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Liability and Financial Responsibility Issues Related to Offshore Oil Production

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Good afternoon Chairman Bingaman, Ranking Member Murkowski, and Members of the Committee. My name is Rawle King. I am an analyst in financial economics and risk assessment in the Congressional Research Service (CRS). On behalf of CRS, I would like to thank the Committee for inviting me to testify here today. CRS has been asked by the committee to provide testimony on financing recovery from large-scale disasters, and to review the amount of insurance that is likely to become available from the commercial insurance market for third-party pollution liability damages facing operators of offshore energy facilities in the aftermath of the Deepwater Horizon accident. I should note that CRS does not advocate policy or take a position on specific legislation.

Introduction

Companies that engage in oil and gas exploration, drilling, and production on federal lands on the Outer Continental Shelf (OCS) face a wide range of risks, including marine environmental uncertainty, adverse exposures in drilling and construction of offshore oil wells, performance of equipment, and defects in plans and specifications. Numerous parties are involved in the U.S. offshore oil and gas exploration and development business, including lease or permit holders, drilling contractors, cementing engineers and their various sub-contractors, such as the manufacturers of the blowout preventer. In the early 1960s, a specialty energy insurance market emerged to offer pollution liability coverage for third-party property claims and cleanup and contamination risks, oil well blowouts, and redrilling.

In 1990, Congress passed the Oil Pollution Act (OPA)[1] to strengthen the safety and environmental practices in the oil and gas exploration, drilling, and production business. Under OPA, operators of offshore energy facilities must demonstrate oil spill financial responsibility (OSFR) for removal costs and damages caused by oil discharges from offshore facilities and associated pipelines. Commercial insurance is usually purchased by the facility operator to not only meet the OSFR requirements pertaining to pollution liability coverage for third-party property claims and cleanup and contamination risks, but also to protect the company itself from the financial consequences of an oil well blowout and the expenditures following the loss of well control, the cost to redrill after a blowout, and the pollution liability coverage for third-party property claims and cleanup and contamination risks and the direct physical loss or damage to platforms, rigs, and equipment.

The Gulf Coast Oil Spill

On April 20, 2010, the ultra-deepwater, semi-submersible mobile offshore oil rig *Deepwater Horizon* burned and sunk in the Gulf of Mexico off the shores of Louisiana. The rig was owned

[1] P.L. 101-380; 104 Stat. 484.

and operated by Transocean, a Swiss offshore drilling contractor, and leased to British Petroleum (BP). The explosion and fire killed 11 workers and injured 17 others.

According to the American Petroleum Institute, there have been 17 marine well blowouts in the United States since 1964 for a total of 248,963 barrels spilled.[2] Two blowouts have occurred in state waters and account for 5% of the total spillage. The largest of these incidents occurred in January 1969 from Alpha Well 21 off Santa Barbara, California, which spilled 100,000 barrels. The 2009 API report said the volume of U.S. well blowouts tends to be small, that is, 50% of the well blowouts involved 400 barrels of oil or less.

Table 1 places the *Deepwater Horizon* oil spill currently as the eighth worst offshore platform oil spill worldwide as of May 5, behind the Alpha Well 21, but its impact may be unlike any other, in terms of offshore oil pollution damages. The final cost of the Deepwater Horizon incident will likely depend on many factors, including the distance between the oil spill location and the potential impact sites along the Gulf Coast, the sea conditions, the sensitivity of affected locations to damage from oil and cleanup techniques, the availability and cost of cleanup labor, the ecosystem value attributed to the location, and socioeconomic factors such as the economic value of activities affected by the spill, and the acceptability of residual level oil contamination.[3]

Table 1. Largest International Oil Well Blowouts by Volume

(As of May 5, 2010)

Date	Name of Platform	Location	Volume of Oil Released (Barrels)
June 1979 – April 1980	Ixtoc I	Bay of Campeche, Mexico	3,500,000
October 1986	Abkatun 91	Bay of Campeche, Mexico	247,000
April 1977	Ekofisk Bravo	North Sea, Norway	202,381
January 1980	Funiwa 5	Forcados, Nigeria	200,000
October 1980	Hasbah 6	Persian Gulf, Saudi Arabia	105,000
December 1971	Iran Marine intl.	Persian Gulf, Iran	100,000
January 1969	Alpha Well 21	Pacific, California, U.S.	100,000
April 2010	DeepWater Horizon	Gulf of Mexico, U.S.	est. 70,000
March 1970	Main Pass Block 41	Gulf of Mexico	65,000
October 1987	Yum II/Zapoteca	Bay of Campeche, Mexico	58,643

Source: *American Petroleum Institute,* "Analysis of U.S. Oil Spillage", p. 26, August 2009, located at: [http://www.api.org/Newsroom/safetyresponse/upload/Analysis_us_oil_spillage.pdf].

The federal government has become involved in the oil recovery efforts. The Secretary of the Department of Homeland Security Secretary, Janet Napolitano, designated the spill as a problem "of national significance" and the Minerals Management Services (MMS), the agency within the Interior Department that regulates offshore oil drilling, is actively working with the U.S. Coast Guard, in partnership with British Petroleum, community volunteers, and other federal agencies, to prevent the spread of oil and protect the environment.

[2] *American Petroleum Institute,* "Analysis of U.S. Oil Spillage", p. 25, Aug. 2009, located at: [http://www.api.org/Newsroom/safetyresponse/upload/Analysis_us_oil_spillage.pdf].

[3] For more information on estimating the cost of offshore oil spills see, Franklin E. Giles, "Factors in Estimating Potential Response Costs of Spills and Releases," *Environmental Claims Journal*, 22(1): 27-37, 2010 p. 29.

Pursuant to the Oil Pollution Act of 1990,[4] the U.S. Coast Guard has named BP and Transocean as "responsible parties" for all cleanup costs including those incurred by the U.S. Coast Guard and other government employees.[5] Much of BP's losses will likely be paid through self-insurance because BP does not purchase insurance. BP's two non-operating partners of the Deepwater Horizon project have reportedly purchased private insurance and these insurers and their reinsurers have pollution liability cleanup exposures totaling about $1.4 billion.

Hazards Facing Offshore Operating Facilities

As background, the oil and gas business has three major segments: exploration and production of oil and natural gas (the upstream); the transportation, storage, and trading of crude oil, refined products, and natural gas (the midstream); and refining and marketing of crude oil (the downstream). The U.S. Minerals Management Services (MMS) uses auctions to allocate exploration and drilling rights (leases) for oil and gas on federal lands on the Outer Continental Shelf (OCS). The federal offshore leasing program began in 1954. Companies could individually, or through a joint offer, submit a bid on areas or tracts within the federal offshore lands that are available for drilling. The winning bidder has the right, but not the obligation, to conduct exploratory drilling of the area. There is a fixed lease term during which exploration must begin to avoid having the lease revert to the government. Leases are automatically renewed if it is productive, provided the operator pays the appropriate royalty to the government.

The insurance underwriting of offshore oil and gas exploration, drilling, and production facilities is among the most difficult and complex commercial property and liability risk to insure, especially in the Gulf of Mexico where hurricanes often damage platforms and undersea pipelines, and drilling and construction projects are major undertakings that require the use of large and expensive marine vessels.[6]

The offshore energy business in the Gulf of Mexico involves risks that could be classified in five broad categories:

- *Weather perils* that include environmental factors such as storms, wind, hurricanes, lightning, and ice/snow/freezing;
- *Marine perils* that include fatigue and corrosion arising from environmental conditions, collision with attendant or passing vessels, foundation failure, subsidence, and mudslides;
- *Drilling perils* that include surface and subsurface blowouts;
- *Production perils* that include fire, explosion, and equipment failure, but also construction defects and maintenance and construction activities, such as pipelaying, piling operation, and construction defects; and
- *Political risks* that include war risk, asset confiscation, expropriation or nationalization, and damage caused by labor dispute or by terrorists.[7]

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[4] P.L. 101-380, 104 Stat. 484 (33 U.S.C. 27001 *et al*).

[5] Potential parties to this incident include; British Petroleum PLC, BP Products North America Inc, BP America Inc. Transocean Ltd., Transocean Offshore Deepwater Inc., Halliburton Energy Services Inc., and Cameron International Corporation.

[6] For more information see, *The International Oil Pollution Compensation Fund*, located at: [http://www.iopcfund.org/].

[7] Mark J. Kaiser and Allan G. Pulsipher, "Loss Categories, Hazard Types in Marine Operations," *Oil & Gas Journal*, May 7, 2007, p. 39.

The Deepwater Horizon incident appears to some to have resulted from a drilling peril involving a blowout preventor.

Offshore Energy Insurance Market

Insuring the liabilities of vessels was not made compulsory until the advent of the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC).[8] At about the same time, the offshore oil and gas insurance market began offering insurance coverage for control of blowouts. Insurers would later expand to cover the costs of drilling in deeper water and, in the event of a blowout, the cost of redrilling. The main types of property and liability insurance coverage relevant to the actual causes and definitive repercussions of the *Deepwater Horizon* incident include:

- **Offshore Physical Damage Coverage** indemnifies the insured for "all risks" physical loss or damage to fixed offshore drilling, production and accommodation facilities, including: (1) fixed offshore drilling, production and accommodation facilities; (2) pipelines; (3) subsea equipment; and (4) offshore loading.[9]
- **Operator's Extra Expense (Control of Well)** – The Operator's Extra Expense (OEE) insurance covers the costs of regaining control of an oil well after an underground blowout. OEE covers evacuation expenses and the property of others in the insured's care custody and control. In addition, coverage may include the redrilling of a well after a blowout to the original depth and comparable condition prior to the loss, as well as the legal expenses emanating from an incident such as the sinking of a rig, or an oil spill. With respect to sudden and accidental pollution, the offshore facility operator is also indemnified for third-party bodily injury claims, damage to and loss of third party property, and the cost of clean up and defense expenses as a result of a blowout.
- **Excess Liability Insurance coverage ─** Excess liability insurance covers all legal liabilities that an offshore energy facility operator might encounter. It is purchased as an additional layer of coverage in excess of the OEE policy.
- **Business Interruption —** Covers damage to platforms, pipelines, tankers, etc. owned by the insured, and contingent business interruption, associated with damage to upstream facilities such as processing plants, trunklines, and refineries owned by third parties. This coverage is usually written in conjunction with offshore physical damage coverage on standardized forms published by Insurance Services Office (ISO) or those that resemble the ISO form.[10] Because of the standardization in contract language there tends to be more predictability in claim payments and, therefore, reduced potential litigation over contract interpretation. Companies filing a business interruption insurance claim must

[8] See, *International Convention on Civil Liability for Pollution Damage, 1969*, located at: [http://www.imo.org/conventions/contents.asp?doc_id=660&topic_id=256].

[9] Offshore drilling rigs are classified into two categories: mobile offshore drilling units (MODUs) and fixed units. MODUs are classified in terms of bottom-supported (shallow water) rigs and floating (deepwater) rigs. In bottom-supported units, the rig is in contact with the sea floor during drilling, while a floating rig floats over the site while it drills, held in position by anchors or equipped with thrusters to be dynamically positioned. Both units float when moved from one site to another. Bottom-supported units include jack ups, tenders, submersibles, and barges. Floating units include semi-submersibles and drillships. Fixed units (or platform rigs) are drilling units that are placed upon a platform or other structures. Subsea floating production systems are employed in deeper water. The Deepwater Horizon was a floating production system (FPS) or vessel that was connected to a subsea pipeline, while a floating, production, storage, and offloading vessel (FPSO) processed and stored oil on board a vessel prior to being offloaded into shuttle tankers.

[10] *ISO Form CP 0030.*

show that their business operation sustained actual direct physical loss of or damage to the insured property. Without this proof the business interruption claim could be denied. This, in turn, could result in extensive litigation because, as many experts agree, the consequences of an oil spill can be far reaching without any need for the oil itself to actually reach those affected.

- **Workers' Compensation/Employers' Liability ─** Provides coverage for claims arising out of employee injuries.

Oil Spill Financial Responsibility for Offshore Facilities

As a matter of U.S. environmental policy, Congress has enacted numerous environmental laws designed to control oil pollution in the U.S. waters. Policy is implemented by federal agencies through regulations, rules, administrative orders, memoranda, and programs.[11] Acts of oil pollution are regulated (controlled) by a wide range of enforcement methods undertaken by the U.S. Environmental Protection Agency (EPA), as well as the U.S. Coast Guard that protects and enforces regulations pertaining to U.S. waters. In addition, many federal environmental regulations (standards) are delegated to the states for their implementation.

The *Oil Pollution Act of 1990* (OPA) features a financial responsibility requirement and compulsory liability insurance combined with strict liability rules that strive to accomplish several things:

- Prevent oil pollution damages from offshore energy facilities;[12]
- Establish oil spill financial responsibility (OSFR) for lease holders of offshore facilities to demonstrate the capability to meet liability for possible removal costs and damages;
- Establish a standard for measuring natural resource damages (worst case oil spill for an offshore energy facility);
- Establish penalties for not complying with the Act.

Specifically, the OPA features a compulsory liability insurance structure as part of the oil spill financial responsibility (OSFR) requirement combined with strict liability rules for oil pollution damages associated with offshore energy facilities. The financial responsibility and compulsory insurance requirements provide the funds to pay for damages, and the strict liability rules allow third-party claims to be made directly against the insurer, irrespective of negligence. This regulatory structure serves to avoid time-consuming and costly litigation and the need for oil spill victims to prove negligence as the primary test of liability for oil pollution damage. The rational basis for the compulsory insurance/strict liability structure is threefold: (1) the loss, however caused, is more than the victim can be expected to bear without hardship; (2) the compensatory system is not a liability system, as such, but, instead, a means to speedily compensate oil pollution victims; and (3) the regulatory scheme needs resources from which to pay unlimited compensation.

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[11] Some of the other water programs that are not addressed in this report include the regulation of the containment of wastes, covered by the Solid Waster Disposal and CERCLA Act; the Federal Land Policy and Management Act; the Surface Mining Control and Reclamation Act; the Forest and Rangeland Renewable Resources Planning Act; the Coastal Zone Management Act; or the Marine Mammal Protection Act.

[12] It is important to distinguish between a mobile offshore drilling unit (MODU), such as the Deepwater Horizon, and a well drilled from a MODU. A mobile offshore drilling unit (MODU) is classified as a vessel and well drilling from a MODU is classified as a covered offshore facility (COF) under the OPA. The Secretary of Transportation has authority for vessel oil pollution financial responsibility and the U.S. Coast Guard regulates the oil-spill financial responsibility program for vessels.

Insurance Requirements

Under Section 1016 of the OPA, parties responsible for offshore facilities must establish and maintain oil spill financial responsibility (OSFR) capability to meet their liabilities for removal costs and damages caused by oil discharges from an offshore facility and associated pipelines. The OSFR is demonstrated in various ways including surety bonds, guarantees, letters of credit and self insurance, but the most common method is by means of an insurance certificate. The insurance certificate spells out the limit required under Section 1016 of OPA. Lease holders of a covered offshore facility (COF) must demonstrate a minimum amount of OSFR of $35 million per 35,000 barrels of "worst case oil-spill discharge" up to a maximum of $150 for COF located in the OCS and $10 million in state waters. As an illustration, a worst case oil-spill discharge volume of 35,000 barrels (bbls) requires $35 million in OSFR while a volume of 35,001 bbls requires $70 million. The MMS calculates the worst case oil-spill discharge volume for a facility. An exemption to the OSFR is provided for persons responsible for facilities having a potential worst case oil-spill discharge of 1,000 bbls or less.

Policy Issues and Analysis

In the aftermath of the Deepwater Horizon incident, one major issue that Congress may wish to deliberate is the willingness of the commercial energy insurance industry to participate in the OSFR program given the proposed increase in the limit of liability required under OPA to $10 billion and also the required evidence of OSFR to some level that is yet to be determined. If insurers were willing to participate, another question is whether the new limit of liability is supported by the availability of insurance coverage on adequate terms and conditions in the global commercial insurance market for offshore energy facilities given the insurability of future offshore oil spill hazards; and the insurance market's capacity for underwriting "catastrophe" or "peak" risks, including oil spill damages.

Future Insurability of Offshore Oil Spill Perils

With respect to the insurability of future oil spill hazards, it is beneficial to point out that in recent decades the frequency and magnitude of large-scale natural disasters have been increasing along with federal spending to mitigate future losses and compensate disaster victims. As a major source of post-disaster recovery financing, commercial insurance companies have also been called upon to pay for catastrophe-related losses, in some cases beyond their contractual policy limitations. For example, after the September 11, 2001 terrorist attacks at the World Trade Center, insurers faced pressure to interpret policy language liberally with respect to war risk coverage and the number of occurrences. After some negotiation between private insurers and reinsurers, legislators, and other industry participants, which led to the passage of the Terrorism Risk Insurance Act, (a pre-disaster risk financing scheme), insurers agreed to pay claims related to the 9/11 incident. Insurers did not charge a premium to cover the risk. Other notable examples include asbestos and Superfund environmental claims (continuum triggers) and Hurricane Katrina with the water exclusion provision in homeowners' insurance policies where some policies were reinterpreted by the courts to expand coverage for water damage where coverage was explicitly excluded. Consideration of coverage expansion through the reinterpretation of insurance contract language by the courts could affect the availability of insurance for offshore energy facilities going forward.

Available Liability Insurance Capacity

The proposed increase in the limit of liability required under OPA to $10 billion and also the required evidence of OSFR to something similar could have at least three consequences in the

energy insurance market. *First*, some insurance market experts have asserted that the global commercial insurance capacity for third party liability insurance ─ Operators' Extra Expense (OEE) and Excess Liabilities coverage ─ that is available to meet OSFR requirements is approximately in the range of $1.5 billion. Insurers make the point that the strict liability with direct access to the insurer serves to further limit overall industry capacity. The reason is that the insurer cannot control claims payment with contract terms and conditions.

The point is that the estimated $1.5 billion is likely to be far below the OSFR for the new $10 billion liability limits. Moreover, the OEE coverage provides a combined single limit for well control, well redrilling after the blowout, and sudden and accidental seepage and pollution clean-up. Thus, pollution liability and clean-up is subject to the apportionment of the combined single limit over respective risks. What this means is that operators of COF would have to prioritize the single limit: use the insurance proceeds to first hire a well control expert to retake control of the well and, if necessary, drill a new well, with the balance of the OEE insurance limits used for pollution clean-up.

Second, given basic economic supply-demand principles and the fallout from possibly the most damaging oil spill in the nation's history, one would expect the supply of insurance coverage for the new OSFR to only be available at a high price or premium, if at all. The imposition of higher strict liability limits for large-scale oil pollution could have the effect of greatly increasing the demand for liability insurance protection. This could multiply the challenges insurers would have in evaluating the risk exposure, defining reasonable limits for the coverage and calculating prices.

This means the operators may find themselves assuming or retaining higher levels of self insurance, which might affect the MMS's offshore oil and gas lease bidding and ultimately the royalties earned for the U.S. Treasury. The availability of alternative sources of capital for spreading financial risk, perhaps through catastrophe bonds or energy insurance financial futures and options (i.e., derivative financial instruments that securitizes insurance risk, turning an insurance policy or reinsurance contract into a security) could provide the added capital needed in the insurance industry to cover the higher liability and associated OSFR limits.

Third, if the past is an indication of the future, private commercial insurers may be reluctant to commit financial capital in underwriting unknown new risks in the post-Deepwater Horizon environment until there is greater clarity on the legislative and legal climate. Insurers would need to collect the necessary data for evaluation of risks associated with certain severity of loss and insurability, calculate rate, policy terms and conditions, and set appropriate limitations. Conduct of these normal activities, at least in the short term, will be affected by the uncertainty of the losses associated with the recent Gulf of Mexico oil spill.

From an insurer's perspective, one issue that may arise is the potential for future massive environmental-related (strict liability) damages which leads to the question as to whether offshore oil pollution will be insurable or insurable only with government support. Given the magnitude of losses and uncertainty about future profitability in the energy insurance business, a "hard" energy insurance market —scarcity of coverage and high prices — may emerge following the Deepwater Horizon incident. Prior to this event, the third party pollution liability market was thought to be in a "soft" phase where rates were low as a result of oversupply of capacity.[13]

Finally, many insurance market experts would support a more efficient pre-disaster risk financing approach to managing and financing large-scale oil spill disasters. The OPA's oil financial responsibility rule is a pre-disaster risk financing strategy that, in the wake of the Deepwater

[13] *Willis Limited*, "Energy Market Review: On the Edge of an Abyss?", March 2010, located at: [http://www.willis.com/Media_Room/Press_Releases_(Browse_All)/2010/20100324_Willis_Energy_Market_Review_24_March_2010/]

Horizon incident, could come under intense pressure because of capital shortages in the insurance industry.

Again, new insurance and reinsurance companies (additional capacity) would be needed. A number of approaches could emerge to enhance access to the capital markets through new innovative financial instruments that serve as alternatives to traditional reinsurance treaties, grouped under the term alternative risk transfer or non-traditional reinsurance.

Thank you again for invitation to appear today. I will be pleased to address any questions you may have.