

**STATEMENT OF
WALTER CRUICKSHANK
DEPUTY DIRECTOR, MINERALS MANAGEMENT SERVICE
U.S. DEPARTMENT OF THE INTERIOR
BEFORE THE
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
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Thank you, Chairman Bingaman, Senator Murkowski, and members of the Committee, for the opportunity to discuss the Minerals Management Service's (MMS) stewardship in promoting environmentally responsible energy and mineral development on the Outer Continental Shelf (OCS).

The Department of the Interior (Department) and its agencies, including the MMS, are public stewards for much of our nation's natural resources. The Department manages 500 million acres of land, one-fifth of the land mass of the U.S., and over 1.7 billion acres of the OCS. About 1/3 of the nation's domestic oil and gas production comes from Federal resources managed by the Department.

This land base includes areas that boast some of the best renewable energy resources available for development today. On the OCS, the Department of Energy's National Renewable Energy Lab has identified more than 1,000 gigawatts of wind potential off the Atlantic coast, and more than 900 gigawatts of wind potential off the Pacific coast. Secretary Salazar is committed to taking the initiative in these areas by contributing to a clean energy-based economy that promotes investment and innovation here at home and in an environmentally responsible manner. Collectively, the Administration's efforts to develop a clean energy economy will generate jobs, improve our energy security by reducing our dependence on oil, and reduce greenhouse gas emissions.

We recognize that we will likely be dependent on conventional sources of energy – oil, gas and coal – for a significant portion of our energy for some time to come. Therefore, it is important that the Department continue careful stewardship of energy resources on public lands, both onshore and on the OCS. With these objectives in mind, the Department has been actively engaged in the Interagency Ocean Policy Task Force. The Task Force, established by President Obama is led by the White House Council on Environmental Quality and charged with developing a recommendation for a national policy that ensures protection, maintenance, and restoration of the ocean, our coasts and the Great Lakes. It will also recommend a framework for improved stewardship, and effective coastal and marine spatial planning designed to facilitate better management of multiple uses of the oceans, coasts, and Great Lakes, including oil and gas operations and emerging renewable energy resources well into the future. We strongly support this coordinated approach to sustainable management of our ocean, coastal, and Great Lakes resources.

The MMS is charged with managing access to and development of the Nation's energy and mineral resources on the Federal OCS in a manner that is operationally safe and environmentally sound, prevents waste, and provides a fair return for public resources. MMS is also responsible for the management of the mineral revenues generated from Federal and American Indian lands onshore and the Federal OCS.

For 50 years, the Department of the Interior and MMS have overseen the OCS oil and gas program by enforcing regulations, developing standards, and conducting technology and environmental research. The Committee has asked me to highlight MMS's stewardship role in managing OCS oil and gas resources. I will focus on three areas (1) how MMS determines which areas to lease to meet the Nation's energy needs; (2) the environmental protections and standards for developing OCS energy and mineral resources; and (3) MMS research programs.

Determining Areas to Lease

The MMS has cradle-to-grave management and oversight responsibility for oil and gas leasing, exploration, and development on the OCS. Section 18 of the OCS Lands Act requires the Secretary of the Interior to prepare a 5-Year oil and gas leasing program (5-Year Program) that consists of a 5-year schedule of proposed lease sales that shows size, timing, and location of leasing activity as precisely as possible. The OCS Lands Act mandates that the 5-Year Program must balance the priorities of meeting national energy needs, ensuring environmentally sound and safe operations, and assuring receipt of fair market value to the taxpayer. Before any particular lease sale is considered, it must be included in an approved 5-Year Program.

The process to develop a 5-Year program includes three separate comment periods, two draft proposals, a final proposal, and the development of an environmental impact statement that informs the Secretary's decision making. During this process MMS evaluates the economic, social, and environmental values of the renewable and nonrenewable resources in the OCS and the potential impact of oil and gas exploration on other resource values of the OCS and the marine, coastal, and human environments. Throughout the stages of developing the plan, MMS analysis is based on science and research obtained through the MMS Environmental Studies Program, Technology Assessment and Research Program, and studies from other sources such as other Federal and State agencies, the National Academy of Science, and universities.

In order to balance the priorities of national energy needs, environmental protection and receipt of fair market value, the OCS Lands Act requires the Secretary to consider information on the geographical, geological, and ecological characteristics of each region; equitable sharing of development benefits and environmental risks; regional and national energy markets; other uses of the OCS; interest of potential oil and gas producers; the laws, goals and policies of the affected states; the relative environmental sensitivity and marine productivity of different areas of the OCS; and the relevant environmental and predictive information for different areas of the OCS.

The 5-Year Program initiates the process of deciding how, when and where it is appropriate to offer oil and gas leases on the OCS. As the leasing process moves forward, the potential areas to be offered for lease cannot be expanded from those available in the previous step without re-initiating the development of a new 5-Year Program. Thus, the entire leasing process proceeds from broad-based planning to a narrower focus as actual development is proposed. For example, it was at the final proposal stage of the current 2007-2012 5-Year Program, that the area 25-miles seaward of the coastline of the Chukchi Sea Planning Area was deferred from leasing activity to reduce potential environmental impact to the resources. For the Beaufort Sea Planning Area, the Barrow and Kaktovik bowhead whale hunt areas were also excluded from leasing. In the Central Gulf of Mexico Planning Area, the proposed final program included the commitment reached with the Governor of Alabama to avoid surface occupancy in a 15-mile area offshore Baldwin County, Alabama in order to mitigate visual impacts; this stipulation has been consistently included at the lease sale stage for all sales in this area since 1999.

After a new 5-Year Program is finalized, there is further environmental review and consultation with other Federal agencies and state, local and Tribal governments before holding any individual lease sale. As with the 5-Year Program development, the individual sale process is conducted in an open, transparent, predictable manner. From the Call for Information/Nominations to the Final Notice of Sale, the individual lease sale process, described in section 19 of the OCSLA, includes many opportunities for public input, in addition to the opportunities offered by necessary procedures under the National Environmental Policy Act and Coastal Zone Management Act. In all, there are eight opportunities for public comment before a final decision is made to hold any OCS sale. As a result of environmental review and consultations in this pre-lease sale process, additional areas may be excluded from leasing and mitigating measures may be required to address any potential impacts from oil and gas exploration and development. For example, MMS has for decades ensured protection of the Flower Garden Banks in the northwest Gulf of Mexico, by prohibiting leasing in the immediate area and restricting activities in a surrounding buffer zone.

Oversight of OCS Leases

MMS's stewardship responsibilities do not end once leases are executed; they have only begun. The Department of the Interior's OCS regulatory program has been in existence for 50 years. The program continues to evolve with the goals of improving effectiveness and efficiency and ensuring preparedness for new technological challenges such as deep water or Arctic operations.

Our regulatory framework encompasses a variety of components which address environmental, safety, and conservation issues. This framework includes a three-tiered approach to regulation, relying upon prescriptive requirements, performance-based goals, and consensus-based technical standards incorporated into MMS regulations. (A consensus-based technical standard is an industry standard where all concerned parties are given a voice in its development. While this process seeks agreement with most

participants, it also resolves or mitigates the objections of the minority. MMS has incorporated 97 such standards into our regulations. The MMS continually reviews these regulations to update and revise them to ensure that they include the most effective requirements for promoting safety and environmental protection on the OCS.)

Plan Submissions: Once a lease has been issued, a lessee/operator must submit plans for MMS approval before beginning any activity. The lessee/operator must meet certain criteria documented in a site-specific Exploration Plan (EP) before beginning exploratory drilling on a lease. If exploration results are favorable, the lessee/operator moves to the production and development phase of its operations. The lessee/operator must submit a Development and Production Plan (DPP) or a Development Operations Coordination Document (DOCD).

In water depths greater than 400 feet, the lessee/operator must also submit a Deepwater Operations Plan (DWOP) and a Conservation Information Document (CID). The purpose of the DWOP is to ensure that MMS has sufficient information to review any development project that uses non-conventional production or completion technology (in most cases, floating or subsea production systems) from a total system approach. MMS evaluates the system to determine whether the project will be properly developed, particularly from the standpoint of operational safety and environmental protection issues. The purpose of the CID is to ensure that all economically producible reservoirs are developed.

Each EP, DPP or DOCD must demonstrate that the proposed activities are conducted in a manner that --

- Conforms to Federal laws and regulations
- Is safe
- Prevents waste, conserves natural resources, and protects Federal interests
- Does not unreasonably interfere with other uses of the OCS
- Does not cause undue or serious harm or damage to the human, marine, or coastal environment.

An Application for Permit to Drill (APD) must be submitted to MMS for each and every well drilled on the OCS. Written approval is required before an operator may begin to drill any well, sidetrack, bypass or to deepen a well. The MMS requires each lessee/operator to take necessary precautions to keep wells under control at all times. The oil spill financial responsibility requirements must also be met.

Fail-Safe Mechanisms: Drilling and production safety equipment used on the OCS must be designed, installed, used, maintained, and tested in a manner to assure the safety and protection of the human, marine, and coastal environments. All wells open to hydrocarbon-bearing zones below the surface must be equipped with safety devices that will shut off the flow from the well in the event of an emergency, unless the well is incapable of flowing. All surface production facilities, including separators, treaters, compressors, headers, and flowlines, must be designed, installed, and maintained in a manner that provides for efficiency, safety of operations, and protection of the

environment. Surface- and subsurface-controlled safety valves and locks must conform to the requirements of MMS regulations. Production facilities also have stringent requirements concerning electrical systems, flowlines, engines, and firefighting systems. The safety-system devices are tested by the lessee at specified intervals.

Inspections: MMS conducts announced and unannounced inspections of OCS facilities and any vessels engaged in drilling or downhole operations to determine whether an operator's performance is acceptable year-round. Surprise unannounced inspections foster a climate of safe operations, maintain an MMS presence, and focus on operators with a poor performance record. Noncompliance with requirements for specific installations or procedures is followed by prescribed enforcement actions consisting of written warnings or shut-ins of platforms, zones (wells), equipment, or pipelines. In the event noncompliance is detected, the inspector takes the appropriate enforcement action. If an operator is found in violation of a safety or environmental requirement, a citation is issued requiring that it be fixed within 7 days. The violation may call for the particular well component, production component, or the entire complex to be shut in.

The Secretary also has other remedies, including the assessment of civil penalties for failure to comply with responsibilities under the law, a license, a permit, or any regulation or order issued.

Coordination: Throughout the 5-Year Program, individual sale, and regulatory processes, MMS consults with various Federal, state, and local agencies that share a stewardship role in managing the OCS. MMS consults with the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Fish and Wildlife Service to meet the requirements of the Endangered Species Act. MMS meets with tribal leaders in accordance with government-to-government consultation requirements and to incorporate their views in decisions. MMS and other agencies routinely collaborate to develop Memoranda of Agreement on various areas of overlapping responsibility.

Exploration and production activities proposed to MMS for approval must undergo environmental reviews by other federal agencies in compliance with more than ten statutes, executive orders and international agreements, in addition to the extensive environmental analysis required under NEPA. For example, proposed activities are examined for potential impacts to endangered and threatened species and habitat under the Endangered Species Act, to fish and habitat under the Magnuson-Stevens Fishery Conservation and Management Act, and to cultural resources under the National Historic Preservation Act. Evaluations of potential effects on marine mammals, birds, coral reefs, water quality, air quality, Indian sacred sites, and environmental justice also take place under separate consultation processes. Further, MMS coordinates with affected states under the Coastal Zone Management Act to ensure any MMS-approved activities are consistent with a state's federally-approved coastal management program. All of these environmental reviews are considered by MMS, along with the NEPA analysis, to make decisions on whether to approve an activity, and if so, what mitigation and monitoring measures must be put in place to eliminate or minimize any potential for adverse affects to these valuable marine resources.

In addition, in 2004, MMS entered into a Memorandum of Understanding with the U.S. Coast Guard (USCG). MMS interacts with the USCG on a multitude of mission areas at all levels from Headquarters down to the field units. For example, MMS has been authorized to oversee the Fixed Platform Self-Inspection Program on behalf of the USCG, and frequently exchanges information with the USCG to clarify policy issues and provide compliance statistics. MMS also interacts with the USCG at the Region and District levels to coordinate overlapping areas of offshore inspection and accident investigation field activities.

The MMS has been consulting with the military for more than 25 years at both the planning and operational stages to ensure that each agency meets the requirements of its mission while not unduly interfering with the other. Coordination under a 1983 MOA between the Department and the Department of Defense has yielded no serious conflict. For example, seven military communication towers installed by the U.S. Air Force offshore Mobile, Alabama support Air Combat Maneuvering Instrumentation; MMS coordinates with the Air Force to ensure non-interference with military operations in that area. Oil and gas activities are restricted so that no activity can take place within 500 feet of a tower site, and unobstructed lines of sight must be maintained between towers. The MOA is in the process of being updated to more accurately reflect the current status of the OCS and the new offshore renewable energy program.

Conservation of Resources: Part of the MMS mission is to manage ocean energy and mineral resources on the OCS to enhance public benefits, promote responsible use, and realize fair value. In order to accomplish this, MMS emphasizes the importance of conservation principles, which maximize the ultimate recovery of oil and natural gas from currently producing reservoirs. Sound conservation practices also ensure that the Nation reaps the full benefits of OCS development, including royalty revenues to the U.S. Treasury as well as domestic energy.

Through regulation and oversight, MMS requires a lessee/operator to conform to sound conservation practices that ensure all recoverable oil and gas reserves are produced and enhanced recovery is used whenever possible. Enhanced recovery operations include a variety of methods that alter the natural forces in a reservoir to increase the ultimate recovery of oil and gas. To this end, in water depths greater than 400 feet, operators must submit conservation information documents (CID).

The CID's submitted by the operator undergo a detailed review by a multidisciplinary team composed of a petroleum engineer, a geologist and a geophysicist. This team reviews the CID to ensure that all economically producible hydrocarbon-bearing zones are developed in an efficient manner. Waste of hydrocarbons could occur if producible hydrocarbon reservoirs are bypassed.

In addition, all requests to revise or abandon projects in deepwater are reviewed to ensure that wells are not prematurely abandoned before all economically producible reserves are recovered as outlined in the CID.

In addition, MMS is revising its regulations on flaring and venting of natural gas. Flaring and venting are only allowed after receiving prior approval from MMS (MMS may deny a request to flare or vent). The new regulations will set clearer limits on natural gas flaring and venting and require operators to report the amount of natural gas they flare separately from the amount of natural gas they vent. In addition, we will require operators to install natural gas flare/vent meters on any facility that processes more than 2,000 barrels of oil per day. These changes will give MMS better data on natural gas flaring and venting operations on the OCS.

Oil Spill Planning and Preparedness: The Oil Pollution Act of 1990 and Executive Order 12777 gives DOI/MMS authority over oil spill planning and preparedness for facilities in state and Federal offshore waters that handle, store, or transport oil (excluding deepwater ports). The MMS Oil Spill Program was established to oversee planning and preparedness activities of operators of regulated facilities in offshore waters. The goal of the program is to ensure that, during a response, those who will operate oil spill response equipment or serve on management teams are prepared to do so in a manner that prevents or minimizes safety hazards to responders and the public, and negative impacts to the environment.

Affected offshore operators must prepare an oil spill response plan for MMS approval that includes details on how they will respond to a worst-case discharge scenario from both near-shore and far-shore locations. Contents of oil spill response plans include spill management team members, certification of contracts with oil spill removal organizations, notification requirements, sensitive resources, dispersant use plans, platform and pipeline information, and specific emergency management procedures. On an annual basis, MMS conducts over 30 unannounced oil spill drills to verify that operators are prepared to quickly and efficiently respond to a spill from one of their facilities.

MMS Research Programs

The MMS is a leading participant in and supporter of scientific research relating to the ocean environment. Environmental stewardship is emphasized in all phases of OCS activity from the development of the 5-Year Program through platform decommissioning and removals. A fundamental goal of MMS's Environmental Studies Program is to develop workable solutions for those activities in the OCS that could adversely affect environmental resources. Since the program's inception in 1973, more than \$867 million has been spent on environmental research to manage development of offshore energy and mineral resources. This allows MMS to determine how to maintain safety and environmental protection while approved exploration and development continue. In fiscal year 2008 alone, 29 environmental studies were contracted at nearly \$16 million, and MMS completed 320 environmental assessments and two full, detailed environmental impact statements.

In many areas, MMS research has added significantly to scientific knowledge of the marine environment. Nearly 300 new marine species have been discovered as a result of the MMS studies. One of these discoveries is the fascinating “iceworm,” that lives on the surface of frozen methane hydrate in deep waters of the Gulf of Mexico.

One of the most important focuses for scientific study in the Alaskan offshore area has been the bowhead whale. Distinctive for its huge, comb-like baleen and thick blubber, the bowhead migrates annually between the Canadian Beaufort Sea and the Bering Sea. This large whale is vitally important to Alaska Native subsistence hunters and coastal villages in Alaska that are located along the migration route. The whale is protected by U.S. laws and has been designated as an endangered species. Since 1979, the MMS has funded and for many years conducted the “Bowhead Whale Aerial Survey Project” to survey the bowhead whales’ fall migration through the Western Beaufort Sea. During many summers between 1979 and 1991, the MMS funded aerial surveys in the Chukchi Sea for marine mammals. Since 2008, MMS has funded the “Chukchi Offshore Monitoring in Development Area” to provide aerial surveys of the migration in the Chukchi Sea Planning Area. This project is coordinated through NOAA’s National Marine Mammal Laboratory. The MMS uses the aerial survey information from the Beaufort and Chukchi Seas in the environmental review of OCS activities. Further, the information is available for any other entity to use and is posted on MMS website and the NOAA Fisheries Alaska Fisheries Science Center website.

The MMS also funds research into operational safety, pollution prevention, and oil spill response and cleanup capabilities through its Technology Assessment and Research (TAR) Program. In fiscal year 2008, the MMS funded 29 TAR studies at nearly \$3 million. The components of the TAR Program include the Operational Safety and Engineering Research program that addresses technological issues associated with the complete spectrum of oil and gas operations ranging from the drilling of exploratory wells to the removal and decommissioning of facilities on the OCS; the Oil Spill Response Research (OSRR) program that covers a wide spectrum of oil spill response issues to improve the knowledge and technologies used for the detection, containment and cleanup of oil spills that may occur on the OCS; and the Renewable Energy Research program that addresses technology and engineering issues associated with renewable energy projects on the OCS.

This research enables MMS managers to make better decisions in evaluating operational proposals and enables regulators to consider the latest technological advancements in enacting new regulations. As a result, the MMS has a robust regulatory system designed to prevent accidents and oil spills from occurring. This includes redundant well control equipment, emergency plans, and production safety systems as well as a host of other requirements. This has proven effective both in the wake of hurricanes in the Gulf of Mexico and in the Arctic conditions on the Alaska OCS.

Through the OSRR program, MMS also manages the Ohmsett wave and test tank facility at the Naval Weapons Station Earle Waterfront in Leonardo, New Jersey. Ohmsett provides oil spill response testing, training, and research opportunities to government, industry, academia, and private organizations on a reimbursable basis. Standard test

protocols are used at Ohmsett to evaluate oil spill containment booms and skimmers. Ohmsett provides the intermediate step between small-scale and open water testing of equipment. An estimated 95% of the performance data on mechanical equipment used today was obtained at Ohmsett. Ohmsett is also developing the capability to test renewable energy wave and current systems.

Examples of MMS Stewardship of Leased Areas on the OCS

One of the best examples of MMS environmental stewardship is at the Flower Garden Banks in the Northwest Gulf of Mexico. These two banks are the northernmost coral reefs on the continental shelf of North America and have a higher cover of living coral than other reefs off Florida or most areas of the Caribbean. They are considered among the healthiest coral reefs in the world. They also lie in an area of the Gulf of Mexico with extensive hydrocarbon reserves.

Beginning in the early 1970s, MMS initially required extensive monitoring studies of the reefs related to each energy development activity, typically many miles away. This requirement was later dropped and buffer zones were developed to prevent any possible impacts to the coral habitats from energy development activities including physical contact as well as discharges from drilling activities. Required protection measures range from specific areas where no activity of any kind is allowed, up to a four-mile radius where all drilling discharges are required to be transported or shunted to near the sea bed in deeper water preventing any transport onto the coral reefs.

Even though surrounded by numerous active oil and gas platforms, these coral reefs remain extremely healthy, while the majority of coral reefs all over the world suffer from extensive mortality due to heat stress and land-based sources of impacts. One existing platform structure is located just one mile from the coral reef at the East Flower Garden Bank. This platform predates, and is located inside the boundaries of the Flower Garden Banks National Marine Sanctuary. It has served as a research station in the past through cooperative arrangements with industry. Although MMS began research and monitoring at the Flower Gardens in the 1970s, both NOAA and MMS began sharing the expense of annual monitoring of the reefs beginning shortly after their designation as a sanctuary in 1992.

The MMS has also been a leader in the protection of deep-sea biological communities, particularly chemosynthetic communities and cold water corals. Chemosynthetic communities (animals living independent of photosynthesis required by most all other life on earth) were first discovered in the Central Gulf of Mexico during an MMS-funded study of the deep continental slope in 1984. MMS recognized the importance of these unusual habitats and this particular project was extended specifically to study these new communities for the first time. Through MMS studies, chemosynthetic communities in the Gulf of Mexico are the best understood ecosystems of their kind anywhere in the world. Avoidance regulations were established beginning in 1988 and adapted over time as we learned more about these communities, leading to increased buffer distances from both energy production discharge locations and physical impacts such as anchors.

MMS has also been at the forefront of the study of cold water corals beginning in the 1990s. The most extensive deep coral habitat in the Gulf of Mexico was discovered in 1,500 feet of water southeast of Louisiana in 1993, during a standard visual survey required by MMS prior to operations. Through an adaptive management approach, regulatory policies are being revised to incorporate recent MMS scientific findings. Two recent studies have determined that very sensitive deepwater coral habitats occur as shallow as 300 meters. Amending MMS's regulatory policies to require review for these coral habitats beginning at 300 meters rather than 400 meters, will result in extended avoidance and buffer distances from all potential deep water coral habitats and protect these corals.

Historic preservation is another aspect of MMS's protection of the offshore environment. The MMS considers the effect of all its actions, including lease sales, studies and permits, on the cultural heritage of the Nation. To meet this responsibility, it requires the oil and gas industry to conduct marine remote-sensing surveys that may identify shipwrecks. As a result, a highly sought-after World War II German submarine, the U-166, was discovered 45 miles from the mouth of the Mississippi River through the joint efforts of MMS and the oil industry charged with conducting the surveys. The U-166, the only German submarine sunk in the Gulf of Mexico, rests in the crater it created when it was sent to the bottom by a depth charge in the summer of 1942, shortly after the U-166 torpedoed and sank the passenger freighter *S.S. Robert E. Lee*. The wreckage of the submarine was found in 5,000 feet of water. The U-boat's whereabouts had long been disputed and it was thought to lie far from its actual resting-place. MMS archaeologists were part of the scientific team that was instrumental in locating and identifying the World War II U-boat. The discovery solved a 59-year old mystery and ended decades of fruitless searching.

In addition, we have just finished the third year of a four-year project jointly sponsored by MMS and NOAA's Office of Ocean Exploration and Research, to better understand ocean ecosystems, corals and submerged historic and cultural resources in the Gulf of Mexico. By working together, we combine our talent, funding and physical resources to meet important objectives for both agencies with better results and lower costs than either agency could realize alone.

Conclusion

The Department and MMS are poised to continue their vital roles in managing OCS conventional and renewable energy resources. The magnitude and complexity of being a responsible steward requires a continued commitment to environmental protection and safe operations on the OCS. The MMS takes OCS stewardship responsibilities seriously and is committed to regulating the development of the Nation's energy and mineral resources through measures to ensure environmental protection and safe operations, continued research, and requiring fair returns and accurate accounting of revenue generated from the Federal resources.

We welcome your input on our Nation's energy initiatives and look forward to working with the Committee as we move forward with our OCS energy and minerals programs. Mr. Chairman, this concludes my remarks. I would be happy to answer any questions.