with burning of oil to assess residue, and testing of booms to evaluate their efficacy with oil below the surface. If, in fact, the Service and industry did not recognize the value of such steps, then one could argue that both parties failed to take a systematic and comprehensive approach to risk analysis and management—a shortcoming that should not be repeated under the 2012–2017 leasing program.

In summary, the Marine Mammal Commission believes that the environmental impact statement for the 2012–2017 leasing program should (1) describe its purpose and need in the context of a long-term national energy strategy, (2) provide a detailed and systematic description of the phases of oil and gas development and production as well as the production infrastructure, (3) provide a comprehensive description of the physical and biological environment including available and needed baseline information and broadscale measures of ecosystem sensitivity and resilience, and (4) include a systematic review of all risks associated with oil and gas operations and the capacity for responding when and where those risks become reality. The Commission considers such a systematic review to be essential for reducing the risk of another accident like that of the Deepwater Horizon operation and ensuring more effective accident response.

Please contact me if you have questions regarding these recommendations and comments.

Sincerely,

Timothy J. Ragen, Ph.D.
Executive Director