CHAPTER 1

THE PROPOSED ACTIONS

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1.1. DESCRIPTION OF THE PROPOSED ACTIONS

This draft environmental impact statement (EIS) addresses two proposed Federal actions. The proposed actions are two oil and gas lease sales (Lease Sales 189 and 197) in the proposed lease sale area of the Eastern Planning Area (EPA) of the Gulf of Mexico (GOM) Outer Continental Shelf (OCS) (Figure 1-1), as scheduled in the *Outer Continental Shelf Oil and Gas Leasing Program: 2002-2007* (5-Year Program). Under the 5-Year Program, proposed Lease Sale 189 is scheduled for 2003, while proposed Lease Sale 197 is scheduled for 2005. The proposed lease sale area is the same area offered under Lease Sale 181 in 2001. The area is comprised of 256 blocks covering 1.5 million acres (ac) in 1,600 to 3,000 meters (m) of water, making each proposed lease sale relatively small in comparison to a Central or Western GOM lease sale. Geographically, the proposed lease sale area is 70 miles (mi) from Louisiana, 98 mi from Mississippi, 93 mi from Alabama, and 100 mi from Florida (see Appendix A, Physical and Environmental Settings). It is estimated that each proposed lease sale could result in the production of 0.065-0.085 billion barrels of oil (BBO), 0.265-0.340 trillion cubic feet (Tcf) of gas, 11-13 exploration and delineation wells, 19-27 development wells, and 2 production structures. There are currently 118 leased blocks within the proposed lease sale area (Figure 1-2); therefore, 138 blocks would be available for lease. Six exploration plans (EP) covering 18 blocks have been submitted in the proposed lease sale area (Figure 1-3). Four of the six EP's have been approved; the other two are pending. It is not expected that all of the blocks offered would be leased; only some of the leases would actually produce oil and gas.

For analysis purposes (Chapter 4), a proposed action is presented as a set of ranges for resource estimates, projected exploration and development activities, and impact-producing factors. Each of the proposed lease sales is expected to be within the scenario ranges; therefore, a proposed action is representative of either proposed Lease Sale 189 or Lease Sale 197. Each proposed action includes existing regulations (Chapter 1.3) and lease stipulations (Chapter 2.2.2.1).

1.2. PURPOSE OF AND NEED FOR THE PROPOSED ACTIONS

The purpose of the proposed actions (Lease Sales 189 and 197) is to offer for lease all unleased blocks in the proposed lease sale area that may contain economically recoverable oil and natural gas resources (Figure 1-2). The proposed lease sales would provide qualified bidders the opportunity to bid upon and lease acreage on the GOM OCS in order to explore, develop, and produce oil and natural gas. The GOM constitutes one of the world's major oil- and gas-producing areas, and it has proved to be a steady and reliable source of crude oil and natural gas for more than 50 years. Without oil from the GOM, the Nation's need for oil imports would be greater. Natural gas is generally considered an environmentally preferable alternative to oil in terms of both production and consumption. It is estimated that each proposed lease sale could result in the production of 0.065-0.085 BBO and 0.265-0.340 Tcf of gas.

Since proposed Lease Sales 198 and 197 and their projected activities are very similar, this Draft EIS encompasses both proposed leases sales as authorized under 40 Code of Federal Regulations (CFR) 1502.4, which allows related or similar proposals to be analyzed in one EIS. The multisale EIS approach is intended to focus the National Environmental Policy Act (NEPA) EIS process on the differences between the proposed lease sales and new issues and information. This Draft EIS analyzes the potential impacts of the proposed actions on the marine, coastal, and human environments as mandated by the NEPA. Scoping for this Draft EIS was conducted in accordance with the Council on Environmental Quality (CEQ) regulations implementing NEPA. Detailed information on this document's scoping process is presented in Chapter 5.

At the completion of the NEPA process for the Final EIS, a decision will be made only for proposed Lease Sale 189. An additional NEPA review (an environmental assessment (EA)) will be conducted in the year prior to proposed Lease Sale 197 to address any relevant new information. Formal consultation with other Federal agencies, the affected States, and the public will be carried out to assist in the determination of whether or not the information and analyses in the Final EIS are still valid. The EA will tier from the Final EIS and will summarize and incorporate the material by reference. Consideration of the EA and any comments received will result in either a Finding of No New Significant Impact

(FONNSI) or the determination that the preparation of a Supplemental EIS (SEIS) is warranted. The SEIS, if deemed necessary, will also tier from the Final EIS and will summarize and incorporate the material by reference.

The Outer Continental Shelf Lands Act (OCSLA) of 1953 (67 Statute (Stat.) 462), as amended (43 United States Code (U.S.C.) 1331 and the following (*et seq*.) (1988)), established Federal jurisdiction over submerged lands on the OCS seaward of the State boundaries. Under the OCSLA, the United States Department of the Interior (USDOI or DOI) is required to manage the leasing, exploration, development, and production of oil and gas resources on the Federal OCS. The Secretary of the Interior (Secretary) oversees the OCS oil and gas program and is required to balance orderly resource development with protection of the human, marine, and coastal environments while simultaneously ensuring that the public receives an equitable return for these resources and that free-market competition is maintained. The Act empowers the Secretary to grant leases to the highest qualified responsible bidder(s) based on sealed competitive bids and to formulate such regulations as necessary to carry out the provisions of the Act. The Secretary has designated the Minerals Management Service (MMS) as the administrative agency responsible for the mineral leasing of submerged OCS lands and for the supervision of offshore operations after lease issuance.

1.3. REGULATORY FRAMEWORK

Federal laws mandate the OCS leasing program and the environmental review process. Several Federal regulations establish specific consultation and coordination processes with Federal, State, and local agencies. In addition, the OCS leasing process and all activities and operations on the OCS must comply with other Federal, State, and local laws and regulations. The following are summaries of the major, applicable, Federal laws and regulations.

Outer Continental Shelf Lands Act

The OCSLA of 1953 (43 U.S.C. 1331 *et seq*.), as amended, established Federal jurisdiction over submerged lands on the OCS seaward of State boundaries. The Act, as amended, provides guidelines for implementing an OCS oil and gas exploration and development program. The basic goals of the Act include the following:

- to establish policies and procedures for managing the oil and natural gas resources of the OCS that are intended to result in expedited exploration and development of the OCS in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade;
- to preserve, protect, and develop oil and natural gas resources of the OCS in a manner that is consistent with the need
  - — to make such resources available to meet the Nation's energy needs as rapidly as possible;
  - — to balance orderly resource development with protection of the human, marine, and coastal environments;
  - — to ensure the public a fair and equitable return on the resources of the OCS; and
  - — to preserve and maintain free enterprise competition; and
- to encourage development of new and improved technology for energy resource production, which will eliminate or minimize the risk of damage to the human, marine, and coastal environments.

Under the OCSLA, the Secretary is responsible for the administration of mineral exploration and development of the OCS. Within the DOI, MMS is charged with the responsibility of managing and regulating the development of OCS oil and gas resources in accordance with the provisions of the

OCSLA. The MMS operating regulations are in Chapter 30, CFR, Part 250 (30 CFR 250); 30 CFR 251; and 30 CFR 254.

Under Section 20 of the OCSLA, the Secretary shall ". . . conduct such additional studies to establish environmental information as he deems necessary and shall monitor the human, marine, and coastal environments of such area or region in a manner designed to provide time-series and data trend information which can be used for comparison with any previously collected data for the purpose of identifying any significant changes in the quality and productivity of such environments, for establishing trends in the area studied and monitored, and for designing experiments to identify the causes of such changes." Through the Environmental Studies Program (ESP), MMS conducts studies designed to provide information on the current status of resources of concern and notable changes, if any, resulting from OCS Program activities.

In addition, the OCSLA provides a statutory foundation for coordination with the affected States and, to a more limited extent, local governments. At each step of the procedures that lead to lease issuance, participation from the affected States and other interested parties is encouraged and sought.

National Environmental Policy Act

The NEPA of 1969 (42 U.S.C. 4321 *et seq*.) provides a national policy that encourages "productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man . . . ." The NEPA requires that all Federal agencies use a systematic, interdisciplinary approach to protect the human environment; this approach will ensure the integrated use of the natural and social sciences in any planning and decisionmaking that may have an impact upon the environment. The NEPA also requires the preparation of a detailed EIS on any major Federal action that may have a significant impact on the environment. This EIS must address any adverse environmental effects that cannot be avoided or mitigated, alternatives to the proposed action, the relationship between short-term uses and long-term productivity of the environment, and any irreversible and irretrievable commitments of resources involved in the project.

In 1979, CEQ established uniform guidelines for implementing the procedural provisions of NEPA. These regulations (40 CFR 1500 to 1508) provide for the use of the NEPA process to identify and assess the reasonable alternatives to proposed actions that avoid or minimize adverse effects of these actions upon the quality of the human environment. "Scoping" is used to identify the scope and significance of important environmental issues associated with a proposed Federal action through coordination with Federal, State, and local agencies; the public; and any interested individual or organization prior to the development of an impact statement. The process is also intended to identify and eliminate, from further detailed study, issues that are not significant or that have been covered by prior environmental review.

The Marine Mammal Protection Act

Under the Marine Mammal Protection Act (MMPA) of 1972 (16 U.S.C. 1361 *et seq*.), the Secretary of Commerce is responsible for all cetaceans and pinnipeds, except walruses; authority for implementing the Act is delegated to the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), also known as the National Marine Fisheries Service (NMFS). The Secretary is responsible for walruses, polar bears, sea otters, manatees, and dugongs; authority is delegated to the U.S. Fish and Wildlife Service (FWS). The Act established the Marine Mammal Commission (MMC) and its Committee of Scientific Advisors on Marine Mammals to provide oversight and advice to the responsible regulatory agencies on all Federal actions bearing upon the conservation and protection of marine mammals.

The MMPA established a moratorium on the taking of marine mammals in waters under United States (U.S.) jurisdiction. The MMPA defines "take" to mean "to harass, harm, shoot, wound, trap, hunt, capture, or kill, or attempt to engage in any such conduct (including actions that induce stress, adversely impact critical habitat, or result in adverse secondary or cumulative impacts)." Harassment is the most common form of taking associated with OCS Program activities. The moratorium may be waived when the affected species or population stock is within its optimum sustainable population range and will not be disadvantaged by an authorized taking (for example (e.g.), will not be reduced below its maximum net productivity level, which is the lower limit of the optimum sustainable population range). The Act directs

that the Secretary, upon request, authorize the unintentional taking of small numbers of marine mammals incidental to activities other than commercial fishing (e.g., offshore oil and gas exploration and development) when, after notice and opportunity for public comment, the Secretary finds that the total of such taking during the 5-year (or less) period will have a negligible impact on the affected species. The MMPA also specifies that the Secretary shall withdraw, or suspend, permission to take marine mammals incidental to oil and gas and other activities if, after notice and opportunity for public comment, the Secretary finds (1) that the applicable regulations regarding methods of taking, monitoring, or reporting are not being complied with or (2) the taking is, or may be, having more than a negligible impact on the affected species or stock.

In 1994, a subparagraph (D) was added to the MMPA to simplify the process for obtaining "small take" exemptions when unintentional taking incidental to activities such as offshore oil and gas development is by harassment only. Specifically, incidental take (IT) by harassment can now be authorized by permit for periods of up to one year (as opposed to the lengthy regulation/Letter of Authorization process that was formerly in effect). The new language also sets a 120-day time limit for processing harassment IT authorizations.

In October 1995, NOAA Fisheries issued regulations (50 CFR 228) authorizing and governing the taking of bottlenose and spotted dolphins incidental to the explosive removal of oil and gas drilling and production structures in State waters and on the GOM OCS for a period of five years (*Federal Register* (FR), 1995a). Letters of Authorization must be requested from, and issued to, individual applicants (operators) to conduct the activities (structure removals) pursuant to the regulations. Since 1986, MMS, the U.S. Army Corps of Engineers (USCOE or COE), operators, and removal contractors have been following strict NOAA Fisheries requirements in order to avoid the incidental taking of marine mammals and to prevent adverse impacts to endangered sea turtles. Regulations allowing for the incidental taking of coastal dolphin species by harassment (Subpart M of 50 CFR 216) will expire in February 2004. The OCS lessees and operators are required to follow, at a minimum, the mandatory mitigation measures in this Subpart. The MMS and NOAA Fisheries are working to develop improved measures to minimize the take of marine mammals and endangered or threatened species as a result of removing OCS structures using explosives. Once finalized, this new regulation will replace the current Subpart M.

To ensure that OCS activities adhere to the MMPA, MMS has conducted studies to identify possible associations between cetaceans and high-use areas of the northern GOM. For example, MMS and the Biological Resources Division (BRD) of the U.S. Geological Survey (USGS or GS) funded the Gulf Cetaceans (GulfCet) Program, which was conducted jointly by Texas A&M University at Galveston and NOAA Fisheries. The purpose of GulfCet was to determine the distribution and abundance of cetaceans along the continental slope in the northern GOM and to help MMS assess the potential effects of deepwater oil and gas exploration and production on marine mammals in the GOM. The studies included systematic aerial and shipboard (visual and acoustic) surveys, behavioral observations, and photo-identification of individual sperm whales. During 1991-1994, the GulfCet I study examined seasonal and geographic distribution of cetaceans along the continental slope in the north-central and western GOM (Davis and Fargion, 1996). GulfCet II (1996-1997) was designed, in part, to determine the distribution and abundance of whales and dolphins in the Eastern GOM, an area of potential oil and gas exploration and production (Davis and others (et al.), 2000). Another component of GulfCet II was to conduct focal studies specifically designed to address whale and dolphin associations with habitats (physical environment and available prey). The GulfCet Program demonstrated that whales and dolphins are not sighted randomly throughout the northern GOM. Cetacean distribution is influenced by both bottom depth and by the presence of mesoscale hydrographic features.

The Endangered Species Act

The Endangered Species Act (ESA) (16 U.S.C. 1631 *et seq*.) of 1973, as amended (43 U.S.C. 1331 *et seq*.), establishes a national policy designed to protect and conserve threatened and endangered species and the ecosystems upon which they depend. The ESA is administered by FWS and NOAA Fisheries. Section 7 of the ESA governs interagency cooperation and consultation. Under Section 7, MMS formally consults with NOAA Fisheries and FWS to ensure that activities in the OCS under MMS jurisdiction do not jeopardize the continued existence of threatened or endangered species and/or result in adverse modification or destruction of their critical habitat. The results of these consultations are presented as a Biological Opinion (BO). The FWS and NOAA Fisheries make recommendations on the modification of

oil and gas operations to minimize adverse impacts, although it remains the responsibility of MMS to ensure that proposed OCS activities do not impact threatened and endangered species. If an unauthorized taking has occurred or if the authorized level of incidental take (as described in the previous section) is exceeded, reinitiating formal consultation would likely be required.

The NOAA Fisheries issued a BO (July 1988) concerning the impacts of removing OCS structures using explosives to endangered or threatened species. The NOAA Fisheries concluded that explosive removals may injure or kill sea turtles. All sea turtle species occurring in the GOM are listed and protected under the ESA. As part of the Incidental Take Statement issued with the BO, NOAA Fisheries established mandatory mitigation measures that lessees and operators are required to perform when removing OCS structures using explosives. As OCS activities have moved into deeper waters of the GOM, MMS is reinitiating a formal consultation with the NOAA Fisheries under Section 7 of the ESA that will result in a new BO concerning explosive removals of OCS structures.

The MMS ESP (Chapter 1.6) complies with the ESA's intent of conserving endangered or threatened species by contracting research on sea turtles and cetaceans.

The Clean Air Act

The 1970 Clean Air Act (CAA) (42 U.S.C. 7401 *et seq*.) established the National Ambient Air Quality Standards (NAAQS). The CAA required Federal promulgation of national primary and secondary standards. The primary NAAQS standards are to protect public health; the secondary standards are to protect public welfare. Under the CAA, the U.S. Environmental Protection Agency (USEPA) sets limits on how much of a pollutant can be in the air anywhere in the U.S. Although the CAA is a Federal law covering the entire country, the states do much of the work to carry out the Act. The law allows individual states to have stronger pollution controls, but states are not allowed to have weaker pollution controls than those set for the whole country. The law recognizes that it makes sense for States to take the lead in carrying out the CAA because pollution control problems often require special understanding of local industries, geography, housing patterns, etc.

States may have to develop State implementation plans (SIP) that explain how each state will come into or remain in compliance with the CAA, as amended. The States must involve the public, through hearings and opportunities to comment, in the development of the SIP. The USEPA must approve the SIP, and if the SIP is not acceptable, USEPA can take over enforcing the CAA, as amended, in that State. The U.S. Government, through USEPA, assists the States by providing scientific research, expert studies, engineering designs, and money to support clean air programs.

The CAA established the Prevention of Significant Deterioration (PSD) program to protect the quality of air in the regions of the U.S. where the air is cleaner than required by the NAAQS. Under the PSD program, air quality attainment areas in the U.S. were classified as Class I or Class II (a Class III designation was codified but no areas were classified as such). Class I areas receive the most protection. Any new major (250 tons per year or larger) permanent source of emissions is required to receive a review by the Federal permitting agency, and the Federal permitting agency must consult with the appropriate Federal land manager prior to granting approval. The FWS is the Federal land manager for Breton, St Marks, Okefenokee, and Chassahowitzka Class I areas. The National Park Service (NPS) is the Federal land manager for the Everglades Class I area.

The CAA, as amended, delineates jurisdiction of air quality between the USEPA and DOI. For OCS operations in the GOM, those operations east of 87.5^{o} (degrees) West (W.) longitude are subject to USEPA air quality regulations and those west of 87.5^{o}W. longitude are subject to MMS air quality regulations. In the OCS areas under MMS jurisdiction, the MMS regulations at 30 CFR 250 are in force.

The 1990 Clean Air Act Amendments (CAAA) (Public Law (P.L.) 101-549)) required that MMS conduct and complete a study to evaluate impacts from the development of OCS petroleum resources in the GOM on air quality in the ozone nonattainment areas. Florida was not included in the study area since, at that time, the counties in the Panhandle were in compliance with the Federal ozone standard. That study was completed in late 1995. Based on the results of this study, the Secretary has consulted with the USEPA Administrator to determine if new requirements are needed for the OCS areas in the GOM that remain under MMS jurisdiction (the areas west of 87°30′ (minutes) W. longitude). Based on the consultation, it was determined that no new requirements are needed at this time.

The MMS air quality regulations are at 30 CFR 250 Subpart C. These regulations are based on potential impacts; as such, the farther away from shore, the larger the allowable emission rate before an

air quality impact analysis is required. All OCS plans are required to include emission information and receive air quality review. The regulations allow MMS to select which OCS plans require emissions information for air quality review. In 1994, the GOM Region issued a Letter to Lessees requiring operators to submit standardized emissions information with all OCS plans. This requirement is more stringent than corresponding onshore requirements because MMS applies the same exemption levels and significance levels to temporary sources as it does to permanent sources. Under the onshore PSD regulations, temporary sources are typically exempt from air quality permitting requirements. The MMS's impact-based regulations establish a three-tier process for identifying potentially significant emission sources. There are no screening models recommended for offshore use (see 30 CFR 250.303). The only model approved by USEPA as a preferred model for modeling offshore emission sources' impacts upon onshore areas is the Offshore and Coastal Dispersal (OCD) model developed by MMS in 1989. The OCD model is based on steady-state Gaussian assumptions.

The Clean Water Act

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972. The CWA establishes the basic structure for regulating discharges of pollutants to waters of the U.S. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters without a National Pollution Discharge Elimination System (NPDES) permit. The USEPA may not issue a permit for a discharge into ocean waters unless the discharge complies with the guidelines established under Section 403(c). These guidelines are intended to prevent degradation of the marine environment and require an assessment of the effect of the proposed discharges on sensitive biological communities and aesthetic, recreational, and economic values, both directly and as a result of biological, physical, and chemical processes altering the discharges.

All waste streams generated from offshore oil and gas activities are regulated by the USEPA, primarily by general permits. Under Sections 301 and 304 of the CWA, USEPA issues technology-based effluent guidelines that establish discharge standards based on treatment technologies that are available and economically achievable. The most recent effluent guidelines for the oil and gas extraction point-source category were published in 1993 (58 FR 12454). Within the GOM, USEPA Region 4 has jurisdiction over the eastern portion of the GOM, including all of the OCS EPA and part of the Central Planning Area (CPA) off the coasts of Alabama and Mississippi. The region has promulgated general permits for discharges that incorporate the 1993 effluent guidelines as a minimum. In some instances, a site-specific permit is required. The USEPA also published new guidelines for the discharge of synthetic-based drilling fluids (SBF) on January 22, 2001 (66 FR 6850). The new permit became effective on February 16, 2002. The USEPA Region 4 general permit was issued on October 16, 1998 (63 FR 55718), was modified on March 14, 2001 (66 FR 14988), and expires on October 31, 2003. Region 4 has not revised the general permit to incorporate new guidelines for SBF and other nonaqueous-based drilling fluids. Region 4 plans to address SBF in the 2003 general permit revision.

Other sections of the CWA also apply to offshore oil and gas activities. Section 404 of the CWA requires a COE permit for the discharge or deposition of dredged or fill material in all the waters of the U.S. Approval by the COE, with consultation from other Federal and State agencies, is also required for installing and maintaining pipelines in coastal areas of the GOM. Section 303 of the CWA provides for the establishment of water quality standards that identify a designated use for waters (e.g., fishing/swimming). States have adopted water quality standards for ocean waters within their jurisdiction (waters of the territorial sea that extend out to 3 mi off Louisiana, Mississippi, and Alabama, and 3 leagues off Texas and Florida). Section 402(b) of the CWA authorizes USEPA approval of State permit programs for discharges from point sources.

The Oil Pollution Act

The Oil Pollution Act of 1990 (OPA or OPA 90) (33 U.S.C. 2701 *et seq*.) is comprehensive legislation that includes, in part, provisions to (1) improve oil-spill prevention, preparedness, and response capability; (2) establish limitations on liability for damages resulting from oil pollution; and (3) implement a fund for the payment of compensation for such damages.

The OPA, in part, revised Section 311 of the CWA to expand Federal spill-response authority; increase penalties for spills; establish U.S. Coast Guard (USCG), prepositioned, oil-spill response

equipment sites; require vessel and facility response plans; and provide for interagency contingency plans. Many of the statutory changes required corresponding revisions to the National Oil and Hazardous Substances Pollution Contingency Plan.

If a spill or substantial threat of a spill of oil or a hazardous substance from a vessel, offshore facility, or onshore facility is considered to be of such a size or character to be a substantial threat to the public health or welfare of the U.S., under provisions of the Act, the President (through the USCG) now has the authority to direct all Federal, State, and private actions to remove a spill or to mitigate or prevent the threat of the spill. Potential impacts from spills of oil or a hazardous substance to fish, shellfish, wildlife, other natural resources, or the public and private beaches of the U.S. would be an example of the degree or type of threat considered to be of such a size or character to be a substantial threat to the U.S. public health or welfare. In addition, the USCG's authority to investigate marine accidents involving foreign tankers was expanded to include accidents in the Exclusive Economic Zone (EEZ). The Act also established USCG oil-spill, district response groups (including equipment and personnel) in each of the 10 USCG districts, with a national response unit, the National Strike Force Coordination Center, located in Elizabeth City, North Carolina.

The OPA strengthened spill planning and prevention activities by providing for the establishment of interagency spill contingency plans for areas of the U.S. To achieve this goal, Area Committees composed of qualified Federal, State, and local officials were created to develop Area Contingency Plans. The OPA mandates that contingency plans address the response to a "worst case" oil spill or a substantial threat of such a spill. It also required that vessels and both onshore and offshore facilities have response plans approved by the President. These plans were required to adhere to specified requirements, including the demonstration that they had contracted with private parties to provide the personnel and equipment necessary to respond to or mitigate a "worst case" spill. In addition, the Act provided for increased penalties for violations of statutes related to oil spills, including payment of triple costs by persons who fail to follow contingency plan requirements.

The Act further specifies that vessel owners, not cargo owners, are liable for spills and raises the liability limits from $150 (dollars) per gross ton to $1,200 per gross ton for vessels. The maximum liability for offshore facilities is set at $75 million plus unlimited removal costs; liability for onshore facilities or a deepwater port is set at $350 million. Willful misconduct, violation of any Federal operating or safety standard, failure to report an incident, or refusal to participate in a cleanup subjects the spiller to unlimited liability under provisions of the Act.

Pursuant to the Act, double hulls are required on all newly constructed tankers. Double hulls or double containment systems are required on all tank vessels less than 5,000 gross tons (that is (i.e.), barges). Since 1995, existing single-hull tankers are being phased out based on size and age.

An Interagency Coordinating Committee on Oil Pollution Research was established by the provisions of the Act and tasked with submitting a plan for the implementation of an oil-pollution research, development, and demonstration program to Congress. The plan was submitted to Congress in April 1992. This program addressed, in part, an identification of important oil-pollution research gaps, an establishment of research priorities and goals, and an estimate of the resources and timetables necessary to accomplish the identified research tasks.

In October 1991, Executive Order 12777 delegated the provisions of OPA to various departments and agencies within the U.S. Government, including the USCG, USEPA, U.S. Department of Transportation (USDOT or DOT), and DOI. The Secretary was delegated Federal Water Pollution Control Act authority over offshore facilities and associated pipelines (except deepwater ports) for all Federal and State waters. The Secretary's functions under the Executive Order include spill prevention, Oil Spill Contingency Plans (OSCP's), equipment, financial responsibility certification, and civil penalties.

The Oil Spill Liability Trust Fund (OSLTF), authorized under OPA and administered by the USCG, is available to pay for removal costs and damages not recovered from responsible parties. The Fund provides up to $1 billion per incident for cleanup costs and other damages. The OSLTF was originally established under Section 9509 of the Internal Revenue Code of 1986. It was one of several similar Federal trust funds funded by various levies set up to provide for the costs of water pollution. The OPA generally consolidated the liability and compensation schemes of these prior, Federal oil-pollution laws and authorized the use of the OSLTF, which consolidated the funds supporting those regimes. Those prior laws included the Federal Water Pollution Control Act, Trans-Alaska Pipeline Authorization Act,

Deepwater Port Act, and OCSLA. On February 20, 1991, the National Pollution Funds Center (NPFC) was commissioned to serve as fiduciary agent for the OSLTF.

The OPA 90 provides that parties responsible for offshore facilities demonstrate, establish, and maintain oil-spill financial responsibility (OSFR) for those facilities. The OPA 90 replaced and rescinded the OCSLA OSFR requirements. Executive Order 12777 assigned the OSFR certification function to the DOI; the Secretary, in turn, delegated this function to MMS.

The minimum amount of OSFR that must be demonstrated is $35 million for covered offshore facilities (COF's) located on the OCS and $10 million for COF's located in State waters. A COF is any structure and all of its components, equipment, pipeline, or device (other than a vessel or other than a pipeline or deepwater port licensed under the Deepwater Port Act of 1974) used for exploring for, drilling for, or producing oil or for transporting oil from such facilities. The regulation provides an exemption for persons responsible for facilities having a potential worst-case oil spill of 1,000 barrel (bbl) or less, unless the risks posed by a facility justify a lower threshold volume.

The Secretary of Transportation has authority for vessel oil-pollution financial responsibility, and the USCG regulates the oil-spill financial responsibility program for vessels. A mobile offshore drilling unit (MODU) is classified as a vessel. However, a well drilled from a MODU is classified as an offshore facility under this rule.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. 9601 *et seq*.), modified by the 1986 Superfund Amendments and Reauthorization Act (SARA) and Section 1006 of OPA 90, requires the promulgation of regulations for the assessment of natural resource damages from oil spills and hazardous substances. These Acts provide for the designation of trustees who determine resource injuries, assess natural resource damages (including the costs of assessing damages), present claims, recover damages, and develop and implement plans for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the injured natural resources under the trusteeship.

The DOI was given the authority under CERCLA to develop regulations and procedures for the assessment of damages for natural resource injuries resulting from the release of a hazardous substance or oil spills (Natural Resource Damage Assessment (NRDA) Regulations). These rulemakings are all codified at 43 CFR 11. The CERCLA specified two types of procedures to be developed: type "A" procedures for simplified, standard assessments requiring minimal field observations in cases of minor spills or releases in certain environments; and type "B" site-specific procedures for detailed assessments for individual cases.

The Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901 *et seq*.) provides a framework for the safe disposal and management of hazardous and solid wastes. The OCS wastes taken to shore are regulated under RCRA. The USEPA has exempted many oil and gas wastes from coverage under the hazardous wastes regulations of RCRA. Exempt wastes (exploration and production (E&P) waste) include those generally coming from an activity directly associated with the exploration, drilling, production, or processing of a hydrocarbon product. Therefore, most oil and gas wastes taken onshore are not regulated by the Federal Government but by various Gulf States' programs. It is occasionally possible for a RCRA exempt E&P waste to fail a State's E&P waste disposal regulations. If wastes generated on the OCS are not exempt and are hazardous, the wastes must be transported to shore for disposal at a hazardous waste facility.

The Marine Plastic Pollution Research and Control Act of 1987 (MPPRCA) (33 U.S.C. 1901 *et seq*.) implements Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL). Under provisions of the law, all ships and watercraft, including all commercial and recreational fishing vessels, are prohibited from dumping plastics at sea. The law also severely restricts the legality of dumping other vessel-generated garbage and solid-waste items both at sea and in U.S. navigable waters. The USCG is responsible for enforcing the provisions of this law and has developed final rules for its implementation (33 CFR 151, 155, and 158), calling for adequate trash reception facilities at all ports, docks, marinas, and boat-launching facilities.

The GOM has received "Special Area" status under MARPOL, thereby prohibiting the disposal of all solid waste into the marine environment. Fixed and floating platforms, drilling rigs, manned production platforms, and support vessels operating under a Federal oil and gas lease are required to develop waste management plans and to post placards reflecting discharge limitations and restrictions. The MMS regulations explicitly prohibit the disposal of equipment, cables, chains, containers, or other materials into offshore waters. Portable equipment, spools or reels, drums, pallets, and other loose items must be marked in a durable manner with the owner's name prior to use or transport over offshore waters. Smaller objects must be stored in a marked container when not in use.

Final rules published under MPPRCA explicitly state that fixed and floating platforms, drilling rigs, manned production platforms, and support vessels operating under a Federal oil and gas lease are required to develop Waste Management Plans and to post placards reflecting MARPOL dumping restrictions. Waste Management Plans will require oil and gas operators to describe procedures for collecting, processing, storing, and discharging garbage and to designate the person who is in charge of carrying out the plan. These rules also apply to all oceangoing ships of 12 m (39 feet (ft)) or more in length that are documented under the laws of the U.S. or numbered by a State and that are equipped with a galley and berthing. Placards noting discharge limitations and restrictions, as well as penalties for noncompliance, apply to all boats and ships 8 m (26 ft) or more in length. Furthermore, the Shore Protection Act of 1988 (33 U.S.C. 2601 *et seq*.) requires ships transporting garbage and refuse to assure that the garbage and refuse is properly contained on-board so that it will not be lost in the water from inclement wind or weather conditions.

The Magnuson Fishery Conservation and Management Act

The Magnuson Fishery Conservation and Management Act (MFCMA) of 1976 (16 U.S.C. 1251 *et seq*.) established and delineated an area from the States' seaward boundary outward 200 nautical miles (nmi) as a fisheries conservation zone for the U.S. and its possessions. The Act established national standards for fishery conservation and management.

Congress amended and reauthorized the MFCMA through passage of the Sustainable Fisheries Act of 1996. The Act, as amended, established eight Regional Fishery Management Councils (FMC's) to exercise sound judgment in the stewardship of fishery resources through the preparation, monitoring, and revision of fishery management plans (FMP). An FMP is based upon the best available scientific and economic data. The reauthorization also promotes domestic commercial and recreational fishing under sound conservation and management principles, including the promotion and catch and release programs in recreational fishing and encouraging the development of currently underutilized fisheries. The reauthorization requires that the FMC's identify Essential Fish Habitat (EFH). To promote the protection of EFH, Federal agencies are required to consult on activities that may adversely affect EFH designated in the FMP's.

Essential Fish Habitat

There are FMP's in the GOM region for shrimp, red drum, reef fishes, coastal migratory pelagics, stone crabs, spiny lobsters, coral and coral reefs, billfish, and highly migratory species (HMS). The Gulf of Mexico Fishery Management Council's (GMFMC) *Generic Amendment for Addressing Essential Fish Habitat Requirements* (1998) amends the first seven FMP's listed above, identifying estuarine/inshore and marine/offshore EFH for over 450 managed species (about 400 in the Coral FMP). Although not part of the GMFMC's FMP's, separate FMP's have been finalized by NOAA Fisheries for Atlantic tunas, swordfish and sharks, and the Atlantic billfish fishery (NMFS, 1999a and b).

The GMFMC's *Generic Amendment for Addressing Essential Fish Habitat Requirements* identifies threats to EFH and makes a number of general and specific habitat preservation recommendations for pipelines and oil and gas exploration and production activities within State waters and OCS areas (Chapter 3.2.9.2). The MMS and NOAA Fisheries have entered into consultation agreements for EFH related to OCS activities in the lease areas. The EFH conservation measures recommended by NOAA Fisheries serve the purpose of protecting EFH and can include avoidance distances from topographic-feature's No Activity Zones and live-bottom pinnacle features. Additional conservation provisions and circumstances that require project-specific consultation have been agreed to through a Programmatic

Consultation. These agreements, including avoidance distances from topographic-feature's No Activity Zones and live-bottom pinnacle features appear in Notice to Lessees and Operators (NTL) 2002-G08.

Essential Fish Habitat Consultation

This Draft EIS includes the required components of an EFH assessment that represents a submission to NOAA Fisheries in request of an EFH consultation. Each of these required components are outlined below, together with associated sections of the Draft EIS where EFH discussion and other related material can be located.

I. A description of a proposed action:
Chapters 1.1-1.6, 2.3, and 2.4. Description of the environment appears throughout Chapter 3 with specific sections on Fishery Resources and EFH in Chapter 3.2.9.

II. An analysis of the effects, including cumulative effects, of a proposed action on EFH:
Chapter 4.1, *Routine Operations* and Chapter 4.2.1.10, *Impacts*. Impacts from accidental events are treated separately in Chapter 4.4.3.10. Cumulative impacts are discussed in Chapter 4.5.10.

III. The MMS's views regarding the effects of an action on EFH:
Summary and conclusion statements are included with each impact discussion outlined under item II above. Summaries of impacts also appear in Chapter 2, *Alternatives Including a Proposed Action*.

IV. Proposed Mitigations:
Mitigations are presented in Chapter 2.2.2. Additional mitigating measures include lease stipulations, discussed in Chapters 2.3.1.3.1 and 2.3.1.3.2. The programmatic consultation agreement between MMS and NOAA Fisheries includes "Additional EFH Conservation Recommendations" outlined in Chapter 3.2.9.2.

National Fishing Enhancement Act

The National Fishing Enhancement Act of 1984 (33 U.S.C. 2601 *et seq*.), also known as the Artificial Reef Act, establishes broad artificial-reef development standards and a National policy of the U.S. to encourage the development of artificial reefs that will enhance fishery resources and commercial and recreational fishing. The Secretary of Commerce provided leadership in developing a National Artificial Reef Plan that identifies design, construction, siting, and maintenance criteria for artificial reefs and that provides a synopsis of existing information and future research needs. The Secretary of the Army issues permits to responsible applicants for reef development projects in accordance with the National Plan, as well as regional, State, and local criteria and plans. The law also limits the liability of reef developers complying with permit requirements and includes the availability of all surplus Federal ships for consideration as reef development materials. Although the Act mentions no specific materials other than ships for use in reef development projects, the Secretary cooperated with the Secretary of Commerce in developing the National Plan, which identifies oil and gas structures as acceptable materials of opportunity for artificial-reef development. The MMS adopted a Rigs-to-Reefs policy in 1985 in response to this Act and to broaden interest in the use of petroleum platforms as artificial reefs.

Fishermen's Contingency Fund

Final regulations for the implementation of Title IV of the OCSLA, as amended (43 U.S.C. 1841-1846), were published in the *Federal Register* on January 24, 1980 (50 CFR 296). The OCSLA, as amended, established the Fishermen's Contingency Fund (not to exceed $2 million) to compensate commercial fishermen for actual and consequential damages, including loss of profit due to damage or loss of fishing gear by various materials and items associated with oil and gas exploration, development, or production on the OCS. This Fund, administered by the Financial Services Division of NOAA Fisheries, mitigates most losses suffered by commercial fishermen due to OCS oil and gas activities.

As required in the OCSLA, nine area accounts have been established — five in the GOM, one in the Pacific, one in Alaska, and two in the Atlantic. The five GOM accounts cover the same areas as the five MMS, GOM OCS Region Districts. The New Orleans District account covers the EPA. Each area account is initially funded at $100,000 and cannot exceed this amount. The accounts are initiated and maintained by assessing holders of leases, pipeline rights-of-way and easements, and exploration permits. These assessments cannot exceed $5,000 per operator in any calendar year.

The claims eligible for compensation are generally contingent upon the following: (1) damages or losses must be suffered by a commercial fisherman; and (2) any actual or consequential damages, including loss of profit, must be due to damages or losses of fishing gear by items or obstructions related to OCS oil and gas activities. Damages or losses that occur in non-OCS waters may be eligible for compensation if the item(s) causing damages or losses are associated with OCS oil and gas activities.

Ineligible claims for compensation are generally (1) damages or losses caused by items that are attributable to a financially responsible party; (2) damages or losses caused by negligence or fault of the commercial fishermen; (3) occurrences before September 18, 1978; (4) claims of damages to, or losses of, fishing gear exceeding the replacement value of the fishing gear; (5) claims for loss of profits in excess of 6 months, unless supported by records of the claimant's profits during the previous 12 months; (6) claims or any portions of damages or losses claimed that will be compensated by insurance; (7) claims not filed within 60 days of the event of the damages or losses; and (8) damages or losses caused by natural obstructions or obstructions unrelated to OCS oil and gas activities.

There are several requirements for filing claims, including one that a report stating, among other things, the location of the obstruction, must be made within 5 days after the event of the damages or losses; this 5-day report is required to gain presumption of causation. A detailed claim form must be filed within 60 days of the event of the damages or losses. The specifics of this claim are contained in 50 CFR 296. The claimant has the burden of establishing all the facts demonstrating eligibility for compensation, including the identity or nature of the item that caused the damages or losses and its association with OCS oil and gas activity.

Damages or losses are presumed to be caused by items associated with OCS oil and gas activities provided the claimant establishes that (1) the commercial fishing vessel was being used for commercial fishing and was located in an area affected by OCS oil and gas activities; (2) the 5-day report was filed; (3) there is no record in the most recent U.S. Department of Commerce's (USDOC or DOC) NOAA/National Ocean Service (NOS) nautical charts or weekly USCG Notice to Mariners of an obstruction in the immediate vicinity; and (4) no proper surface marker or lighted buoy marked the obstruction. Damages or losses occurring within a one-quarter-mile radius of obstructions recorded on charts, listed in the Notice to Mariners, or properly marked are presumed to involve the recorded obstruction.

Shipping Safety Fairways, Anchorages, and Traffic Separation Schemes

The Ports and Waterways Safety Act (33 U.S.C. 1223) authorizes the USCG to designate safety fairways, fairway anchorages, and traffic separation schemes (TSS's) to provide unobstructed approaches through oil fields for vessels using GOM ports. The USCG provides listings of designated fairways, anchorages, and TSS's in 33 CFR 166 and 167, along with special conditions related to oil and gas production in the GOM. In general, no fixed structures, such as platforms, are allowed in fairways. Temporary underwater obstacles such as anchors and attendant cables or chains attached to floating or semisubmersible drilling rigs may be placed in a fairway under certain conditions. Fixed structures may be placed in anchorages, but the number of structures is limited.

A TSS is a designated routing measure that is aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes (33 CFR 167.5). The Galveston Bay approach TSS and precautionary areas is the only TSS established in the GOM. There is no TSS in the EPA.

Marine and Estuarine Protection Acts

The Sanctuaries and Reserves Division, NOS, NOAA, of DOC, administers the National Marine Sanctuary and National Estuarine Research Reserve programs. The marine sanctuary program was

established by the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRS), and the estuarine research reserve program was established by the Coastal Zone Management Act of 1972.

Marine sanctuaries and estuarine research reserves are designed and managed to meet the following goals, among others:

- enhance resource protection through the implementation of a comprehensive, long-term management plan tailored to the specific resources;
- promote and coordinate research to expand scientific knowledge of sensitive marine resources and improve management decision making;
- enhance public awareness, understanding, and wise use of the marine environment through public interpretive and recreational programs; and
- provide for optimum compatible public and private use of special marine areas.

The Congress declared that ocean dumping in the territorial seas or the contiguous zone of the U.S. would be regulated under the MPRS (33 U.S.C. 1401 *et seq*.). Under 40 CFR 228, pursuant to Section 103 of the MPRS, sites and times for ocean dumping of dredged and nondredged materials were designated by USEPA after a determination that such dumping will not unreasonably degrade or endanger human health, welfare, or the marine environment. The EIS's on these disposal sites describe impacts that are expected to occur over a period of 25 years. Under 33 U.S.C. 1413 (33 CFR 324), the COE reviews applications for permits to transport dredged and nondredged materials for the purpose of dumping it in ocean waters. On December 31, 1981, 33 U.S.C. 1412a mandated the termination of ocean dumping of sewage sludge and industrial waste.

Marine Protection, Research, and Sanctuaries Act

The MPRS 1972 established the National Marine Sanctuary Program, which is administered by NOAA of the DOC. A single National Marine Sanctuary exists in the Eastern GOM.

The Florida Keys National Marine Sanctuary was designated in November 1990. The Sanctuary was established to provide comprehensive management and protection of the marine ecosystems surrounding the Florida Keys. The Sanctuary boundary encompasses 2,800 squared nautical miles (nmi^2) of diverse marine ecosystems, including the productive waters of Florida Bay, sand flats, seagrass meadows, mangrove-fringed shorelines and islands, and extensive living coral reefs. These environments support high levels of biological diversity and are fragile and easily susceptible to damage from human activities. The Sanctuary incorporates the existing Looe Key and Key Largo National Marine Sanctuaries on the Atlantic side of the Keys. The following two uses of the area are specifically prohibited by the law: (1) operation of a tank vessel or a vessel greater than 50 m (164 ft) in length, except for public vessels; and (2) leasing, exploration, development, or production of minerals or hydrocarbons.

The Secretary of Commerce is directed to consult with other Federal agencies and the appropriate State and local governments in managing the Sanctuary. An advisory council has been established to assist in the development of a comprehensive management plan and in the implementation of regulations. Sombrero Key and Alligator Reef, both of which had previously been mandated for study as marine sanctuaries by Congress, will also be included in the comprehensive management plan.

National Estuarine Research Reserves

Four Estuarine Research Reserves have been established in the GOM: Rookery Bay National Estuarine Research Reserve and Apalachicola National Estuarine Research Reserve in Florida, Weeks Bay National Estuarine Research Reserve in Alabama, and Grand Bay National Estuarine Research Reserve in Mississippi.

Rookery Bay National Estuarine Research Reserve, at more than 3,440 hectares (ha) (8,500 ac), preserves a large mangrove-filled bay and two creeks, along with their drainage corridors. Management of the sanctuary is performed by the Florida Department of Environmental Protection, The Nature Conservancy, and the National Audubon Society. This unique management structure was created when the two private organizations granted a dollar-per-year, 99-year lease of the land to the State. Federal and

State funds will add additional key acreage to the existing core area. The diversity of the area's fauna can be recognized by the porpoises that feed there and the bald eagles and white-tailed deer that make Rookery Bay their permanent residence. Within the Sanctuary is a marine laboratory, which, even before the establishment of the sanctuary, provided data used in important coastal management decisions — a primary objective of Congress in establishing the estuarine research-reserve program.

At about 76,890 ha (190,000 ac), the Apalachicola National Estuarine Research Reserve is one of the largest remaining naturally functioning ecosystems in the Nation, and it is also the first sanctuary on the mouth of a major navigable river. Its establishment served to promote improved cooperation concerning river navigation among the States of Florida, Alabama, and Georgia. The major business activity of Apalachicola, which is adjacent to the sanctuary, centers around the oyster industry. It is expected that the sanctuary will benefit this and other fishing industries by protecting the environment and by providing research information that will help assure the continued productivity of the bay/river ecosystem. A FWS refuge and a State park, representing a unique cooperative effort at ecosystem protection, exist within the boundaries of the reserve.

Weeks Bay National Estuarine Research Reserve covers a small estuary of approximately 1,215 ha (3,000 ac) in Baldwin County, Alabama. Weeks Bay is a shallow open bay with an average depth of less than 1.5 m (4.9 ft) and extensive vegetated wetland areas. The bay receives waters from the spring-fed Fish and Magnolia Rivers and connects with Mobile Bay through a narrow opening.

Grand Bay National Estuarine Research Reserve covers about 7,470 ha (18,400 ac) in Jackson County, Mississippi. Located between Pascagoula and the Alabama State line, it contains diverse habitats that support several rare or endangered plants and animals. The reserve's fishery resources include oysters, fish, and shrimp. The area also has recreational resources and archaeological sites.

No other sites in the GOM have been formally proposed as National Estuarine Research Reserves.

The National Estuary Program

In 1987, an amendment to the Clean Water Act, known as the Water Quality Act (P.L. 100-4), established the National Estuary Program (NEP). The purpose of the NEP is to identify nationally important estuaries, to protect and improve their water quality, and to enhance their living resources. Under the NEP, which is administered by the USEPA, comprehensive management plans are generated to protect and enhance environmental resources. The governor of a state may nominate an estuary for the Program and request that a Comprehensive Conservation and Management Plan (CCMP) be developed for an estuary. Representatives from Federal, State, and interstate agencies; academic and scientific institutions; and industry and citizen groups work during a 5-year period to define objectives for protecting the estuary, to select the chief problems to be addressed in the Plan, and to ratify a pollution control and resource management strategy to meet each objective. Strong public support and subsequent political commitments are needed to accomplish the actions called for in the Plan; hence, the 5-year time period to develop the strategies. A total of 22 estuaries have been selected for the Program, 7 of which are in the GOM: Sarasota Bay, Charlotte Harbor, and Tampa Bay in Florida; Mobile Bay in Alabama; the Barataria-Terrebonne Estuarine Complex in Louisiana; and Galveston Bay and Corpus Christi Bay in Texas.

Executive Order 11990 (May 24, 1977), Protection of Wetlands

Executive Order 11990 establishes that each Federal agency shall provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. The Executive Order applies to the following Federal activities: managing and disposing of Federal lands and facilities; providing federally undertaken, financed, or assisted construction and improvements; and conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Coastal Barrier Resources Act

The Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 *et seq*.) established that undeveloped coastal barriers, per the Act's definition, may be included in a Coastal Barrier Resource System (CBRS).

The CBRA prohibits all new Federal expenditures and financial assistance within the CBRS, with certain specific exceptions, including energy development. The purpose of this legislation was to end the Federal Government's encouragement for development on barrier islands by withholding Federal flood insurance for new construction of or substantial improvements to structures on undeveloped coastal barriers.

The National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 *et seq*.), states that any Federal agency, before approving federally permitted or federally funded undertakings, must take into consideration the effect of that undertaking on any property listed on, or eligible for, the National Register of Historic Places. Implied in this legislation and Executive Order 11593 is that an effort be made to locate such sites before development of an area. Section 101(b)(4) of NEPA states that it is the continuing responsibility of the Federal Government to preserve important historic and cultural aspects of our natural heritage. In addition, Section 11(g)(3) of the OCSLA, as amended, states that "exploration (oil and gas) will not . . . disturb any site, structure, or object of historical or archaeological significance."

The NHPA provides for a National Register of Historic Places to include districts, sites, buildings, structures, and objects noteworthy in American history, architecture, archaeology, and culture. These items may bear National, State, or local significance. The NHPA provides funding for the State Historic Preservation Officer and his staff to conduct surveys and comprehensive preservation planning, establishes standards for State programs, and requires States to establish mechanisms for certifying local governments to participate in the National Register nomination and funding programs.

Section 106 of the Act requires that Federal agencies having direct or indirect jurisdiction over a proposed Federal, federally assisted, or federally licensed undertaking, prior to approval of the expenditure of funds or the issuance of a license, take into account the effect of the undertaking on any district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to the undertaking. This Council, appointed by the President, has implemented procedures to facilitate compliance with this provision at 36 CFR 800.

Section 110 of the NHPA directs the heads of all Federal agencies to assume responsibility for the preservation of National Register listed or eligible historic properties owned or controlled by their agency as well as those not under agency jurisdiction and control but are potentially affected by agency actions. Federal agencies are directed to locate, inventory, and nominate properties to the National Register, to exercise caution to protect such properties, and to use such properties to the maximum extent feasible. Other major provisions of Section 110 include documentation of properties adversely affected by Federal undertakings, the establishment of trained Federal preservation officers in each agency, and the inclusion of the costs of preservation activities as eligible agency project costs.

A Section 106 review refers to the Federal review process designed to ensure that historic properties are considered during Federal project planning and execution. The review process is administered by the Advisory Council on Historic Preservation, an independent Federal agency, together with the State Historic Preservation Office.

Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 *et seq*.) prohibits the unauthorized obstruction or alteration of any navigable water of the U.S. The construction of any structure in or over any navigable water of the U.S., the excavating from or depositing of dredged material or refuse in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters is unlawful without prior approval from the COE. The legislative authority to prevent inappropriate obstructions to navigation was extended to installations and devices located on the seabed to the seaward limit of the OCS by Section 4(e) of the OCSLA of 1953, as amended.

National Ocean Pollution Planning Act

The National Ocean Pollution Planning Act of 1978 (33 U.S.C. 1701 *et seq*.) calls for the establishment of a comprehensive, coordinated, and effective ocean pollution research, development, and

monitoring program. The Act requires that NOAA, in consultation with other agencies, prepare a comprehensive 5-year Federal Plan for Ocean Pollution Research, Development, and Monitoring every three years. The Plan contains major elements that consider an assessment and prioritization of National needs and problems, existing Federal capabilities, policy recommendations, and a budget review.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) (16 U.S.C. 1451 *et seq*.) was enacted by Congress in 1972 to develop a national coastal management program that comprehensively manages and balances competing uses of and impacts to any coastal use or resource. The national coastal management program is implemented by individual State coastal management programs in partnership with the Federal Government. The CZMA Federal consistency regulations require that Federal activities (e.g., OCS lease sales) be consistent to the maximum extent practicable with the enforceable policies of a State's coastal management program. The Federal consistency also requires that other federally approved activities (e.g., activities requiring Federal permits, such as activities described in OCS plans) be consistent with a State's federally approved coastal management program. The Federal consistency requirement is an important mechanism to address coastal effects, to ensure adequate Federal consideration of State coastal management programs, and to avoid conflicts between States and Federal agencies. The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), enacted November 5, 1990, as well as the Coastal Zone Protection Act of 1996 (CZPA), amended and reauthorized the CZMA. The CZMA is administered by the Office of Ocean and Coastal Resource Management (OCRM) within NOAA's NOS.

Executive Order 12898: Environmental Justice

The environmental justice policy, based on Executive Order 12898 of February 11, 1994, requires agencies to incorporate analysis of the environmental and health effects of their proposed programs on minorities and low-income populations and communities into NEPA documents. The MMS's existing NEPA process invites participation by all groups and communities in the development of its proposed actions, alternatives, and potential mitigation measures. Scoping and review for the EIS is an open process that provides an opportunity for all participants, including minority and low-income populations, to raise new expressions of concern that can be addressed in the EIS. The effects of the proposed actions on local populations or resources used by local groups including minority and low-income groups are considered in the analyses of socioeconomic conditions, commercial fisheries, air quality, and water quality.

Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

Executive Order 13186 of January 10, 2001, requires Federal agencies taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a Memorandum of Understanding (MOU) with FWS. The MOU is intended to establish protocols to promote the conservation of migratory bird populations. The MMS has initiated development of such an MOU with FWS.

Occupational Safety and Health Act

The Occupational Safety and Health Act of 1970 (29 U.S.C. 651-678) was enacted to assure, to the extent possible, safe and healthful working conditions and to preserve our human resources. The Act encourages employers and employees to reduce occupational safety and health hazards in their places of employment and stimulates the institution of new programs and the perfection of existing programs for providing safe and healthful working conditions. The Act establishes a National Institute for Occupational Safety and Health, which is authorized to develop and establish occupational safety and health standards. The Act also establishes a National Advisory Committee on Occupational Safety and Health.

The Act empowers the Secretary of Labor or his representative to enter any factory, plant, establishment, workplace, or environment where work is performed by employees and to inspect and investigate during regular working hours and at other reasonable times any such place of employment and

all pertinent conditions and equipment therein. If, upon inspection, the Secretary of Labor or authorized representative believes that an employer has violated provisions of the Act, the employer shall be issued a citation and given 15 days to contest the citation or proposed assessment of penalty.

1.4. PRELEASE PROCESS

Scoping for this Draft EIS was conducted in accordance with CEQ regulations implementing NEPA. Scoping provides those with an interest in the OCS Program an opportunity to provide comments on the proposed actions. In addition, scoping provides MMS an opportunity to update the GOM Region's environmental and socioeconomic information base. The scoping process officially commenced on February 7, 2002, with the publication in the *Federal Register* of the Call for Information and Nominations (Call) and the Notice of Intent to Prepare an EIS (NOI). Additional public notices were distributed via local newspapers, the U.S. Postal Service, and the Internet. A 45-day comment period was provided; it closed on March 25, 2002. Federal, State, and local governments, along with other interested parties, were invited to send written comments to the GOM Region on the scope of the EIS. The MMS received six comment letters in response to the Call/NOI.

Formal scoping meetings were held during March 2002 in Louisiana and Alabama. Attendees at the meetings included representatives from local governments, interest groups, industry, businesses, and private citizens. Scoping topics included the following: air quality; alternative fuels and conservation; biological resources; navigation; oil spills; lease sale area; socioeconomic; State issues; terrorism; waste; and water quality. All scoping comments received for this Draft EIS were considered in the preparation of this document. The comments (both verbal and written) from the Call/NOI and the three scoping meetings have been summarized in Chapter 5.

The MMS also conducted early coordination with appropriate Federal and State agencies and other concerned parties to discuss and coordinate the prelease process for the proposed lease sales and this EIS. Key agencies and organizations included NOAA Fisheries, FWS, U.S. Department of Defense (USDOD or DOD), USCG, USEPA, State Governors' offices, and industry groups. On February 27, 2002, representatives of MMS's GOM Region met with representatives of the Florida Governor's office, via telephone, to discuss any concerns the State may have regarding the proposed actions. The MMS staff presented a plan of action for this Eastern GOM EIS (Chapter 2.1), as well as facts on the proposed lease sale area (Chapter 1).

Although the scoping process was formally initiated on February 7, 2002, with the publication of the Call/NOI in the *Federal Register*, scoping efforts and other coordination meetings have proceeded and will continue to proceed throughout this NEPA process. The GOM Region's Information Transfer Meetings (ITM) provide an opportunity for MMS analysts to attend technical presentations related to OCS Program activities and to meet with representatives from Federal, State, and local agencies; industry; MMS contractors; and academia. Scoping and coordination opportunities are also available during MMS's requests for information, comments, input, and review on other MMS NEPA documents.

On July 19, 2002, the Area Identification (Area ID) decision was made. One Area ID was prepared for both proposed lease sales. The Area ID describes the geographical area of a proposed action (the proposed lease sale area) and identifies the alternatives, mitigating measures, and issues to be analyzed in the appropriate NEPA document. As mandated by NEPA, this Draft EIS analyzes the potential impacts of the proposed actions on the marine, coastal, and human environments.

The MMS will send copies of this Draft EIS for review and comment to public and private agencies, interest groups, and local libraries. To initiate the public review and comment period on this Draft EIS, MMS will publish a Notice of Availability (NOA) in the *Federal Register*. Additionally, public notices will be mailed out with the Draft EIS and placed on the MMS Internet website (www.gomr.mms.gov). In accordance with 30 CFR 256.26, MMS will hold public hearings (in Louisiana and Alabama during January 2003) to solicit comments on this Draft EIS. Notices of the public hearings will be included in the NOA, posted on the MMS Internet website, and published in local newspapers. The hearings will provide the Secretary with information from interested parties to help in the evaluation of potential effects of the proposed lease sales. The dates, times, and locations of the public hearings are presented in Chapter 5. All comments received on this Draft EIS will be considered in the preparation of the Final EIS. Summaries and/or copies of the comments and MMS's responses will also be included in the Final EIS.

Concurrent with the preparation of the Final EIS, a consistency review and subsequent Consistency Determination (CD) will be performed. For presale CD's, MMS reviews each affected State's Coastal Zone Management (CZM) program, analyzes the potential impacts to the CZM program, and makes an assessment of consistency with the enforceable policies of each State's program. If a State disagrees with MMS's CD, the State is required to do the following under CZMA: (1) indicate how the MMS presale proposal is inconsistent with their CZM program; (2) suggest alternative measures to bring the MMS proposal into consistency with their CZM program; or (3) describe the need for additional information that would allow a determination of consistency. Unlike the consistency process for specific OCS plans and permits, there is not a procedure for administrative appeal to the Secretary of Commerce for a Federal CD for presale activities. Either MMS or the State may request mediation. Mediation is voluntary and the DOC would serve as the mediator. Whether there is mediation or not, the final CD is made by DOI and is the final administrative action for the presale consistency process. Each Gulf State's CZM program is described in Appendix B.

The publication of the Final EIS will initiate a 30-day minimum comment period. After the end of the comment period, DOI will review the Final EIS and all comments received on both the Draft and the Final EIS's. The Assistant Secretary of the Interior for Land and Minerals (ASLM) will then decide which of the proposed alternatives will be implemented. A decision will be made only for proposed Lease Sale 189. The Proposed Notice of Sale for Lease Sale 189 and the Final EIS will be published at about the same time. A Final Notice of Sale for Lease Sale 189, if approved, will be published in the *Federal Register* at least 30 days prior to the scheduled lease sale. The Final Notice identifies the specific configuration of the proposed lease sale as decided upon by the ASLM.

An additional NEPA review (an EA) will be conducted in the year prior to proposed Lease Sale 197 to address any relevant new information. Formal consultation with other Federal agencies, the affected States, and the public will be carried out to assist in the determination of whether or not the information and analyses in the Final EIS are still valid. Specifically, an Information Request will be issued soliciting input on proposed Lease Sale 197.

The EA will tier from the Final EIS and will summarize and incorporate the material by reference. Because the EA will be prepared for a proposal that "is, or is closely similar to, one which normally requires the preparation of an EIS" (40 CFR 1501.4(e)(2)), the EA will be made available for public review for a minimum of 30 days prior to making a decision on the proposed lease sale. Consideration of the EA and any comments received in response to the Information Request will result in either a FONNSI or the determination that the preparation of a SEIS is warranted. If the EA results in a FONNSI, the EA and FONNSI will be sent to the Governors of the affected States. The availability of the EA and FONNSI will be announced in the *Federal Register*. The FONNSI will become part of the documentation prepared for the decision on the Notice of Sale.

In some cases, the EA may result in a finding that it is necessary to prepare a SEIS (40 CFR 1502.9). Some of the factors that could justify a SEIS are a significant change in resource estimates, legal challenge on the EA/FONNSI, significant new information, significant new environmental issue(s), new proposed alternative(s), a significant change in the proposed action, or the previous analysis in the Final EIS is deemed inadequate.

If a SEIS is necessary, it will also tier from the Final EIS and will summarize and incorporate the material by reference. The analysis will focus on addressing the new issue(s) or concern(s) that prompted the decision to prepare the SEIS. The SEIS will include a discussion explaining the purpose of the SEIS, a description of the proposed action and alternatives, a comparison of the alternatives, a description of the affected environment for any potentially affected resources that are the focus of the SEIS and were not described in the Final EIS, an analysis of new impacts or changes in impacts from the Final EIS because of new information or the new issue(s) analyzed in the SEIS, and a discussion of the consultation and coordination carried out for the new issues or information analyzed in the SEIS.

Lease sale-specific notices will be published as usual, except that the Proposed Notice of Sale will be published after completion of the final NEPA document for proposed Lease Sale 197.

1.5. POSTLEASE ACTIVITIES

The MMS is responsible for managing, regulating, and monitoring oil and natural gas exploration, development, and production operations on the Federal OCS to promote orderly development of mineral

resources and to prevent harm or damage to, or waste of, any natural resource, any life or property, or the marine, coastal, or human environment. Regulations for oil, gas, and sulphur lease operations are specified in 30 CFR 250, 30 CFR 251, and 30 CFR 254.

Measures to mitigate potential impacts are an integral part of the OCS Program. These measures are implemented through lease stipulations, operating regulations, NTL's, and project-specific requirements or approval conditions. Mitigating measures address concerns such as endangered and threatened species, geologic and manmade hazards, military warning and ordnance disposal areas, air quality, oil-spill response planning, chemosynthetic communities, operations in hydrogen sulfide (H_2S) prone areas, and shunting of drill effluents in the vicinity of biologically sensitive features. Standard mitigation measures in the GOM OCS include

- limiting the size of explosive charges used for structure removals;
- requiring placement explosive charges at least 15 ft below the mudline;
- requiring site-clearance procedures to eliminate potential snags to commercial fishing nets;
- establishment of No Activity and Modified Activity Zones around high-relief live bottoms;
- requiring remote-sensing surveys to detect and avoid biologically sensitive areas such as low-relief live bottoms, pinnacles, and chemosynthetic communities; and
- requiring coordination with the military to prevent multiuse conflicts between OCS and military activities.

The MMS issues NTL's to provide clarification, description, or interpretation of a regulation; guidelines on the implementation of a special lease stipulation or regional requirement; or convey administrative information. A detailed listing of current GOM OCS Region NTL's is available through the MMS, GOM OCS Region's Internet Homepage at http://www.gomr.mms.gov or through the Region's Public Information Office at (504) 736-2519 or 1-800-200-GULF.

Conditions of approval are mechanisms to control or mitigate potential safety or environmental problems associated with proposed operations. Conditions of approval are based on MMS technical and environmental evaluations of the proposed operations. Comments from Federal and State agencies (as applicable) are also considered in establishing conditions. Conditions may be applied to any OCS plan, permit, right-of-use of easement, or pipeline right-of-way grant.

Some MMS-identified mitigation measures are implemented through cooperative agreements or efforts with the oil and gas industry and Federal and State agencies. These measures include the NOAA Fisheries Observer Program to protect marine mammals and sea turtles when OCS structures are removed using explosives, labeling of operational supplies to track sources of accidental debris loss, development of methods of pipeline landfall to eliminate impacts to barrier beaches, and semiannual beach cleanup events.

The following postlease activity descriptions apply only to the proposed lease sale area in the EPA, not to the whole EPA.

Geological and Geophysical Activities

A geological and geophysical (G&G) permit must be obtained from MMS prior to conducting geological or geophysical exploration or scientific research on unleased OCS lands or on lands under lease to a third party (30 CFR 251.4 (a) and (b)). Geological investigations include various seafloor sampling techniques to determine the geochemical, geotechnical, or engineering properties of the sediments.

Seismic surveys are performed to obtain information on surface and near-surface geology and on subsurface geologic formations. Low-energy, high-resolution seismic surveys collect data on surficial geology used to identify potential shallow geologic or manmade hazards (e.g., faults or pipelines) for engineering and site planning for bottom-founded structures. The high-resolution surveys are also used to identify environmental and archaeological resources such as low-relief live-bottom areas, pinnacles,

chemosynthetic community habitat, and shipwrecks. High-energy, deep-penetration, common-depth-point (CDP) seismic surveys obtain data about geologic formations thousands of feet below the seafloor. The two-dimensional (2D) and three-dimensional (3D) CDP data are used to map structure features of stratigraphically important horizons in order to identify potential hydrocarbon traps. They can also be used to map the extent of potential habitat for chemosynthetic communities. In some situations, a set of 3D surveys can be run over a time interval to produce a four-dimensional (4D), or "time-lapse," survey that could be used to characterize production reservoirs.

The MMS is preparing a programmatic EA on Geological and Geophysical Exploration for Mineral Resources on the GOM OCS (USDOI, MMS, in preparation). Upon receiving a complete G&G permit application, MMS conducts a categorical exclusion review (CER), an EA, or an EIS in accordance with NEPA and other applicable MMS policies and guidelines. When required under an approved coastal zone management program, proposed G&G permit activities must receive State concurrence prior to MMS permit approval.

Exploration and Development Plans

To ensure conformance with the OCSLA, other laws, applicable regulations, and lease provisions, and to enable MMS to carry out its functions and responsibilities, formal plans (30 CFR 250.203 and 250.204) with supporting information must be submitted for review and approval by MMS before an operator may begin exploration, development, or production activities on any lease. Supporting environmental information, archaeological reports, biological reports (monitoring and/or live-bottom survey), and other environmental data determined necessary must be submitted with an OCS plan. This information provides the basis for an analysis of both offshore and onshore impacts that may occur as a result of the activities. The MMS may require additional specific supporting information to aid in the evaluation of the potential environmental impacts of the proposed activities. The MMS can require amendment of an OCS plan based on inadequate or inaccurate supporting information.

The OCS plans are reviewed by geologists, geophysicists, engineers, biologists, archaeologists, air quality specialists, oil-spill specialists, and technicians. The plans and accompanying information are evaluated to determine whether any seafloor or drilling hazards are present; that air and water quality issues are addressed; that plans for hydrocarbon resource conservation, development, and drainage are adequate; that environmental issues and potential impacts are properly evaluated and mitigated; and that the proposed action is in compliance with NEPA, MMS operating regulations, and other requirements. Federal agencies, including the FWS, NOAA Fisheries, USEPA, the U.S. Navy, the U.S. Air Force, and the USCG, may be consulted if the proposal has the potential to impact areas under their jurisdiction. Each Gulf Coast State has a designated CZM agency that takes part in the review process. The OCS plans are also made available to the general public for comment through the MMS, GOM OCS Region's Public Information Office.

In response to increasing deepwater activities in the GOM, MMS developed a comprehensive strategy to address NEPA compliance and environmental issues in the deepwater areas. A key component of that strategy was the completion of a programmatic EA to evaluate the potential effects of the deepwater technologies and operations (USDOI, MMS, 2000). As a supplement to the EA, MMS prepared a series of technical papers that provide a summary description of the different types of structures that may be employed in the development and production of hydrocarbon resources in the deepwater areas of the GOM (Regg et al., 2000).

On the basis of the MMS reviews of the OCS plan, the findings of the proposal-specific CER, EA, or EIS, and other applicable MMS studies and NEPA documents, the OCS plan is approved or disapproved by MMS, or modification of the plan is required. Although very few OCS plans are ultimately disapproved, many must be amended prior to approval to fully comply with MMS operating regulations and requirements, to address reviewing agencies' concerns, or to avoid potential hazards or impacts to environmental resources.

Exploration Plans

An EP must be submitted to MMS for review and decision before any exploration activities, except for preliminary activities, can begin on a lease. The EP describes exploration activities, drilling rig or vessel, proposed drilling and well-testing operations, environmental monitoring plans, and other relevant

information, and includes a proposed schedule of the exploration activities. Guidelines and environmental information requirements for lessees and operators submitting an EP are addressed in 30 CFR 250.203 and further explained in NTL 2002-G08.

After receiving an EP, MMS performs technical and environmental reviews. The MMS evaluates the proposed exploration activities for potential impacts relative to geohazards and manmade hazards (including existing pipelines), archaeological resources, endangered species, sensitive biological features, water and air quality, oil-spill response, and other uses (e.g., military operations) of the OCS. The EP is reviewed for compliance with all applicable laws and regulations.

A CER or EA is prepared in support of the NEPA environmental review of the EP. The CER or EA is based on available information, which may include the geophysical report (for determining the potential for the presence of deepwater benthic communities); archaeological report; air emissions data; live-bottom survey and report; biological monitoring plan; and recommendations by the affected State(s), DOD, FWS (for selected plans under provisions of a DOI agreement), NOAA Fisheries, and/or internal MMS offices. As part of the review process, most EP's and supporting environmental information are sent to the affected State(s) for consistency certification review and determination under the States' approved CZM programs.

After EP approval and prior to conducting drilling operations, the operator is required to submit and obtain approval for an Application for Permit to Drill (APD) (see *Wells* under *Permits and Applications* below).

Deepwater Operations Plans

In 1992, MMS formed an internal Deepwater Task Force to address technical issues and regulatory concerns relating to deepwater (greater than 1,000 ft or 305 m) operations and projects utilizing subsea technology. Based on the Deepwater Task Force's recommendation, an NTL was developed, which required operators to submit a Deepwater Operations Plan (DWOP) for all operations in deepwater and all projects using subsea technology (currently NTL 2000-N06). DeepStar, an industry-wide cooperative workgroup focused on deepwater regulatory issues and critical technology development issues, worked closely with the MMS Deepwater Task Force to develop the initial guidelines for the DWOP. The DWOP was established to address regulatory issues and concerns that were not addressed in the existing MMS regulatory framework and is intended to initiate an early dialogue between MMS and industry before major capital expenditures on deepwater and subsea projects are committed. Deepwater technology has been evolving faster than MMS's ability to revise OCS regulations; the DWOP was established through the NTL process, which provides for a more timely and flexible approach to keep pace with the expanding deepwater operations and subsea technology. The DWOP requirements are being incorporated into MMS operating regulations via the proposed rulemaking for revisions to 30 CFR 250 Subpart B.

The DWOP is intended to address the different functional requirements of production equipment in deep water, particularly the technological requirements associated with subsea production systems, and the complexity of deepwater production facilities. The DWOP provides MMS with information specific to deepwater equipment issues to demonstrate that a deepwater project is being developed in an acceptable manner as mandated in the OCSLA, as amended, and the MMS operating regulations at 30 CFR 250. The MMS reviews deepwater development activities from a total system perspective, emphasizing operational safety, environmental protection, and conservation of natural resources. The DWOP process is a phased approach that parallels the operator's state of knowledge about how a field will be developed. A DWOP outlines the design, fabrication, and installation of the proposed development/production system and its components. A DWOP will include structural aspects of the facility (fixed, floating, subsea); stationkeeping (includes mooring system); wellbore, completion, and riser systems; safety systems; offtake; and hazards and operability of the production system. The DWOP provides MMS with the information to determine that the operator has designed and built sufficient safeguards into the production system to prevent the occurrence of significant safety or environmental incidents. The DWOP, in conjunction with other permit applications, provides MMS the opportunity to assure that the production system is suitable for the conditions in which it will operate.

The MMS recently completed a review of several industry-developed, recommended practices that address the mooring and risers for floating production facilities. The recommended practices address such things as riser design, mooring system design (stationkeeping), and hazard analysis. The MMS is in

the process of incorporating these recommended practices into the existing regulations. Hazard analyses allow MMS to be assured that the operator has anticipated emergencies and is prepared to address such, either through their design or through the operation of the equipment in question.

Conservation Reviews

One of MMS's primary responsibilities is to ensure development of economically producible reservoirs according to sound conservation, engineering, and economic practices as cited in 30 CFR 250.202(a), 250.203(b)(21), 250.204(b)(17), and 250.1101(a). The MMS has established requirements for the submission of conservation information (NTL 2000-N05) for production activities. Operators should submit the necessary information as part of their Supplemental Plan of Exploration (POE) and Initial and Supplemental Development Operations Coordination Documents (DOCD). Conservation reviews are performed to ensure that economic reserves are fully developed and produced.

Development Operations and Coordination Documents

Before any development operations can begin on a lease in the proposed lease sale area, a DOCD must be submitted to MMS for review and decision. A DOCD describes the proposed development activities, drilling activities, platforms or other facilities, proposed production operations, environmental monitoring plans, and other relevant information, and includes a proposed schedule of development and production activities. Requirements for lessees and operators submitting a DOCD are addressed in 30 CFR 250.204, and information guidelines for DOCD's are given in NTL 2000-G10, dated April 27, 2000.

After receiving a DOCD, MMS performs technical and environmental reviews. The MMS evaluates the proposed activity for potential impacts relative to geohazards and manmade hazards (including existing pipelines), archaeological resources, endangered species, sensitive biological features, water and air quality, oil-spill response, and other uses (e.g., military operations) of the OCS. The DOCD is reviewed for compliance with all applicable laws and regulations.

A CER, EA, and/or EIS is prepared in support of the NEPA environmental review of a DOCD. The CER, EA, and/or EIS is based on available information, which may include the geophysical report (for determining the potential for the presence of deepwater benthic communities); archaeological report; air emissions data; live-bottom survey and report; biological monitoring plan; and recommendations by the affected State(s), DOD, FWS (for selected plans under provisions of a DOI agreement), NOAA Fisheries, and/or internal MMS offices.

As part of the review process, the DOCD and supporting environmental information may be sent to the affected State(s) for consistency certification review and determination under the States' approved CZM programs. The OCSLA (43 U.S.C. 1345(a) through (d) and 43 U.S.C. 1351(a)(3)) provides for this coordination and consultation with the affected State and local governments concerning a DOCD.

New or Unusual Technologies

Technologies continue to evolve to meet the technical, environmental, and economic challenges of deepwater development. The MMS prepared a programmatic EA to evaluate potential effects of deepwater technologies and operations (USDOI, MMS, 2000). As a supplement to the EA, MMS prepared a series of technical papers that provides a profile of the different types of development and production structures that may be employed in the GOM deep water (Regg et al., 2000). The EA and technical papers were used in the preparation of this EIS.

New or unusual technologies (NUT) may be identified by the operator in its EP, DWOP, and DOCD or through MMS's plan review processes. Some of the technologies proposed for use by the operators are actually extended applications of existing technologies and interface with the environment in essentially the same way as well-known or conventional technologies. These technologies are reviewed by MMS for alternative compliance or departures that may trigger additional environmental review. Some examples of new technologies that do not affect the environment differently and that are being deployed in the OCS Program are synthetic mooring lines, subsurface safety devices, and multiplex subsea controls.

Some new technologies differ in how they function or interface with the environment. These include equipment or procedures that have not been installed or used in GOM OCS waters. Having no operational history, they have not been assessed by MMS through technical and environmental reviews.

New technologies may be outside the framework established by MMS regulations and, thus, their performance (safety, environmental protection, efficiency, etc.) has not been addressed by MMS. The degree to which these new technologies interface with the environment and the potential impacts that may result are considered in determining the level of NEPA review that would be initiated.

The MMS has developed a dynamic NUT's matrix to help facilitate decisions on the appropriate level of engineering and environmental review needed for a proposed technology. Technologies will be added to the NUT's matrix as they emerge, and technologies will be removed as sufficient experience is gained in they implementation. From an environmental perspective, the matrix characterizes new technologies into three components: technologies that may affect the environment, technologies that do not interact with the environment any differently than "conventional" technologies, and technologies that MMS does not have sufficient information to determine its potential impacts to the environment. In this later case, MMS will seek to gain the necessary information from operators or manufacturers regarding the technologies to make an appropriate determination on its potential effects on the environment.

Alternative Compliance and Departures: The MMS's project-specific engineering safety review ensures that equipment proposed for use is designed to withstand the operational and environmental condition in which it would operate. When an OCS operator proposes the use of technology or procedures not specifically addressed in established MMS regulations, the operations are evaluated for alternative compliance or departure determination. Any new technologies or equipment that represent an alternative compliance or departure from existing MMS regulation must be fully described and justified before it would be approved for use. For MMS to grant alternative compliance or departure approval, the operator must demonstrate an equivalent or improved degree of protection as specified in 30 CFR 250.141. Comparative analysis with other approved systems, equipment, and procedures is one tool that MMS uses to assess the adequacy of protection provided by alternative technology or operations. Actual operational experience is necessary with alternative compliance measures before MMS would consider them as proven technology.

Emergency Plans

Criteria, models, and procedures for shutdown operations and the orderly evacuation for a pending hurricane have been in place in the GOM OCS for more than 30 years. Operating experience from extensive drilling activities and more than 4,000 platforms during the 30-plus years of the GOM OCS Program have demonstrated the effectiveness and safety of securing wells and evacuating a facility in advance of severe weather conditions. Preinstallation efforts, historical experience with similar systems, testing, and the actual operating experience (under normal conditions and in response to emergency situations) is to formulate the exact time needed to secure the wells/production facility and to abandon as necessary. Operators will develop site-specific curtailment/securing/evacuation plans that will vary in complexity and formality by operator and type of activity. In general terms, all plans are intended to make sure the facility (or well) is secured in advance of a pending storm or developing emergency. The operating procedures developed during the engineering, design, and manufacturing phases of the project, coupled with the results (recommended actions) from hazard analyses performed, will be used to develop the emergency action/curtailment plans. Evacuation and production curtailment must consider a combination of factors, including the well status (drilling, producing, etc.), and the type and mechanics of wellbore operations. These factors are analyzed onsite through a decision making process that involves onsite facility managers. The emphasis is on making real-time, situation-specific decisions and forecasting based on available information. Details of the shut-in criteria and various alerts are addressed on a case-by-case basis.

Plans for shutting in production from the subsea wells are addressed as part of the emergency curtailment plan. The plan specifies the various alerts and shutdown criteria linked to both weather and facility performance data, with the intent to have operations suspended and the wells secured in the event of a hurricane or emergency situation. Ensuring adequate time to safely and efficiently suspend operations and secure the well is a key component of the planning effort. Clearly defined responsibilities for the facility personnel are part of the successful implementation of the emergency response effort.

For a severe weather event such as a hurricane, emergency curtailment plans would address the criteria and structured procedures for suspending operations and ultimately securing the wellbore(s) prior to weather conditions that could exceed the design operating limitations of the drilling or production unit. For drilling operations, the plan might also address procedures for disconnecting and moving the drilling

unit off location after the well has been secured, should the environmental conditions exceed the floating drilling unit's capability to maintain station. Curtailment of operations consists of various stages of "alerts" indicating the deterioration of meteorological, oceanographic, or wellbore conditions. Higher alert levels require increased monitoring, the curtailment of lengthy wellbore operations, and, if conditions warrant, the eventual securing of the well. If conditions improve, operations could resume based on the limitations established in the contingency plan for the known environmental conditions. The same emergency curtailment plans would be implemented in an anticipated or impending emergency situation, such as the threat of terrorist attack.

Neither MMS nor USCG mandates that an operator must evacuate a production facility for a hurricane; it is a decision that rests solely with the operator. The USCG does require the submittal of an emergency evacuation plan that addresses the operator's intentions for evacuation of nonessential personnel, egress routes on the production facility, lifesaving and personnel safety devices, firefighting equipment, etc. As activities move farther from shore, it may become safer to not evacuate the facility because helicopter operations become inherently more risky with greater flight times. Severe weather conditions also increase the risks associated with helicopter operations. The precedent for leaving a facility manned during severe weather is established in North Sea and other operating basins.

Redundant, fail-safe, automatic shut-in systems located inside the wellbore and at the sea surface, and in some instances at the seafloor, are designed to prevent or minimize pollution. These systems are designed and tested to ensure proper operation should a production facility or well be catastrophically damaged. Testing occurs at regular intervals with predetermined performance limits designed to ensure functioning of the systems in case of an emergency.

Permits and Applications

After EP or DOCD approval, the operator submits applications for specific activities to MMS for approval. These applications include those for drilling wells; well-test flaring; temporary well abandonment; installing a well protection structure, production platforms, satellite structures, subsea wellheads and manifolds, and pipelines; installation of production facilities; commencing production operations; platform removal and lease abandonment; and pipeline decommissioning.

Wells

The MMS requirements for the drilling of wells can be found at 30 CFR 250 Subpart D. Lessees are required to take precautions to keep all wells under control at all times. The lessee must use the best available and safest technology to enhance the evaluation of abnormal pressure conditions and to minimize the potential for uncontrolled well flow.

Prior to conducting drilling operations, the operator is required to submit and obtain approval for an APD. The APD requires detailed information — including project layout at a scale of 24,000:1, design criteria for well control and casing, specifications for blowout preventers, a mud program, cementing program, directional drilling plans, etc. — to allow evaluation of operational safety and pollution-prevention measures. The APD is reviewed for conformance with the engineering requirements and other technical considerations.

The MMS is responsible for conducting technical and safety reviews of all drilling, workover, and production operations on the OCS. These detailed analyses determine if the lessee's proposed operation is in compliance with all regulations and all current health, safety, environmental, and classical engineering standards. Compliance includes requirements for state-of-the-art drilling technology, production safety systems, completion of oil and gas wells, oil-spill contingency plans, pollution-control equipment, H_2S contingency plans, and specifications for platform/structure designs. These safety, technical, and engineering reviews involve risk assessment and a thorough analysis of the hazards involved. Safety systems used for drilling, workover, and production operations 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. Specific requirements for sundry notices for well workovers, completions, and abandonments are detailed in 30 CFR 250 Subparts F, E, and Q, respectively.

The MMS regulations at 30 CFR 250.1710-1717 address the requirements for permanent abandonment of a well on the OCS. A permanent abandonment includes the isolation of zones in the open wellbore, plugging of perforated intervals, plugging the annular space between casings (if they are

open), setting a surface plug, and cutting and retrieving the casing at least 15 ft below the mudline. All plugs must be tested in accordance with the regulations. There are no routine surveys of permanently abandoned well locations. If a well were found to be leaking, MMS would require the operator of record to perform an intervention to repair the abandonment. If a well is temporarily abandoned at the seafloor, an operator must provide MMS with an annual report summarizing plans to permanently abandon the well or to bring the well into production. Part of the annual report for a temporarily abandoned well is a survey of the well location to ensure the temporary abandonment is intact and adequately restricting any reservoir fluids from migrating out of the well. All equipment such as wellheads, production trees, casing, manifolds, etc., must be designed to withstand the maximum pressures that they may experience. These designs are verified by MMS through multiple levels of engineering safety reviews prior to the equipment being placed into service.

Platforms and Structures

The MMS does a technical and safety review of all proposed structure designs and installation procedures. All proposed facilities are reviewed for structural integrity. These detailed classical engineering reviews entail an intense evaluation of all operator proposals for fabrication, installation, modification, and repair of all mobile and fixed structures. The lessee must design, fabricate, install, use, inspect, and maintain all platforms and structures on the OCS to assure their structural integrity for the safe conduct of operations at specific locations. Applications for platform and structure approval are filed in accordance with 30 CFR 250.901. Design requirements are presented in detail at 30 CFR 250.904 through 250.909. The lessee evaluates characteristic environmental conditions associated with operational functions to be performed. Factors such as waves, wind, currents, tides, temperature, and the potential for marine growth on the structure are considered. In addition, pursuant to 30 CFR 250.902 and 250.903, a program has been established by MMS to assure that new structures meeting the conditions listed under 30 CFR 250.900(c) are designed, fabricated, and installed using standardized procedures to prevent structural failures. This program facilitates review of such structures and uses third-party expertise and technical input in the verification process through the use of a Certified Verification Agent. After installation, platforms and structures are required to be periodically inspected and maintained under 30 CFR 250.912.

Pipelines

Regulatory processes and jurisdictional authority concerning pipelines on the OCS and in coastal areas are shared by several Federal agencies, including DOI, DOT, COE, the Federal Energy Regulatory Commission (FERC), and the USCG. Aside from pipeline regulations, these agencies have the responsibility of overseeing and regulating the following areas: the placement of structures on the OCS and pipelines in areas that affect navigation; the certification of proposed projects involving the transportation or sale of interstate natural gas, including OCS gas; and the right of eminent domain exercised by pipeline companies onshore. In addition, DOT is responsible for promulgating and enforcing safety regulations for the transportation in or affecting interstate commerce of natural gas, liquefied natural gas (LNG), and hazardous liquids by pipeline. This includes, for the most part, offshore pipelines on State lands beneath navigable waters and on the OCS that are operated by transmission companies. The regulations are contained in 49 CFR 191 through 193 and 195. In a MOU between DOT and DOI dated December 10, 1996, each party's respective regulatory responsibilities are outlined. The DOT is responsible for establishing and enforcing design, construction, operation, and maintenance regulations, and for investigating accidents for all OCS transportation pipelines beginning downstream of the point at which operating responsibility transfers from a producing operator to a transporting operator. The DOI's responsibility extends upstream from the transfer point described above.

The MMS is responsible for regulatory oversight of the design, installation, and maintenance of OCS producer-operated oil and gas pipelines. The MMS operating regulations for pipelines found at 30 CFR 250 Subpart J are intended to provide safe and pollution-free transportation of fluids in a manner that does not unduly interfere with other users of the OCS. Pipeline applications are usually submitted and reviewed separately from development and production plans. Pipeline applications may be for on-lease pipelines or right-of-way for pipelines that cross other lessees' leases or unleased areas of the OCS. Pipeline permit applications to MMS include the pipeline location drawing, profile drawing, safety

schematic drawing, pipe design data, a shallow hazard survey report, and an archaeological report, if applicable.

The DOI has regulatory responsibility for all producer-operated pipelines. The DOI's responsibility extends downstream from the first production well to the last valve and associated safety equipment on the last OCS-related production system along the pipeline. The DOT's regulatory responsibility extends shoreward from the last valve on the last OCS-related production facility.

The MMS evaluates the design, fabrication, installation, and maintenance of all OCS pipelines. Proposed pipeline routes are evaluated for potential seafloor or subsea geologic hazards and other natural or manmade seafloor or subsurface features or conditions (including other pipelines) that could have an adverse impact on the pipeline or that could be adversely impacted by the proposed operations. Routes are also evaluated for potential impacts on archaeological resources and biological communities. A NEPA review is conducted in accordance with applicable policies and guidelines. The MMS prepares an EA on all pipeline rights-of-way that go ashore. The design of the proposed pipeline is evaluated for an appropriate cathodic protection system to protect the pipeline from leaks resulting from the effects of external corrosion of the pipe; an external pipeline coating system to prolong the service life of the pipeline; measures to protect the inside of the pipeline from the detrimental effects, if any, of the fluids being transported; the submersibility of the line (i.e., that the pipeline will remain in place on the seafloor and not have the potential to float, even if empty or filled with gas rather than liquids); proposed operating pressure of the line, and protection of other pipelines crossing the proposed route. Such an evaluation includes (1) reviewing the calculations used by the applicant in order to determine whether the applicant properly considered such elements as the grade of pipe to be used, the wall thickness of the pipe, derating factors related to the submerged and riser portions of the pipeline, the pressure rating of any valves or flanges to be installed in the pipeline, the pressure rating of any other pipeline(s) into which the proposed line might be tied, the required pressure to which the line must be tested before it is placed in service; (2) protective safety devices such as pressure sensors and remotely operated valves, the physical arrangement of those devices proposed to be installed by the applicant for the purposes of protecting the pipeline from possible overpressure conditions and for detecting and initiating a response to abnormally low-pressure conditions; and (3) the applicant's planned compliance with regulations requiring that pipelines installed in water depths less than 200 ft be buried to a depth of at least 3 ft (30 CFR 250.1003). In addition, pipelines crossing fairways require a COE permit and must be buried to a depth of at least 10 ft and to 16 ft if crossing anchorage area.

Operators are required to periodically inspect pipeline routes. Monthly overflights are conducted to inspect pipeline routes for leakage.

Applications for pipeline decommissioning must also be submitted for MMS review and approval. Decommissioning applications are evaluated to ensure they will render the pipeline inert and/or to minimize the potential for the pipeline becoming a source of pollution by flushing and plugging the ends; and to minimize the likelihood that the decommissioned line will become an obstruction to other users of the OCS by filling it with water and burying the ends.

Inspection and Enforcement

The OCSLA authorizes and requires MMS to provide for both an annual scheduled inspection and a periodic unscheduled (unannounced) inspection of all oil and gas operations on the OCS. The inspections are to assure compliance with all regulatory constraints that allowed commencement of the operation.

The primary objective of an initial inspection is to assure proper installation of mobile drilling units and fixed structures, and proper functionality of their safety and pollution prevention equipment. After operations begin, additional announced and unannounced inspections are conducted. Unannounced inspections are conducted to foster a climate of safe operations, to maintain an MMS presence, and to focus on operators with a poor performance record. These inspections are also conducted after a critical safety feature has previously been found defective. Poor performance generally means that more frequent, unannounced inspections may be conducted on a violator's operation.

The annual inspection examines all safety equipment designed to prevent blowouts, fires, spills, or other major accidents. These annual inspections involve the inspection for installation and performance of all platform, safety-system components.

The inspectors follow the guidelines as established by the regulations, API RP 14C, and the specific MMS-approved plan. The MMS inspectors perform these inspections using a national checklist called

the Potential Incident of Noncompliance (PINC) list. This list is a compilation of yes/no questions derived from all regulated safety and environmental requirements. Information PINC's can be found at http://www.mms.gov/regcompliance/inspect.htm.

The MMS administers an active civil penalties program (30 CFR 250, Subpart N). A civil penalty in the form of substantial monetary fines may be issued against any operator that commits a violation that may constitute a threat of serious, irreparable, or immediate harm or damage to life, property, or the environment. The MMS may make recommendations for criminal penalties if a willful violation occurs. In addition, the regulation at 30 CFR 250.173(a) authorizes suspension of any operation in the GOM Region if the lessee has failed to comply with a provision of any applicable law, regulation, or order or provision of a lease or permit. Furthermore, the Secretary may invoke his authority under 30 CFR 250.185(c) to cancel a nonproductive lease with no compensation. Exploration and development activities may be canceled under 30 CFR 250.182 and 250.183.

Pollution Prevention, Oil-Spill Response Plans, and Financial Responsibility

Pollution Prevention

Pollution prevention is addressed through proper design and requirements for safety devices. The MMS regulations at 30 CFR 250.400 require that the operator take all necessary precautions to keep its wells under control at all times. The lessee is required to use the best available and safest drilling technology in order to enhance the evaluation of conditions of abnormal pressure and to minimize the potential for the well to flow or kick. Redundancy is provided for critical safety devices that will shut off flow from the well if loss of control is encountered.

In addition, MMS regulations at 30 CFR 250.500, 250.600, and 250.800 require that the lessee assure the safety and protection of the human, marine, and coastal environments during completion, workover, and production operations. All production facilities, including separators, treaters, compressors, headers, and flowlines are required to be designed, installed, tested, maintained, and used in a manner that provides for efficiency, safety of operations, and protection of the environment. Wells, particularly subsea wells, include a number of sensors that help in detecting pressures and the potential for leaks in the production system. Safety devices are monitored and tested frequently to ensure their operation, should an incident occur. To ensure that safety devices are operating properly, MMS incorporates the American Petroleum Institute (API) Recommended Practice (RP) 14C into the operating regulations. API RP 14C incorporates the knowledge and experience of the oil and gas industry regarding the analysis, design, installation, and testing of the safety devices used to prevent pollution. API RP 14C presents proven practices for providing these safety devices for offshore production platforms. Proper application of these practices, along with good design, maintenance, and operation of the entire production facility, should provide an operationally safe and pollution-free production platform.

Also, MMS regulations at 30 CFR 250.1000 require that pipelines and associated valves, flanges, and fittings be designed, installed, operated, maintained, and abandoned to provide safe and pollution-free transportation of fluids in a manner that does not unduly interfere with other uses in the OCS.

The MMS regulation at 30 CFR 250.300(a) requires that lessees not create conditions that will pose an unreasonable risk to public health, life, property, aquatic life, wildlife, recreation, navigation, commercial fishing, or other uses of the ocean during offshore oil and gas operations. The lessee is required to take measures to prevent the unauthorized discharge of pollutants into the offshore waters. Control and removal of pollution is the responsibility and at the expense of the lessee. Immediate corrective action to a pollution event is required. All hydrocarbon-handling equipment for testing and production, such as separators, tanks, and treaters, are required to be designed, installed, and operated to prevent pollution. Maintenance and repairs that are necessary to prevent pollution is required to be taken immediately. Drilling and production facilities are required to be inspected daily or at intervals approved or prescribed by the MMS District Supervisor to determine if pollution is occurring.

Operators are required to install curbs, gutters, drip pans, and drains on platform and rig deck areas in a manner necessary to collect all contaminants and debris not authorized for discharge. The rules also explicitly prohibit the disposal of equipment, cables, chains, containers, or other materials into offshore waters. Portable equipment, spools or reels, drums, pallets, and other loose items must be marked in a durable manner with the owner's name prior to use or transport over offshore waters. Smaller objects must be stored in a marked container when not in use. Operational discharges such as produced water

and drilling muds and cuttings are regulated by the USEPA through the NPDES program. The MMS may restrict the rate of drilling fluid discharge or prescribe alternative discharge methods. No petroleum-based substances, including diesel fuel, may be added to the drilling mud system without prior approval of the MMS District Supervisor.

Oil-Spill Response Plans

The MMS's responsibilities under OPA 90 include spill prevention, review, and approval of oil-spill response plans (OSRP); inspection of oil-spill containment and cleanup equipment; and ensuring oil-spill financial responsibility for facilities in offshore waters located seaward of the coastline or in any portion of a bay that is connected to the sea either directly or through one or more other bays. The MMS regulations (30 CFR 254) require that all owners and operators of oil-handling, storage, or transportation facilities located seaward of the coastline submit an OSRP for approval. The term "coastline" means the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters. The term "facility" means any structure, group of structures, equipment, or device (other than a vessel), which is used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil. A MODU is classified as a facility when engaged in drilling or downhole operations.

The regulation at 30 CFR 254.2 requires that an OSRP must be submitted and approved before an operator can use a facility. The MMS can grant an exception to this requirement during the MMS review of an operator's submitted OSRP. In order to be granted this exception during this time period, an owner/operator must certify in writing to MMS that it is capable of responding to a "worst-case" spill or the substantial threat of such a spill. To continue operations, the facility must be operated in compliance with the approved OSRP or the MMS-accepted "worst-case" spill certification. Owners or operators of offshore pipelines are required to submit an OSRP for any pipeline that carries oil, condensate, or gas with condensate; pipelines carrying essentially dry gas do not require an OSRP. Current OSRP's are required for abandoned facilities until they are physically removed or dismantled.

The OSRP describes how an operator intends to respond to an oil spill. The OSRP may be site-specific or regional (30 CFR 254.3). The term "regional" means a spill response plan that covers multiple facilities or leases of an owner or operator, including affiliates, which are located in the same MMS GOM Region. Although Regional OSRP's have not been allowed for facilities in the EPA in the past, MMS has recently initiated a new policy accepting subregional plans for this area. The subregional plan concept is similar to the regional concept, which allows leases or facilities to be grouped together for the purposes of (1) calculating response times, (2) determining quantities of response equipment, (3) conducting oil-spill trajectory analyses, (4) determining worst-case discharge scenarios, and (5) identifying areas of special economic and environmental importance that may be impacted and the strategies for their protection. The OSRP's filed for multiple facilities or leases in the EPA are referred to as subregional OSRP's to distinguish them from the Regional OSRP's filed in the CPA and Western Planning Area (WPA). The number and location of the leases and facilities allowed to be covered by a subregional OSRP will be decided by MMS on a case-by-case basis considering the proximity of the leases or facilities proposed to be covered. NTL 2002-G09 includes guidance on the preparation and submittal of subregional OSRP's.

The Emergency Response Action Plan within the OSRP serves as the core of the MMS required OSRP. In accordance with 30 CFR 254.23, the Emergency Response Action Plan requires identification of (1) the qualified individual and the spill-response management team, (2) the spill-response operating team, (3) the oil-spill response removal organizations under contract for response, and (4) the Federal, State, and local regulatory agencies that an owner/operator must notify or that they must consult with to obtain site-specific environmental information when an oil spill occurs. The OSRP is also required to include an inventory of appropriate equipment and materials, their availability, and the time needed for deployment, as well as information pertaining to dispersant use, *in situ* burning, a worse-case discharge scenario, contractual agreements, and training and drills. The response plan must provide for response to an oil spill from their facility and the operator must immediately carry out the provisions of the plan whenever an oil spill from the facility occurs. The OSRP must be in compliance with the National Contingency Plan and the Area Contingency Plan(s) (ACP). The operator is also required to carry out the training, equipment testing, and periodic drills described in the OSRP. All MMS-approved OSRP's must be reviewed at least every two years. In addition, revisions must be submitted to MMS within 15 days whenever:

(1) a change occurs that appreciably reduces an owner/operator's response capabilities;

(2) a substantial change occurs in the worst-case discharge scenario or in the type of oil being handled, stored, or transported at the facility;

(3) there is a change in the name(s) or capabilities of the oil-spill removal organizations cited in the OSRP; or

(4) there is a change in the applicable ACP's.

Financial Responsibility

The responsible party for COF's may have to demonstrate OSFR as required by 30 CFR 253 under OPA 90. A COF is any structure and all of its components (including wells completed at the structure and the associated pipelines), equipment, pipeline, or device (other than a vessel or other than a pipeline or deepwater port licensed under the Deepwater Port Act of 1974) used for exploring, drilling, or producing oil, or for transporting oil from such facilities. The MMS ensures that each responsible party has sufficient funds for removal costs and damages resulting from the accidental release of liquid hydrocarbons into the environment for which the responsible party is liable.

Air Emissions

The OCSLA (43 U.S.C. 1334(a)(8)) requires the Secretary to promulgate and administer regulations that comply with the NAAQS pursuant to the CAA (42 U.S.C. 7401 *et seq*.) to the extent that authorized activities significantly affect the air quality of any State. Under provisions of the CAAA of 1990, the USEPA Administrator has jurisdiction and, in consultation with the Secretary and the Commandant of the USCG, established the requirements to control air pollution in OCS areas of the Pacific, Atlantic, Arctic, and eastward of 87°30′ W longitude in the GOM. The OCS area westward of 87°30′ W longitude in the GOM is under MMS air quality jurisdiction.

For OCS air emission sources located east of 87°30′ W. longitude and within 25 mi of the States' seaward boundaries, the requirements are the same as the requirements that would be applicable if the source were located in the corresponding onshore area. The USEPA requirements for these OCS areas are at 40 CFR 55, Appendix A. For emission sources located beyond the 25 mi of the States' boundaries, the sources are subject to Federal requirements for PSD. The regulations also establish procedures to allow the USEPA Administrator to exempt any OCS source from a control technology requirement if it is technically infeasible or poses unreasonable threat to health or safety.

For OCS air emission sources west of 87°30′ W longitude, MMS established the regulations at 30 CFR 250 Subpart C to comply with the CAA. The regulated pollutants include carbon monoxide (CO), suspended particulates, sulphur dioxide (SO_2), nitrogen oxides (NO_x), total hydrocarbons, and volatile organic compounds (VOC) (as a precursor to ozone). In areas where H_2S may be present, operations are regulated by 30 CFR 250.417. All new or supplemental EP's and DOCD's must include air emissions information sufficient to make an air quality determination. The MMS regulations provide for the collection of information about potential sources of pollution in order to determine whether projected emissions of air pollutants from a facility may result in onshore ambient air concentrations above USEPA significance levels and to identify appropriate emissions controls to prevent accidents and air quality deterioration.

Emissions data for new or modified onshore facilities directly associated with proposed OCS activities are required to be included in the development plan to enable each affected State to make a determination of the effects on its air quality.

The MMS uses a three-level hierarchy of criteria to evaluate the potential impact of offshore emission sources upon onshore receptors. The evaluation criteria are (1) exemption level, (2) significance level, and (3) maximum allowable increase. If the proposed activities exceed the criteria at the first level, they are then evaluated against the set of criteria at the next level; the same for the second to third levels.

The first step is to compare the worst-case emissions to the MMS exemption criteria. This corresponds to the USEPA screening step. Since there is no screening model suitable for use with offshore emission sources, MMS uses simple equations to calculate the screening thresholds or

"exemption levels." A Gaussian model was used to obtain a simple linear relationship. If the emissions associated with the proposed activities are below the exemption levels, the proposed actions are exempt from further air quality review and modeling with the OCD model is not required.

The second step requires refined modeling using OCD if the exemption level is exceeded. The modeled onshore impacts are compared to MMS's codified significance levels. In the event the significance level is exceeded in the second step, the operator would be required to apply best available control technology and remodel the resulting emissions. If the resulting impact is still above the significance level, the operator must comply with the third step by demonstrating that the cumulative impact to onshore areas is below the maximum allowable increase or the operator must offset the emissions. The maximum allowable increase is determined by the PSD classification of the potentially affected onshore area. The maximum allowable increase for a Class II area is higher than for a Class I area. For large sources potentially affecting Class I areas, MMS actively consults with the designated Federal land manager. The MMS consults with the Federal land manager for all permanent large sources affecting Class I areas, including any modification to an existing large facility that results in any increase in emissions above the previously approved levels of the PSD regulated pollutants.

It is worth noting that to date no plan has ever been submitted in the GOM Region that required the need to go the third step in the review process — all MMS-approved emissions are below the MMS's significance levels. Additionally, to date, no GOM Region plan has had to undergo Federal land manager consultation for particulate matter, and all plans that underwent Federal land manger consultation for nitrogen dioxide (NO_2) or SO_2 were deemed to "not significantly consume the increment."

Flaring

Flaring is the venting and/or burning of natural gas from a specially designed boom. Flaring systems are also used to vent gas during well testing or during repair/installation of production equipment. The MMS heavily regulates flaring to minimize the loss of natural gas resources. The MMS policy, in accordance with 30 CFR 250.1105, is to not allow flaring or venting of natural gas on an extended basis, but regulations do provide for some limited volume, short duration (typically 2-14 days) flaring or venting upon approval by MMS. Such flaring or venting may be conducted as part of unloading/testing operations that are necessary to remove potentially damaging completion fluids from the well bore, to provide sufficient reservoir data for the operator to evaluate a reservoir and development options, and in emergency situations. Under extraordinary circumstances, special flaring approval may be granted. Substantial justification must be provided for each flaring request.

Hydrogen Sulfide Contingency Plans

The operator of a lease must request that MMS make a determination regarding the presence of H_2S gas pursuant to 30 CFR 250.203, 30 CFR 250.204, and 30 CFR 250.417. The MMS classifies an area of proposed operations as (1) H_2S absent, (2) H_2S present, or (3) H_2S unknown.

All operators on the OCS involved in production of sour hydrocarbons that could result in atmospheric H_2S concentrations above 20 parts per million (ppm) are required to file an H_2S contingency plan. This plan must include procedures to ensure the safety of the workers on the production facility and contingencies for simultaneous drilling, well-completion, well-workover, and production operations. The lessee/operator must take all necessary and practicable precautions to protect personnel from the toxic effects of H_2S and to mitigate the adverse effects of H_2S to property and the environment. All operators are required to adhere to the National Association of Corrosion Engineers' (NACE) *Standard Material Requirement MRO175-97 for Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment* (NACE International, 1997). These engineering standards enhance the integrity of the infrastructure used to produce the sour oil and gas. In addition, the API has also developed *Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide* (API, 1995).

The MMS issued rules governing requirements for preventing hydrogen sulfide releases, detecting and monitoring hydrogen sulfide and SO_2, protecting personnel, providing warning systems, and establishing requirements for hydrogen sulfide flaring. NTL 98-16, titled "Hydrogen Sulfide (H_2S) Requirements," provides clarification, guidance, and information on the requirements. The NTL provides guidance on sensor location, sensor calibration, respirator breathing time, measures for protection against

sulfur dioxide, requirements for classifying an area for the presence of H_2S, requirements for flaring and venting of gas containing H_2S, and other issues pertaining to H_2S-related operations.

Archaeological Resources Regulation

The archaeological resources regulation at 30 CFR 250.194 grants specific authority to each MMS Regional Director to require archaeological resource surveys and reports where deemed necessary. The technical requirements of the archaeological resource surveys are detailed in NTL 2002-G01, issued by the MMS, GOM OCS Region. The regulation at 30 CFR 250.26 requires the lessee to include an archaeological report with an EP or DOCD. If the evidence suggests that an archaeological resource may be present, the lessee must either locate the site of any operation so as not to adversely affect the area where the archaeological resource may be, demonstrate that an archaeological resource does not exist, or demonstrate that archaeological resources will not be adversely affected by operations. If the lessee discovers any archaeological resource while conducting approved operations, operations must be immediately stopped and the discovery reported to the MMS Regional Director.

Coastal Zone Management Consistency Review and Appeals for Plans

Pursuant to the CZMA, a State with an approved CZM plan reviews certain OCS activities to determine whether they will be conducted in a manner consistent with their approved plan. This review authority is applicable to activities described in detail in any plan for the exploration or development of any area that has been leased under the OCSLA and that affects any land or water use or natural resource within the State's coastal zone (16 U.S.C. 1456(c)(3)(B)). The MMS may not issue a permit for activities described in an EP or DOCD unless the State concurs or is conclusively presumed to have concurred that the OCS plan is consistent with its CZM plan (43 U.S.C. 1340(c) and 1351(d); 16 U.S.C. 1456(c)(3)).

The information requirements for CZM purposes are found at 30 CFR 250.203 and 250.204 and are discussed in NTL 2002-G08. Under the CZMA, each State with an approved CZM plan may require information that is different than that specifically outlined in these regulations. All of the Gulf States have approved CZM programs. A State CZM agency must ensure timely public notice of their receipt of an OCS plan that has been submitted for their CZM consistency determination (15 CFR 930.78(b) and 15 CFR 930.84(a)).

In accordance with the requirements of 15 CFR 930.76(b), the MMS, GOM OCS Region sends copies of an OCS plan, including the consistency certification and other required necessary data and information, to the designated State CZM agency by receipted mail. Under the revised 15 CFR 930 regulations, effective January 8, 2001, a State has 30 days in which to determine if the CZM consistency clock has begun. Once the consistency review clock has begun, if no State-agency objection is submitted by the end of the consistency review period, MMS shall presume consistency concurrence by the State (15 CFR 930.79(a) and (b)). Similar procedures are followed for amended, revised, and modified plans.

If a written consistency concurrence is received from the State, MMS may then approve any permit for activities described in the OCS plan in accordance with 15 CFR 930.63(c). The MMS does not impose or enforce additional State conditions when issuing permits. The MMS can require modification of a plan if the operator has agreed to certain requirements requested by the State.

If MMS receives a written consistency objection from the State containing all the items required in 15 CFR 930.79(c) before the expiration of the review period, MMS will not approve any activity described in the OCS plan unless (1) the operator amends the OCS plan to accommodate the objection in accordance with 15 CFR 930.83 and concurrence is subsequently received or conclusively presumed; (2) upon appeal, the Secretary of Commerce, in accordance with 15 CFR 930.120, finds that the OCS plan is consistent with the objectives or purposes of the CZMA or is necessary in the interest of national security; or (3) the original objection is declared invalid by the courts.

Best Available and Safest Technologies

To assure that oil and gas exploration, development, and production activities on the OCS are conducted in a safe and pollution-free manner, 43 U.S.C. 1347(b) of the OCSLA, as amended, requires that all OCS technologies and operations use the best available and safest technology (BAST) whenever practical. The Director may require additional BAST measures to protect safety, health, and the

environment, if it is economically feasible and the benefits outweigh the costs. Conformance to the standards, codes, and practices referenced in 30 CFR 250 is considered the application of BAST. These standards, codes, and practices include requirements for state-of-the-art drilling technology, production safety systems, completion of oil and gas wells, oil-spill response plans, pollution-control equipment, and specifications for platform/structure designs. The MMS conducts periodic offshore inspections, and continuously and systematically reviews OCS technologies to ensure that the best available and safest technologies are applied to OCS operations. The BAST is not required when MMS determines that the incremental benefits are clearly insufficient to justify increased costs; however, it is the responsibility of an operator of an existing operation to demonstrate why application of a new technology would not be feasible. This requirement is applicable to equipment and procedures that, if failed, would have a significant effect on safety, health, or the environment, unless benefits clearly do not justify the cost (30 CFR 250.107(c) and (d)).

The BAST concept is addressed in the MMS, GOM OCS Region by a continuous effort to locate and evaluate the latest technologies and to report on these advances at periodic Regional Operations Technology Assessment Committee (ROTAC) meetings. A part of the MMS staff has an ongoing function to evaluate various vendors and industry representatives' innovations and improvements in techniques, tools, equipment, procedures, and technologies applicable to oil and gas operations (drilling, producing, completion, and workover operations). This information is provided to MMS district personnel at ROTAC meetings. The requirement for the use of BAST has been, for the most part, an evolutionary process whereby advances in equipment, technologies, and procedures have been integrated into OCS operations over a period of time. An awareness by both MMS inspectors and the OCS operators of the most advanced equipment and technologies has resulted in the incorporation of these advances into day-to-day operations. An example of such an equipment change that evolved over a period of time would be the upgrading of diverter systems on drilling rigs from the smaller diameter systems of the past to the large-diameter, high-capacity systems found on drilling rigs operating on the OCS today. Another example of a BAST-required equipment change would be the requirement to replace subsurface-controlled, subsurface safety valves with surface-controlled, subsurface safety-valve systems, which incorporate a more positive closure design and operation.

Production Facilities

The MMS's regulations governing oil and gas production safety systems are found in 30 CFR 250 Subpart H. 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 tubing installations 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. Surface- and subsurface-controlled safety valves and locks must conform to the requirements of 30 CFR 250.801. 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. 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 and must be in accordance with API RP 14 C Appendix D and other measures.

Personnel Training and Education

An important factor in ensuring that offshore oil and gas operations are carried out in a manner that emphasizes operational safety and minimizes the risk of environmental damage is the proper training of personnel. Under 30 CFR 250.1500 Subpart O, MMS has outlined well control and production safety training program requirements for lessees operating on the OCS. The goal of the regulation (30 CFR 250.1501) is safe and clean OCS operations. Lessees must ensure that their employees and contract personnel engaged in well control or production safety operations understand and can properly perform their duties. To accomplish this, the lessee must establish and implement a training program so that all of their employees are trained to competently perform their assigned well control and production safety duties. The lessee must also verify that their employees understand and can perform the assigned duties.

The mandatory Drilling Well-Control Training Program was instituted by MMS in 1979. In 1983, the mandatory Safety Device Training Program was established to ensure that personnel involved in installing, inspecting, testing, and maintaining safety devices are qualified. As a preventive measure, all offshore personnel must be trained to operate oil-spill cleanup equipment, or the lessee must retain a trained contractor(s) to operate the equipment for them. In addition, MMS offers numerous technical seminars to ensure that personnel are capable of performing their duties and are incorporating the most up-to-date safety procedures and technology in the petroleum industry. In 1994, the Office of Safety Management (OSM) created the MMS Offshore Training Institute to develop and implement an inspector training program. The Institute introduced state-of-the-art multimedia training to the inspector work force and has produced a series of interactive computer training modules.

Structure Removal and Site Clearance

Under MMS operating regulations (30 CFR 250.1700 *et seq.*) and lease agreements, all lessees must remove objects and obstructions from the seafloor upon termination of a lease. The MMS's NTL 2002-G08 gives the lessees direction on explosive and nonexplosive removal guidelines for the severing of all obstructions (i.e., wellheads, caissons, casing stubs, platforms, mooring devices, etc.) to a depth at least 15 ft below the seafloor. Additional information establishes site-clearance verification procedures that may include trawling or running remotely operated vehicle (ROV) surveys over predetermined radii depending upon water depth and structure type. The MMS requires lessees to submit a procedural plan for site clearance verification prior to any removal operations, with a subsequent reports on the results of their site clearance activities within 30-days of removal. The regulations and NTL provide additional information that would allow decommissioned pipelines to be abandoned in place.

For a well-related, nonexplosive severing, lessees/operators must notify their MMS District Office at least 30 days prior to removal with a Sundry Notice (MMS-124) detailing removal operations and well characteristics. If a well is to be removed with explosives or if the structure is a facility (platform, caisson, etc.), an application for a structure removal permit must be submitted to the GOM Region, providing information that includes the following: complete identification of the structure; size of the structure (number and size of legs and pilings); removal technique to be employed (if explosives are to be used, the amount and type of explosive per charge); and the number and size of well conductors to be removed. An EA is prepared that analyzes the impacts that the decommissioning activities would inflict on the marine, operational, and socioeconomic environments. If explosives are to be used, the proposed operations must fall within the terms and conditions of a "generic" BO, issued by NOAA Fisheries under a 1988 Section 7, ESA Consultation. The restrictions on the use of explosives are to reduce the possible impacts that could cause injury or death to protected marine mammals and endangered sea turtles. For removal operations falling outside the terms and conditions of the 1988 BO, a new Section 7, ESA Consultation must be initiated (3-6 months). Additional mitigation, observation, and reporting requirements can be found in Subpart M of MMPA regulations (50 CFR 216.141 to 216.148).

1.6. OTHER OCS-RELATED ACTIVITIES

The MMS has programs and activities that are OCS related but not specific to the leasing process or to the management of exploration, development, and production activities. These programs include both environmental and technical studies, and cooperative agreements with other Federal and State agencies for NEPA work, joint jurisdiction over cooperative efforts, inspection actives, and regulatory enforcement. The MMS also participates in industry research efforts and forums.

Environmental Studies Program

The ESP was established in 1973 in accordance with Section 20 of the OCSLA. The goals of the ESP are to obtain environmental and socioeconomic information that can be used to assess the potential and real effects of the GOM OCS natural gas and oil program. As a part of the ESP, the GOM Region has funded more than 350 completed or ongoing environmental studies. The types of studies funded include

- literature reviews and baseline studies of the physical, chemical, and biological environment of the shelf;

- literature review and studies of the physical, chemical, and biological environment of deep water (>300 m);
- studies of the socioeconomic impacts along the Gulf Coast; and
- studies of the effects of oil and gas activities on the marine environment.

A list of MMS GOM Region studies completed during 1999-2002 is presented in Appendix C and is available on the MMS Internet website at http://www.gomr.mms.gov/homepg/regulate/environ/techsumm/rec_pubs.html. The MMS's Environmental Studies Program Information System (ESPIS) provides immediate access to all completed MMS ESP studies (http://mmspub.mms.gov:81/search.html). The ESPIS is a searchable, web-based, full-text retrieval system allowing users to view on line or to download the complete text of any completed MMS ESP report. A complete description of all ongoing GOM Region studies is available at http://www.gomr.mms.gov/homepg/regulate/environ/ongoing_studies/gom.html. Each listing not only describes the research being conducted but also shows the institution performing the work, the cost of the effort, timeframe, and any associated publications, presentations, or affiliated web sites.

The ESP funds studies to obtain information needed for NEPA assessment and the management of environmental and socioeconomic impacts on the human, marine, and coastal environments that may be affected by OCS oil and gas development. The ESP studies were used by MMS GOM Region analysts to prepare this document. While not all of the MMS GOM Region studies are specifically referenced in this document, they were used by analysts as input into their analysis. The information in ESP studies is also used by decisionmakers to manage and regulate exploration, development, and production activities on the OCS.

Technical Assessment & Research Program

The Technical Assessment & Research (TA&R) Program supports research associated with operational safety and pollution prevention as well as oil-spill response and cleanup capabilities. The TA&R Program is comprised of two functional research activities: (1) operational safety and engineering research (topics such as air quality, decommissioning, and mooring and anchoring); and (2) oil-spill research (topics such as behavior of oil, chemical treating agents, and *in situ* burning of oil). The TA&R Program has four primary objectives.

- Technical Support — Providing engineering support in evaluating industry operational proposals and related technical issues and in ensuring that these proposals comply with applicable regulations, rules, and operational guidelines and standards.
- Technology Assessment — Investigating and assessing industry applications of technological innovations and ensuring that governing MMS regulations, rules, and operational guidelines ensure the use of BAST (Chapter 1.5).
- Research Catalyst — Promoting and participating in industry research initiatives in the fields of operational safety, engineering research, and oil-spill response and cleanup research.
- International Regulations — Supporting international cooperative efforts for research and development initiatives to enhance the safety of offshore oil and natural gas activities and the development of appropriate regulatory program elements worldwide.

Interagency Agreements

Cooperating Agency Agreements under NEPA

Section 1500.5(b) of the CEQ implementing regulations (40 CFR 1500.5(b)) encourages agency cooperation early in the NEPA process. A Federal agency can be a lead, joint lead, or cooperating agency. A lead agency manages the NEPA process and is responsible for the preparation of an EIS; a

joint lead agency shares these responsibilities; and a cooperating agency that has jurisdiction by law and/or has special expertise with respect to any environmental issue shall participate in the NEPA process upon the request of the lead agency.

When an agency is requested and agrees to become a cooperating agency, the cooperating and lead agencies usually enter into a cooperating agency agreement. The agreement details the responsibilities of each participating agency.

The MMS has entered into agreements with State and Federal agencies. The MMS, as lead agency, has requested other Federal agencies to enter into cooperating agency agreements (e.g., the Destin Dome 56 Unit project); other agencies have requested MMS to become a cooperating agency (e.g., the Gulfstream Gas Pipeline project). The MMS has been, is, and will likely be involved in cooperating agency agreements with USEPA, COE, FERC, DOT, and USCG. Some projects, such as major gas pipelines across Federal waters and projects under the Deepwater Port Act of 1974, can require cooperative efforts by multiple Federal and State agencies.

Memorandum of Understanding between MMS and USCG

Given the overlap in jurisdictions of MMS and USCG and the large array of regulatory provisions pertaining to activities on the OCS, MMS and USCG have established a formal MOU that delineates lead responsibilities for managing OCS activities in accordance with OCSLA and OPA 90. The MOU, dated August 1989 and updated December 1998 (and published in the *Federal Register* on January 15, 1999), is designed to minimize duplication and promote consistent regulation of facilities under the jurisdiction of both agencies.

Generally, the MOU identifies MMS as the lead agency for matters concerning the equipment and operations directly involved in the production of oil and gas. These include, among others, design and operation of risers, permanent mooring foundations of the facility, drilling and well production and services, inspection and testing of all drilling-related equipment, and platform decommissioning. Issues regarding the safe operation of the facility, its systems, and the equipment needed to support all operations on board generally fall under the jurisdiction of the USCG. These include, among others, design of vessels, their seakeeping characteristics, propulsion and dynamic positioning systems, supply and lightering procedures and equipment, utility systems, safety equipment and procedures, and pollution prevention and response procedures. Both agencies will continue to be responsible for accident investigations. For incidents for which both agencies have an investigative interest in the systems involved, one agency will assume lead investigative responsibility with supporting participation provided by the other agency.

International Activities and Marine Minerals Division

The MMS's International Activities and Marine Minerals Division (INTERMAR) has a dual role. On behalf of MMS, it functions as a liaison for agency involvement in international activities and it provides policy direction for management of minerals resources on the Federal OCS. The INTERMAR takes an active approach to identify and become involved in international initiatives that promote better integration of safety and environmental concerns into offshore development decision-making. To do this the division focuses on monitoring, developing, and refining safety and environmental standards, technical and information exchanges with international regulatory counterparts, and providing technical advice to the State Department. The MMS's nonenergy minerals program in the GOM is described in Chapter 4.1.3.2.2.