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Testimony

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OIL AND GAS MANAGEMENT

Key Elements to Consider for Providing Assurance of Effective Independent Oversight

Statement of Frank Rusco, Director
Natural Resources and the Environment



GAO

Accountability * Integrity * Reliability

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to participate in this hearing to discuss the Secretary of the Interior's proposal to reorganize the Minerals Management Service (MMS) in response to the Deepwater Horizon drilling rig disaster. The tragic loss of life, damage to natural resources, loss of livelihoods, and harm to local economies that resulted from the explosion, fire, and catastrophic oil spill in the Gulf of Mexico have again drawn national attention to federal oversight of exploration and production of oil and gas from federal land and waters. Under the current organizational structure, the Department of the Interior's bureaus are responsible for regulating the processes that oil and gas companies must follow when leasing, drilling, and producing oil and gas from federal leases as well as ensuring that companies comply with all applicable requirements. Specifically, the Bureau of Land Management (BLM) oversees onshore federal oil and gas activities, and MMS's Offshore Energy and Minerals Management (OEMM) oversees offshore oil and gas activities. Additionally, MMS's Minerals Revenue Management (MRM) is responsible for collecting royalties on oil and gas produced from both onshore and offshore federal leases. In fiscal year 2009, Interior reported collecting over \$9 billion in royalties for oil and gas produced on federal lands and waters, purchase bids for new oil and gas leases, and annual rents on existing leases, making revenues from federal oil and gas one of the largest nontax sources of federal government funds.

In recent years, we and others, including Interior's Office of Inspector General (OIG) have conducted numerous evaluations of federal oil and gas management and revenue collection processes and practices and have found many material weaknesses (see app. II for related GAO reports). Our work included reviews of Interior's oversight practices, operations, and rules, and our conclusions have been remarkably consistent: the agency has not done enough to meet the challenges it faces. Others, including the Interior OIG and a panel of experts convened by Interior have drawn similar conclusions. As a result, Interior staff are in the midst of attempting to implement over 100 recommendations spanning the scope of the department's operations. We acknowledge Interior's efforts to reassess key oil and gas policies addressing revenue collection and rates of development on federal lands and waters as an important first step to address material weaknesses. In addition, the Secretary of the Interior announced several changes to BLM's leasing process in May 2010.

Because of the recent announcement of the Secretary's proposed reorganization, we have not conducted a detailed analysis of these reorganization plans. However, our recent work on oil and gas management as well as work in the area of strengthening independent oversight of nuclear facilities and operations can be useful in evaluating key aspects of the Secretary's plans to reorganize MMS. In a

2008 report,¹ we identified the following key elements that any nuclear safety oversight organization should possess in order to provide effective independent oversight:

- **Technical expertise:** The organization should have sufficient staff with the expertise to perform sound safety assessments.
- **Ability to perform reviews and require that findings be addressed:** The organization should have the working knowledge necessary to review compliance with requirements, developed through periodic reviews, and should also have sufficient authority to require the program offices to effectively address its review findings and recommendations.
- **Enforcement authority:** The organization should have sufficient authority to achieve compliance with requirements.
- **Public access:** The organization should provide public access to its reports so that those most affected by operations can get information.
- **Independence:** The organization conducting oversight should be structurally distinct and separate from the entities it oversees.

When coupled with findings and recommendations about the management of federal oil and gas leases from our prior and ongoing work, these key elements may provide the Secretary and Congress with a useful framework for evaluating proposed reorganizations. While nuclear safety differs from safety associated with offshore oil and gas development, we believe there are similarities that make the key elements applicable. Specifically, as has been made clear by the recent oil spill disaster in the Gulf of Mexico, Interior is responsible for overseeing an industry with potentially significant impacts on workers, the environment, and vast areas of our oceans. Further, as with nuclear safety, even small probability adverse events can have significant and far-reaching effects.

My testimony today uses the five key elements for effective independent oversight to broadly frame examples from our prior work on the management of federal oil and gas activities issued from June 2005 through March 2010, as well as preliminary results from our ongoing review on public challenges to federal

¹GAO, *Nuclear Safety: Department of Energy Needs to Strengthen Its Independent Oversight of Nuclear Facilities and Operations*, GAO-09-61 (Washington, D.C.: Oct. 23, 2008). We developed these elements based on a long history of reviewing nuclear safety at DOE and supporting independent oversight and through our work with outside nuclear safety experts.

onshore oil and gas leasing decisions, to assist the committee as it considers changes to Interior's oversight. We developed these preliminary results from June 2009 through June 2010 by reviewing federal laws, regulations, and guidance; analyzing data from Interior on the four Mountain West states (Colorado, New Mexico, Utah, and Wyoming) responsible for 69 percent of the oil and 94 percent of the natural gas produced on federal lands during fiscal years 2007 to 2009;² and interviewing BLM officials and stakeholder groups—including representatives from the energy industry, state government, and nongovernmental organizations representing environmental, hunting, fishing, and recreational interests. We conducted the performance audit work that supports this statement in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to produce a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our statement today.

Technical Expertise

Interior agencies should have sufficient staff with the technical expertise to oversee the activities under their authority. Oil and gas production methods on federal lands and waters have become increasingly sophisticated over the past decade. Additionally, oil and gas companies now rely on information technology to manage and oversee their operations. In a March 2010 review, we found that Interior had challenges in hiring, training, and retaining staff in critical oil and gas oversight roles, leading to questions about the technical capacity of Interior staff overseeing oil and gas activities.³

- We found that Interior has faced difficulties in hiring, retaining, and training staff in key oil and gas oversight positions. Specifically, we found that staff within Interior's program for verifying that oil and gas produced from federal leases are correctly measured—including petroleum engineers and inspectors—lacked critical skills because, according to agency officials, Interior 1) has had difficulty in hiring experienced staff, 2) has struggled to retain staff, and 3) has not consistently provided the appropriate training for staff. Interior's challenges in hiring and retaining staff stem, in part, from competition with the oil and gas industry, which generally pays significantly more than the federal government. Moreover, key technical positions responsible for oversight of oil and gas

²We assessed the reliability of these data and found them to be sufficiently reliable for our purposes.

³GAO, *Oil and Gas Management: Interior's Oil and Gas Production Verification Efforts Do Not Provide Reasonable Assurance of Accurate Measurement of Production Volumes*, [GAO-10-313](#) (Washington, D.C.: Mar. 15, 2010).

activities have experienced high turnover rates, which, according to Interior officials, impede these oversight employees' capacity to oversee oil and gas activities. These positions included petroleum engineers, who process drilling permits and review oil and gas metering systems, and inspection staff—including BLM's petroleum engineer technicians and production accountability technicians onshore—who conduct drilling, safety and oil and gas production verification inspections (see app. I). For example, we found that turnover rates for OEMM inspectors at the four district offices we reviewed between 2004 and 2008 ranged from 27 to 44 percent. Furthermore, Interior has not consistently provided training to the staff it has been able to hire and retain. For example, neither onshore nor offshore petroleum engineers had a requirement for training on the measurement of oil and gas, which is critical to accurate royalty collections and can be challenging at times because of such factors as the type of meter used, the specific qualities of the gas or oil being measured, and the rate of production. Additionally, although BLM offers a core curriculum for its petroleum engineer technicians and requires that they obtain official BLM certification and then be recertified once every 5 years to demonstrate continued proficiency, the agency has not offered a recertification course since 2002, negatively impacting its ability to conduct inspections. It is important to note that BLM's petroleum engineer technicians are the eyes and ears for the agency—performing key functions and also perhaps the only Interior staff with direct contact with the onshore lease property itself.

- We also found that Interior's efforts to provide its inspection staff with mobile computing capabilities for use in the field are moving slowly and are years from full implementation. Interior inspectors continue to rely on documenting inspection results on paper, and later reentering these results into Interior databases. Specifically, Interior's BLM and OEMM are independently developing the capacity for inspection staff to (1) electronically document inspection results and (2) access reference documents, such as American Petroleum Institute standards and measurement regulations, via laptops while in the field. BLM initiated work on developing this capacity in 2001, whereas OEMM is now in the preliminary planning stages of a similar effort. According to Interior officials, widespread implementation of a mobile computing tool to assist with production verification and other types of inspections, potentially including drilling and safety, are still several years away. Interior officials said having such a tool would allow inspection staff to not only easily reference technical documents while conducting inspections to verify compliance with regulations but also to document the results of those inspections while in the field and subsequently upload them to Interior databases.

Ability to Perform Reviews and Require that Findings Be Addressed

An effective oversight program should include a component for systematic inspections and reviews, whose findings should be documented and subsequently addressed. In several recent reviews, we found that Interior had been unable to complete its necessary reviews, including both environmental and oil and gas production verification inspections and certain offshore environmental analyses.

- We found that Interior was unable to meet its goals for conducting environmental and production verification oversight inspections because of a management focus on drilling. For example, in June 2005, ⁴ we reported that Interior devoted fewer resources to completing onshore environmental inspections—inspections to ensure that oil and gas companies are complying with various environmental laws and lease stipulations. According to Interior staff, one of the principal reasons was that management shifted available resources to processing drilling permits. More recently, in March 2010, ⁵ we reported that Interior had only been able to complete approximately one-third of the required onshore production verification inspections, raising concerns about the accuracy of the oil and gas volumes reported to MRM.
- In another March 2010 report, ⁶ we found that MMS faces challenges in the Alaska Outer Continental Shelf (OCS) Region in conducting reviews of oil and gas development under the National Environmental Protection Act (NEPA), which requires MMS to evaluate the likely environmental effects of proposed actions, including oil and gas development. ⁷ Although Interior policy directed its agencies to prepare handbooks providing guidance on how to implement NEPA, we found that MMS lacked such a handbook. The lack of comprehensive guidance in a handbook, combined with high staff turnover in recent years, left the process for meeting NEPA requirements ill defined for the analysts charged with developing NEPA documents. It also left unclear MMS's policy on what constitutes a significant environmental impact as well as its procedures for conducting and documenting NEPA-required analyses to address environmental and cultural sensitivities, which have often been the topic of litigation over Alaskan offshore oil and gas development. We also found that the Alaska OCS

⁴GAO, *Oil and Gas Development: Increased Permitting Activity Has Lessened BLM's Ability to Meet Its Environmental Protection Responsibilities*, [GAO-05-418](#), (Washington, D.C.: June 17, 2005).

⁵[GAO-10-313](#).

⁶GAO, *Offshore Oil and Gas Development: Additional Guidance Would Help Strengthen the Minerals Management Service's Assessment of Environmental Impacts in the North Aleutian Basin*, [GAO-10-276](#), (Washington, D.C.: Mar. 8, 2010).

⁷Pub. L. No. 91-190, 83 Stat. 852 (1970).

Region shared information selectively, a practice that was inconsistent with agency policy, which directed that information, including proprietary data from industry, be shared with all staff involved in environmental reviews. According to regional MMS staff, this practice has hindered their ability to complete sound environmental analyses under NEPA.

- In an August 2009 report examining Interior’s royalty-in-kind (RIK) program,⁸ we found that although MRM staff had made progress in conducting reviews of gas imbalances—instances where Interior may not be receiving the total amount of royalties due from gas production—they were unable to determine the exact amount the agency was owed for imbalances because it lacked certain key information. For example, MRM did not verify production data to ensure it received its entitled percentage of RIK gas from leases taken in kind. Without these and other data, MRM staff were unable to quantify revenues from imbalances, leading to forgone revenues and uncertainty about how much gas the government is owed.
- Until recently, Interior has left key functions it oversees without review for long periods. In two reports issued in 2008, we noted that Interior received less in royalties and other payments for development of its oil and gas resources than many other countries and that Interior did less than other landowners to encourage development of resources it leased for development. In a September 2008 report on royalties and other payments,⁹ we found that Interior had not done a comprehensive analysis of its royalty and other revenue structure in over 25 years, and we recommended that it do so. In an October 2008 report,¹⁰ we found that Interior had done less than selected states and private landowners to encourage development of oil and gas leases, and we recommended that it develop a strategy to evaluate options to encourage faster development on federal lands. Just this year, Secretary Salazar directed that Interior conduct studies to examine these issues. We are encouraged that Interior is undertaking these efforts and hopeful that the findings of the studies will identify opportunities to improve Interior’s oversight of oil and gas development.

⁸GAO, *Royalty-in-Kind Program: MMS Does Not Provide Reasonable Assurance It Receives Its Share of Gas, Resulting in Millions in Forgone Revenue*, [GAO-09-744](#), (Washington, D.C.: Aug. 14, 2009).

⁹GAO, *Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment*, [GAO-08-691](#), (Washington, D.C.: Sept. 3, 2008).

¹⁰GAO, *Oil and Gas Leasing: Interior Could Do More to Encourage Diligent Development*, [GAO-09-74](#), (Washington, D.C.: Oct. 3, 2008).

Enforcement Authority

Oversight entities must have the authority to ensure that all regulated entities fully comply with the law and applicable regulations. In our March 2010 report,¹¹ we determined that in some instances Interior is uncertain about its legal authority for undertaking necessary enforcement actions and may be using its enforcement authority inconsistently.

- We found that Interior had not determined the extent of its authority over key elements of oil and gas production infrastructure necessary for ensuring accurate measurement. This infrastructure includes meters in (or after) gas plants, which may include the meter where oil and gas are measured for royalties and meters owned by pipeline companies. These companies frequently own, operate, and maintain the meter used at the official measurement point on federal leases and own the production data the meter generates. Because it did not know the extent of its authority, Interior did not know what steps it could take to enforce its standards and regulations for meters. Thus it lacked assurances that royalty-bearing volumes of oil and gas were correctly measured.
- We also found that Interior inspection staff were not, in all cases, pursuing enforcement actions when they identified oil and gas production activities not in compliance with its regulations. Specifically, we found that some Interior staff were not issuing incidents of non-compliance—a type of enforcement action—when they identified certain measurement devices during the course of their inspections, as they believe the current measurement regulations were out of date. If staff do not uniformly ensure compliance with regulations through specified procedures and document their findings, Interior is at risk of not capturing data to know the full extent of particular violations.

Public Access

Organizations should make relevant information widely available to ensure that those most affected by operations, including the public, can fully participate in decision-making processes that can, ultimately, have significant impacts. We recently found that Interior has been providing inconsistent and limited information with respect to its use of categorical exclusions in approving onshore oil and gas activities. Also, in preliminary results from our ongoing work on public challenges to BLM's federal onshore oil and gas lease sale decisions, we found that BLM state offices provide limited and varying amounts of information to the public on their leasing decisions.

¹¹[GAO-10-313](#).

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- In September 2009, we found that BLM’s use of categorical exclusions was not fully transparent.¹² In addressing long-term energy challenges, Congress enacted the Energy Policy Act of 2005, in part to expedite oil and gas development within the United States.¹³ This law authorizes BLM, for certain oil and gas activities, to approve projects without preparing new environmental analyses that would normally be required by NEPA. Section 390 of the Energy Policy Act of 2005 does not specify procedures for involving or informing either the public or other government agencies when section 390 categorical exclusions are used. According to Interior and BLM officials, there is no requirement to publicly disclose that BLM used a section 390 categorical exclusion to approve a project or to disclose approved section 390 categorical exclusion decision documents. Instead, the public depends on the discretion of each field office for such disclosure. We found that BLM field offices had different degrees and methods of disclosing information related to decisions on section 390 categorical exclusions. For example, some field offices, such as White River and Glenwood Springs, Colorado, publicly disclosed online which Applications for Permit to Drill they approved with section 390 categorical exclusions. In contrast, other field offices, such as Price/Moab, Utah, and Pinedale, Wyoming, did not publicly disclose their decisions to use section 390 categorical exclusions and, in fact, required the public to file Freedom of Information Act requests to identify which projects BLM approved using section 390 categorical exclusions and to obtain copies of approved section 390 categorical exclusion decision documents. In some cases, it was difficult for other governmental agencies—including state environmental agencies—and the public to determine whether BLM had used a section 390 categorical exclusion until it was too late to comment on or challenge BLM’s action. When the public and other federal and state agencies do not have a reliable or consistent way of determining which projects have been approved with section 390 categorical exclusions, they lack a fundamental piece of information needed to hold BLM accountable for their use.
- In preliminary results from our ongoing work on public challenges to BLM’s federal oil and gas lease sale decisions in the four Mountain West states responsible for most onshore federal oil and gas development, we found the extent to which BLM made publicly available information related to public protests filed during the leasing process varied by state and was generally limited in scope. We also found that stakeholders—nongovernmental organizations representing environmental, recreational, and hunting interests that filed protests

¹²GAO, *Energy Policy Act of 2005: Greater Clarity Needed to Address Concerns with Categorical Exclusions for Oil and Gas Development under Section 390 of the Act*, [GAO-09-872](#), (Washington, D.C.: Sept. 26, 2009).

¹³Pub. L. No. 109-58, 119 Stat. 594 (2005).

to BLM lease offerings—wanted additional time to participate in the leasing process and more information from BLM about its leasing decisions. In May 2010, the Secretary of the Interior announced several agencywide leasing reforms that are to take place at BLM, some of which may address concerns raised by these stakeholder groups. For instance, BLM state offices are to provide an additional public review and comment opportunity during the leasing process. They are also required to post on their Web sites their responses to letters filed in protest of state office decisions to offer specific parcels of land for oil and gas development.

Independence

The agency should be free from the direct and indirect influence of the oil and gas industry. Our past work, as well as that of Interior's OIG, has identified several instances where Interior staff had inappropriate relationships with oil and gas industry personnel, raising questions about whether Interior's oversight efforts were sufficient.

- During the course of our audit work for our report on Interior's use of categorical exclusions,¹⁴ allegations were made about inappropriate relationships between Interior management and the oil and gas industry. We referred these allegations to Interior's OIG, which initiated an investigation. The results of the investigation substantiated these inappropriate contacts, the details of which are included in an Interior OIG investigative report.
- Additional reports by Interior's OIG have also identified instances that call into question the independence of key staff working in Interior's oil and gas program. In August 2008, Interior's OIG reported on inappropriate relationships between staff working in Interior's RIK program and the oil and gas industry.¹⁵ Specifically, the OIG found that between 2002 and 2006 nearly one-third of the RIK program staff socialized with and received a wide array of gifts and gratuities from oil and gas companies with whom the program was conducting official business. Most recently, in May 2010, the OIG reported on inappropriate relationships between Interior's offshore inspection staff and certain oil and gas companies operating in the Gulf of Mexico.¹⁶ Interior's Acting Inspector General stated that her greatest concern is the environment in which these inspectors operate, particularly the ease with which they move between industry and

¹⁴[GAO-09-872](#).

¹⁵Interior OIG, *Investigative Report: Oil Marketing Group – Lakewood* (Washington, D.C.: Aug. 19, 2008).

¹⁶Interior OIG, *Investigative Report: Island Operating Company et al* (Washington, D.C.: Mar. 31, 2010).

government.

In conclusion, over the past several years, we and others have found Interior to be in need of fundamental reform. This past work has found weaknesses across a wide range of Interior's oversight of onshore and off shore oil and gas development. Secretary Salazar has taken notable steps to begin comprehensive evaluations of leasing rules and practices as well as the amount and ways in which the federal government collects revenues. Interior is also currently implementing a number of our recommendations aimed at making improvements within the existing organization of Interior's functions.

As the Secretary and Congress consider what fundamental changes are needed in how Interior structures its oversight of oil and gas programs, we believe that our and others' past work provides a strong rationale for broad reform of the agency's oil and gas oversight functions—at MMS to be sure, but also across other parts of Interior, including those responsible for oversight of onshore areas. If steps are not taken to ensure effective independent oversight, we are concerned about the agency's ability to manage the nation's oil and gas resources, ensure the safe operation of onshore and offshore leases, provide adequate environmental protection, and provide reasonable assurance that the U.S. government is collecting the revenue to which it is entitled. Reorganization and fundamental change can be very difficult for an organization. Although we have not conducted a detailed evaluation of Secretary Salazar's proposals for reforming MMS, we believe that regardless of how MMS is ultimately reorganized, Interior's top leadership must also address the wide range of outstanding recommendations for any reorganization effort to be effective.

Mr. Chairman, this completes my prepared statement. I would be happy to respond to any questions that you or other Members of the Subcommittee may have at this time.

GAO Contact and Staff Acknowledgement

For further information on this statement, please contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov. Contact points for our Congressional Relations and Public Affairs offices may be found on the last page of this statement. Other staff that made key contributions to this testimony include, Ron Belak, Dan Feehan, Glenn C. Fischer, Jon Ludwigson, Ben Shouse, Kiki Theodoropoulos, and Barbara Timmerman.

Appendix I: Data on Turnover of Key Department of the Interior Inspection Staff

Table 1: Total Turnover Rates for Bureau of Land Management (BLM) Petroleum Engineers, Fiscal Years 2004–2008

Field office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
Buffalo	80	5	4	1 of 3	1 of 2	1 of 2	0 of 2	1 of 2	2
Carlsbad	75	4	3	1 of 1	0 of 0	1 of 1	0 of 3	1 of 3	2
Farmington	50	8	4	1 of 6	0 of 6	2 of 6	0 of 5	1 of 5	6
Glenwood Springs	50	2	1	0 of 0	0 of 0	0 of 1	0 of 1	1 of 1	1
White River	100	2	2	0 of 1	1 of 1	0 of 1	0 of 1	1 of 1	1
Pinedale	100	2	2	0 of 1	0 of 1	0 of 1	1 of 2	1 of 1	1
Roswell	80	5	4	0 of 5	0 of 5	2 of 5	0 of 3	2 of 3	4
Vernal	33	6	2	0 of 2	2 of 3	0 of 2	0 of 2	0 of 4	3

Source: GAO analysis of Interior data.

Note: We calculated the total turnover rate by (1) counting the number of individual petroleum engineers who separated from BLM, plus those who changed locations, plus those who changed from the petroleum engineer position to another position within that office; (2) dividing that by the number of individual petroleum engineers employed in each BLM office from fiscal years 2004 through 2008. For those individuals who changed jobs or locations, we did not determine whether they changed jobs or locations because of a management decision, as opposed to the employees' own decision.

Table 2: Total Turnover Rates for BLM Petroleum Engineer Technicians, Fiscal Years 2004–2008

Field office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
Buffalo	30	20	6	1 of 12	0 of 12	2 of 13	2 of 14	1 of 15	13
Carlsbad	47	19	9	1 of 10	1 of 9	4 of 9	1 of 10	2 of 12	10
Farmington	54	37	20	1 of 22	3 of 25	7 of 24	3 of 21	6 of 22	23
Glenwood Springs	67	3	2	0 of 0	0 of 0	0 of 0	0 of 2	2 of 3	3
Hobbs	22	9	2	2 of 8	0 of 6	0 of 6	0 of 6	0 of 6	6
White River	55	11	6	1 of 2	2 of 3	0 of 1	1 of 2	2 of 7	3
Pinedale	83	12	10	1 of 2	1 of 6	2 of 6	3 of 5	3 of 5	5
Roswell	57	7	4	0 of 4	0 of 4	1 of 4	1 of 4	2 of 5	4

Field office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
Vernal	17	18	3	1 of 13	1 of 14	1 of 13	0 of 15	0 of 15	14

Source: GAO analysis of Interior data.

Note: We calculated the total turnover rate by (1) counting the number of individual petroleum engineer technicians who separated from BLM, plus those who changed locations, plus those who changed from the petroleum engineer technician position to another position within that office; (2) dividing that by the number of individual petroleum engineer technicians employed in each BLM office from fiscal years 2004 through 2008. For those individuals who changed jobs or locations, we did not determine whether they changed jobs or locations because of a management decision, as opposed to the employees' own decision.

Table 3: Total Turnover Rates for BLM Production Accountability Technicians, Fiscal Years 2004–2008

Field office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
Buffalo	75	8	6	0 of 2	0 of 2	0 of 2	3 of 4	3 of 5	3
Carlsbad	67	3	2	1 of 1	0 of 0	0 of 0	0 of 0	1 of 2	2
Farmington	63	8	5	0 of 3	1 of 4	0 of 3	2 of 5	2 of 5	4
Glenwood Springs	0	1	0	0 of 0	0 of 0	0 of 0	0 of 1	0 of 1	1
Hobbs	50	4	2	0 of 1	0 of 2	0 of 2	2 of 4	0 of 2	2
White River	50	2	1	0 of 0	0 of 0	0 of 0	1 of 2	0 of 1	2
Pinedale	100	3	3	0 of 0	0 of 1	0 of 1	1 of 1	2 of 2	1
Roswell	100	1	1	1 of 1	0 of 0	0 of 0	0 of 0	0 of 0	1
Vernal	50	2	1	1 of 1	0 of 1	0 of 1	0 of 2	0 of 2	1

Source: GAO analysis of Interior data.

Note: We calculated the total turnover rate by (1) counting the number of individual production accountability technicians who separated from BLM, plus those who changed locations, plus those who changed from the production accountability technicians to another position within that office; (2) dividing that by the number of individual production accountability technicians employed in each BLM office from fiscal years 2004 through 2008. For those individuals who changed jobs or locations, we did not determine whether they changed jobs or locations because of a management decision, as opposed to the employees' own decision.

Table 4: Total Turnover Rates for Offshore Energy and Minerals Management (OEMM) Petroleum Engineers who Approve Measurement, Fiscal Years 2004–2008

Regional office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
Gulf of Mexico region	30	10	3	0 of 8	1 of 7	2 of 6	0 of 7	0 of 7	7
Pacific region	0	1	0	0 of 1	0 of 1	0 of 1	0 of 1	0 of 1	1

Source: GAO analysis of Interior data.

Note: We calculated the total turnover rate by (1) counting the number of individual petroleum engineers who separated from OEMM, plus those who changed locations, plus those who changed from the petroleum engineers to another position within that office; (2) dividing that by the number of individual petroleum engineers employed in each OEMM office from fiscal years 2004 through 2008. For those individuals who changed jobs or locations, we did not determine whether they changed jobs or locations because of a management decision, as opposed to the employees' own decision.

Table 5: Total Turnover Rates for OEMM Inspectors, Fiscal Years 2004–2008

District office	Turnover percentage FY2004-08	Total number of employees in position, FY2004-08	Total employees leaving position, FY2004-08	Total employees leaving position, FY2004-08 (of the number employed in that fiscal year)					Average number of employees in position, FY2004-08
				2004	2005	2006	2007	2008	
New Orleans	42	19	8	1 of 13	0 of 13	2 of 13	3 of 14	2 of 13	13
Lake Jackson	27	11	3	0 of 9	0 of 11	2 of 11	0 of 9	1 of 9	10
Lake Charles	41	17	7	2 of 15	0 of 13	0 of 13	1 of 13	4 of 14	14
California	44	9	4	0 of 7	2 of 9	0 of 7	1 of 7	1 of 6	7

Source: GAO analysis of Interior data.

Note: We calculated the total turnover rate by (1) counting the number of individual inspectors who separated from OEMM, plus those who changed locations, plus those who changed from the inspectors to another position within that office; (2) dividing that by the number of individual inspectors employed in each OEMM office from fiscal years 2004 through 2008. For those individuals who changed jobs or locations, we did not determine whether they changed jobs or locations because of a management decision, as opposed to the employees' own decision.

Appendix II: Related Prior GAO Reports

Oil and Gas Management: Interior's Oil and Gas Production Verification Efforts Do Not Provide Reasonable Assurance of Accurate Measurement of Production Volumes, [GAO-10-313](#), (Washington, D.C.: Mar. 15, 2010).

Offshore Oil and Gas Development: Additional Guidance Would Help Strengthen the Minerals Management Service's Assessment of Environmental Impacts in the North Aleutian Basin, [GAO-10-276](#), (Washington, D.C.: Mar. 8, 2010).

Energy Policy Act of 2005: Greater Clarity Needed to Address Concerns with Categorical Exclusions for Oil and Gas Development under Section 390 of the Act, [GAO-09-872](#), (Washington, D.C.: Sept. 26, 2009).

Federal Oil And Gas Management: Opportunities Exist to Improve Oversight, [GAO-09-1014T](#), (Washington, D.C.: Sept. 16, 2009).

Royalty-In-Kind Program: MMS Does Not Provide Reasonable Assurance It Receives Its Share of Gas, Resulting in Millions in Forgone Revenue, [GAO-09-744](#), (Washington, D.C.: Aug. 14, 2009).

Mineral Revenues: MMS Could Do More to Improve the Accuracy of Key Data Used to Collect and Verify Oil and Gas Royalties, [GAO-09-549](#), (Washington, D.C.: July 15, 2009).

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