

FOREIGN OCS READINESS

HEARING BEFORE THE COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

TO

EXAMINE THE STATUS OF RESPONSE CAPABILITY AND READINESS FOR
OIL SPILLS IN THE FOREIGN OUTER CONTINENTAL SHELF WATERS
ADJACENT TO U.S. WATERS

OCTOBER 18, 2011



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CONTENTS

STATEMENTS

	Page
Bingaman, Hon. Jeff, U.S. Senator From New Mexico	1
Bromwich, Michael R., Director, Bureau of Safety and Environmental Enforcement, Department of the Interior	3
Hartig, Larry, Commissioner, State of Alaska, Department of Environmental Conservation, Juneau, AK	46
Piñon, Jorge R., Visiting Research Fellow, Florida International University, Latin American and Caribbean Center, Cuban Research Institute, Miami, FL	25
Murkowski, Hon. Lisa, U.S. Senator From Alaska	2
Myers, Mark, Vice Chancellor for Research, University of Alaska, Fairbanks, AK	32
Salerno, Vice Admiral Brian M., Deputy Commandant for Operations, U.S. Coast Guard	9
Schuler, Paul, President & CEO, Clean Caribbean & Americas, Fort Lauderdale, FL	28

APPENDIX

Responses to additional questions	51
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FOREIGN OCS READINESS

TUESDAY, OCTOBER 18, 2011

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The Committee met, pursuant to notice, at 10:06 a.m. in room SD-366, Dirksen Senate Office Building, Hon. Jeff Bingaman, chairman, presiding.

OPENING STATEMENT OF HON. JEFF BINGAMAN, U.S. SENATOR FROM NEW MEXICO

The CHAIRMAN. Alright. Why don't we get started?

The hearing will come to order. Today we're going to receive testimony from 2 panels of experts about an issue of great importance to the committee. That is offshore oil development. More precisely, we are focusing today's hearing on examining the status of response capability and readiness for oil spills in the foreign Outer Continental Shelf waters adjacent to the United States to our own waters.

This activity presents a complex set of issues related to its risks and its benefits. Last year we, the world, learned a hard lesson through the Deepwater Horizon disaster. We learned that there are tragic consequences for human life and environmental quality and marine resources and the economy if offshore development is conducted with anything but the highest degree of skill and care.

For these reasons the committee spent a significant amount of time in this Congress and in the previous Congress considering issues related to oil drilling and development in the waters of the United States. Obviously we need to continue to be dedicated to ensuring that the activities in our own waters are done safely and in a manner that protects the environment. Additionally it's clear that with respect to offshore activities the actions of our marine neighbors are important to consider as well.

As many people have already said, oil spills do not respect international boundaries. There are indications that several of our neighbors are planning to increase offshore oil development. Specifically Cuba and Mexico and the Bahamas and Canada in both the Canadian Arctic and the Eastern Canadian waters all have activities underway that could lead to increased offshore development.

The complexities of these activities that exist for operations in U.S. waters will obviously be faced by our neighbors as well. In addition there are particular issues related, for example, to the Cuban embargo and to the challenges presented by oil spill re-

sponse in Arctic areas. Our goal is to consider these issues. Find the best means, including international activities, that will allow us to protect our shared marine resources and those whose safety and livelihood depend on these resources.

Today we'll hear from some of our government experts on the first panel, who are working to address these issues and then also from other experts in oil spill response in the Gulf, in the Caribbean and Arctic regions. I look forward to the testimony and to continuing this committee's work to address the risks and challenges involved in these complex, offshore activities.

Let me turn to Senator Murkowski for her opening remarks before we introduce the first panel.

**STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR
FROM ALASKA**

Senator MURKOWSKI. Thank you, Mr. Chairman and thank you to our witnesses that are here, not only those distinguished witnesses on our first panel, but our second as well.

I want to extend a special welcome to my friend, Dr. Mark Myers, who will be appearing on the second panel. He's from the University of Alaska, and he's one of our top scientists on these matters. He's previously appeared before this committee as the Director of USGS.

I think this promises to be an interesting hearing. I am amazed by how assertive so many of our neighbors have become in exploring their offshore oil and natural gas. Cuba, I think, is probably receiving the most attention because so many issues of controversy arise with their development.

But I think it's very important to also recognize that our Nation also shares maritime orders with Russia, with Canada and with Mexico. All of those Nations are moving forward with major plans to venture into new areas of their Outer Continental Shelf. Some of those areas are not too far from our own shorelines.

Neither geology nor ocean currents recognize our borders, as the Chairman has said. So we really have both a shared opportunity in terms of the benefits of resource development, and also a shared risk in terms of spills or other impacts that can occur.

It probably comes as no surprise that I believe that it makes no sense for America to sit stubbornly in between active drilling operations in neighboring waters with our arms folded. It does us no good to complain that offshore drilling is too risky for us to pursue as other Nations are clearly very busy reaping its benefits right outside our front door. Yet that position is precisely what some Senators and some groups would advocate: that the U.S. stay out of this business entirely.

For the moment, I would ask that we set aside the discussion about jobs, about revenue and security that we would sacrifice. I would ask my colleagues to consider then, would we even be able to lend expertise to our neighbors if the U.S. hadn't taken bold steps into the offshore many decades ago? I think the answer to that is, no.

The unfortunate reality is that oil spills, whether they be from tankers or rigs, have occurred in our waters. These incidents have taught Americans about contending with maritime incidents. We

know some of what works and much of what does not work. Necessity has bred some invention as well, including the Sub C containment mechanisms which put an end to the Macondo blowout last year.

So we're here today to talk about what the U.S. can be doing to keep its own shorelines and resources safe and well managed in what is now, obviously, a global petroleum economy. I'd argue that the more build-out that we can advance in terms of offshore support facilities, aircraft, response, containment assets, ice breakers and vessels of opportunity, the better off we are. I'd argue that by training and re-training the best personnel and expertise in this field, the better off we will be in achieving a degree of comfort that a mistake next door will not mean a problem at our own doorstep.

I'll close by saying that it's not realistic to expect international compliance with anything close to U.S. standards if the U.S. cannot demonstrate that those standards work in both a profitable and a workable way.

I thank you again, Mr. Chairman, for holding the hearing. Look forward to the discussion and the input from our witnesses. Thank you.

The CHAIRMAN. Thank you very much. Let me introduce our first panel.

Mr. Michael Bromwich, who is the Director of the Bureau of Safety and Environmental Enforcement in the Department of Interior. He's a frequent and regular testifier to our committee. We appreciate him being back today.

Also, Vice Admiral Brian M. Salerno, who is the Deputy Commandant for Operations in the United States Coast Guard. Thank you very much for being here.

Why don't you proceed? Give us the main points we need to understand from your testimony and the written testimony that Mr. Bromwich has submitted, we'll just include that in the record in its entirety.

Mr. Bromwich, why don't you start and then Admiral Salerno?

STATEMENT OF MICHAEL R. BROMWICH, DIRECTOR, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, DEPARTMENT OF THE INTERIOR

Mr. BROMWICH. Thank you very much, Mr. Chairman and Senator Murkowski and other members of the committee. I'm happy to be here today to discuss the status of response capability and readiness for oil spills originating in foreign waters that might affect nearby U.S. waters and shorelines.

As you know the blowout and oil spill from the Macondo well last year prompted the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history. Our new standards and other reforms are designed to ensure that the exploration and development of oil and gas resources in U.S. waters proceed safely and with appropriate protections for ocean environments and our coastlines. But the risks to U.S. waters and shores posed by offshore drilling, as both you, Mr. Chairman and Senator Murkowski have noted, are not limited to the activities on the U.S. OCS. As a result we have taken steps to try to improve drilling standards and practices for operations in foreign waters

that could have an impact on our coastline as well as focus on oil spill response preparedness.

We are working with key agencies across the Federal Government including the State Department, the Coast Guard, EPA, NOAA and others, as well as with industry, oil spill response and blowout containment companies and our international counterparts in the Gulf of Mexico, in the Arctic and along our maritime boundaries with Canada. In particular we are working closely with other Federal agencies to address the threat of an oil spill in neighboring parts of the Gulf of Mexico that could affect U.S. waters, shores and interests. Several other countries on or near the Gulf of Mexico are expected to proceed with offshore drilling in their exclusive economic zones in the near future.

As you know the Spanish oil company, Repsol, has announced its intention to drill offshore wells in Cuba's waters using a newly constructed, semi-submersible rig. In the near future there also will likely be offshore drilling activity in the EEZs of the Bahamas and Jamaica and continuing offshore activity in Mexico's EEZ.

Now the U.S. Government is taking steps to protect our waters and coastal resources by promoting drilling safety through prevention and by preparing response contingencies in the event of a spill. These activities include communicating with Repsol to encourage its compliance with U.S. safety and environmental standards, cooperating with our regulatory agency counterparts in the region including Mexico through bilateral and multilateral mechanisms to develop common safety standards and taking steps to ensure that U.S. resources are available to respond to an oil spill. As you know we do not have regulatory authority over Repsol's activities in Cuba. But beginning in February of this year, Repsol has voluntarily provided us information regarding its drilling and oil spill response plans.

We have had numerous contacts with the company. We have made it clear that we expect it to adhere to the highest environmental, health and safety standards and to have adequate prevention, mitigation and remediation systems in place in the event of an incident. Repsol officials have stated publicly that in carrying out its exploratory drilling plans in Cuban waters, it will adhere to U.S. regulations and the highest industry standards.

Repsol has also offered U.S. agencies an opportunity to board the rig that it intends to use in Cuban waters to inspect the vessel and drilling equipment and to review relevant documentation. To protect U.S. interests we have welcomed the opportunity to gather information on the unit's operation, technology and safety equipment. BSEE and the Coast Guard are planning to coordinate a joint visit to the unit that would occur shortly before the rig is scheduled to enter Cuban waters.

Now in addition to keeping BSEE regularly informed of its plans, Repsol has expressed a desire to keep U.S. regulators and spill response planners apprised of its oil spill preparedness activities offshore Cuba. Along with other U.S. representatives, BSEE has already witnessed a table top spill response exercise held at the Repsol office in Trinidad. During the exercise Repsol spill management team mobilized to response to a hypothetical spill and demonstrated response equipment deployment capabilities.

Beyond our specific engagement with Repsol, BSEE has been engaged with our regulatory counterparts in the Gulf of Mexico in an effort to harmonize drilling safety standards in the region. BSEE and its predecessor agencies have been collaborating with officials from all levels of the Mexican government since the late 1990s. This cooperation has increased substantially in the aftermath of Deepwater Horizon and since the creation of the National Hydrocarbons Commission, the Mexican agency responsible for regulating offshore drilling safety on Mexico's Continental Shelf.

BSEE and CNH, it's the name of the regulatory agency in Mexico, are working toward a set of common safety and environmental standards through a series of technical workshops. If an oil spill from activities in the region were to threaten U.S. waters or its coastline, the U.S. Government would immediately use all appropriate resources and authorities to conduct response operations. The Administration has engaged State and local governments and private parties that might be affected by such a spill to ensure awareness and mutual cooperation. We will continue to actively support these efforts to ensure that appropriate plans and resources are in place to respond promptly and effectively to an oil spill that reaches U.S. waters. In addition the U.S. is also taking measures to ensure that the appropriate private industry parties are able to respond quickly in the event of an oil spill in Cuban waters.

Finally the Gulf of Mexico is not the only area in which we are proactively working on issues relating to a potential oil spill. My prepared testimony discusses the ways in which DOI and BSEE, in particular, are engaged in a number of multilateral and bilateral initiatives for oil spill preparedness and response in the Arctic and with Canada. We view engagement with our foreign counterparts in areas of shared interests and concern whether it is the Gulf of Mexico, the Arctic or along our maritime border with Canada as a central part of our efforts to protect U.S. environmental and economic interests. We are committed to continuing that engagement.

Thank you very much. I look forward to your questions.

[The prepared statement of Mr. Bromwich follows:]

PREPARED STATEMENT OF MICHAEL R. BROMWICH, DIRECTOR, BUREAU OF SAFETY
AND ENVIRONMENTAL ENFORCEMENT, DEPARTMENT OF THE INTERIOR

Mr. Chairman and Members of the Committee,

I am pleased to be here today to discuss the status of response capability and readiness for oil spills originating in foreign waters with potential effects on adjacent U.S. waters and shorelines.

As you know, the blowout and oil spill from the Macondo well last year prompted the most aggressive and comprehensive reforms to offshore oil and gas regulation and oversight in U.S. history. Our new standards and other reforms are designed to ensure that the exploration and development of oil and gas resources in U.S. waters proceeds safely and with appropriate protections for ocean environments and our coastlines.

Because the risks to U.S. waters and shores posed by offshore drilling are not limited to the activities on the U.S. OCS, the Department of the Interior (DOI) and my agency have taken steps to improve drilling standards and practices, as well as oil spill response preparedness, for operations in foreign waters that could have an impact our coastline. DOI and the Bureau of Safety and Environmental Enforcement (BSEE) are engaged with the key agencies across the federal government—including the State Department, United States Coast Guard (USCG), Environmental Protection Agency (EPA), National Oceanic and Atmospheric Administration (NOAA) and others—as well as with industry, oil spill response and blowout con-

tainment companies, and our international counterparts in the Gulf of Mexico, in the Arctic and along our maritime boundaries with Canada.

STATUS OF RESPONSE CAPABILITY AND READINESS IN THE GULF OF MEXICO

DOI and BSEE are working closely with other federal agencies to address the threat of an oil spill in neighboring parts of the Gulf of Mexico that could affect U.S. waters, shores and interests. Several other countries on or near the Gulf of Mexico are expected to proceed with offshore drilling in their exclusive economic zones (EEZ) in the near future. As you know, the Spanish oil company Repsol has announced its intent to drill offshore wells in Cuba's waters using a newly constructed mobile offshore drilling unit (MODU), the Scarabeo 9. In the near future, there also likely will be offshore drilling activity in the EEZs of the Bahamas, and Jamaica, and continuing offshore activity in Mexico's EEZ.

The U.S. government is taking steps to protect U.S. waters and environmental and economic resources by promoting drilling safety to prevent spills in the first place and by preparing response contingencies in the event of a spill. These activities include: (1) communicating with Repsol to encourage its compliance with U.S. safety and environmental standards; (2) cooperating with our regulatory agency counterparts in the region, including Mexico, through bilateral and multilateral mechanisms to develop common safety standards; and (3) taking steps to ensure that U.S. resources are available to respond to a spill.

1. Engagement with Repsol

While BSEE does not have regulatory authority over Repsol's activities in Cuba, beginning in February of this year Repsol has voluntarily provided us information regarding its plans related to drilling and oil spill response. In our numerous communications with Repsol, we have made clear that we expect it to adhere to industry and international environmental, health, and safety standards and to have adequate prevention, mitigation, and remediation systems in place in the event of an incident. Repsol officials have stated publicly that in carrying out its exploratory drilling plans in Cuban waters, it will adhere to U.S. regulations and the highest industry standards.

Repsol has offered U.S. agencies an opportunity to board the Scarabeo 9 rig that Repsol intends to use in Cuban waters to inspect the vessel and drilling equipment and to review relevant documentation. Given the proximity of drilling to U.S. waters, and considering the serious consequences a major oil spill would have on our economic and environmental interests, we have welcomed the opportunity to gather information on the rig's operation, technology, and safety equipment. BSEE and the Coast Guard are planning to coordinate a joint visit to the Scarabeo 9 that would occur shortly before the rig is scheduled to enter Cuban waters.

In addition to keeping BSEE regularly informed of its plans, Repsol has expressed a desire to keep U.S. regulators and spill response planners apprised of its oil spill preparedness activities offshore Cuba. Along with other U.S. representatives, BSEE has already witnessed a table-top spill response exercise held at the Repsol office in Trinidad. During the exercise, Repsol's spill management team mobilized to respond to a hypothetical spill and demonstrated response equipment deployment capabilities. Repsol has subsequently invited BSEE and Coast Guard officials to observe another emergency drill to be conducted in Trinidad related to contingency planning for the drilling.

2. Regional Drilling Safety Initiatives in the Gulf of Mexico

In addition to our communications with Repsol, BSEE has been engaged with our regulatory counterparts in the Gulf of Mexico in an effort to harmonize drilling safety standards in the region. BSEE and its predecessor agencies have been collaborating with officials from all levels of the Mexican government since the late 1990s on issues related to the safe and responsible development of oil and gas resources in the Gulf of Mexico. This cooperation has increased substantially in the aftermath of Deepwater Horizon and after the creation of the National Hydrocarbons Commission (CNH), the Mexican agency responsible for regulating offshore drilling safety on Mexico's continental shelf.

BSEE and CNH are working towards a set of common safety and environmental standards through a series of technical workshops. Following a workshop held this summer in BSEE's Gulf of Mexico regional office, the U.S. and Mexico developed an action plan to define subject areas where the creation of common standards would be appropriate. CNH officials will be returning to BSEE's offices in the near future for a technical exchange about BSEE's Worst Case Discharge analysis.

In addition to this ongoing cooperation, Secretary of the Interior Ken Salazar and I traveled to Mexico for a series of meetings with Mexican officials to discuss the

development of common safety and environmental standards for offshore oil and gas exploration and development in the Gulf of Mexico.

3. Spill Response and Preparedness

The U.S. government will immediately use all appropriate resources and authorities to conduct response operations in the event an oil spill from activities in Cuban waters or from activities in other states in the region that threaten U.S. waters or its coastline. The Administration has engaged state and local governments and private parties that might be affected by such a spill to ensure awareness and mutual cooperation and the adequacy of five different existing Area Contingency Plans covering Florida where models predict varying probabilities of U.S. shoreline impacts should a spill occur at the planned exploratory drilling locations in Cuban waters. BSEE staff is also engaged with District Seven USCG staff out of Miami in the development of an International Offshore Drilling Response Plan and will be participating in an upcoming workshop to validate the plan. We will continue with active support of these efforts to ensure that appropriate plans and resources are in place to respond in a rapid and effective manner to an oil spill that reaches U.S. waters.

As part of this planning for possible oil spills from deepwater drilling off of Cuba, NOAA, in cooperation with the Bureau of Ocean Energy Management (BOEM), has run sophisticated trajectory models to identify potential landfall areas along the U.S. coasts. Using worst case discharge data provided by Repsol, coupled with computer model results, the USCG is working with Area Committees in the areas that potentially could be affected by such a spill to enhance Area Contingency Plans—an effort that requires local and state participation in the development of protection strategies and establishing priorities for threatened resources.

The U.S. is also taking measures to ensure that the appropriate private industry parties are able to respond quickly in the event of an oil spill in Cuban waters. The Department of Commerce and the Treasury Department have a long-standing practice of providing licenses to address environmental contingencies in Cuban waters. The Department of Commerce's Bureau of Industry and Security (BIS) has issued a number of licenses for post-incident oil spill containment and cleanup items for use by U.S. companies in Cuban waters. These items include booms, skimmers, dispersants, pumps and other equipment and supplies necessary to minimize environmental damage in the event of a spill. Several such applications are currently under review by BIS, including applications for a subsea well containment system and related equipment, such as remotely operated submersible vehicles and subsea construction, dive support, and well intervention vessels. In consultation with the Department of State, the Treasury Department can issue licenses to U.S. entities to prepare for and to operate in the event of an oil spill. The Treasury Department has been issuing such licenses for over a decade, including licenses for environmental response, maritime salvage, and spill prevention activities.

Finally, BSEE is working closely with other federal agencies on a number of regional initiatives with countries in the region, including Mexico, Cuba, the Bahamas and Jamaica. For example, planning is underway for a Regional Oil Pollution Preparedness, Response and Cooperation Seminar to Focus on Developing National Plans for Marine Pollution Preparedness and Response Related to Offshore Units and Regional Cooperation. This seminar, which is sponsored and conducted by the International Maritime Organization, will take place in the Bahamas later this year and officials from the Bahamas, Cuba, Mexico, Jamaica and the United States have been invited to participate. The seminar will provide a valuable opportunity for participating countries to learn about other nations' plans for emergency well control and oil spill response, which will help us improve our own response planning for upcoming offshore drilling expected in the EEZs of participating states. We believe a multilateral approach that involves all parties in the region contemplating drilling activities that could affect the United States is the most effective means of safeguarding our interests. We therefore intend to continue to vigorously pursue continued multilateral engagements in the Gulf of Mexico.

STATUS OF RESPONSE CAPABILITY AND READINESS IN THE ARCTIC AND WITH CANADA

In addition to our activities in the Gulf of Mexico, DOI and BSEE are also engaged in a number of multilateral and bilateral initiatives for oil spill preparedness and response in the Arctic and with Canada.

1. Arctic Council

The U.S. is a member of the Arctic Council Ministerial Meeting, which is a high-level forum of eight nations—Canada, Russia, Norway, Denmark, Iceland, the United States, Sweden and Finland—and their indigenous peoples.

The Arctic Council's meeting in Nuuk, Greenland this past May led to the creation of two important initiatives to address oil spill prevention, preparedness and response in the Arctic. The first of these is the Oil Spill Preparedness and Response Task Force, of which BSEE is a member and which intends to develop an international instrument on oil pollution preparedness and response in the Arctic. The Task Force is meeting in Oslo, Norway this week. In addition, BSEE is participating in the Arctic Council Emergency Prevention, Preparedness and Response working group, which is developing recommendations on best practices in oil spill prevention. The results of both initiatives will be presented at the next Ministerial Meeting of the Arctic Council in the spring of 2013.

2. Bilateral Cooperation with Canada

BSEE also participates in a number of bilateral initiatives with Canada related to oil spill preparedness and response. BSEE's Technology Assessment and Research Program has collaborated with Canada in over 35 joint research and development projects, many of which relate to improving oil spill response and preparedness. For example, the bureau is collaborating with Canada's Department of the Environment on a number of joint oil spill response research projects focusing on remote sensing and measurement of spilled oil; chemical treating agents; the properties and behavior of spilled oil; testing and evaluating oil spill absorbents; cleaning up of oil from shorelines; mechanical containment and cleanup of spilled oil; and validating the window of opportunity for dispersant use. Another project has involved collaboration with Canada's Department of Fisheries and Oceans on a study of dispersants.

BSEE's predecessor agencies also initiated and conducted two meetings of the US-Canada Northern Oil and Gas Research Forum (Forum). The first Forum took place in October 2008 in Anchorage, followed by a second Forum in December 2010 in Calgary. The forums focused on technical, engineering, and scientific research concerning offshore drilling safety, oil spill prevention and management, ice engineering and transportation issues, as well as the environmental effects of oil and gas exploration and development in the Arctic. These multidisciplinary conferences brought together participants from government, industry, academia, indigenous groups, and non-governmental organizations to discuss research issues of relevance to the management of oil and gas activities.

BSEE has also cooperated in joint projects with the Canadian Coast Guard at the Oil and Hazardous Materials Simulated Environmental Test Tank (OHMSETT), which is the U.S. oil spill response and renewable energy test facility located in New Jersey. One project evaluated remote sensing equipment to detect spilled oil; another evaluated the oil containment performance of five different types of fire-resistant booms. We will continue this engagement under the leadership of BSEE's Oil Spill Response Division.

Finally, BSEE will participate in the yearly Arctic and Marine Oil Spill Program (AMOP) Technical Seminar with Canada. The Seminar was created in 1978 by Canada's environmental ministry to improve the knowledge base and technology for combating Arctic and marine oil spills. Since then, it has been a useful forum for cooperation and information exchange providing BSEE with the opportunity to engage researchers with similar Arctic response interests, learn about emerging technologies and scientific discoveries, inform attendees of findings from BSEE-funded research, and identify research gaps and needs. In the last AMOP seminar conducted in October 2011, the program included discussions on the use of Ohmsett for research related to biofuel spill response and dispersant operational research conducted at Ohmsett over the last ten years, evidencing the contributions that BSEE has and will continue to make to improving oil spill response.

BSEE is also on the Executive and Planning Committees of the International Oil Spill Conference which is held every three years—the most recent being in mid-2011. The conference focuses on new technologies and hosts exhibitors and participants from around the globe.

As you can tell from this description of the activities of DOI and BSEE, we view engagement with our foreign counterparts in areas of shared interest and concern as a central part of protecting U.S. environmental and economic interests.

Thank you and I look forward to your questions.

The CHAIRMAN. Thank you very much.
Admiral, go right ahead, please.

**STATEMENT OF VICE ADMIRAL BRIAN M. SALERNO, DEPUTY
COMMANDANT FOR OPERATIONS, U.S. COAST GUARD**

Admiral SALERNO. Good morning, Mr. Chairman, Ranking Member Murkowski, distinguished members of the Committee. I'm pleased to have this opportunity to answer any questions you may have on response capability and readiness for oil spills originating in foreign waters adjacent to the United States that may affect or threaten our Nation or our natural resources.

Protecting the marine environment from oil spills is an important Coast Guard mission. Contingency planning, training and exercises are fundamental to our readiness to respond to oil spills. These in turn have their foundation in the National Oil and Hazardous Substances Pollution Contingency Plan, known simply as the NCP. That's a long title.

Contingency planning under the NCP occurs at several levels.

Local level planning is conducted by an Area Committee under the guidance of a Coast Guard Captain of the port, who is also pre-designated as the Federal, on scene coordinator for the coastal zone. The Area Committee brings together Federal, State, local and tribal officials and responders to identify risks, sensitive areas to be protected and protection strategies.

At the regional level Coast Guard Districts participate with other Federal agencies and State officials through the Regional Response Team. They consider such issues as disperse and use and insitu burning pre-authorizations.

Finally at the national level, the Coast Guard serves as the Vice Chair of the National Response Team which is comprised of 16 Federal agencies with environmental response functions. Ensures national level capabilities are available, as needed, to support response efforts.

Each of these organizational levels also has a role to play in developing strategies and cooperative relationships with foreign neighbors to enhance preparedness and response to trans-boundary environmental threats. In particular, we have well established relationships with Canada, Russia and Mexico to achieve cooperation on potential pollution threats, the identification of equipment and personnel needed to respond to actual incidents and procedures and protocols for notification, incident management and coordinated spill response. Each of these cases involves cooperation in controlling the source of the pollution as paramount in addressing the transnational nature of the threat.

Without controlling the source you cannot get ahead of the problem. So the facilitated movement of people and equipment to the source is an essential component of these agreements. Additionally these agreements include regular joint planning sessions and exercises. They also help spawn bilateral cooperation in oil spill research and development.

Under these agreements we've recently completed a major bilateral exercise with Mexico held in San Diego this past August. We also held a joint U.S. Coast Guard/Canadian Coast Guard Environmental Summit this past month. Next month I plan to meet with the Russian delegation here in Washington to sign a bilateral Memorandum of Understanding that will expand our current coop-

erative agreements to cover the entire U.S./Russian boundary waters.

We're also working with Russia, Canada and the 6 other Arctic Nations through the Arctic Council to produce an Arctic wide, pollution preparedness and response instrument that will build on our existing bilateral agreements to enhance preparedness throughout the Arctic region.

In light of the growing interest in oil exploration in the Northern Caribbean, we're also working hard to improve regional cooperation there. The anticipated drilling off Cuban waters is a salient example, but others like the Bahamas are also considering deep water drilling operations. By working through the International Maritime Organization, we've garnered support for a regional, multilateral seminar to be held in December in the Bahamas to which other Caribbean Nations will be invited, including the Bahamas, Jamaica, Cuba and Mexico for the purpose of discussing oil spill prevention and response issues.

Meanwhile we're working extensively with all of our domestic response partners to update our contingency plans. We're also engaged directly with Repsol, the Spanish company which plans to drill the first well off Cuba starting in January 2012, to better understand their response strategies, their resources and their capabilities. In the event an oil spill does occur within Cuban waters, the Coast Guard would mount an immediate response under the NCP in partnership with other Federal, State and local agencies. We would focus on combating the spill offshore using all available response tactics.

As was highlighted by the Deepwater Horizon spill, any spill of national significance, regardless of its source will require unity of effort across all levels of government, industry and the private sector.

Thank you. I look forward to answering your questions.

[The prepared statement of Admiral Salerno follows:]

PREPARED STATEMENT OF VICE ADMIRAL BRIAN SALERNO, DEPUTY COMMANDANT FOR OPERATIONS, U.S. COAST GUARD

Good Morning Chairman Bingaman, Ranking Member Murkowski, and distinguished Members of the Committee. I am pleased to have this opportunity to answer any questions you may have on response capability and readiness for oil spills originating in foreign waters adjacent to the United State that may affect or threaten our Nation and our natural resources.

SUMMARY

Protecting the marine environment from oil spills is an important Coast Guard mission. Contingency planning, training, and exercises are fundamental to our readiness to respond to oil spills. These in turn have their foundation in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Contingency planning under the NCP occurs at several levels:

- Local level planning is conducted by an Area Committee, under the guidance of the Coast Guard captain of the port, who is also pre-designated as the Federal On Scene Coordinator for the coastal zone. The area committee brings together federal, state, local, and Tribal officials and responders to identify risks, sensitive areas to be protected, and protection strategies.
- At the regional level, Coast Guard Districts participate with other federal agencies and state officials, through Regional Response Team, on such issues as dispersant use and in-situ burning pre-authorizations;
- And finally at the national level, the Coast Guard serves as the vice chair of the National Response Team, which is comprised of 16 federal agencies with en-

vironmental response functions, and ensures national level capabilities are available as needed to support response efforts.

International Partnerships

Each of these organizational levels also has a role to play in developing strategies and cooperative relationships with foreign neighbors to enhance preparedness and response to transboundary environmental threats. In particular, we have well established relationships with Canada, Russia and Mexico to achieve cooperation on:

- potential pollution threats,
- identification of equipment and personnel resources available to respond to actual spill incidents, and
- procedures and protocols for notification, incident management, and coordinated spill response.

In each of these cases, cooperation in controlling the source of the pollution is paramount in addressing the transnational nature of the threat. Without controlling the source, you cannot get ahead of the problem, so the facilitated movement of essential people and equipment to the source is an essential component of these agreements.

Additionally, these agreements include regular joint planning sessions and exercises; they also help sponsor and support bi-lateral cooperation in oil spill research and development.

For example, we completed

- a major bi-lateral exercise with Mexico in San Diego this past August;
- and a joint U.S. Coast Guard/Canadian Coast Guard Environmental Response Summit last month.

Next month, I plan to host a Russian delegation here in Washington, to sign a Bi-lateral Memorandum of Understanding that will expand our current cooperative agreements to cover the entire U.S./Russian boundary waters.

And we are also working with Russia, Canada and the six other Arctic Nations, through the Arctic Council, to produce an Arctic Wide Oil Pollution Preparedness and Response instrument that will build on our existing bi-lateral agreements to enhance preparedness throughout the Arctic region.

Preparedness in the Northern Caribbean

In light of the growing interest in oil exploration in the Northern Caribbean, we are also working hard to improve regional cooperation. The anticipated deepwater drilling in the Cuban EEZ is a salient example, although others like the Bahamas are also looking at deepwater drilling. By working through the IMO we have garnered support to convene a multilateral seminar this December in the Bahamas that will invite Caribbean nations, including the Bahamas, Cuba, Mexico, and Jamaica, to discuss oil spill prevention and response issues.

Consequently, we are working extensively with all our domestic response partners to update our contingency plans. We are also engaged directly with REPSOL, the Spanish-owned company which plans to drill the first well in the Cuban offshore starting in January 2012, related to their response strategies, resources, and capabilities in support of their drilling operations.

In the event that an oil spill does occur within Cuban waters, the Coast Guard would mount an immediate response under the NCP, in partnership with other Federal, State and local agencies. And we would focus on combating the spill offshore using all viable response tactics.

Conclusion

As was highlighted by the Deepwater Horizon Oil Spill, any spill of national significance, regardless of its source, will require unity of effort across all levels of government, industry, and the private sector.

Thank you and I look forward to answering any questions you may have.

The CHAIRMAN. Thank you both very much.

Let me start with a few questions.

I guess an obvious issue that is framed by this plan that Repsol has to go ahead and drill in Cuban waters is what is the capability of the U.S. or U.S. companies to respond if there were a spill in Cuban waters? We were asked to respond, or to assist in a response by the Cubans—I don't know if those circumstances would

ever occur, but if they did are there legal impediments to U.S. companies responding, if requested, by the Cubans, Mr. Bromwich?

Mr. BROMWICH. Mr. Chairman, my understanding is that there are long term licensing agreements that have existed to provide such services. That the combination of the Treasury Department and the Commerce Department has approved such licenses in the past. Would in an expedited way approve applications for similar licenses should the need arise.

So I don't anticipate that that would be a problem. I think Commerce and Treasury have been looped into conversations in the Administration. They understand very well of this anticipated activity. I have a lot of confidence that if the existing licenses were not sufficient to enable an adequate response and the deployment of all substantial U.S. resources, that those licenses would be granted very, very quickly.

The CHAIRMAN. OK. So that covers any problems with private companies taking action in Cuban waters, if requested to do so. What about with regard to your own department or any other executive branch department? If you were called upon or if the Coast Guard, Admiral Salerno, were called upon to assist in a response to a spill in Cuban waters, are we able to respond or not?

Admiral SALERNO. We do not have immediate authority to respond to a foreign source, in a foreign EEZ. We would have to, at the request of that foreign government through the approval of the State Department. If those permissions were granted then we could do so.

We have sent people to respond to spills in other countries in the past with the concurrence of the State Department.

The CHAIRMAN. But there, as far as you know, there's no law that we've enacted here in the Congress that would in any way prevent the State Department from going ahead and authorizing you to take that action?

Admiral SALERNO. Sir, I think, Cuba of course is a special case. We would have to defer to the inner agency in the State Department as to whether we would be authorized actually to go to the source off Cuba.

The CHAIRMAN. OK.

Do you happen to know, Mr. Bromwich, if there is some kind of legal impediment that would prevent the State Department from authorizing the Coast Guard or your own Department from taking whatever action was requested?

Mr. BROMWICH. I'm not aware of any specific legal impediments, Senator. But I can't say that I've looked at this issue closely. I think other people in the Administration, in other departments have including at the State Department and at the Justice Department. I have confidence that they're working to work through any such obstacles if they see any in current law.

The CHAIRMAN. Mr. Bromwich, I understand from your testimony that you feel reasonably confident that the drill rig that is going to be used by Repsol will be inspected to the standards that we would insist upon for any drill rig operating on our own Outer Continental Shelf. That the necessary blowout prevention equipment and all that sort of thing will also be meeting those same stand-

ards. Is that a correct interpretation of what you said in your testimony?

Mr. BROMWICH. Yes. I want to be clear. We, together with the Coast Guard at Repsol's invitation plan to conduct an inspection of this rig. It's a brand new semi-submersible rig, very advanced, very modern. We're aware of all of the characteristics that the rig has and all the characteristics of the blowout preventer.

So because of our relationship with Cuba we're going to be doing the inspection outside of Cuban waters. We're going to be doing it in a different location. Some of what we would normally inspect, we would do on location including certain types of tests relating to the BOP.

So we will do all available and possible inspections including of the BOP that one can do when it's not on the site where the drilling is going to actually take place. We have been very satisfied in our conversations with Repsol that we will be given access to all components of the rig. We will be able to do whatever we feel is necessary with respect to the blowout preventer. They have been extremely cooperative since they first came to us last February. We have had many, many conversations with them about how we would need to go about the business of inspecting the rig.

The CHAIRMAN. Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman.

Admiral, I am pleased to hear you discuss the task force that came about at the Arctic Council meeting in Greenland with the Arctic Nations focused on oil spill response and preparedness. I think that that's a good initiative going forward in the Arctic. I'm pleased to see that a similar focus is being made down in the Caribbean and in other areas.

As I mentioned in my opening statement we've got some neighbors here not only in the North, but to the South. How we work cooperatively, I think, is going to be critical as we see greater developments within these areas.

The Chairman was asking about this authorization to respond or the permission to respond from State Department. There's an article in the Wall Street Journal just this morning indicating that the U.S. is going to inspect the Cuban rig. But the President of the International Association of Drilling Contractors says that they would like to see some form of blanket authority from the White House to allow any available U.S. ship or equipment to help if there was a spill.

As I think back to the incident with the Deepwater Horizon there was, I think, a fair amount of confusion because there was response capability from other Nations but until that approval was given and in some cases, was not given, we sat without those assets. So is this a situation where the decision is made on a case by case, day by day basis? In which case you may see delay in your opportunity to respond quickly and address the clean up?

Admiral SALERNO. Just to maybe refer back to the Deepwater Horizon, I think there are some misconceptions, Senator, about the international offers of assistance. Some of the—what was offered, quite honestly, was not useful. So there was some technical determinations that had to be made as, you know, can we actually use what's being offered. So that accounted for some of the delays.

We had equipment from over 60 countries responding to Deep-water Horizon. Most of it, quite honestly, was contracted directly by the responsible party. Some of it was government to government. But there was quite a bit that was there. Although people were not fully apprised, I think, of some of the details that went into some of those decisions.

As far as doing the same thing in a foreign EEZ, yes, we do not have pre-authorization to do that. We would be very dependent on the decisions made by the State Department and the Treasury Department regarding the ability of U.S. companies to offer their capabilities in Cuba's EEZ.

Senator MURKOWSKI. But—

Admiral SALERNO. In our discussions with them working with the interagency, I'm very confident that people appreciate the gravity of the situation. The fact that the clock is ticking when an event occurs that close to our shores and that we would need very expedient decisionmaking in those cases.

Senator MURKOWSKI. That's where I would hope that if you've got some protocols that have been put in place similar to what we're looking at with the Arctic Council, and that task force that is keying in on these issues as they relate to the Arctic, that you could do something similar down in the South.

Let me ask you something, Mr. Bromwich, because you've mentioned that good relationship with Repsol. They're going to allow you to come in and inspect and that all is working well.

What about with the contractors? Have you had any conversations? Have you met with the contractors? Because as we learned, it's not just the company whose name happens to be at the top of the letterhead. The contractors that are working also have a great role to play. What discussions have you had with them?

Mr. BROMWICH. This is a somewhat different situation, Senator. Most of the key positions on the rig from project manager down to drilling supervisor, it's our understanding they are going to be Repsol personnel. Obviously the companies, the U.S. companies, that normally provide those kinds of contracting services like the Halliburtons and the MW Swacos and the Schlumberger, because of the embargo are not—do not have employees that are going to work on this rig.

We are in continuing contact with Repsol. We have literally asked them and in the last 48 hours to provide us a greater level of detail about the contractors that they are going to use. Certainly when we get that information we will make further inquiries. But our understanding from the beginning is that the key people on the rig are going to be Repsol personnel. We have not been told that that's changed. So that's been our guiding assumption as we move forward.

Senator MURKOWSKI. Mr. Chairman, I've got some additional questions. But if we have a chance for a second round we'll do it then.

The CHAIRMAN. OK.

Senator MANCHIN.

Senator MANCHIN. Thank you, Mr. Chairman.

You know, Cuba's deep water development of its offshore oil resources raises a number of troubling issues, as you can tell by the

questions you're getting asked. The Cuban government has a history of actively working against the interest of the United States. This is really why I've heard—have a hard time believing that even if there was a desire to work cooperatively to create offshore drilling standards and regulations between Nations, could we truly trust Cuba to follow them?

So my question to both of you would be this. How do we balance a desire not to provide an economic lifeline to a Communist regime but still ensure that we're prepared for any oil spills that may happen? If you were a Communist country and you're looking and trying to take direction and we're trying to intervene. They're going to say, you know, you all didn't do too well with your own oil spill. So how are you going to oversee and concerned about mine?

How would you all answer that?

Mr. BROMWICH. Senator, it's a good question. I just want to be clear that what we are focused on as a government is protecting U.S. interests and not providing a lifeline to anyone. This is all about protecting U.S. environmental interests and economic interests.

Senator MANCHIN. Let me just ask this follow-up question then. If something would happen, who would be paying for the U.S. Government to go and intervene and clean this up? Are we going to get reimbursed?

Mr. BROMWICH. Those are a set of issues that the Justice Department has already begun to look at. I'm sure—

Senator MANCHIN. It's a Communist regime. We haven't had a good relationship with them. How would we expect them to—

Mr. BROMWICH. I think the focus would be on getting compensation from the operator, the way the U.S. regulatory system works.

Senator MANCHIN. Why would the operator pay attention to us as the United States trying to control that when they're basically working in territorial waters that Cuba controls?

Mr. BROMWICH. Repsol and many of the other countries that explore in other countries exclusive economic zones have interests in U.S. waters. Repsol has significant interest in U.S. waters. I think that's played a significant role by—

Senator MANCHIN. So reciprocity—

Mr. BROMWICH. As cooperative—

Senator MANCHIN. I got you.

Mr. BROMWICH. As they have been up until now.

Senator MANCHIN. Do you think there's enough of a retribution or reciprocity that if they would do something that would adhere to what we would think they should, we could basically sanction something they're doing here.

Mr. BROMWICH. The evidence of our dealings with Repsol strongly supports that. Absolutely.

Senator MANCHIN. You're saying even though they were operating correctly in the waters of the U.S. and they did something that you didn't believe was correct in the waters of Cuba, you could retaliate with what they're doing even though they haven't broken any laws in U.S. waters?

Mr. BROMWICH. I don't want to use the word, retaliate. If it turned out that we determined that they weren't operating consist-

ently with U.S. standards, that would be something very troubling to us.

Senator MANCHIN. Does the Justice Department? Would they support that? That we couldn't have restitution made because of what they were doing in U.S. waters?

Mr. BROMWICH. We review permits and operations of all operators that operate in U.S. waters. If we saw, for example, that there was a total failure that would adhere to those standards and operations in other waters that would cause us to re-examine our ability to sanction their continuing activity in U.S. waters.

Senator MANCHIN. You can understand our concern. It sounds like the American taxpayer could get left on the hook again. Without using any other term, getting screwed again for holding the bill for this if something should happen.

So I don't know how you work with a Communist regime. That's the thing I don't know. Do you try to build other relationships or basically go down the path that we've taken?

Mr. BROMWICH. Our focus would be less on dealing with the Cuban government on this and more on dealing with the operators that we do have some leverage on.

Senator MANCHIN. So you think the operators—you think basically the whole standard is going to be built around the operators agreeing to perform and to this function, basically, under the parameters that we've set not mattering—it doesn't matter what waters we're dealing in in the world? Whether it be the Bahaman waters or Cuban waters or Mexican waters, makes no difference?

Mr. BROMWICH. It does make a difference in that we're not guaranteed that every operator who operates in foreign waters—

Senator MANCHIN. Sure.

Mr. BROMWICH. Will adhere to our standards. In fact it's our understanding that some of the companies that may be drilling in Cuba are not ones that have—

Senator MANCHIN. That's my understanding too, is that the Cuban government is sponsoring some of this State owned drilling. What do you do in that case?

Mr. BROMWICH. We do everything we possibly can to protect ourselves.

Senator MANCHIN. But they're not drilling in our waters.

Mr. BROMWICH. Right.

Senator MANCHIN. So you don't have that same—

Mr. BROMWICH. We don't have the same kind of direct regulatory authority.

Senator MANCHIN. You had before?

Mr. BROMWICH. That's true.

Senator MANCHIN. Admiral, do you have any?

Admiral SALERNO. I would echo what Mr. Bromwich said. We do not have direct jurisdiction over a foreign rig operating in a foreign EEZ. The questions you raised, Sir, about you know, liabilities are very good questions. Our legal staff is working with Department of Justice to see what legal avenues might exist and for what we would call the responsible party.

For the response itself, outside of the Cuban EEZ in waters that would directly affect the United States, we would access our own

pollution fund to fund the response as an immediate response measure.

Senator MANCHIN. I also would have for a second round, Mr. Chairman, on some economic conditions.

The CHAIRMAN. OK.

Senator MANCHIN. Thank you.

The CHAIRMAN. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. Thank you for your testimony and for what each of you are trying to do with limited abilities.

Let me make sure I understand. I know there were a number of questions that were just asked but right now the Justice Department, Mr. Bromwich, is developing knowledge as to what recourse we would have against the Spanish entity should there be a blow-out of some type.

Mr. BROMWICH. That's correct.

Senator CORKER. So we really don't know what recourse we would have.

Mr. BROMWICH. That's right. The Justice Department, it's my understanding is exploring various theories for potential recovery against the operator really for an impact of an oil spill that had an impact on U.S. waters or shorelines.

Senator CORKER. It seems to me that it would be odd that we would not know that at present. I mean it just doesn't seem like a new issue. I mean, what did other companies—what did other countries have as recourse against us when the Black water issue occurred?

Mr. BROMWICH. I don't know. I don't know what research was done. We have focused on the research that is done on this specific set of issues, that is a spill in foreign waters in the Caribbean that might have an impact on U.S. waters and the U.S. coastline.

I'm not in the Justice Department, so—

Senator CORKER. Yes. No, I understand that.

Mr. BROMWICH. I'm aware that they're working on it and developing potential theories of recovery. I'm not 100 percent sure how far along they are or whether they've reached a final conclusion.

Senator CORKER. OK.

The inspection issue. I know that again you're limited because of our relationship with Cuba and the fact that it's in their international waters, but—or in their own waters. But it does seem odd that we seem awfully confident about the inspections when I would assume a big part of the inspections that we have on our own rigs are after it's installed and just ensuring that they're checking pressures and doing all the things that need to occur. Yet we feel so confident that Repsol, without any inspections, is going to be operating in a perfectly pure way.

It's just odd that we would be so confident of that.

Mr. BROMWICH. I don't want to overstate our level of confidence.

We're given confidence by the openness that Repsol has shown with us, their willingness to allow us to inspect their rig. It's not optimal, Senator. There's no question that we could do it better and a more full bodied inspection once the rig is onsite. But this is a lot better than nothing in our judgment and we think is the best way to protect U.S. interests as best we can given the limitations.

Senator CORKER. Let me ask you a question. Since well this is obviously creating quite a paradox in U.S. policy. I mean we have areas where we can inspect where we're not exploring. That there are areas, you know, right off our shore that we cannot inspect. Yet we feel semi-confident within our own abilities.

Is this, do you think, shaping policy at all within the Administration to say, hey, look, this is kind of a ridiculous scenario? I mean, we have things happening right off our shore where we cannot inspect. Wouldn't it make sense to go ahead and open up areas that we can inspect and go ahead and make use of, you know, American energy that exists there since we have all those type of inspection mechanisms in place.

Do you think this is helping the Administration maybe evolve on their—on energy policy notions?

Mr. BROMWICH. We're doing that, Senator. As you probably know we're going forward with a lease sale in the Western Gulf of Mexico in December, in the middle of December. We're going forward with a major consolidated lease sale in the Central Gulf of Mexico in May or June of next year. There's going to be a new 5 year plan that will cover the years 2012 to 2017.

So this Administration is in fact, moving forward with a safe and balanced energy production offshore, particularly in the Gulf of Mexico, but also looking at the possibility of the Arctic as well. So I think the Administration is moving forward.

Senator CORKER. Good.

Let me ask you, you know, the Ranking Member mentioned something about the fact that the more we have in the way of resources ourselves involved in exploration, the better we could respond to something that might happen in waters that are nearby. Is that a sensible notion that she laid out? That in fact, the more we're producing and exploring off our own intercontinental shelf, the better we could actually respond to something that's happening in other country's waters.

Mr. BROMWICH. I think Senator Murkowski is absolutely right in stating that. I think we do have huge advantages based on the number of decades that we've been involved in this business of exploring and producing offshore. That doesn't mean that we won't have blind spots as we clearly did prior to Deepwater Horizon.

We didn't have Sub C containment capabilities which Senator Murkowski mentioned in her opening statement. That was a huge gap in our response arsenal. Which unfortunately it took Deepwater Horizon to make everyone in industry and government sit up and say, yeah, we need this. Safe and responsible drilling in deep water can't go forward until we have it.

Senator CORKER. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Let me just remind folks we have a second panel of 3 witnesses. But we'll go ahead with a second round of questions on this panel if members have questions.

Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman. I will try not to use my full 5 minutes.

Just following up on Senator Corker's comments and the statement that I made about developing our own resources to not only assist others but really to build out that source of expertise.

Admiral, are you aware of how many ice breakers the Russians and the Canadians operate within their fleets right now?

Admiral SALERNO. Yes, Senator. I actually have some statistics on that right here.

The Russians have 8 heavy ice breakers, 12 medium ice breakers and 13 light ice breakers.

The Canadians have 2 medium ice breakers and 4 light ice breakers.

Senator MURKOWSKI. Of course the trick question then is how many does the United States have? What is our ice breaking capacity as a Nation?

Admiral SALERNO. We have one operating ice breaker which is a medium ice breaker, the Coast Guard Cutter Healy. We have 2 heavy ice breakers, the Polar Sea and Polar Star.

The Polar Sea is about to be placed in inactive status.

Polar Star is being refurbished. We expect to have her operational in 2013.

Both of those Polars are at the end of their expected service life. They're over 30 years old. So the Polar Star, once refurbished, will probably produce about another 7 to 10 years of service.

That begs the question, you know, what will follow on? That is the subject of ongoing analysis regarding the Coast Guard's needs in the Arctic, the Nation's needs in the Arctic for a permanent presence, particularly given the increase in human activity in that region.

Senator MURKOWSKI. I have suggested many, many times that the current status of our ice breaking capacity as an Arctic Nation just simply is unacceptable. I think that those in the Coast Guard whose responsibility it is to have the oversight of those waters would agree.

Within the studies that are coming up, is the Coast Guard looking at the option then of perhaps leasing ice breakers rather than dealing with the very major budget challenges that we face with funding a new Polar Class ice breaker?

Admiral SALERNO. Yes, Senator, that is a consideration. There is an ongoing independent business case analysis looking at the Coast Guard's needs in the Arctic and how best to perform our missions. So leasing—

Senator MURKOWSKI. I understood—I don't mean to interrupt. But I understood that that business case study was due out on the 15th of October. Do you have any idea when we might expect to see that?

Admiral SALERNO. It's still undergoing review, Senator. I can get back to you on—

Senator MURKOWSKI. OK. I'd appreciate it because we're anxious to see it, as you can imagine. Thank you.

Admiral SALERNO. Yes, Senator.

Senator MURKOWSKI. Mr. Bromwich, on the Arctic side, as you have mentioned, we are underway. Your Department is clearly underway in the process of the review of the Chukchi exploration plan. You committed to starting work on this when the record of

decision was filed on October 3rd. Previous versions of the plan have won your agency's approval.

Where are we in terms of moving this along? What can we anticipate? Will Shell be able to proceed in time for the 2012 exploration season? Where are we with that?

Mr. BROMWICH. We're working hard on it, Senator. As I think you know, we've had many, many contacts with Shell. The President by Executive Order put together an interagency working group to try to make more efficient the permitting process and the review process. It's under the supervision of Deputy—

Senator MURKOWSKI. Can I ask you about that?

Mr. BROMWICH. Sure.

Senator MURKOWSKI. Because I understand that the spill response plan is going to be reviewed separately from the exploration plan. That the feedback is being solicited from this interagency group. So is this actually helping it? The fact that you've got 2 separate tracks could lead one to assume that it might take longer.

Are we on track for both of those plans?

Mr. BROMWICH. I think we're certainly on track to do an effective, focused, efficient review where all of the agencies get to look at the contingency plan, the spill response plan in a timely way. That's really been one of the main focuses of the interagency group. I'm not part of that, but my understanding is that it's proceeding quite well.

Senator MURKOWSKI. Again, I would ask the question whether you believe that it will be completed in time to allow Shell to proceed with the 2012 season.

Mr. BROMWICH. Certainly do everything we can to do the full review so that, if it's approved, they would be able to do that.

Senator MURKOWSKI. Admiral, did you want to chime in there?

Admiral SALERNO. Yes, Senator. We have been in discussions with Shell and with BSEE on the plans. It appears that Shell has been doing its homework as to what is needed there.

As you know the logistical challenges are enormous. Most of what needs to be provided will be sea based. We have provided some feedback to BSEE which has the approval for the offshore spill response plan on some areas we think need to be bolstered. But at this point I do not think they'll be unachievable by Shell.

Senator MURKOWSKI. You believe that they will not be?

Admiral SALERNO. No, I don't think they're unachievable. Two negatives.

Senator MURKOWSKI. OK.

Admiral SALERNO. I think they are achievable.

Senator MURKOWSKI. I thank you.

Admiral SALERNO. Are achievable.

Senator MURKOWSKI. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

I know Senator Manchin has additional questions and maybe Senator Corker does. But Senator Franken has come in. Did you have questions for this first panel?

Senator FRANKEN. I do.

The CHAIRMAN. Please go ahead.

Senator FRANKEN. Thank you, Mr. Chairman.

This is for Vice Admiral. Thank you for your testimony.

The President's Spill Commission report noted that there are a lot of challenges in responding to oil spills in Arctic waters. The waters are so icy so the oil wouldn't break down as quickly. We have fewer bases from which to stage cleanup effort. As the Ranking Member was mentioning, we really lack sufficient ice class vessels capable of responding to a spill.

What changes have the Coast Guard made since the release of the Spill Commission report? Do you think that the Coast Guard is ready to deal? I think you said that it was not unachievable. But what changes have been made?

Admiral SALERNO. Senator, a lot of the response capability will be placed on Shell. They will have the equipment, the vessels, the recovery vessels, on scene to respond to a spill. The Coast Guard will have its obligation to oversee and direct. We've been in discussions with our regional commander in the 17th Coast Guard District as to what capabilities we can provide during the drilling season.

It will be very seasonal. They won't be able to drill year round. So we are looking at buoy tenders which have minimal ice capability to operate in the region during the drilling.

We will rely heavily on Shell for other capabilities such as hangers, refueling for helicopters, aircraft, command and control personnel. The region is very sparse in those capabilities. Even hotel capabilities are very, very limited.

There were, if you compare Deepwater Horizon with the 46,000 responders we would exhaust the hotel capacity on the North Slope with probably just a few hundred. So having people housed at sea would be a major consideration. So we're placing a lot of responsibility on the driller to—the operating company, to provide that capability so that we can exercise our oversight and management responsibilities should something occur.

Senator FRANKEN. In your opinion how did that work in Deepwater Horizon?

Admiral SALERNO. The overall response effort, in my opinion, worked very well. Now that's separate and distinct from how it played out in the media. But the response construct where under our laws the spiller is responsible for mounting an effective response. They did that with the direction of the Federal Government to make sure that they brought all the equipment to bear.

We do not have the equipment in our Federal inventory to mount a response of that magnitude. It is predicated on the industry having that capability and performing to our satisfaction. So overall, sir, I would say it actually worked quite well.

Senator FRANKEN. You thought the response at Deepwater Horizon worked quite well?

Admiral SALERNO. Yes, I did. Now given the fact that there were some obvious gaps at the beginning, we did not have, nobody had, Sub C well containment capability to operate at that depth. This was almost like a moon shot in terms of the technology that had to be developed in the midst of crisis. But that was done. Now we are better prepared for anything of that nature.

Organizationally, yes, the proper elements did come together. Now, was it perfect? No.

One of the key lessons we learned is, you know, although we'd always planned, in conjunction with State officials, we'd learned that we really need to drive that down to the county level and the municipality level. So where there were some chaffing in the response I think that was really the crux of it.

We have now gone back and re-looked at all of our contingency plans around the country to make sure that we are including the local levels, the county levels, in that planning, up front, identifying the sensitive areas, getting their input and making them part of the overall decision process in a natural response.

Senator FRANKEN. But have far fewer resources up in the North Slope than you would in the Gulf.

Admiral SALERNO. That is correct. That is correct.

Senator FRANKEN. So as well as it worked in the Gulf how many barrels of oil were spilled or gallons of oil were spilled in the Gulf from the Deepwater Horizon?

Admiral SALERNO. I don't have that figure at my fingertips, sir. But I can get that for you.

Mr. BROMWICH. It's 4.9 million gallons.

Senator FRANKEN. 4.9 million gallons. But you say that your capability in Alaska is not anywhere near what you had.

Admiral SALERNO. It is not. It's the tyranny of time and distance. Our closest air station is probably 1,200 miles from the location in the Chukchi Sea where the drilling will take place and maybe about 1,500 miles from the location in the Beaufort Sea.

So that's a considerable distance to operate from. We really would need some type of a forward operating location to be effective. Same thing with ships, a ship, and the closest port for a ship to operate from would be Dutch Harbor and that's still a considerable distance from the location.

So time and distance is a significant problem operating in that area.

Senator FRANKEN. OK. Thank you. Thank you, Mr. Chairman.

Mr. BROMWICH. Senator, if I could correct it. I said 4.9 million gallons. It's 4.9 million barrels. My mistake, I apologize.

Senator FRANKEN. Thank you.

The CHAIRMAN. Thank you. In order to stick with our rule of trying to go back and forth, let me see if Senator Corker had any additional questions.

Senator CORKER. Yes, sir. I'll try to be brief.

Mr.—Admiral, if you would? There was a lot of confusion the last time something occurred over the Jones Act and whether it inhibited our ability to respond. Just since we're talking about this issue now, I wondered if you might make any comments regarding that.

Admiral SALERNO. Sir, there was a lot of discussion about that. The reality is it did not affect the ability of any vessel to participate in the response. There were foreign vessels involved.

The Jones Act, as you know, limits movement of cargo, even valueless cargo between U.S. ports by a foreign vessel. That was really not an issue in this response. If there were a need for that there are provisions for waivers.

But there was actually sufficient number of U.S. flag vessels to provide the needed services and there were also, as mentioned,

quite a few foreign flag vessels operating offshore. There was no violation of the Jones Act.

Senator CORKER. OK. Then second and briefly, I have, personally, I have a lot of concerns about the Law of the Sea Treaty which, you know, hasn't become part of the U.S. The U.S. is not a part of that.

But is there anything regarding anything we're discussing today where you would feel most people who do what you do support the treaty. I wonder if there's anything regarding any of the subject matter today where you feel like the Law of the Sea Treaty would be of benefit to you.

Admiral SALERNO. There are provisions in the Law of the Sea Treaty which talk about cooperation between nations in environmental issues. So there is application there, sir.

Senator CORKER. Like what?

Admiral SALERNO. Regarding cooperation on response for oil spills.

Senator CORKER. So like what? I'm not understanding what you're saying. So are you saying between us and Cuba or us and the Bahamas?

Admiral SALERNO. Between any 2 countries if there's provisions. I would have to get the text for you, Senator. It's been quite a while since I've looked at that particular aspect of it.

But response and cooperation between nations for an oil spill that affects both or originates in one that affects another.

Senator CORKER. Again we have a lot of concerns. It's just such a confusing document. But I would appreciate it if you would respond as to how in this particular area there's something that might be of benefit to our country. I thank you both for your testimony.

Admiral SALERNO. Thank you, sir.

The CHAIRMAN. Senator Manchin.

Senator MANCHIN. Thank you, Mr. Chairman.

Knowing firsthand the disasters of an oils spill like we have with the BP in the Gulf and now that you've made very clear, unless it's something—some company such as reputable Repsol, who does work in America. I go back to Cuba. If Cuba's interest is developing their own drilling, which we have no input whatsoever.

With that being said, can either one of you tell me if this Administration is looking at any, lifting any sanctions that might give us a better opportunity to negotiate the oversight and having standards that Cuba would adhere to other than just the reprisal of force? I don't know how you intend to. I'm having a hard time understanding how you intend to have Cuba accept our standards without any retribution on them. They have no stake in this except to explore their own.

Can either one of you tell me if we have anything in place?

Mr. BROMWICH. We can't obviously direct Cuba to impose our standards. So our, really exclusive vehicle, is through the operator.

Senator MANCHIN. No, the question is, is the United States looking at modifying any sanctions that we might have against Cuba in order for a return for them to have to set these standards or adhere to these standards?

Mr. BROMWICH. I'm not aware of any such discussions. The inter-agency group that Admiral Salerno's agency and mine have been involved with—

Senator MANCHIN. So you're totally—

Mr. BROMWICH. Have focused on the specific issues—

Senator MANCHIN. So we are totally depending upon a company that does work in America for you to have a hammer on them to do it right in Cuban waters?

Mr. BROMWICH. That's our leverage, yes.

Senator MANCHIN. Knowing that some exploration will be done by Cuban companies that have no interest in American waters, correct?

Mr. BROMWICH. No. Not Cuban companies. There are other—

Senator MANCHIN. Other countries that do not have any interest in American waters. Is that—

Mr. BROMWICH. It's our understanding that—

Senator MANCHIN. That's fair. That's a fair question.

Mr. BROMWICH. Yes, it is.

Senator MANCHIN. OK. You have no oversight whatsoever. You have no hammer. You have no leverage. Correct?

Mr. BROMWICH. Correct.

Senator MANCHIN. We're at the mercy of the Cuban government to make sure they do it right?

Mr. BROMWICH. They have oversight power. We don't.

Senator MANCHIN. OK. We have no hammer.

Mr. BROMWICH. Correct.

Senator MANCHIN. Any you're telling me you don't know if anyone's talking about using a bargaining of some sanctions or lifting sanctions that might make it better for us environmentally to have input?

Mr. BROMWICH. I don't know whether those conversations are taking place.

Senator MANCHIN. Do you believe that they should? As an official of the government and as the Admiral of the most powerful Department of Defense in the world, what do you believe?

Admiral SALERNO. Sir, we're actually Homeland Security. But sir, I have no—

Senator MANCHIN. You're very powerful.

[Laughter.]

Admiral SALERNO. I have no knowledge of discussions of that nature.

Senator MANCHIN. It's never got to your level. Did you even talked about how you would have more input to protect, environmentally, the American shoreline, the American waters?

Admiral SALERNO. Actually, sir, I think that would—that discussion would take place way above my level.

Mr. BROMWICH. I think there is—we talked, I talked in my prepared testimony in my oral statement about work that we're doing with other countries in the Caribbean including Mexico. So we certainly think and hope that the continuing multi-lateral engagement would have the kind of impact and effect that you're—

Senator MANCHIN. I think the most important thing I've got out of this whole discussion is that basically the only leverage we have

is companies that are doing business in American waters. That's the only leverage we have.

Mr. BROMWICH. That's the direct leverage that we have.

Senator MANCHIN. That's it. But other than that there is—

Mr. BROMWICH. There may also be leverage that we can exercise through our multi-lateral partners like—

Senator MANCHIN. You're going to use economic sanctions, I would assume against other companies that might go on behest of the Cuban government. You're thinking well maybe I can leverage that and go back and make them do it right. But you really have no ties.

If they're not in our waters, we have no oversight or leverage whatsoever. I think that's fair.

Mr. BROMWICH. I think that's fair.

Senator MANCHIN. We've got that. OK.

So we know that we are at a tremendous danger for the environment of the United States coastline and waters unless there's other reasons for someone. If a Communist country, such as Cuba, to have a more vested interest other than just trying to please the American government which they haven't done in the last 50 years.

Mr. BROMWICH. I don't think either of us is denying that there's a risk.

Senator MANCHIN. OK. Thank you, sir.

The CHAIRMAN. Senator Murkowski, do you have anything more?

Senator MURKOWSKI. I do not, Mr. Chairman.

The CHAIRMAN. OK. Why don't we dismiss this panel? Thank you both very much for your excellent testimony. We will go to the second panel.

The second panel is Mr. Jorge Piñon, R. Piñon, who is the Visiting Research Fellow with the Latin American and Caribbean Center at the Cuban Research Institute at Florida International University in Miami.

Mr. Paul A. Schuler, who is President and CEO of the Clean Caribbean and Americas in Fort Lauderdale.

Dr. Mark D. Myers, who is Vice Chancellor for Research at the University of Alaska in Fairbanks.

We thank you all very much for being here. Why don't we use the same general rules with you. We will include any written statement that you have prepared as in full and in the record. But if you could take 5 or 6 minutes each and give us the main points you think we ought to try to understand, that would be very much appreciated.

Mr. Piñon, why don't you start, please?

STATEMENT OF JORGE R. PIÑON, VISITING RESEARCH FELLOW, FLORIDA INTERNATIONAL UNIVERSITY, LATIN AMERICAN AND CARIBBEAN CENTER, CUBAN RESEARCH INSTITUTE, MIAMI, FL

Mr. PIÑON. Thank you, Mr. Chairman and members of the Committee for the privilege and honor to be here today testifying and sharing with you what I consider to be an issue of national security. I'm not only with the University, Florida International University, but I'm also the former President of Amoco Oil Mexico and the President of Amoco Oil Latin America.

It's important that for the United States, Mexico and Cuba, the Gulf of Mexico represents the greatest potential source of significant, new discoveries of oil and natural gas in the years ahead. Underscoring how critical and strategic the region is for the respective energy security interest. These resources will come from increasingly challenging geologic and environmental settings in deep and ultra deep waters, at depths below the sea floor not thought possible a few decades ago.

Development of technology to find and to produce oil and natural gas in these challenging settings has made these resources available. However, as the risks associated with pursuing the development have raised concerns for the environment that challenge industry and regulatory agencies to ensure that they're prepared to manage their development effectively and safely.

There are 4 key elements of success for the development of hydrocarbon resources.

Capital.

Technology.

Operational Knowhow

Last and most important and what I believe is the subject matter of this hearing, Stewardship. Stewardship is the principle by which we operate not only for the economic benefit of the enterprise, but also the commitment to meet human needs while preserving the environment. These are the regulations, standards and behaviors, whose objective is the safe and environmentally responsible development of the resources.

Mexico, Cuba and the Bahamas are in the process of implementing the most advanced and probably up to date drilling regulations and standards. But do they have the resources, capabilities, assets, personnel and experience to enforce them? Can these countries regulatory agencies appropriate police the operators? These are issues for debate.

What are the roles and responsibilities of the oil companies operating in the region relative to safety and oil spill prevention and clean up? Do the operating oil companies who are going to undertake the drilling and physical development of the resources have the values, culture, and economic interests to follow the set rules, standards, regulations of the host country?

Said here is only one, publicly traded, non-state oil company operating in the Gulf of Mexico region outside of the United States. That is Spain's Repsol. All others are State owned National oil companies over whom our sphere of influence is limited or non-existent. I have not heard one single comment about Petronas and Russia's Gazprom, who are going to drill the second well after Repsol. What about them?

Then there is the issue of trans-boundary compensation for oil pollution damages, the role of international oil company liability conventions, the cost of recovery issues when one country is providing most of the incident's spill response and clean-up assets and resources in another country. Just the issue of identifying "responsible party and/or parties" could result in complex legal disputes in international law.

Are the channels of communication in place to share lessons learned and best practices for the benefit and protection of our

common economic and environmental interests? Let's think about prevention. Not only with other regulatory agencies, but most importantly with the private and State oil companies which are going to execute the projects. These are questions that need to be answered.

While respecting each country's sovereignty we must put aside cultural, political and nationalistic differences, not an easy task, and work together toward a set of common standards and regulations, as well as, regional emergency planning and response cooperation agreements.

As a result of the 1979 Pemex Ixtoc well blow-out, which impacted the South Texas coastline, the United States and Mexico signed in 1980 MEXUS Plan, as it was discussed here previously.

A similar environmental agreement exists between the United States and Canada. The 1986 Canada-United States Joint Marine Pollution Contingency Plan covering the shared maritime borders of the Great Lakes, Atlantic/Pacific coast and the Beaufort Sea.

Today the Deepwater Horizon incident and the resulting catastrophic oil spill demonstrates the urgency in developing a similar policy of environmental cooperation between the United States, Mexico, Cuba and the Bahamas, as these countries embark in developing their respective deep water, hydrocarbon resources.

The consequences from an accidental oil spill demands proactive joint planning by all 3 countries and the United States in order to minimize or avoid such a disaster. This planning should be done in the spirit of cooperation and not confrontation.

These risks and challenges are what give purpose to what Dr. Lee Hunt, President of the International Association of Drilling Contractors, calls a "One Gulf" policy of working together for the development of collective standards, regulations and solutions to the risks associated with deep water drilling.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Piñon follows:]

PREPARED STATEMENT OF JORGE R. PIÑON, VISITING RESEARCH FELLOW, FLORIDA INTERNATIONAL UNIVERSITY, LATIN AMERICAN AND CARIBBEAN CENTER, CUBAN RESEARCH INSTITUTE, MIAMI, FL

Thank you Mr. Chairman and members of the committee, for the privilege and honor to be here today testifying and sharing with you what I consider to be an issue of national security.

My name is Jorge Piñon, I am a Visiting Research Fellow with Florida International University, Latin American and Caribbean Center's Cuban Research Institute. I am also the former president of Amoco Oil de Mexico and president of Amoco Oil Latin America.

For the United States, Mexico, and Cuba, the Gulf of Mexico represents the greatest potential source of significant new discoveries of oil and natural gas in the years ahead; underscoring how critical and strategic the region is for their respective energy security interests.

These resources will come from increasingly challenging geologic and environmental settings in deep and ultra-deep water and at depths below the sea floor not thought possible a few decades ago.

The development of technology to find and to produce oil and natural gas in these challenging settings has made these resources available, however as the risks associated with pursuing their development have raised concerns for the environment that challenge industry and regulatory agencies to ensure they are prepared to manage their development effectively and safely. (Groat 2011)

There are four key elements of success for the development of hydrocarbon resources; capital, technology, operational know-how, and last and most important, and what I believe is the subject matter of this hearing, stewardship.

Stewardship is the principle by which we operate not only for the economic benefit of the enterprise, but also the commitment to meet human needs while preserving the environment. These are the regulations, standards, and behaviors whose objective is the safe and environmentally responsible development of the resources.

Mexico, Cuba and The Bahamas are in the process of implementing the most advanced and up to date drilling regulations and standards; but do they have the resources, capabilities, assets, personnel, and experience to enforce them? Can these countries' regulatory agencies appropriately police the operators? These are issues for debate.

What are the roles and responsibilities of the oil companies operating in the region relatively to safety and oil spill prevention and clean up? Do the operating oil companies who are going to undertake the drilling and physical development of the resources have the values, culture, and economic interests to follow the set rules, standards and regulations of the host country?

There is only one, publicly traded, non-state oil company operating in the Gulf of Mexico region outside of the United States and that is Spain's Repsol; all others are state owned national oil companies over whom our sphere of influence is limited or non-existent, and over which the question of sovereign immunity is to be considered.

And then there is the issue of transboundary compensation for oil pollution damages, the role of international oil pollution liability conventions, cost recovery issues when one country is providing most of the incident's spill response and clean-up assets and resources. Just the issue of identifying "responsible party or parties" could result in complex legal disputes in international law.

Are the channels of communication in place to share lessons learned and best practices for the benefit and protection of our common economic and environmental interests? Not only with other regulatory agencies, but most importantly with the private and state oil companies which are going to execute the projects. These are questions that need to be answered.

While respecting each country's sovereignty we must put aside cultural, political, and nationalistic differences—not an easy task—and work together toward a set of common standards and regulations, as well as regional emergency planning and response cooperation agreements.

As a result of the 1979 Pemex Ixtoc well blow-out, which impacted the South Texas coast line, the United States and Mexico signed in 1980 the MEXUS Plan. This agreement of cooperation set protocols to follow in case of an oil spill which would pose a threat to the waters of both countries.

A similar environmental agreement exists between the United States and Canada; the 1986 Canada-United States Joint Marine Pollution Contingency Plan, covering the shared maritime borders along the Great Lakes, Atlantic and Pacific coasts, and the Beaufort Sea.

Today, the Deepwater Horizon incident and the resulting catastrophic oil spill, demonstrates the urgency in developing a similar policy of environmental cooperation between the United States, Mexico, Cuba and The Bahamas; as these countries embark in developing their respective deepwater hydrocarbon resources.

The consequences from an accidental oil spill demands proactive joint planning by all three countries and the United States in order to minimize or avoid such a disaster. This planning should be done in a spirit of cooperation, and not confrontation.

These risks and challenges are what give purpose to what Dr. Lee Hunt, president of the International Association of Drilling Contractors calls a "One Gulf" policy of working together for the development of collective standards, regulations, and solutions to the risks associated with deepwater drilling.

Thank you Mr. Chairman.

[This testimony reflects strictly the personal views of the author and in no way an expression of his views in his official capacity with Florida International University Latin American and Caribbean Center's Cuban Research Institute.]

The CHAIRMAN. Thank you very much.
Mr. Schuler.

**STATEMENT OF PAUL SCHULER, PRESIDENT & CEO, CLEAN
CARIBBEAN & AMERICAS, FORT LAUDERDALE, FL**

Mr. SCHULER. Yes. Good morning, Mr. Chairman and Committee members. My name is Paul Schuler. I am President and CEO of Clean Caribbean and Americas.

CCA is an international oil spill response cooperative with geographic responsibility for the Caribbean basin and the Americas. I've been President of CCA for 20 years following a 14 year U.S. Navy career. I'm here today to discuss how we are planning for oil spill response drilling in Cuba.

CCA covers 37 countries and territories in the hemisphere. We're a non-profit organization that is funded by our 40 oil company members. Our mission is oil spill preparedness and response and over the years membership dues have capitalized a multi-million dollar stockpile of air mobile response equipment. Repsol has been a member of CCA for many years. Petronas, who will be the next company to drill in Cuba, is in the process of completing membership.

CCA operates under an internationally accepted system of response developed decades ago by the U.N. Environment Program and International Maritime Organization. The system is called Tiered Response. Is recognized in the U.S. and is the foundation for preparedness and response around the world.

Accordingly companies involved the petroleum industry are required to have a capability to respond to oil spills that might occur from the entire range of their operations with escalating capability and resources depending on the severity of the incident.

At Tier 1 capability with immediately available response resources for small operational spills should be available onsite.

Tier 2 capability escalates with additional equipment nearby or in cooperation with other companies or government resources.

CCA is a Tier 3 response organization. We have air mobile equipment that can be rapidly mobilized to provide assistance in incidents that exceed local or National capability. We work very closely with other Tier 3 response organizations including Oil Spill Response Limited in the UK and with the Marine Spill Response Corporation in the U.S. MSRC is the world's largest and most capable response cooperative and led the response in the Gulf of Mexico last year for BP.

In the past 20 years CCA has responded to a number of spills in the Caribbean, Latin America and North America. We have been involved in Cuba since 2001 when we first applied and received licenses from the Department of Treasury and Department of Commerce to travel and to export our equipment to Cuba. This was in response to drilling that took place by Repsol and Petronas.

CCA staff, including myself, have traveled to Cuba for contingency planning, training, drills and exercises with these companies. With the new round of drilling coming up we have recently been back to Cuba to work with Repsol and Petronas. CCA is jointly developing Repsol's oil spill contingency plan with our sister cooperative Oil Spill Response Limited in the UK. OSRL also has a large stockpile of air mobile equipment and they have no limitations on sending equipment and personnel to Cuba.

Repsol's contingency plan is being developed and resources are being committed consistent with the international model of tiered response. The drilling rig has Tier 1 equipment onboard to provide initial, rapid response onsite. Seven containers of equipment are en route to Cuba from OSRL to be placed in the shore base at the Port

of Mariel for Tier 2 reinforcement. The contingency plan calls for rapid mobilization of CCA and OSRL for Tier 3 support, if needed.

I'll just divert from the text and say we do not have plans right now for bringing in the U.S. capability. We can discuss that in Q and A.

I do not believe the concern about Cuba is really about small Tier 1 and Tier 2 incidents. It's about the blowout scenario that we experienced last year in the Gulf of Mexico. CCA was intensely involved in that response. Although we provided conventional equipment such as skimmers and containment boom, our primary focus was on aerial application of dispersants flying our spray system in a chartered C-130 Hercules aircraft.

Under the authority of the U.S. Coast Guard as Federal on scene commander, CCA equipment and contractors sprayed almost 400,000 gallons or more than one-third of the dispersant applied by aircraft. We are intensely proud of the role we played. We believe that science supports the judicious use of dispersants to minimize the impact of oil spills.

I have personally been involved in research and published papers on the topic of net environmental benefit analysis of dispersed versus non-dispersed oil in tropical ecosystems. I bring this up because one of the many advantages of the dispersant option is the speed of mobilization and the quantity of spilled oil that can be treated with dispersants. Due to the currents in the Florida straits and the difficulty of conventional recovery operations dispersants will likely play a major role at least in the initial phases of a spill response until other resources can be mobilized.

Spilled oil knows no political boundaries. So what we do in Cuba can very well determine the impact of spilled oil in Florida and the Bahamas. In a deep water blowout scenario in Cuba, CCA will provide the initial Tier 3 response resources from our organic assets.

We can very rapidly mobilize our equipment to integrate with the ongoing Tier 1 and Tier 2 response effort in Cuba. OSRL will simultaneously activate bringing in additional resources. We will provide and sustain the initial response and take measures to combat the spill near its source. However, for an incident on the scale of the Gulf of Mexico spill we would expect the mobilization or cascading of significant other resources as the response further escalates and transitions to the project phase.

I regularly meet with government officials in the Caribbean and Latin America to advise on national contingency planning and especially on establishing mechanisms for rapid and smooth movement of response resources through customs and immigration. Cuba presents a unique challenge. On this coming Thursday, CCA will participate in a table top exercise of the U.S. Coast Guard's International Oil Drilling Response Plan. We will simulate the initial responses I described.

What remains to be seen is how the response escalates beyond our involvement. Nearby in the Gulf of Mexico is perhaps the largest concentration of oil spill capability in the world. Hopefully we'll never need to execute our plan. But if we do we need this capability. I therefore encourage some form of loosening up of the process so more U.S. companies, contractors and resources can be made available, if needed.

Thank you for your attention and the honor and privilege of addressing you.

[The prepared statement of Mr. Schuler follows:]

PREPARED STATEMENT OF PAUL SCHULER, PRESIDENT & CEO, CLEAN CARIBBEAN & AMERICAS, FORT LAUDERDALE, FL

Good morning, Mr. Chairman and Committee members. My name is Paul Schuler and I am President and CEO of Clean Caribbean & Americas (CCA). CCA is an international oil spill response cooperative with a geographic responsibility for the Caribbean basin and the Americas. I have been President of CCA for 20 years, following a 14 year career in the US Navy. I am here today to discuss how we are planning for oil spill response for drilling in Cuba. CCA covers 37 countries and territories in this hemisphere. We are a non-profit organization that is funded by our 40 oil company members. Our mission is Oil Spill Preparedness and Response, and over the years, membership dues have capitalized a multi-million dollar stockpile of air mobile response equipment. Repsol has been a member of CCA for many years, and Petronas, who will be the next company to drill in Cuba, is in the process of completing its membership in CCA.

CCA operates under an internationally accepted system of response developed decades ago by the UN Environment Program and the International Maritime Organization. The system, called "Tiered Response" is recognized in the US and is the foundation of preparedness and response around the world. Accordingly, companies involved in the petroleum industry are required to have the capability to respond to oil spills that might occur from the entire range of their operations, with escalating capability and resources depending on severity of the incident. A Tier 1 capability with immediately available response resources for small, operational spills should be available on site. Tier 2 capability escalates with additional equipment nearby or in cooperation with other companies or government resources. CCA is a Tier 3 response organization, and we have air mobile equipment that can be rapidly mobilized to provide assistance in incidents that exceed local or national capability. We work very closely with other Tier 3 response organizations, including Oil Spill Response Ltd (OSRL), in the UK, and with the Marine Spill Response Corporation (MSRC) in the US. MSRC is the world's largest and most capable response cooperative and lead the response in the Gulf of Mexico last year for BP.

In the past 20 years CCA has responded to a number of spills in the Caribbean, Latin America and North America. We have been involved with Cuba since 2001, when we first applied for and received licenses from the Department of Treasury and Department of Commerce to travel to and export our equipment to Cuba. This was in response to drilling that took place by Repsol and Petrobras. CCA staff, including myself, have traveled to Cuba for Contingency Planning, training, and drills and exercises with these companies. With the new round of drilling coming up, we have recently been back to Cuba to work with Repsol and Petronas. CCA is jointly developing Repsol's Oil Spill Contingency Plan with our sister cooperative, Oil Spill Response Ltd, in the UK. OSRL also has a large stockpile of air mobile equipment, and they have no limitations on sending equipment and personnel to Cuba.

Repsol's contingency plan is being developed and resources are being committed consistent with the international model of Tiered Response. The drilling rig has Tier 1 equipment on board to provide initial rapid response on site. Seven containers of equipment are en route to Cuba from OSRL to be placed in the shore base at the Port of Mariel for Tier 2 reinforcement. The Contingency Response Plan calls for rapid mobilization of both CCA and OSRL for Tier 3 support if needed.

I do not believe the concern about Cuba is really about small Tier 1 or Tier 2 incidents. It is about the blowout scenario that we experienced last year in the Gulf of Mexico. CCA was intensely involved in that response. Although we provided conventional equipment, such as skimmers and containment boom, our primary focus was on aerial application of dispersants flying our spray system in a chartered C-130 Hercules aircraft. Under the authority of the US Coast Guard as Federal On-Scene Commander, CCA equipment and contractors sprayed almost 400,000 gallons, or more than one third of the dispersant applied by aircraft. We are intensely proud of the role we played and believe that science supports the judicious use of dispersants to minimize the impact of oil spills. I have personally been involved in research and published papers on the topic of the Net Environmental Benefit Analysis of Dispersed versus Non-dispersed oil in Tropical Ecosystems. I bring this up because one of many advantages of the dispersant option is the speed of mobilization and quantity of spilled oil that can be treated. Due to the currents in the Florida Straits and difficulty of conventional recovery operations, dispersants will likely

play a major role, at least in the initial phases of a spill response until other resources can be mobilized to the Straits. Spilled oil knows no political boundary, so what we do in Cuba can very well determine the impact of spilled oil in Florida and the Bahamas.

In a deep water blowout scenario in Cuba, CCA will provide the initial Tier 3 response resources from our organic assets. We can very rapidly mobilize our equipment to integrate into the ongoing Tier 1 and Tier 2 response effort in Cuba. OSRL will simultaneously activate bringing in additional resources. We will provide and sustain this initial response and take measures to combat the spill near its source. However, for an incident on the scale of the Gulf of Mexico spill, we would expect the mobilization or "cascading" of significant other response resources as the response further escalates and transitions to the "project phase."

I regularly meet with government officials in the Caribbean and Latin America to advise on National Contingency Planning and especially establishing mechanisms for the rapid and smooth movement of response resources through customs and immigration. Cuba presents a unique challenge. On Thursday, CCA will participate in a tabletop exercise of the US Coast Guard's International Oil Drilling Response Plan. We will simulate our initial response as I described. What remains to be seen is how the response escalates beyond our involvement. Nearby in the Gulf of Mexico is perhaps the largest concentration of oil spill response capability in the world. Hopefully we will never need to execute our plan, but if we do, that capability will be needed.

I therefore encourage some form of loosening up "the process" so more US companies and resources can be made available if needed. Thank you for your attention and the honor and privilege of addressing you.

The CHAIRMAN. Thank you very much.
Dr. Myers, go right ahead.

**STATEMENT OF MARK MYERS, VICE CHANCELLOR FOR
RESEARCH, UNIVERSITY OF ALASKA, FAIRBANKS, AK**

Mr. MYERS. Thank you.

Good morning, Chairman Bingaman, Ranking Member Murkowski and Senator Corker. Today I will limit my comments to the Arctic areas.

Alaska's Outer Continental Shelf adjoins the Canadian Beaufort Sea on the East and on the West the Russian Bering and Chukchi Seas. Response capacity and readiness for oil spills on waters adjoining Alaska's Outer Continental Shelf should be seen in light of the type, probability and potential consequences of spill.

Oil spills in the Arctic could occur from marine shipping accidents such as vessels including fishing boats, cruise ships, bulk carriers, cargo ships or oil tankers.

Oil spills can occur from oil exploration wells, production platforms, loading platforms and oil pipelines.

These different sources all carry different risk profiles and response requirements. Spill risk and ability to respond is also controlled by the geology, geography and ecology of the region.

So talk about marine shipping. It is expected that Arctic shipping will dramatically increase as sea ice decreases. Based on recent historical change and coupled oceanographic and atmospheric models it is predicted the Arctic Ocean will be seasonally ice free by mid century.

This will open up seasonally opportunities for shorter international shipping routes and also create the opportunity to develop increased Arctic tourism, fishing, mining and oil and gas development. With these shipping opportunities will come increased risk of vessel accidents and associated spills. The largest risk to vessels is likely to come from ships that encounter ice conditions beyond the ship's capacity to handle.

In order to escort or respond to vessels in distress both Canada and Russia have significant Arctic capable, ice breaking fleets. The Canadian Coast Guard has a fleet of 7 ice breakers that were built between 1969 and 1987.

Russia has a fleet of 28 ice breakers that were built between 1957 and 2007 including ten that are nuclear powered. In addition Russia intends on constructing 3 new nuclear carriers or nuclear ice breakers by 2020.

In contrast the United States currently has a fleet of one operational ice breaker with a second under repair and a third planned for decommissioning.

In order to prevent shipping accidents, Canada continues to work on its improved Arctic Regulatory Shipping Systems including efforts to better monitor and forecast ice conditions including multi-year ice and pressured ice zones.

Russia has been investing in container ships, oil tankers and commercial ships with ice strengthened hulls that are designed to be used without ice breaker escort.

So I'm looking at oil and gas exploration development in offshore areas adjoining Alaska. I will first look at the Mackenzie Delta region of Canada. To date, 89 exploration wells have drilled in the Canadian Beaufort Sea. No production has occurred.

Although oil was found these wells found significant quantities of natural gas which most likely will not be commercialized without a construction of a natural gas pipeline south of the Mackenzie Valley. These earlier wells were drilled in the shallow waters of the Beaufort Sea inner shelf. Currently there's renewed interest in drilling for oil on the Outer Continental Shelf and the Continental Slope where multiple companies have acquired parcels. Exploration wells drilled in the outer shelf and slope will face some additional challenges to those drilled in shallower water. They are likely to encounter a shorter drilling season due to more severe ice conditions and the use of drill ships rather than bottom founded structures for drilling.

Currently no exploration drilling has occurred on the Russian offshore areas adjoining the U.S. portion of the Chukchi Sea, however offshore production does occur in areas further south near Sakhalin Island and through a large offshore terminal off western Siberia. This terminal is an area where ice cover may exceed or may be at a maximum at about 247 days a year. The terminal is supported by both ice breaker and auxiliary ice breaking tugs.

So if you look at prevention response to exploration spills. The risk from a spill offshore can be dramatically reduced through active preparation. Prevention starts with an in-depth understanding of the geologic conditions to be encountered while drilling. Data collection on shallow hazards such as subsea permafrost, gas hydrates, shallow gas pockets, shallow faults and slope instability, ice scour, and sediment type will help assure the well is properly designed. Proper design should include the use of redundant levels of protection including the best practices in well operations and procedures, logging, casing, cementing and the use of enhanced blow out preventers.

Rapid response should greatly reduce the effects of an oil spill and includes potential to including direct injection of subsea

dispersants and well capping. It also includes the rapid deployment of containment and mechanical cleaning systems, and the ability to use in-situ burning chemical dispersants when appropriate. Finally, equipment should be available to drill a relief well if necessary. In order to improve response, the Canadian Coast Guard has prepositioned supplies in Arctic communities and does some local training. For the Eastern Beaufort Sea, the Canadian producers have formed a nonprofit industry consortium, the Mackenzie Delta Response Corporation.

Some of the challenges associated with responding to Arctic oil spills include the very cold temperatures, sea ice, limited daylight hours, lack of infrastructure, remoteness of the resources and a unique ecosystem. In order to monitor and track the oil spill a suite of sensors from satellites, aircraft, vessels and buoys are necessary. Emerging use of unmanned aerial vehicles and autonomous underwater vehicles will dramatically improve monitoring and tracking of arctic spills because they can stay deployed for longer periods of time and operate under conditions when it is unsafe to use manned systems.

Space and airborne radar systems can locate spills in low light conditions, provided ice cover is not too great. Lidar and electro-optical sensors provide additional capacity. High frequency, portable, coastal radar can be used to measure ocean currents and ice movement.

One of the greatest challenges is locating oil under ice. Both airborne and ground—excuse me, both airborne ground penetrating radar and the use of oil smelling dogs show promise. Poorly understood and in greater need for research is the behavior of oil that is actually under ice. Techniques for removing oil include containment, mechanical cleaning, in-situ burning, bioremediation, chemical dispersants and natural recovery. The effectiveness of these techniques is significantly affected by the percentage of ice cover.

Throughout the Arctic more research is needed in order to develop better predictive models for the movement of sea ice and ocean currents, improve spill trajectory models, increased understanding of behavior and tracking of oil under ice and a better understanding of impacts to the ecosystem. Stronger integration of data streams and system—excuse me, data streams and data sharing will be necessary in order to develop a best operational picture. Finally more large scale field training exercise will be necessary in order to achieve the most efficient operational capacity.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Myers follows:]

PREPARED STATEMENT OF MARK MYERS, VICE CHANCELLOR FOR RESEARCH,
UNIVERSITY OF ALASKA, FAIRBANKS, AK

Alaska's outer continental shelf adjoins the Canadian Beaufort Sea on the east, and on the west the Russian Bering and Chukchi Seas. Response capacity and readiness for oil spills in the waters adjoining Alaska's outer continental shelf should be seen in light of the type, probability and potential consequences of a spill. Oil spills in the Arctic could occur from marine shipping accidents from vessels including fishing boats, cruise ships, bulk carriers, cargo ships, or oil tankers. Oil spills could occur from oil exploration wells, production platforms, loading platforms, and oil pipelines. These different sources all carry different risk profiles and response requirements. Spill risk and ability to respond is also controlled by the geology, geography and the ecology of the location.

MARINE SHIPPING

It is expected that Arctic shipping will dramatically increase as sea ice decreases. Based upon recent historical change and coupled oceanographic and atmospheric models it is predicted that the Arctic Ocean will be seasonally ice free by mid-century. This will open up seasonal opportunities for shorter international shipping routes and also create the opportunity to develop increased Arctic tourism, fishing, mining and oil and gas development. With these shipping opportunities will come increased risk of vessel accidents and associated spills. The largest risk to vessels is likely to come from ships that encounter ice conditions that are beyond the ship's capacity to handle. In order to escort or respond to vessels in distress both Canada and Russia have significant Arctic capable ice breaker fleets. The Canadian Coast Guard has a fleet of 7 icebreakers that were built between 1969 and 1987. Russia has a fleet of 28 icebreakers that were built between 1957 and 2007, including 10 that are nuclear powered. In addition Russia intends on constructing 3 new nuclear icebreakers by 2020. In contrast, the United States currently has a fleet of one operational ice breaker with a second under repair and a third planned for decommissioning. In order to prevent shipping accidents Canada continues to work on improving its Arctic Regulatory Shipping Systems including efforts to better monitor and forecast ice conditions including multi-year ice and pressured ice zones. Russia has been investing in container carriers, oil tankers and commercial ships with ice strengthened hulls that are designed to be used without ice breaker escort.

OIL AND GAS EXPLORATION AND DEVELOPMENT IN OFFSHORE AREAS ADJOINING ALASKA

To date 89 exploration wells have been drilled in the Canadian Beaufort Sea. No production has occurred. Although oil was found, these wells primarily found significant quantities of natural gas which most likely will not be commercialized without the construction of a natural gas pipeline south through the Mackenzie Valley. These earlier wells were drilled in shallow water on the Beaufort inner shelf. Currently there is renewed interest in drilling for oil on the outer shelf and continental slope where multiple companies have acquired parcels. Exploration wells drilled on the outer shelf and slope will face some additional challenges from those drilled in shallower water. They are likely to encounter a shorter drilling season due to more severe ice conditions and the use of drill ships rather than bottom founded structures.

Currently no exploration drilling has occurred in the Russian offshore area adjoining the US portion of the Chukchi Sea, however offshore production does occur further south near Sakhalin Island and through a large offshore terminal off Western Siberia. This terminal is in an area that may be ice covered up to 247 days a year. The terminal is supported by auxiliary an ice breaker and an icebreaker tug.

PREVENTION AND RAPID RESPONSE TO EXPLORATION SPILLS

Risk of a spill from an offshore exploration well can be dramatically reduced through active prevention. Prevention starts with an in-depth understanding of the geologic conditions to be encountered while drilling. Detailed data collection on shallow hazards such as subsea permafrost, gas hydrates, shallow gas pockets, shallow faults, slope instability, ice scour, and sediment type will help assure that the well is properly designed. Proper design should include the use of redundant levels of protection including best practices in well operations and procedures, logging, casing, cementing and use of enhanced blow out preventers.

Rapid response should greatly reduce the effects of a spill and includes potential for direct injection of subsea dispersants and well capping. It also includes the rapid deployment of containment and mechanical cleaning, and the ability to use in-situ burning, and chemical dispersants when appropriate. Finally, equipment should be available to drill a relief well if necessary.

In order to improve response the Canadian Coast Guard has prepositioned supplies in the Arctic at local communities and does some local training. For the Eastern Beaufort Sea the Canadian producers have formed a nonprofit industry consortium, the Mackenzie Delta Response Corporation.

ARCTIC SPECIFIC OIL SPILL ADVANCES IN TECHNOLOGY

Some of the challenges associated with responding to Arctic oil spills include very cold temperatures, sea ice, limited daylight hours, lack of infrastructure, remoteness from resources and the unique ecosystem. In order to monitor and track an oil spill a suite of sensors from satellite, aircraft, vessel and buoys are necessary. Emerging use of unmanned aerial vehicles and autonomous underwater vehicles will dramatically improve monitoring and tracking of arctic spills because they can stay de-

ployed for long periods of time and operate under conditions when it is unsafe to use manned systems. Space and airborne radar systems can locate spills in low light conditions provided the ice cover is not too great. Lidar and electro-optical sensors provide additional capacity. Portable high frequency coastal radar can be used to measure ocean currents and ice movement.

One of the greatest challenges is locating oil under ice. Both airborne ground penetrating radar and the use of oil smelling dogs show promise. Poorly understood and in need of greater research is in the behavior of oil under and within ice.

Techniques for removing oil include containment and mechanical cleaning, in-situ burning, bioremediation, chemical dispersants, and natural recovery. The effectiveness of these various techniques is significantly affected by the percentage of ice cover.

RESEARCH NEEDS

Throughout the Arctic more research is needed in order to develop better predictive models for the movement of sea ice and ocean currents, improved oil spill trajectory models, increased understanding of the behavior and tracking of oil under ice, and better understanding of the impacts to the ecosystem. Stronger integration of data streams and data sharing will be necessary in order to develop the best operational picture. Finally, more large scale field training exercises will be necessary in order to achieve the most efficient operational capacity.

The CHAIRMAN. Alright. Thank you very much. Let me just start with a few questions and then defer to Senator Murkowski.

It seems to me just listening to Mr. Piñon and Mr. Schuler that we sort of have 2 different expectations of possible actions on our part. Mr. Piñon, you talk about, in your view, the urgency, let me quote you exactly. Here you say, "Urgency in developing a similar policy that is similar to the policy we have with Mexico, the MEXUS plan and similar to the policy we have with Canada in 1986." So you're talking about the urgency of developing a similar policy of environmental cooperation between the United States, Mexico, Cuba and the Bahamas as these countries embark on developing their respective deep water, hydrocarbon resources.

So you feel that some kind of formalized effort to come to an agreement among those countries around the Caribbean is important to pursue at this time. Is that accurate?

Mr. Piñon. No question, Mr. Chairman. I mean, sometimes I'm surprised how naïve we are in transnational issues, particular when it comes to oil and gas issues. We need to be sure that we focus on prevention.

So far this conversation has been about assuming that there is going to be a spill. But I haven't seen any focus on prevention. I mean, the technology in which a lot of these companies operate is what's important. Most of that technology is in the U.S.

Mr. Chairman, we continue to focus on Repsol. I am amazed and pardon the expression, how we're bullying that company. I haven't heard any comments, whatsoever, Mr. Chairman, about Bicentenario Uno. Bicentenario Uno, if you can put the Mexican map up please, is a rig that was built in Korea, in South Korea, that is now, has been delivered to Mexico. It's going to be operated by Pemex just 22 miles south of our EEZ on the Mexican side.

Is the U.S. Coast Guard going to respect Bicentenario? We have to cooperate. We have to work together. We cannot continue in this element of confrontation with countries that I just mentioned and that is my sense of urgency.

My sense of urgency is we're all in business together. The environment is all of our concern. So we need to sit down and work, not in a spirit of confrontation, but cooperation.

The CHAIRMAN. Alright.

Mr. Schuler, you talk in your comments at the end of your written testimony about encouraging a loosening up of the process so more companies and more resources can be brought into the response from the U.S. in the event they are needed. Now then, I understand Mr. Piñon is talking about prevention. You're here, your organization is focused more on response and that's a very important distinction. But could you describe a little more, elaborate, on what you mean by how you would like to see a loosening up of the process so that more companies and more resources could be brought into a response from the U.S. if they are needed?

Mr. SCHULER. First of all I'd say there's a lot of emotional issues in South Florida about Cuba as there are here, I'm sure. But at present we write the contingency plan with only the resources we know we can get, not with resources that we would like to have. It's pretty black and white. If you can't assuredly have it, don't put it in the plan.

There are only 3 U.S. companies that have licenses to go to Cuba right now. We are the only company that has a license to export to Cuba. The other 2 can provide management and training services.

So if we're talking about being able to cascade equipment into Cuba, I'm a little bit less sanguine about the process with licensing than we heard before from the Director. We have to renew our licenses either every year or every 2 years. It's a long process and my view is that if we're looking to have U.S. resources go in there, it needs to be handled in advance and put into the plan, not as an ad hoc type of arrangement that we're going to try to do once there is oil spilt—

The CHAIRMAN. Let me just ask you one other question, Mr. Schuler. Would you agree with Mr. Piñon, that we should be initiating an effort to work with Mexico and Cuba and the Bahamas to get a plan for establishing standards and ensuring safe operations in the Gulf?

Mr. SCHULER. Again there is the distinction that I work on the side when prevention fails. Preparedness and response is our area. But yes, I agree 100 percent.

Years ago when we first applied for the license back in 2001, the first time we did it, it was denied. We went back and wrote a little paper and said this is a little bit like cutting off your nose to spite your face. If there's a significant problem in Cuba and we're unable to deal with it in Cuban waters. The obvious follow on is that we'll deal with it in U.S. waters and perhaps in the coast of Florida.

So I think it's in our interest and the interest of preserving our natural resources in Florida, the beaches, the mangroves to coral reefs and further up the coast that we do something to engage with the Cubans so that we can operate there.

The CHAIRMAN. Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman.

Mr. Piñon, I hear the frustration in your voice when you ask why is everybody just focusing on Repsol? The purpose of the hearing was to kind of look at what is happening off Cuba. But it is a reminder to us that we are a global petroleum economy. We need to wake up to the fact that it's happening around us and it's hap-

pening in waters that we share that maritime border. If we don't receive that—if we just kind of close our eyes to it here and say it's not going to happen anywhere else, we're fooling ourselves.

So I think that conversation that we're having here today is important. About what is going on in Mexico, what is happening up North, and as Dr. Myers has pointed out, while the Russians in the high Arctic are not exploring right now they have been down in the South. The Canadians are looking. There is a level of activity that I think is unprecedented.

Again, how we have a level of preparedness that makes sense, I like the idea whether it's the Arctic Council spearheading the oil spill prevention and response or whether it's one Gulf policy as you have mentioned. We've got to recognize that the water touches all of us here. If there is a spill the impact doesn't necessarily stop there at our borders.

You brought up the issue of enforcement of regulations. This is something that I think we saw play out here. You've got folks that are earning a pretty good income out working on the rigs. They're making a heck of a lot more than they were as potentially workers within MMS or within the agencies.

So we didn't have the trained, skilled work force that we needed to enforce on the rigs because people are getting paid well. I understand that the tool pushers on the rig offshore, off Cuba, are going to be paid. They're going to be paid very well.

So the question is whether the Cuban government has the ability to pay competitive wages to those who are issuing the permits, doing the inspection. Is this going to be an issue for us? We're relying on a level of oversight. We heard Director Bromwich speak to that, but how much can we count on from the Cuban government when it comes to enforcement?

Mr. PINON. That is a very good point. It's not the issue of whether the Cuban government can pay the wages that other countries are paying. The issue, Senator, I have worked in countries around the world in which both you and I would be impressed by their environmental regulations that are on the shelf.

But that form of enforcement is a huge gap. A lot of countries and nothing against Cuba or Mexico even for example. They just don't have the experience. They just don't have the years of experience that we have in the United States to enforce those regulations.

So even in Mexico, Comision Nacional de Hidrocarburos was just formed in 2009. They're doing a fantastic job. Most of their personnel are former Pemex employees. So the experience is only for one oil company.

So the issue is, I am sure, that the Bahamas, Cuba, Mexico will eventually have on their regulations the best policies and standards available. But that is not the point. Do they have the resources of the manpower and the experience, like you said, to enforce those regulations? I doubt it.

That's why it's so important then to have operators that are of the caliber of Repsol. Instead of trying to run them off the scene, we need those types of strong companies which are the ones that somehow we're they're going to get the guarantee that those regulations are going to be enforced. Having said that again, not that

Cuba, Mexico and the Bahamas are not going to enforce it, but regrettably they just don't have the experience at it.

Senator MURKOWSKI. How do you see things playing out in Mexico now that their supreme court has opened up the doors, if you will, for foreign companies coming in to produce off their waters? In terms of stepped up activity you had a map there that you reminded us. I think you said 22 miles.

Mr. PIÑON. Right.

Senator MURKOWSKI. From where that rig is and U.S. shores, what do you see happening? Are we seeing a stepped up level of interest?

Mr. PIÑON. Yes. Yes.

Senator MURKOWSKI. From whom?

Mr. PIÑON. Mexico, Pemex. There's only one oil company in Mexico and that is Pemex. They are scheduled to drill 3 prospects next year at about a billion dollar total cost, south of the Perdido Fault or on the Mexican Perdido Fault just south of where Chevron, for example, has tried and where Exxon and Shell are also active.

So they're going to aggressively announce their production is really declining. They're now below 3 million barrels a day. They expect that there's as much as 20 billion barrels of reserves on the Mexican side of the Perdido Fault. So they are aggressively going to move forward in that direction.

I expect that changes will come into the Mexican constitution in the next election period which will be sometime in 2013. But right now hands are tied in Mexico for international oil companies such as Repsol, for example, to take an active participation in their deep water exploration. That's why I think now is the time to engage Pemex, now, which we're doing, by the way. We're doing a very good job at it working with the Mexican authorities.

So Mexico certainly is an area of concern from that point of view because again they're going to be just 22 miles south of our EEZ. We do have the experience of the Ixtoc well explosion and blow out back in 1979.

Senator MURKOWSKI. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. Thank you all for your testimony.

Mr. Piñon, I got in listening to the, our first witness and then talking about Repsol the way that you have. I had no idea that there was a mentality of potentially bullying them. I didn't know that's what we were talking about.

But apparently the State on enterprises then, we have there is no transparency whatsoever. We have no idea what they're doing. It seems to me that that's your concern that the Bureau that we have that is able to deal with Repsol because they are public and they want to do business with us and other entities, we have the ability to talk with them, if you will.

But with the State on enterprise we have none of that. Do they have the same types of industry practices that Repsol has or are they far less sophisticated?

Mr. PIÑON. The international oil companies that are operating in Cuba, Senator, are experienced oil companies that have experience in deep water. Petronas from Malaysia, ONGC from India, even

Sonangol from Mongolia, they have deep water experience. But the issue is that we have not established any—we haven't made any effort even to approach them. We have solely focused on Repsol because it just happens to be the only company that is willing to share as much information as they have shared with us.

By the way, they also have a contractual issue. We're asking of Repsol things like the pressure of the reservoir. That's proprietary information, confidential information that they have with the Cuban government. We have put them in a bind because they have a contractual relationship.

It is just like Pemex will come to us and ask Shell what is the reservoir pressure in your Perdido Fault. That's just like if the Bahamas will come and ask us in the United States from Exxon and Shell and Chevron and others information on their offshore activities. So we have to be very careful with that.

But Petronas from Malaysia is a partner with Russia's Gazprom. ONGC from India, they're an experienced company. But the Scarabeo 9, as soon as Scarabeo 9 finishes with Repsol, she's moving over to another prospect right there by April she'll be drilling a Petronas prospect. We're totally blind when that Scarabeo 9 gets to the Petronas prospect.

Senator CORKER. Is there a reasonable chance if we tried to engage with them and understand what their practices were and what they were doing that they would share those or?

Mr. PIÑON. I will be sure that those companies will be more than happy, even though they don't have assets in the West. May I remind the Senator that the U.S. does have assets in those countries? Chevron, Exxon and Hess have huge assets in Malaysia. Chevron controls one-third of the production of Angola. Their company is going to drill in Cuba.

So there's no question to me, Senator and members of the Committee, that if we establish that relationship with all companies working in these areas, even if they're national oil companies, we can certainly get a positive response from them. But we haven't done it.

Senator CORKER. Why do you think we haven't?

Mr. PIÑON. Because of Cuba. I mean, it's—you said the Miami crowd. I happen to be Cuban American. It's regrettable how the issue of politics gets in the way of safeguarding the economy and the livelihood of the whole State of Florida.

I think that's not acceptable. I am a Cuban American. I am very proud to be a Cuban American. But I'm also an American. I pledge allegiance to the flag of this country. So I have the same feelings that everybody else has, probably, toward Cuba. But I recognize that my primary concern is the livelihood, the economic livelihood, of the State of Florida and its 11 million citizens.

Senator CORKER. Mostly Presidential politics, I might add, not here.

But Mr. Schuler, the—you seem like you were speaking in code about the loosening up. Maybe you're alluding to the same thing that Mr. Piñon is leading—alluding to here. But when you say loosening up is that loosening up by us?

I mean, is it our own limitations that we place on our own entities that put us in a position of not being able to respond appro-

priately if there is a blow out of some kind or is it, or are they policies that Cuba is putting in place?

Mr. SCHULER. No, sir. These are U.S. policies. Again, in order to send equipment and personnel to Cuba you have to have either a Department of Commerce or a Department of Treasury license. There are very few companies who have them.

So right now as we speak today, the U.S., the overwhelming part of the U.S. response industry is not going there. It's not because the Cubans won't accept them it's because it takes licenses to go there. Then you have to go through the entire licensing process which my experience has not been quick.

Senator CORKER. Mr. Chairman, it's interesting. I don't want to wade into the bigger issues that—in this hearing regarding Cuba. But it seems like there are some policies that we have that are sort of cutting your nose off to spite your face that maybe it would be worth looking at.

I thank you for having this hearing. Certainly appreciate the testimony of our witnesses.

The CHAIRMAN. Senator Murkowski, I believe had a few other questions.

Senator MURKOWSKI. Just very quickly. I'll follow up with you, Mr. Schuler, because you kind of dangled this out there.

We have incredible resources and assets standing by just 100 miles away. To recognize that in the event of an incident, a tragedy, a disaster, that could impact our shores that we're kind of in standby mode. You say, you know, from your experience, it takes a while—the licensing and just that whole process.

That doesn't give folks the assurance that I think we would all like. There's nothing more frustrating than knowing that you have the ability to address something, but you've got your policies that are hanging you up from accomplishing that.

Dr. Myers, I wanted to first of all acknowledge the fact that you came a long way on some pretty short notice and appreciate that. You mentioned in your testimony that while Canada and Russia are neighbors in the Arctic, they have not yet really begun to move out in terms of exploration and production activity. But clearly the resource is there.

In your former capacity as head of USGS, you had certainly a hand in assessing what it is that is available in the Arctic offshore. From a geological perspective, from an academic perspective, do you have any doubt that these other Arctic Nations will begin to aggressively bring these offshore resources to market?

Mr. MYERS. Thank you for the question, Senator Murkowski.

Let me start by saying in my testimony I talked about the waters immediately adjoining Alaska in our Arctic waters. There is development and exploration occurring on the Canadian Arctic side in the East side of Hibernia. There is also drilling off Greenland and a significant amount of activity off in the Bering Sea and off the West Siberian shelf. So there are drilling activities currently ongoing in the Arctic, substantial activities and substantial development that has occurred in the Arctic region.

So I was just referring again to that—

Senator MURKOWSKI. Right.

Mr. MYERS [continuing]. Blanket in Canada and then the area adjoining the Alaska Chukchi and Bering Seas.

Again the production operations in the Sakhalin Islands to the South are significant. So those countries are developing the resources.

Again, I want to thank you for the compliments, but on the 2008 CARA study the survey did, that was the work of really good quality science.

Senator MURKOWSKI. Yes.

Mr. MYERS. Really good scientists and I want to commend them for the work they did. That was a ground breaking study. It clearly was the first time we integrated the data and did a strong peer reviewed approach on what the resource potential was in the Circum-Arctic, the entire Circum-Arctic. It did show areas of tremendous high potential, as you know about 22 percent of the world's remaining undiscovered resource base up there.

It highlighted several basins. Those are the basins we're seeing drilling. Greenland, again, West Siberian, Bering Sea area, off shore of Alaska was quickly highlighted because of its high oil potential. The other areas have significant oil resources but a lot of natural gas as well.

So in those areas that were highlighted we've seen the activity increasing. We see strong intent. You see high levels of investment in Arctic technology and capacity that's occurring in major companies like Shell, ConocoPhillips, Stat Oil. We're just starting to see. We're seeing huge investments in Russia for Arctic oil and gas exploration by some of the biggest international partnerships.

It's coming. Clearly the companies have a long term view of the Arctic. The leases in the Mackenzie were very aggressive.

We have seen that area was quiet. It was developed in the 1970s and the late 1970s primarily when they did a bunch of drilling. We're seeing a huge renewal of leasing activity and plans to drill, again in areas where traditionally they found more gas, but they believe there's more oil out there in the Mackenzie as well. I mean, in the further offshore environments, as well as areas almost immediately adjoining the Coast of Alaska.

So we're clearly seeing that interest follow the assessment of the CARA study or the CARA study is mimicking the company's own interpretation of the high perspective areas.

Senator MURKOWSKI. Let me ask you about the technologies. You mentioned the various things that we're utilizing up North, everything from the satellite and radar to the unmanned aerial vehicles and, really, just the changing landscape. With the technologies that are available for us to track, to just be on top of whatever the issue may be whether it is a spill or how we deal with the prevention side which as Mr. Piñon has mentioned, this is where we want to be.

Do we have the expertise to build-out a sufficient amount of response, assets and capacity, the infrastructure that we have there? We're Alaskans. We know. Big State.

There's a lot of space in between our communities and what we heard from the Admiral there is absolutely true. We need a forward operating base. We need a deep water port. We appreciate that as Alaskans in terms of the infrastructure. But do we have the

expertise that we will need to build out some of these technologies that will really help us?

Mr. SCHULER. Lots of questions there. But let me start with the concept of the emerging technology. There are huge advancements in technologies in terms of seismic technology, remote sensing technology, satellite technology, the use of unmanned systems that offer huge potential. That potential is not fully realized yet.

So we're going through the research and development stage. We learned a lot in the Gulf. Of course in the Arctic you have the ice and very different environmental conditions. You have very different geological conditions. So they'd need to be appropriately used where they're available.

In order to combat issues of lack of infrastructure the use of these remote aerial vehicles and remote submarines, very sophisticated radars, fusion of sensors together give you a much better operational picture. Again we're dealing with darkness in the winter so the primary use of optical systems isn't going to work. So we're going to rely more on radar, more on a broad range of other sensors. That is all doable. But we have to operationalize it.

The other thing I would say is incremental steps of development are going to require different solutions. So again the solutions you have to deal with shipping issues, better navigation, better charts, ice breakers, is different than you would to do a Sub C developed pipeline.

So we're in that phase now, the exploration phase in the further offshore and we need to bring these technologies together. But as the Admiral said, the Coast Guard has some capacity, but the primary capacity is with the companies. I'll go with that again, prevention is the No. 1 cure of risks of oil spills. The ability to make sure that you understand the underlying risks whether they be ecological or geological. To make sure that you have a strong culture of safety and you have redundant safety on the rig.

Good regulation to prevent the spill is the first thing.

The second thing is to get to it quickly so the well capping and the containment, the ability for them to move equipment up there quickly helps us immensely in this exploration phase. So that's an assessment of risk.

In the development stage I would expect a different infrastructure to develop. Just like Alaska Clean Seas is over \$50 million of equipment, 160 skimmers sitting there around Prudhoe Bay. There is significant capacity to deal with the existing infrastructure. If you go off far in the offshore, 100 miles offshore, you would expect in a production scenario for additional capacity be added to deal with that. So capacity kind of follows the expected path of development.

We also have to understand that this is where international relationships work well. We have good relations with the Canadians. We can share capacity and remote sensing and satellite and integration of information with them and to a certain extent with the Russians, so international cooperation is an important piece of this in the Arctic.

As you had pointed out before there is significant development in the Arctic. If we don't do it on the U.S. side, it certainly is hap-

pening elsewhere. An oil spill in one part of the Arctic affects the rest of the Arctic.

So again, integration, international efforts, adaptation of this new, developing technology investment in not only in the new sensors, making them small enough to fit on UAVs. The use of remote submarines again, throughout the water column give you a huge advantage that we hadn't previously had. So I'm excited about the technology.

I'm concerned that we're not fast, integrating it fast enough into our operational potential.

Senator MURKOWSKI. I appreciate that answer. Thank you, all of you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Shaheen.

I'm going to have to go back to my office for an appointment. But why don't you go ahead with your questions and then dismiss the hearing at the end of those questions unless Senator Murkowski has additional questions.

Senator MURKOWSKI. I don't think so, but I will listen to Senator Shaheen's.

The CHAIRMAN. OK. Either one of you that still has questions can dismiss the hearing when we're through.

Thank you all very much. I think it's been useful.

Senator SHAHEEN [presiding]. Thank you very much, Mr. Chairman. I appreciate your keeping this panel until I could get here and apologize for being late.

I think I probably want to follow up on what I understand has been a line of questioning from a number of members of the Committee. Because I'm very interested in what you had to say, Dr. Myers about the developing technology and agree with you that that provides the opportunity that we have for, not only further exploration, but for trying to make sure that that exploration is as safe both for humans and for the environment as possible. But recognizing that despite everything we do to try and make sure that exploration is as safe and without problems as possible, I still am concerned about human failure and about how we address oil spills once they happen.

I know that Director Bromwich probably addressed earlier what the Department of the Interior and Secretary Salazar would like to see with respect to the Ocean Energy Safety Institute and how that could help with researching responses to oil spills. But how can we incentivize the private sector to also look at that issue? I know they have an incentive in developing new technologies to help them advance exploration. But how do we also think about encouraging them to look at what happens in case of a disaster?

I would throw it out to any of you to respond.

Mr. MYERS. I'll take the first shot at that, Senator.

You know, I think in some ways we need to really understand that companies have a shorter term profit cycle. They work through an issue. They invest appropriately at a certain level of technology appropriate to their activities.

Again, the company exploring doesn't know if it's going to find a susceptible development. So they're not going to invest fully in

the infrastructure necessary to deal with development until they're in the appropriate development stage.

The government, on the other hand, has a long term interest. If you look at the fiscal interest in oil and gas development and the money that goes to the Federal Treasury, I think there's an opportunity for the government to invest in the research R and D. Some of the mapping and remote sensing pieces provide fundamental underpinning of information, investing in translational technology, for example.

There's a risk with that technology. So again coming from a university environment, I see huge opportunities to exploit the technology and to get it to the point where it can become operational.

The other piece, I think, is you see in the Gulf spill, as a classic example. You've seen it after every large natural disaster in the United States, local community involvement. Getting the folks engaged in the process and making those connections is partly governmental. It's partly industry. It's a connection back to local and State government as well.

So I think one aspect is the linkages of the decisionmaking process together can be much stronger if there is a more integrated process of providing base information publicly.

Companies, as was pointed out, work on a confidential basis. That information or that underlying geology is extremely sensitive and valuable to them.

On the other hand, the regulators need to have that information and be able to share a level of information. We need to know what those Sub C pressures are. So there has to be a vehicle for private/public partnerships of that kind of base information that involves safety, even if it compromises a bit of the confidentiality.

It's a crucial element. It builds public trust. It gets everyone aware. It allows the best technology and approaches to be brought forward. So that information flow, in my opinion, is a big thing that needs to be worked on.

Can we release data, seismic data, after 10 or 15 years of confidentiality for, particularly a shallow section of seismic data, can tell you a lot about the geo-hazards? There's just one example.

Can well data—in the State of Alaska, we released well data after a certain period of time after really it's primarily commercial sensitivity is gone. Providing that data out there to other agencies to the public provides a huge sense of confidence and actually can help develop the kinds of things you're talking about. So I think data freedom, policy integrated information, some baseline government investment help the companies and help their ultimate engagement.

Senator SHAHEEN. Do you think the industry appreciates that that's helpful to them and important to their future?

Mr. MYERS. I think they do on the broad sense. But when it's your project and your specific area, that particular company may resist it. They might love it when it's someone else's project.

So I'll defer that question to you, if I could.

Mr. PINON. Yes. I think the Deepwater Horizon certainly taught a lesson that up front efforts both in the form of technology investment is worth long term. It's very difficult for the private sector sometimes, Senator, to balance profitability and growth.

Senator SHAHEEN. Right.

Mr. PINON. But I think that, again, the Deepwater Horizon incident has taught the industry as a whole. Not that the industry wasn't doing it before, but certainly to go back and focus on the up-front side of prevention and technology because if it doesn't work the costs, not only the monetary costs, but the social costs are huge.

The issue of confidentiality, I think that is an issue that can be resolved as long as it's done in the spirit of cooperation and not confrontation. I think the oil companies would be more than happy to sit down and have this conversation, again, but it has to be done—it has to take place in the spirit of cooperation and not confrontation.

Senator SHAHEEN. Thank you.

Mr. Schuler, would you like to add anything?

Mr. SCHULER. Not very much actually, but just last week in New York the X Prize Foundation announced the winners of a million dollar prize for the company that could develop the best skimmer for offshore operations. There was several months of testing that took place at the research tank up in New Jersey. One company won the million dollars. The second won \$300,000.

But that's kind of a one shot deal. There's always efforts to improve containment boom, improve skimmers and prove dispersants because it's in the marketplace that the best ones are going to be sold. But it's purely a commercial incentive. There isn't, outside of the manufacturers and a few oil companies, there's not a tremendous amount of R and D in this field.

Senator SHAHEEN. Thank you all very much. At this time I will close the hearing.

[Whereupon, at 12:04 p.m. the hearing was adjourned.]

[The following statement was received for the record.]

STATE OF ALASKA,
DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
Juneau, AK, October 18, 2011.

Hon. JEFF BINGAMAN,
Chairman, Energy & Natural Resources Committee, U.S. Senate, 304 Dirksen Senate Building, Washington, DC.

Hon. LISA MURKOWSKI,
Ranking Member, Energy & Natural Resources Committee, U.S. Senate, 304 Dirksen Senate Building, Washington, DC.

Re: Full Committee Hearing to Examine the Status of Response Capability and Readiness for Oil Spills in Foreign Outer Continental Shelf Waters Adjacent to U.S. Waters

DEAR CHAIRMAN BINGAMAN AND RANKING MEMBER MURKOWSKI: I am writing to you on behalf of the State of Alaska to provide our comments to the Senate Committee on Energy and Natural Resources for its hearing on response capability and readiness for oil spills in foreign Outer Continental Shelf (OCS) waters adjacent to United States waters. I serve as the state's commissioner of the Alaska Department of Environmental Conservation, the state agency with primary responsibility for spill prevention, preparedness and response. This testimony was prepared by me in consultation with Mead Treadwell, lieutenant governor of Alaska, liaison to the Arctic Council, and former chair of the U.S. Arctic Research Commission.

My comments are in four parts: a short overview of the State of Alaska's experience in oil spill prevention, preparedness and response; the risks we see from spills related to foreign OCS activities; what actions the state is currently taking to help mitigate those risks, and lastly, specific actions Alaska believes should be taken at a federal level to make OCS oil and gas development and transportation safer for everyone.

ALASKA'S EXPERIENCE

Oil spill prevention, preparedness, and response are not new to the State of Alaska. The state has been among the three leading states in oil production in the U.S. for decades. Although most of this production has occurred from wells on Alaska's North Slope (over 15 billion barrels), there have also been 78 wells drilled in the Arctic Ocean, 33 wells in the Bering Sea and 695 wells in Cook Inlet. If it is successful in getting its remaining federal permits and authorizations, Shell has plans next summer to drill two exploratory wells on the OCS in the Beaufort Sea. It also holds leases on the OCS in the Chukchi Sea and plans for exploratory drilling there too. Other companies with plans to explore the OCS off Alaska's northern shore include Conoco Phillips, ENI and Statoil. These companies are moving back into areas in the U.S. Arctic OCS where drilling has already occurred. The State of Alaska, federal agencies, local governments and industry continue to work hard to make sure oil and gas exploration and development in Alaska are safe.

Oil spill prevention, preparedness and response related to foreign OCS exploration and development is also very important to Alaska. We are bordered on the east by Canada and immediately across the Bering Strait is Russia. Both of these nations currently have OCS exploration and development plans or activities that could lead to an oil spill impacting the waters and shoreline of Alaska. According to a U.S. Geological Survey report, "The extensive Arctic continental shelves may constitute the geographically largest unexplored prospective area for petroleum remaining on Earth" (USGS Fact Sheet 20083049: Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas north of the Arctic Circle). According to the report, an estimated 90 billion barrels of oil, nearly 1,669 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids may remain to be found in the Arctic, 84 percent of it in offshore areas. The report puts one-third of the oil resource in the Circum-Arctic region in Alaska and the Alaska OCS. Given the world demand for energy, and increased accessibility due to less seasonal sea ice, it appears likely exploration and development of these important resources will continue. Thus, it is imperative that federal, state and local governments in Alaska, as well as the international indigenous groups that are permanent participants in the Arctic Council, engage, not only at a state and national, but also at an international level, to minimize the risks of spills and to prepare for responses that may cross national borders.

RISKS FROM SPILLS

There are two primary sources of spills that need to be considered: spills from drilling platforms and other fixed infrastructure, and spills from vessels carrying crude oil, fuel and other hazardous materials.

The worst spills in Alaska over the last 25 years have been from marine accidents. These include accidents in the Aleutian Islands involving non-tank ships on the Great Circle Route between Asia and North America and Alaska's very worst spill, the 1989 Exxon Valdez tanker spill in Prince William Sound. Drilling platforms and other infrastructure, although fixed in location, have the potential in some locations and circumstances for even larger spills, as demonstrated by the Macondo well blowout in the Gulf of Mexico.

Various reports indicate this year's traffic may total 18 Northern Sea Route voyages (which go across the top of Russia and through the Bering Strait). We understand from shippers that traffic carries hazardous cargoes in both directions, i.e., oil or oil products originating in the Russian Arctic find markets in Asia, and aviation fuel in Asia may be returned on the back haul. Ships plying this route are subject to Russian regulation, but there is no contingency planning requirement today that involves U.S. regulatory bodies. (Such a requirement might kick in if a cargo were headed to or from a U.S. port.) At its most narrow point, the Bering Strait is only about 53 miles wide between Russia and Alaska. The wells in Russia that are providing some of these cargoes are much further away and aren't believed to pose a risk to the state.

In Canada, there is potential for oil development in the Eastern Beaufort. A large spill in that area could travel west and impact the northeasterly shores of Alaska. Such a spill could also impact fishes, whales and other marine mammals that are important to Alaska Natives in the region.

Regardless of the source of the spill, oil spill response challenges in the Arctic include:

- Extreme weather—wind, temperature, and fog
- Seasonal darkness
- Seasonal and broken sea ice

- Distances from ports, harbors, air fields, lodging and other infrastructure and services
- Distances to response assets, including vessels and aircraft
- Communications network less developed in far north latitudes

The tactics, equipment, vessels and other resources the United States and Alaska rely on to address the risk of spills must take into account these challenges.

ACTIONS TO MITIGATE OIL SPILL RISKS

Again, the actions the State of Alaska is taking build on many years of experience with spill prevention, preparedness and response. The state is very willing to be a partner at the table with federal agencies and other jurisdictions, learning from their experiences and sharing ours. I will describe how the state is participating with the federal government at an international, regional and national level, then describe some of our efforts at the state and local level, to better address the risk of oil spills.

The State of Alaska was pleased to be invited by the federal agencies to participate in new Arctic Council initiatives related to oil spills. The Arctic Council, a unique organization that includes indigenous groups whose membership straddles our borders with Canada and Russia and includes all of the eight Arctic nations, approved an agreement last May on how the nations will cooperate on search and rescue in the Arctic. At that meeting, the Council also agreed to a 2-year effort to develop an instrument on how the nations can jointly address oil spill preparedness and response. In addition, the Council approved a review of spill prevention measures by its Emergency Prevention, Preparedness, and Response working group. Larry Dietrick, the State of Alaska's Director of Spill Prevention and Response, is currently representing the state in the first set of meetings on these matters in Oslo, Norway.

It is Alaska's hope that through the Arctic Council work, nations will find ways to better share information and resources to address the risk of spills. Ideally, vessels plying this route would have a contingency plan and provide financial support for an oil spill response organization in our region. This could be a method of sharing the cost of ocean-going tugs and other spill response assets in key locations such as the Bering Strait and the Aleutian Islands. It may be appropriate to seek International Maritime Organization (IMO) approval for local precautionary measures. Those precautionary measures may also be authorized under Article 234 of the United Nations Convention on the Law of the Sea. (The U.S. has not yet ratified the Law of the Sea, nor has it determined how it might use the authorities to extend environmental law in traditionally ice-covered areas authorized by Article 234.)

The importance of having an ocean-going tug in the Aleutians was dramatically demonstrated in December 2010 when the M/V Golden Seas, a 738-foot long foreign freighter lost a turbocharger on its only propulsion engine and began drifting north of Adak in heavy seas. The ship was carrying a cargo of rapeseed from Canada to the United Arab Emirates. There was a combined volume of more than 473,000 gallons of fuel oil, diesel fuel and lube oil on board. A break in the weather allowed it to turn away from shore. An ocean-going tug stationed in Dutch Harbor for work with Shell Exploration was able to reach the vessel with an emergency tow line provided by the state, and which had been stored in Dutch Harbor for such an emergency. The vessel was towed nearly 500 miles to Dutch Harbor for repairs. This incident had a good outcome, unlike the grounding of the Selendang Ayu which lost power and eventually broke up on a reef in the Aleutians in December 2004, spilling an estimated 350,000 gallons of bunker oil and diesel fuel.

The state has also been following and commenting on the U.S. Coast Guard led Bering Strait Port Access Route Study. This study looks at navigational hazards, vessel traffic patterns, environmental concerns, aids to navigation and other factors affecting the safety of ship traffic in the area. The state supports this effort and plans to stay engaged as it progresses through discussions among the U.S. federal agencies, joint U.S.-Russia negotiations and then the IMO process.

At a more regional level, the state has participated in tabletop and field spill drills with the U.S. and Canadian Coast Guard and neighboring provinces and states. These drills have looked at spill scenarios in both the Eastern Beaufort and Dixon Entrance area at the Southeast border of Alaska.

The state also actively participates in the Pacific States / British Columbia Oil Spill Task Force. The members of this task force include California, Oregon, Washington, British Columbia, Hawaii and Alaska. The members share information and collaborate on oil spill research. The task force recently completed a review of existing U.S./Canada transboundary oil spill response plans and capabilities for the British Columbia/Alaska and British Columbia/ Washington borders, including rec-

ommendations for improvements. (The report can be found at the task force's website at http://www.oilspilltaskforce.org/docs/notes_reports/Final_US_Canada_Transboundary_Project_Report.pdf.) Although this report focuses on Alaska's southern boundary with Canada, many of the findings and recommendations are also pertinent to looking at spill response along the shared boundary at the northeast corner of Alaska.

The Pacific States / British Columbia task force members have also all signed mutual aid agreements that describe how they will assist each other in responding to a major spill in the region, or back up a state/province that sends resources to another region, such as happened last year in response to the Macondo well incident.

More recently, the State of Alaska has begun working with the Yukon and Northwest Territories in a sub-group of the Arctic Caucus of the Pacific Northwest Economic Region ("PNWER") focusing on identifying and sharing information and resources at the provincial/ state level in the event of a spill. PNWER is a bi-national, public partnership of states, provinces and territories in the Pacific Northwest.

Although Alaska has several venues for collaborating with our Canadian counterparts on spill preparedness and response, there hasn't been the same opportunity to engage with our Russian counterparts. There, we are much more dependent on the U.S. federal government to provide forums for the exchange of information, joint planning and sharing of resources. The state will continue to track with great interest, and participate where we can with the federal agencies, in the work of the Arctic Council and on the Bering Strait Port Access Study. We hope the level of cooperation will grow where we can do more joint planning and even drills with the Russians.

The state has commented on U.S. Coast Guard regulations for non-tank vessels and tracked its use of "Alternative Planning Criteria" where the Coast Guard finds vessels may have initial difficulty in meeting the response planning requirements. Alaska remains concerned that the Alternative Planning Criteria framework applied in remote areas off Alaska does not include sufficient detail and structure to ensure practical, achievable improvement in spill response resources in those remote areas.

Alaska has also partnered with the U.S. Coast Guard on a marine traffic risk assessment for the Aleutians. This study was designed with the help of the Transportation Research Board in the National Academy of Sciences. The study involved a variety of experts and stakeholders. Their Phase I report (<http://www.aleutiansriskassessment.cona/>) containing initial recommendations for the Coast Guard and the state was issued this year.

With the increase in OCS activity and marine transportation, the State of Alaska has also expanded its own planning and spill response preparedness. The federal Oil Pollution Act of 1990 (OPA) requires the U.S. Coast Guard and Environmental Protection Agency (EPA) to create a National Contingency Plan for spill response. There are also requirements for Regional and Area Plans. Working cooperatively, the U.S. Coast Guard, EPA and the state have created a "Unified Plan" for the state that satisfies both OPA and state spill planning requirements for government involvement in spill response. We have also developed ten sub-area regional plans, including for Arctic areas.

The state has been engaged over the last year updating and enhancing the sub-area regional plans for Northern and Northwest Alaska, including a more focused look at: identification of environmentally sensitive areas, geographic response strategies, near shore response plans and tactics, potential places of refuge for stricken vessels, local response agreements and training, spill drills, prepositioning initial response equipment and emergency tow packages.

The state has also put an emphasis on making sure there is alignment and a common understanding of the provisions of these government spill response plans and the spill contingency plans private entities are required to have in place under federal and state law.

A critical need for both search and rescue and spill response is being able to identify and track marine vessels. The 2009 Arctic Marine Shipping Assessment Workshop report noted a Highest Priority Arctic Policy Issue was "Full tracking and monitoring of Arctic commercial ships and mandatory AIS (Automatic Identification System)." Since 2004 most major commercial vessels have been required by international treaty to be equipped with AIS that broadcasts several times a minute the vessel name, type of vessel, flag, dimensions, cargo, course, speed, location and destination. Having this information allows agencies with responsibilities to spot when a vessel may be getting into trouble and what other vessels of opportunity might be in the area and able to respond. The state has been investing in AIS receiving stations along its coastline. It is a challenge to cover all of Alaska's approximately 33,904 miles of coastline (longer than the rest of the entire "lower 48" coastline com-

bined), particularly when some of the stations are in very remote locations without any local source of power.

As Alaska expands its network of AIS receivers, we have also been talking with our neighbors in Canada about the eventual build-out of their systems in the Canadian Arctic and how we might share information to better track commercial marine traffic in the Arctic.

The state of Alaska has also been tracking and partnering on scientific research by industry and other jurisdictions designed to reduce the risk of spills from OCS drilling. Among many other activities, the state is watching with interest the Joint Industry Program on Arctic Oil Spill Response Technology. The state is looking to partner with industry and others through establishment of an Oil Spill Research Center at the University of Alaska in Fairbanks.

WHAT'S MISSING?

The United States needs polar class ice breakers to help maintain our safety, security and competitiveness in the Arctic. As stated by Governor Sean Parnell in his testimony to the U.S. Senate Subcommittee on Homeland Security Appropriations, August 20, 2009:

Melting sea ice and increased military and commercial activity require a greater Coast Guard presence. The Coast Guard needs to move north and improve its capability—our heavy ice-class icebreakers are on their last legs. To provide homeland security the Coast Guard must have new Arctic-class icebreakers equipped for search and rescue missions, border protection, law enforcement, fisheries enforcement, infrastructure and environmental protection.

Prime Minister Vladimir Putin announced on September 23, 2011 that Russia will be building nine new icebreakers to work toward their goal of making the Northern Sea Route as important to commerce as the Suez Canal. No action has been taken by the U.S. Executive Branch for new icebreaker capacity. Alaska's Congressman Don Young introduced legislation that would authorize the Coast Guard to lease and operate two new icebreakers. Senator Mark Begich is a sponsor of the Coast Guard reauthorization legislation that requires the continued operation of at least two polar class icebreakers. It is vital that the U.S. Congress support these efforts.

The federal government needs to support the U.S. Coast Guard in establishing forward bases to respond more quickly to maritime accidents and spills in the Arctic, including the Aleutians.

The U.S. government, if it is going to be a viable player in the Arctic, also needs to ratify the United Nations Convention on the Law of the Sea.

The U.S. government needs to continue to work through the IMO, Arctic Council and other international venues to make sure that the U.S. is a player—not a bystander—in the future of the Arctic.

Alaska looks forward to both the challenges and opportunities in the Arctic, which are not only vitally important to our state, but to our entire nation.

Sincerely,

LARRY HARTIG,
Commissioner.

APPENDIX
RESPONSES TO ADDITIONAL QUESTIONS

RESPONSES OF MICHAEL R. BROMWICH TO QUESTIONS FROM SENATOR BINGAMAN

Question 1. I would like to open this round of questions by asking the both of you—How confident are you that the U.S. is ready to respond to a spill following the tragic events of the Deepwater Horizon?

Answer. BSEE is very confident that our overall preparedness and capability to respond to an undersea drilling well blowout has significantly improved when compared to the capability before the Deepwater Horizon incident. The Deepwater Horizon was a human and environmental tragedy that highlighted a number of weaknesses in our offshore drilling and oil spill response regulatory regimes in place at that time. We have learned from those weaknesses, however, and taken strong steps to reform our regulations and processes. Shortly after the spill, the Bureau of Ocean Energy Management, Regulation, and Enforcement (now split into the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE)) began requiring implementation of new safety measures for offshore drilling activities, including the availability of undersea containment equipment for any well being drilled with a subsea blowout preventer or floating drilling rig. This requirement alone, which clarifies existing regulation-based requirements on operators, will help ensure that we will be far more ready to respond in the event that another subsea blowout occurs. We have also instituted a requirement that all offshore lessees and operators have safety and environmental management systems, and have recently proposed expanding that requirement to provide for an even greater level of safety. In addition, we have improved planning and communication regarding oil spill response with other agencies, including U.S. Coast Guard the Environmental Protection Agency (EPA), and the National Oceanic and Atmospheric Administration (NOAA). We continue to work to improve safety oversight in other areas, such as strengthening our inspections and enforcement program to ensure that we are assessing and focusing adequate resources on the highest-risk operations.

Question 2. In particular, how confident are you that we're ready in the advent that an oil spill occurs in the near future in Cuban waters—that would impact US waters, such as the Florida straights?

Answer. In conjunction with other federal agencies such as the U.S. Coast Guard (USCG) EPA, and NOAA, and to the extent authorized by law, BSEE is seeking to ensure that U.S. national interests, particularly environmental interests in Florida and along the U.S. coastline, are protected from the potential impacts of oil and gas drilling operations in Cuban waters. Repsol YPF Cuba, S.A., (Repsol), a Spanish energy company, is preparing to undertake petroleum exploration activities in Cuban waters. Repsol offered the United States government (USG) access to review certain operations and equipment on the Scarabeo 9, the drilling rig that will be used to conduct these activities. The USG accepted Repsol's offer to allow U.S. government officials, including BSEE and USCG inspectors, to review certain equipment and documentation onboard the rig while it was offshore Trinidad and Tobago. These observations and reviews have provided information for USG officials concerning Repsol's adherence to its voluntary commitment to conform to all U.S. offshore drilling safety standards, including those implemented after the Deepwater Horizon incident. However, we do not have enforcement authority over the rig or Repsol's activities in Cuban waters, nor were we able to do a number of inspection activities that BSEE or the USCG would typically perform in U.S waters once a rig is at the drilling site. BSEE is aware that the USCG is updating its contingency plans to ensure its readiness to respond to oil spills in Cuban waters that may affect U.S waters and coastline. Questions about USCG activities in that regard should be directed to the USCG.

CUBA LICENSING

Question 3. You mention that Treasury has been issuing licenses in the last decade for spill response and is considering new licenses for spill response. Should equipment, such as capping stacks and other well containment that is manufactured in the US, be needed—in the advent of an oil spill—do you think Treasury will grant licenses for this equipment and its supporting personnel knowing that U.S. natural resources, environmental and human health and safety could be adversely affected?

Answer. All U.S. efforts are designed to protect U.S. interests. BSEE works closely with other government agencies including the Department of Commerce and the Department of the Treasury in the context of fulfilling the Bureau's missions.

The Department of Commerce advises BSEE that, consistent with U.S. foreign policy and national security concerns, the Department of Commerce's Bureau of Industry and Security (BIS) has licensed temporary exports of post-incident oil spill containment and cleanup items for use by U.S. companies while in Cuban waters since 2001.

The Department of the Treasury advises BSEE that Treasury's Office of Foreign Assets Control (OFAC) has licensed U.S. entities to prepare for and to operate in the event of an oil spill.

We defer to the Department of Commerce and the Department of the Treasury to provide any additional details.

BAHAMAS

Question 4. You seem to have had some great success in working with Mexico and Repsol, in terms of getting them to comply with accepted U.S. regulatory standards. Have you begun to work with the Bahamian government at all to assist them in developing regulations for any offshore exploration that may occur going forward?

Answer. We participated in a multilateral regional technical meeting titled "Regional OPRC [Oil Pollution Preparedness, Response, and Cooperation] Seminar to Focus on Developing National Plans for Marine Pollution Preparedness and Response Related to Offshore Units and Regional Cooperation," on December 7-9, 2011, in the Bahamas. Participating countries were the Bahamas, Cuba, Jamaica, Mexico, and the United States. The meeting was a planning seminar focused on improving spill prevention and well control, preparedness and response to a major oil spill from an offshore drilling operation that may impact the waters and coastlines of multiple nations in the northern Caribbean. It was a useful starting point for coordination among Caribbean nations, and we plan to have follow-up meetings to further examine issues and carry out strategies.

ARCTIC

Question 5. It seems that BSEE is quite active in the area of spill prevention and intervention for arctic areas and that a great deal of efforts are being expended to gain a better understanding of how best to approach this issue. Do you feel that we are currently ready to respond to an oil spill of any magnitude that could happen in arctic waters, on ice or under ice—in or around Alaska? How do you think we compare, in terms of our experience and readiness, with our arctic neighbors—Canada and Russia?

Answer. BSEE's regulatory responsibility for spill prevention includes oil spill response plan review and approval, drilling permit review and approval, and a safety and environmental inspection program. Facilities engaged in the development, exploration and production of offshore energy resources are required to submit detailed spill-response and prevention plans for BSEE approval prior to commencing operations. Spill response plans must specifically designate a spill management team available on a 24-hour basis as well as an oil spill response organization (OSROs) capable of responding to prospective spills from that specific facility in accordance with the Oil Pollution and Clean Water Acts. BSEE engages in a rigorous review and approval process to ensure that adequate spill response and prevention measures are in place and that the operator has the capability to respond to a worst-case scenario oil spill. Facilities operating in the Arctic must demonstrate the capability to respond to spills in these scenarios without the assistance of the USCG or the State of Alaska.

The Administration is proposing a priority action through the National Ocean Policy Implementation Plan to address development and implementation of response coordination, procedures, and decision support systems. BSEE, in collaboration with federal partners in NOAA and USCG are also studying the effects of oil in, on and under the ice with international partners. BSEE is committed to developing and as-

sessing new technology and techniques for oil spill prevention and response in ice-covered waters through our Technology Assessment & Research (TAR) Program, which has provided funds and resources for research concerning Arctic spill prevention, preparedness and response for decades.

Many nations, including Norway and Canada, have collaborated with the TAR Program and use our OHMSETT spill tank facilities in New Jersey for testing response measures in ice conditions with real oil. Canada and Norway are members of the International Regulators Forum in which safety, operational practices, and investigations of offshore incidents are shared among national regulators to foster a coordinated approach to prevention and preparedness.

BSEE is also a leader in the work of the Arctic Council on spill prevention, preparedness and response, including development of the Arctic Offshore Oil and Gas Guidelines and Guidelines for In-Situ Burning, an Arctic-wide instrument for emergency preparedness and response, and other projects. The U.S. and Canada have been sharing research in spill response in the U.S.-Canada Northern Oil and Gas Research Forum. Results of these studies, assessments, programs, as well as our experience in offshore Arctic operations, are valuable to Arctic nations. Based on our participation in the Arctic Council and communications with other northern nations, we believe that our readiness for oil spills is equal to or greater than Canada's and Russia's.

RESPONSES OF MICHAEL R. BROMWICH TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Prior versions of the Chukchi exploration plan had won your agency's approval and the only changes to it have been, indisputably, improvements such as including additional spill prevention, containment, and response measures. Specifically, what legal and administrative obstacles may remain before the approval of this EP?

Answer. The approval of exploration plans (EPs), in the Chukchi or anywhere else on the U.S. Outer Continental Shelf (OCS), is not under BSEE's purview. All EP reviews and decisions are performed by the Bureau of Ocean Energy Management (BOEM). We coordinate closely with BOEM during its EP review to ensure that required information is submitted and understood by both bureaus. Subsequent to BOEM approval of an EP, BSEE would consider any applications for permits to drill in accordance with any BOEM-approved EP.

BOEM granted conditional approval of Shell Gulf of Mexico, Inc.'s Exploration Plan under leases in the Chukchi Sea Planning Area on December 16, 2011. BOEM is best able to provide additional information concerning review and approval of exploration plans in the Chukchi Sea.

Question 2. You have stated before that the failure to provide final answers on administrative decisions is the worst possible result from an agency. Is your current process consistent with delivering an answer in time for the decisions which the Chukchi applicant must make with regard to contracting for the 2012 exploratory season?

Answer. The mission of the Bureau of Safety and Environmental Enforcement (BSEE) is to ensure that exploration, development and production of offshore energy resources take place in a manner that is protective of human health and the environment. Although BSEE is committed to conducting the most efficient reviews possible, reviews of oil spill response plans or applications for permit to drill must take place in a manner such that agency decision-making is fully informed by all relevant materials regardless of any particular applicant's internal timelines. We are on schedule to complete a thorough review of Shell's Oil Discharge Prevention and Contingency Plan (ODPCP) for the Chukchi Sea, with comments informed by the participation of other federal agencies through the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska, well before the start of the 2012 exploratory season in Alaska. The timelines for agency review are dependent on Shell providing information and correcting any potential shortcomings in its plans or applications. BOEM conditionally approved Shell's Chukchi Sea Exploration Plan on December 16, 2011, and we are confident that BSEE's internal processes will not be the source of any undue delays in the review of the ODPCP or future Applications for Permits to Drill.

Question 3. It is my understanding that the Administration will be reviewing the Alaska spill response plan separately from the exploration plan; specifically that Deputy Secretary Hayes is evaluating this element of the plan with the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska. Although your testimony indicated your absence from the Interagency Working Group, both BOEM and BSEE have or will have responsibilities associated with the plan. What is the timeline on evaluating the spill response plan?

Answer. The review of the ODPCP is proceeding separately from the review of the exploration plan (EP) because the two reviews are conducted, under our regulations, by two separate bureaus. The separation of these functions is part of our reorganization intended to put safety regulation in different hands from planning and leasing for oil and gas development offshore. BOEM is responsible for review of the EP, and BSEE is responsible for the review of the ODPCP. As part of our review of Shell's Arctic ODPCPs, BSEE has been closely engaged with the Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska, established by the President in E.O. 13580, and BSEE staff has participated in comprehensive dialogue with technical experts from Shell, the USCG, the Environmental Protection Agency, and the National Oceanic and Atmospheric Administration. The interagency process has been extremely helpful for highlighting concerns from other agencies long before they would normally be addressed. Working through those concerns is helping to inform our review and should allow Shell to more fully address our comments on their ODPCPs in a more timely manner. Shell was provided a detailed notification of certain modifications that we believe are necessary to incorporate into their Chukchi ODPCP. Shell's response to that notification was received and will be incorporated into our review of their Chukchi ODPCP.

Question 4. In light of the Interagency Working Group's apparent control over part of the decision on the Arctic, as well as action and inaction of other agencies with the power to slow or halt OCS exploration, are you comfortable that DOT's ultimate statutory authority over the OCS is preserved?

Answer. The Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska has no control over any decisions to be made in the Arctic by BSEE. The purpose of the Interagency Working Group is to ensure effective coordination among all relevant agencies with respect to decisions about Arctic resource development. With respect to the ODPCP, this involves soliciting information and feedback from other agencies to help inform BSEE's review. It has performed this role admirably. With respect to other agencies that also have legal authority over activities on the OCS, we continue to work with those agencies exercising their respective statutory authorities, which do not negatively affect the Department of the Interior's ability to successfully fulfill its missions in any way.

Question 5. Your agency has asserted that contractors in the OCS will be subject to the same direct regulation by DOI as the operators—notwithstanding the previous practice of regulating the operator as the lead entity in charge of an operation. Because this authority is newly found or, at a minimum, newly exercised, the Committee has an immediate interest in understanding specifically how the OCSLA, a statute under our jurisdiction, is being interpreted and implemented at the agency level. In the interests of oversight, better understanding, and transparency, will you include those specific memoranda on legal rationale for this authority with your responses to these questions?

Answer. BSEE's legal authority over contractors who violate the provisions of the Outer Continental Shelf Lands Act (OCSLA), is based in part on subsection 24(b)(1), which states in part: "[I]f any person fails to comply with any provision of the Act, or any term of a lease, or permit issued pursuant this Act, or any regulation or order under this Act, after notice of such failure and expiration of any reasonable? period allowed for corrective action, such person shall be liable for a civil penalty . . ." Consistent with the Act, BSEE's implementing regulations also extend responsibility for OCSLA compliance to co-lessees, operators, and those persons actually performing OCS covered activities. (See, 30 C.F.R. §250.146.) BSEE's civil penalty regulation also defines a "violator" as a person responsible for a violation of the Act. (See; 30 C.F.R. §250.1402.) In addition, in subsection 24(c) Congress authorized assessment of criminal penalties against "any person" who "knowingly and willfully" violates OCSLA, regulations issued under the authority of the OCSLA, and leases, licenses, or permits issued pursuant to the OCSLA. Congress's utilization of the term "any person" in OCSLA provides BSEE with clear statutory authority over non-leaseholders and non-operators.

RESPONSES OF JORGE R. PIÑON TO QUESTIONS FROM SENATOR BINGAMAN

Question 1. Do you feel that the channels of communication that you referenced in your testimony are in place to share best oilfield exploration practices, as well as spill prevention, preparedness and response practices, between ourselves and our neighbors in the Gulf—Mexico, Cuba, and the Bahamas?

Answer. Not with Cuba and The Bahamas. The only "communication" with Cuba is through Repsol, one of the six international oil companies holding oil and gas exploratory concessions in that country and with the Houston based International As-

sociation of Drilling Contractors. To my knowledge no formal conversations have been held by either the USCG, Department of State and or Department of Interior's BSEE with Malaysia's PETRONAS, Russia's Gazprom, India's ONGC, Angola's Sonangol, Vietnam's Petrovietnam and or Venezuela's PDVSA. I am also not aware of formal conversations with The Bahamas Petroleum Company Plc., the only licensed operator in The Bahamas.

Most importantly no conversations have been held with Cuba's oil and gas regulatory agency Oficina de Regulacion Ambiental y Seguridad Nuclear and The Bahamas Ministry of the Environment. The United States does have channels of communication with Mexico's national oil company Pemex and Mexico's regulatory agency Comision Nacional de Hidrocarburos.

Question 2. How do you think that we, the U.S. government, can work to best help our Gulf neighbors in spill prevention and response planning?

Answer. Create a public or private (non-political academic center of excellence or professional trade organization such as the International Association of Drilling Contractors) umbrella organization under which deepwater hydrocarbon development lessons and best practices can be shared.

For Cuba's national oil company CUPET to become a member of the Houston based International Association of Drilling Contractors. . . they would have to apply for an OFAC license! And face a number of; 1917 Trading with the Enemy Act, State Sponsors of Terrorism, The Cuban Democracy Act, and The Cuban Liberty and Democratic Solidarity Act filters. In my opinion this is not the way to share best practices.

Question 3. Perhaps more importantly, is there anything that we can or should do to help less experienced offshore oil regulators in other countries to develop the experience that is needed to be an effective regulator?

Answer. See below.

Question 4. Do the Mexican, Cuban and Bahamian governments have the resources, capabilities and experienced personnel required to create and enforce the most advanced and timely drilling regulations and standards?

Answer. Certainly not Cuba and or The Bahamas. I am sure they have qualified professionals in their field of academic study but understandably lack experience in enforcing regulations in the technically complex environment of deepwater drilling for oil and gas. That is why it is so important to have experienced operators and sub-contractors, along with equipment and service providers that have hands-on international experience of operating under a multitude of geological and environmental complex scenarios.

But it is not only an issue of physical resources but most important. . . behaviors.

The challenge for Mexico's regulatory agency CNH is independence. Mexico's oil and gas sector has been a monopoly for over seventy (70) years! Most of the experience of CNH's staff comes from working with Pemex. Would the Senator support a situation under which most of BSEE's staff were former Exxon employees?

Emerging countries regulatory agencies also face the challenge of ethical conduct and or dishonest and illegal practices which undermines the independency of the agency in enforcing regulations and standards.

Question 5. Can each of these countries' regulatory agencies effectively regulate the operators working in our shared waters?

Answer. Regrettably, not today. Maybe in the future as they gain industry and sector experience.

RESPONSES OF JORGE R. PIÑON TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Your testimony indicates that the Gulf of Mexico represents a great opportunity for Cuba to develop resources and bolster its economy. Let's presume for the sake of discussion that Cuba's drilling program this year results in a safe, commercial discovery. What kind of pace or timeline would you envision for additional leasing, exploration, and development? When might we see first oil?

Answer. Limited production within three (3) years and a maximum net working interest of approximately 131,000 barrels per day within seven to ten (7-10) years assuming that 5 billion barrels of crude oil reserves are determined to be proven in the "North Cuba Basin". Note; Cuba's current oil demand, under its centralized economic model, is 147,000 barrels per day.

In Cuba's Production Sharing Agreement, Cupet awards the rights to a third party contractor to explore and produce hydrocarbons within a specific geographical area at its own risk. The contractor is responsible for supplying all capital, equipment, installations, technology and personnel needed to carry out the operations as outlined in the contract.

PSAs are generally divided into exploration and production periods, each with its own set of performance requirements. If no exploratory work is conducted within the specified exploration period, typically 3-7 years, or insufficient quantities of crude oil and/or natural gas are found and the reservoir is declared un-commercial the concession can be surrendered with the contractor unable to recover any of its capital investments.

If the reservoir is considered commercially viable, then the first oil extracted from the concession is allocated to the contractor to recover its capital investment and other exploration costs—cost oil—, with a limit on what percentage of production can be allocated as cost oil.

Once costs have been recovered the remaining oil—profit oil—is divided between Cupet and the contractor in agreed proportions (60% / 40%) as outlined in the PSA. Exploration and production terms are typically 25-30 years in duration.

Taxes generally paid by the contractor are 25% on personnel salaries and 30% on net profits. The contractor is also allowed to dispose of its share of production by exporting it—in kind—or selling it to Cupet at an agreed to price formula.

Question 2. Can you provide any estimate as to the level of oil production Mexico might achieve in out years, now that some foreign participation will be allowed in its development?

Answer. Mexico's oil and gas future has not received the attention and concern that it deserves as to the socio-economic impact that it could have in the United States-Mexico relations.

Mexico's crude oil production has fallen below the 3 million barrels per day threshold for the first time since 1990 from a high production level of 3.8 million barrels per day in 2004. Oil production and Pemex represent 14% of total export revenues and 32% of total government revenues.

Pemex does not have any deepwater experience. Its current production area of Campeche is not considered deepwater. . . Pemex is about to drill next year Maximo its first Gulf of Mexico ultra deepwater prospect at over 9,500 feet of water depth. . . yes, 9,500 feet of water depth, just 22 miles south of the US-Mexico EEZ. . . And we are worry about Cuba and Repsol??

That is why we recently witnessed an unfriendly attempt by Pemex to take shareholder's control of a well experienced Gulf of Mexico deepwater operator. . . hold and behold. . . REPSOL!!

DOE's EIA assessment.

Mexico, liquids production sinks to approximately 1.4 million barrels per day in 2025 before rebounding slowly to 1.7 million barrels per day in 2035, still 1.5 million barrels per day below the 2008 production volume of 3.2 million barrels per day. The rebound after 2025 depends entirely on the development of potential resources in the deepwater Gulf of Mexico, which must begin some years in advance of any increase in production levels. The outlook for Mexico's liquids production is markedly different from the IEO projection just 5 years ago, in which production did not fall below 2.9 million barrels per day, and a long-term recovery began in 2013. The difference between the projections is the result of production declines at Cantarell, which have been more severe than expected, as well as diminished expectations for Chicontepec production and more pessimistic assumptions about the level of future investment, both foreign and domestic, in Mexico's deepwater production.

Although the shortage of investment in Mexico is expected to lead to a mid-term decline, Mexico has potential resources to support a long-term recovery in total production, primarily in the Gulf of Mexico. The extent and timing of a recovery will depend in part on the level of economic access granted to foreign investors and operators. Mexico's national oil company, Petroleos Mexicanos (PEMEX), currently does not have the technical capability or financial means to develop potential deepwater projects in the Gulf of Mexico.

RESPONSES OF MARK MYERS TO QUESTIONS FROM SENATOR BINGAMAN

ICEBREAKERS AND COOPERATION

Question 1. You mentioned the issue of icebreakers in your testimony. Icebreakers seem to be very important in spill response and prevention—while the US has only two icebreakers (with a third to be decommissioned); the fleet of the Canadian icebreakers seems more than adequate to assist us should we need assistance. Do you

know if there are any agreements in place whereby the Canadians will assist us should we need to borrow an icebreaker under emergency conditions?

Answer. I know of no pre-arranged agreements between the United States Coast Guard (USCG) and the Canadian Coast Guard (CCG) for icebreaker support for the purpose of emergency oil spill response. Even if there were such a formal agreement for ice-breaker assistance, the Canadian fleet of icebreakers, consisting of two medium and five lighter class icebreakers, is spread over a wide area of Canadian Arctic waters so their ability to effectively respond to a spill in US arctic waters would be rather limited and probably not very timely. First response would likely come from an industry-owned or chartered commercial icebreaker or the USCG Healy.

There has been good cooperation between the CCG and the USCG for the joint use of icebreakers for scientific research in the Arctic Ocean. For example 2008-2011 there has been coordinated use of the USCG Icebreaker Healy and the CCG Icebreaker Louis S. St-Laurent for mapping of the extended continental shelf off the US and Canadian portions of the Arctic Ocean.

ARCTIC EXPERIENCE

Question 2. In areas where ice cover remains throughout the majority of the year, how is it possible to complete a well in a drilling season? Are our Canadian and Russian neighbors better prepared to prevent and respond to oil spills? Or do we all have the same level of experience and knowledge of the Arctic and the complexities that are involved with arctic offshore oil drilling and development?

Answer. The ability to drill in areas where ice cover remains throughout the majority of the year is dependent upon the water depth and drilling technology employed. Where water depth is shallow (generally less than 100 feet), bottom-founded structures or man-made islands can potentially be used for year-round drilling. In very near shore areas, wells can be directionally drilled continuously off shore from causeways or onshore drill pads. However, in offshore areas where ice cover remains throughout most of the year and where water depths are deeper than 100 feet, completion of wells normally requires multiple drilling seasons. Drill ships or offshore drill rigs are brought in during the ice free season and the well is partially drilled, cased, temporarily plugged and abandoned. The rig is then transported off site. The following summer the rig returns, reenters and completes the well.

In the United States significant investment has been made through industry partnerships for oil spill response for currently producing facilities in the near shore waters of the Beaufort Sea. Because no production is occurring in the Canadian Beaufort Sea, the Canadian companies have more limited spill response capacity which is directed toward exploration drilling and shipping rather than near-shore production as in offshore Alaska. Because the Canadian and Russian governments have larger icebreaker fleets these governments are potentially better capable at responding to a ship-based spill along the northern sea routes when ice cover is an issue. It should be noted that independent of the US government capacity, Shell Oil has developed its own icebreaker to be used in support of its proposed exploration drilling operations in the Beaufort and Chukchi Seas.

Similar drilling technology is generally available in all arctic nations where oil and gas exploration development is occurring which could indicate similar oil spill prevention capacity. However, safety practices and the capacity and practices of individual companies along with regulatory requirements and enforcement practices vary from country to country. With respect to overall scientific knowledge of the complex nature of the arctic ecosystem, I believe that the United States has marginally greater knowledge.

ARCTIC ENERGY COUNCIL

Question 3. Can you elaborate a little bit on the role of the Arctic Energy Council in offshore oil development in arctic areas?

Answer. Established in 1996, the Arctic Council is an intergovernmental forum to promote cooperation, coordination and interaction among arctic states. Member states include Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russian Federation, Sweden, and the United States. The Arctic Council focuses on issues of sustainable development (including oil and gas) and the environmental protection of the Arctic.

Since 2008, the Arctic Council through its Emergency Prevention, Preparedness and Response Working Group has been synthesising knowledge and developing expertise on the behavior of oil in arctic waters and promoting the development and use of technologies and methods that improve oil spill response. On May 12, 2011, the Arctic Council began negotiations toward an international instrument on arctic marine oil spill preparedness and response.

DISPERSANTS

Question 4. How do dispersants behave in arctic areas? Do we know if it is the same as warmer areas, like the Gulf of Mexico? What is the state of the science for dispersants in cold water areas?

Answer. In two series of tests funded by the Minerals Management Service, commercially available chemical dispersants were tested in cold water conditions on North Slope crude oil samples. These tests were conducted in the wave tank at the National Oil Spill Response Test Facility and found that the dispersants were effective in dispersing both fresh and weathered samples in energetic wave conditions. The results of these tests were published in the Marine Pollution Bulletin 58 (2009) p. 118-128. Less is understood about the effectiveness of chemical dispersants in less energetic arctic environments such as oil that is trapped under ice.

Funded by the Joint Industry Research Program, toxicology tests have been performed on sample arctic marine species. Petroleum and chemical dispersant exposures on copepods, fish and krill indicate that they react with similar or higher resilience than temperate species. Additionally, chemical dispersants in oiled arctic seawater appear to enhance the completeness of degradation of measured components in oil over petroleum not exposed to dispersants.

Recent testing and research has significantly enhanced the state of knowledge of the effectiveness of commercially available dispersants in arctic environments and species, particularly with respect to open water and higher energy environments. However, much less is understood about how dispersants will function in environments where significant sea ice is present. Additionally, more research is needed in order to understand issues such as how dispersed oil and associated microbial activity will affect oxygen levels in under ice environments. Information gathered from the recent large scale use of dispersants in the Gulf of Mexico should be used to better focus comparative research in arctic waters.

CHALLENGES

Question 5. What do you think the real challenges are for oil drilling and development in the Arctic? Do you feel that our neighbors are adequately prepared to prevent and respond to an oil spill on or under arctic ice or in open waters in arctic areas?

Answer. I believe that the greatest challenge for oil drilling and development anywhere is the prevention of a spill by fully assessing risk, employing the best and most appropriate technology, practicing a culture of safety first in all operations, and preventing situations where a single point of failure will cause a spill. If prevention fails, the more rapid the spill is contained, the more effective the response. Prepositioning effective well capping equipment is an example of a newly tested technology that could dramatically improve the oil industry's ability to respond to a spill in offshore wells.

Some of the additional challenges associated with responding to an arctic oil spill include very cold temperatures, sea ice, limited daylight hours, lack of infrastructure, remoteness from resources and the unique ecosystem. There is a strong need for the development and deployment of an all season and all weather operational sensor network in the Arctic that integrates subsurface, sea floor, water column, surface, and atmospheric monitoring. Such an operational network will require significant investment in emerging technological advancements. Some examples are next generation autonomous underwater vehicles and sensors, small to medium unmanned aerial vehicles, portable high frequency coastal radar, and enhanced integration of data from manned aircraft and space systems, all coupled with more effective integration of community-based monitoring systems.

One of the greatest challenges is locating oil under ice. Furthermore, the behavior of oil under and within ice is poorly understood and in need of greater research.

Techniques for removing oil include containment and mechanical cleaning, in-situ burning, bioremediation, chemical dispersants, and natural recovery. The effectiveness of these various techniques is significantly affected by the percentage of ice cover and the ability to timely mobilize adequate equipment and personnel to the spill site. Throughout the Arctic more research is needed in order to develop better predictive models for the movement of sea ice and ocean currents, improved oil spill trajectory models, increased understanding of the behavior and tracking of oil under ice, and better understanding of the impacts to the ecosystem. Stronger agreements between governments, agencies, communities and companies and protocols for the integration of data streams and data sharing will be necessary in order to develop the best operational picture. More realistic and larger-scale field training exercises will be necessary in order to achieve the most efficient operational capacity.

Under minimal ice and ice free conditions our neighbors in Russia and Canada have some capacity to prevent and respond to spills in and around existing infrastructure. However, neither neighbor (nor the United States) has the capacity to effectively clean up oil under ice.

RESPONSES OF MARK MYERS TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Would you say that strong understanding of the offshore oil and gas resources, including characterizing the reservoirs, is important to determine what kind of build out will be necessary, should production advance?

Answer. Yes, understanding the fundamental geology of the resource is critically important for all aspects of the exploration and development of oil and gas fields and their associated production and transportation infrastructure. For example, the reservoir properties including the seals, depth, pressure, fluid types and contacts, reservoir thickness and volume will significantly affect the well and completion design, the number and spacing of drilling and production platforms, methods of enhanced oil production, and many aspects of the design for the production facilities, pipelines and associated compressors. Other key factors that affect facility and well design include the water depth and ice conditions that the facilities must be built to withstand.

Question 2. Critics of arctic development talk much about how dealing with issues in that environment is so much more difficult because of the harsh weather and the darkness—but they tend to forget that those are essentially normal conditions in our region. Is there a population, both domestically and globally, of both skilled and unskilled personnel who are accustomed to working in arctic environments?

Answer. In Alaska, Norway, Russia and Canada there is a highly successful, professional, skilled, and unskilled labor force that has worked year-round for decades in oil and gas development and other professions in the extreme weather conditions of the Arctic.

RESPONSES OF PAUL SCHULER TO QUESTIONS FROM SENATOR BINGAMAN

Question 1. Do you feel that the channels of communication that Mr. Piñon referenced in his testimony are in place to share best oilfield exploration practices, as well as spill prevention, preparedness and response practices, between ourselves and our neighbors in the Gulf—Mexico, Cuba and the Bahamas?

Answer. I feel channels of communication are expanding; reference the upcoming IMO Workshop in the Bahamas scheduled for December 7-9, 2011, which will have representatives from the Bahamas, Cuba, Jamaica, Mexico, and the United States, as well as several subject matter experts.

Question 2. How do you think that we, the U.S. government, can work to best help our Gulf neighbors in spill prevention and response planning?

Answer. Prevention is beyond the scope of my company's activities, but I believe response planning could be enhanced by the U.S. Government hosting both workshops and training courses on the subject, with subject matter experts assisting.

Question 3. Perhaps more importantly, is there anything that we can or should do to help less experienced offshore oil regulators in other countries to develop the experience that is needed to be an effective regulator?

Answer. Like #2, dedicated education and training opportunities through IMO and other international organizations may be helpful.

Question 4. In your testimony, you have indicated that you have a license to go and work directly with representatives of Repsol and Petrobras who have been operating previously in Cuba. In your recent work, have you felt that the competencies of the companies have increased with experience?

Answer. I am not qualified to comment on the competencies of these companies with regard to drilling operations. However, with regard to oil spill preparedness and response since the Macondo incident, Repsol and Petrobras, like all the other companies we work with, have continued to improve on their preparedness and planning, as well as enhancing response capacities.

Question 5. You also mentioned your sister cooperative, Oil Spill Response Ltd. Do they have the same capabilities as your company Clean Caribbean & Americas? Or do they have expanded capabilities such as wellhead containment equipment?

Answer. Oil Spill Response Ltd. has broadly similar preparedness & response capabilities as Clean Caribbean & Americas. They have recently acquired a single wellhead containment system that is dedicated to the North Sea operations only.

Question 6. You finished your testimony by stating that the process could be loosened up so that more companies and resources can be brought into the response from the US. Are you referring to the licensing process itself or to the embargo?

Answer. I thought it presumptuous to comment on specifics regarding how to “loosen up” the process, which I felt was the purview of Congress. My point was strictly to bring to light the need to have more resources available to protect U.S./Florida natural resources. This could be accomplished by making the licensing process quicker and broader.

RESPONSES OF PAUL SCHULER TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Your member companies represent both major integrated and independent oil companies. To what extent do you draw on their expertise—or recruit from such companies—in maintaining Clean Caribbean’s readiness to respond to incidents?

Answer. Preparedness and response is a collaborative process involving both the operating companies, and the response cooperatives. Typically the preparedness functions such as planning reside in the companies, while Tier 3 response resources (supplemental to OSR resources that the oil companies possess) the physical response resources reside in the response cooperatives. They are integrated through training, drills and exercises.

Question 2. Your testimony discusses the appropriateness of dispersants when used responsibly. One of the issues we’ve struggled with is a responsible means of getting pre-authorization for certain tested dispersants in certain situations. Are there parameters, in your view, that would make such a regime workable and responsible?

Answer. The primary goal of any oil spill response operation should be to minimize environmental harm. Although one expectation may be the complete physical containment and removal of oil from the environment, this is often not possible (especially with large offshore spills) due to physical limitations of mechanical recovery systems. In fact, recovery operations during previous offshore spills only collected a small fraction of the spilled oil even under ideal conditions [ITOPF Handbook, 2010]. The Deepwater Horizon incident is no exception, with preliminary estimates indicating that only 3% of the oil was mechanically recovered [NOAA Oil Budget, 2010]. Relying solely on mechanical response measures to large offshore spills may therefore result in less effective protection of the environment. Responders, response advisors, and regulators must consider the advantages and limitations of each response option and the conditions of the spill to develop a response strategy that minimizes environmental harm.

The oil and gas industry recognizes the significant limitations of mechanical recovery for large offshore oil spills and has developed alternative response tools—one of which is oil spill dispersants. Oil spill dispersants facilitate removal of oil from the environment by enhancing the natural biodegradation process. Dispersants do this by rapidly breaking a surface slick into micron-sized droplets that move into the water column. This provides naturally occurring oil degrading bacteria greater access to the oil by creating a dilute mixture of oil in water rather than a thick surface accumulation. Fortunately, oil degrading bacteria are present in all marine environments, having evolved to degrade oil released by natural seeps [Margesin and Schinner, 2001; Prince and Clark, 2004].

Dispersed oil rapidly dilutes [French McCay and Payne, 2001; French McCay et al., 2006, McAuliffe et al., 1980, Cormack and Nichols, 1977, Daling and Indrebo, 1996], and concentrations above known toxicity thresholds do not persist for more than a few hours after effective dispersant application. Thus the potential for acute impacts to the environment from dispersed oil is limited in duration and space. In contrast, a surface slick has the potential to impact marine mammals and birds for many days and strand on sensitive shorelines. The most sensitive areas in many marine environments are marine marshes and swamps. These areas can take years to decades to recover [Sell et al., 1993] once impacted by surface slicks.

Fortunately, during the Deepwater Horizon incident, the amount of damage to these resources was far less than scientists initially expected. In many locations where oil did enter, marsh grass recovery was apparent soon after the spill [Kaufman and Dewan, 2010]. Although additional investigations are still needed, this and other preliminary evidence suggests that a key reason for the limited shoreline impacts during the Deepwater Horizon incident was the use of dispersants and, in particular, the subsea injection of dispersants at the wellhead.

Considering the limitations of mechanical recovery in removing oil from the environment, the decision to use dispersants often assists in reducing the potential for environmental impacts. The preliminary evidence from the Deepwater Horizon incident shows that the decision to use dispersants minimized potential impacts to marine mammals and birds and oiling of sensitive shoreline environments.

Question 3. Another priority I think we recognized last year was the need to conduct controlled test spills in the ocean—something we can't currently practice in the U.S. but which has been conducted in other nations. Would your organization find use in such an exercise to both obtain real world experience with the behavior of oil in water and to test equipment and assets?

Answer. I think that controlled test spills would be useful for expanding the science and knowledge base on dispersants, in-situ burning, and other methods, but I don't believe oil in water is necessary to test the capabilities of responders to mobilize and deploy equipment in the open water as we perform such exercises on a regular basis.

Question 4. If the federal government authorized small, controlled spills in the ocean for purposes of training, would this enhance the readiness of organizations such as Clean Caribbean to respond to oil spills in areas adjacent to U.S. waters?

Answer. I believe, as above, that controlled spills would be valuable for the purposes of enhancing science and knowledge on various response methods and strategies, but are not critical or additive for the purposes of training.

RESPONSES OF VICE ADMIRAL BRIAN M. SALERNO TO QUESTIONS FROM
SENATOR BINGAMAN

Question 1. I would like to open this round of questions by asking the both of you—How confident are you that the U.S. is ready to respond to a spill following the tragic events of the Deepwater Horizon?

Question 2. In particular, how confident are you that we're ready in the advent that an oil spill occurs in the near future in Cuban waters—that would impact US waters, such as the Florida straits?

Answer. The U.S. Coast Guard investigates and responds to oil spills every day. As the designated Federal On-Scene Coordinator under the National Oil and Hazardous Substance Contingency Plan (NCP), each local Coast Guard Captain of the Port (COTP) is responsible for coordinating local preparedness and response activities for their respective coastal zone. These responsibilities include overseeing the development of Area Contingency Plans (ACP) and organizing the Area Committee whose membership is comprised of stakeholders from other federal agencies as well as state, local, tribal and industry representatives.

While the National Contingency Plan (NCP) is sound and performed well during the DWH spill response, the Coast Guard is working with DHS, the National Response Team, and other agency partners to update guidance documents and protocols to reflect DWH Lessons Learned. The Coast Guard, in partnership with EPA and FEMA, has jointly chartered work groups to develop recommendations that support improvements for government responses. The Coast Guard is also working closely with the National Response Team, including EPA and NOAA, to review and update response equipment options available to operational commanders in combating catastrophic spill events.

In addition, the Coast Guard is aggressively and methodically pursuing a number of enhancements across three major lanes, including (1) improving internal competency and capacity; (2) improving response system policy; and (3) improving quantity, quality and efficiency of the national inventory of response equipment.

In improving internal competency and capacity the Coast Guard is addressing the ability to manage and sustain an incident response by developing training courses and implementing personnel enhancements in the pollution response field. The Coast Guard requested billets in the FY12 President's Budget for a National Incident Management Assistance Team (IMAT) Additionally, the Coast Guard has encouraged more participation from state and local officials in oil spill planning and preparedness efforts.

The Coast Guard is partnering with other agencies to improve the quantity, quality and efficiency of the national inventory of response equipment. The Coast Guard and Bureau of Safety, Energy and Environment (BSEE) and other agencies are reviewing OPA 90's technical planning standards for assessing oil spill response equipment efficiency and effectiveness. In addition the Coast Guard is currently working with industry on updates to its 1997 Oil Pollution Research and Development Technology Plan.

Protecting the marine environment from accidental oil and chemical spills is a key mission of the U.S. Coast Guard. Although a response to an oil spill in Cuban waters that affects the U.S. would certainly be more challenging than a similar domestic event, the Coast Guard is working with other stakeholders to maximize preparedness should a spill occur. To ensure readiness and awareness, specific to Cuban proposed offshore oil exploration, the U.S. Coast Guard Seventh District

Commander began outreach and planning efforts over a year ago. These efforts are ongoing and the U.S. Coast Guard will continue to maximize information sharing, preparation, and training with all partners, to make sure sound strategies and liaisons are built to prepare for and respond to any potential environmental threat to U.S. waters. The Coast Guard has engaged the State of Florida, our fifteen National and Regional Response Team partners to include: the Environmental Protection Agency, Departments of State, Commerce, Treasury, and Interior, the Government of the Commonwealth of the Bahamas, Oil Spill Removal Organizations with licenses to work in Cuban waters, as well as elected officials at all levels of government.

The Coast Guard maintains contingency plans that are ready to be activated in the event incidents occur. The Coast Guard is updating plans to address a potential discharge from a drilling rig off the coast of Cuba or other Caribbean Nations that could potentially impact U.S. waters. This preparedness effort is far-reaching and includes a host of federal, state, and private entities to ensure awareness and mutual cooperation. Additionally, plans are already underway to begin regional coordination as the Coast Guard focuses on the near-term drilling that is to occur off Cuba, the Coast Guard is also mindful of the potential for future offshore oil exploration in Bahamian waters.

In the event of an emergency, the U.S. Coast Guard would mount an immediate response using existing authorities in partnership with other Federal, State and local agencies under the National Oil and Hazardous Substances Pollution Contingency Plan and the Oil Pollution Act of 1990. The National Contingency Plan (NCP) is the Federal government's blueprint for responding to both oil spills and hazardous substance releases. In accordance with the NCP, U.S. response agencies are authorized to undertake immediate actions for the removal of a discharge that may affect its natural resources. A "Unified Command" approach would be employed, focusing on combating the spill offshore using all viable response tactics.

CUBA

Question 3a. Has the Coast Guard been in the same discussions with Repsol as the BSEE officials have? If so, do you feel confident that Repsol is adequately prepared on both the prevention (in terms of the vessel itself) and spill response should another oil spill occur?

Answer. In March 2011, Repsol independently reached out to the Coast Guard regarding their future operations for the Straits of Florida. On April 6, 2011, Repsol officials attended a meeting at Coast Guard Headquarters and provided general information on their efforts and plans. This meeting, hosted by the Coast Guard, was attended by interagency partners including Department of State (DOS), the National Oceanographic and Atmospheric Administration, the Department of the Interior (DOI), and the Environmental Protective Agency. Additionally in July 2011, the U.S. Coast Guard representatives, along with DOS and DOI (BOEMRE) representatives, received an updated briefing by Repsol in Trinidad.

Based on information available to the Coast Guard at this time, the Coast Guard believes the vessel will be fit for intended service. A joint inspection with BSEE onboard the vessel will help validate the Coast Guard's expectations that it meets international standards.

The Administration is committed to protecting U.S. national interests, particularly environmental interests in the Florida Keys and along the U.S. coastline, as they relate to deepwater drilling in Cuban waters. Should U.S. waters or land be threatened by an oil spill from any drilling site, the United States government can use existing authorities to conduct response operations. Additionally the U.S. government has engaged relevant state, local, and private stakeholders to ensure awareness and mutual cooperation and to examine existing oil spill response plans and will continue to do so.

We have made clear to Repsol that we expect it to adhere to the highest environmental, health, and safety standards and have adequate prevention, mitigation, and remediation systems in place in the event of an incident. Repsol has informed the U.S. government of its plans and invited U.S. government officials to observe an emergency drill conducted in Trinidad related to contingency planning for the drilling. The Administration is committed to supporting best practices to prevent and contain oil spills, and is pursuing immediate and long term initiatives that seek to minimize risks to U.S. waters and shores.

The United States government views a multilateral approach as essential to contingency planning for oil spill prevention and response, especially in light of planned deepwater activity by a number of countries in the region. Multilateral engagement with the Bahamas, Cuba, Jamaica, and Mexico could occur in multiple forums. It

is our intent to vigorously pursue such engagement. Our multilateral engagement is intended to ensure common understanding and effective implementation of international obligations and standards for oil spill prevention and response. Outside U.S. jurisdiction, it would generally fall to the flag state of the mobile offshore drilling rig and coastal state where it is operating to ensure compliance with safety and maintenance rules. Such rules would need to conform to applicable international requirements, which are often established under the auspices of the International Maritime Organization.

Question 3b. Will you be conducting an inspection of the Repsol rig in conjunction with the BSEE inspectors?

Answer. A joint inspection is tentatively scheduled to occur in December 2011 when the SCARABEO 9 makes a port call in Trinidad. The Coast Guard intends to send two Coast Guard marine inspectors to accompany the BSEE surveyors.

GENERAL SPILL RESPONSE

Question 4. Can you describe how you've worked previously with other governments when spills have occurred?

Answer. In accordance with the Clean Water Act and the National Contingency Plan (40CFR300), the Coast Guard serves as US lead for bi-lateral oil and hazardous substance preparedness, planning and response across our international boundaries with Canada, Mexico, Russia, Panama, and nations in the Northern Caribbean. Semi-annual plenary meetings are held at the national level and daily contact occurs in each of the regions for planning, exercise and actual response operations.

In general, when a pollution incident occurs, the responsible On-Scene Coordinator provides notification of the type of incident to include: situation; action taken; future plans; recommendations; and the status of the case. Response objectives are coordinated between the US and the other governments involved.

ARCTIC

Question 5. Can you discuss a little more about how you are working with local stakeholders in arctic areas to coordinate a spill prevention and response plan? How does a spill response differ in the arctic areas, compared to non-arctic areas?

Answer. As the designated Federal On-Scene Coordinator for the Coastal Zone under the National Oil and Hazardous Substance Contingency Plan (NCP), the local Coast Guard Captain of the Port (COTP) is responsible for coordinating local preparedness and response activities for their respective coastal zone. These responsibilities include overseeing the development of the Area Contingency Plan (ACP) and organizing the Area Committee whose membership is comprised of stakeholders from other federal agencies as well as state, local, tribal and industry representatives.

As a result of the proposed offshore drilling activities in the Arctic, the Coast Guard is collaboratively working with the state, local, and tribal representatives at the local level to update the worst-case discharge (WCD) scenarios in the industry plans and other information in the appropriate Regional and Area Contingency Plans. These plans include the Northwest Arctic and North Slope Geographic Response Plans (local) and the Alaska Unified Plan (regional). The revised plans include updated information about offshore facility WCD scenarios, response equipment surge strategy, environmental protection strategies, source control, and waste disposal operations. These revised plans are scheduled for completion and final approval by the Coast Guard and the Alaska interagency regional and local planning bodies in advance of the 2012 drilling season. The Coast Guard in Alaska will continue to encourage more participation from state, local and tribal officials in oil spill planning and preparedness efforts in the form of participation in drills and exercises as well as Area Committee discussions to improve oil spill contingency plans.

A spill response in the Arctic would primarily differ compared to a spill in non-Arctic regions because of the distance to remote spill locations, lack of pre-staged equipment, and lack of supporting shore-based infrastructure. Adverse weather conditions such as ice, low visibility, and prolonged darkness also reduce the effectiveness of a response effort.

RESPONSES OF VICE ADMIRAL BRIAN M. SALERNO TO QUESTIONS FROM SENATOR MURKOWSKI

Question 1. Your testimony indicated that the Coast Guard was examining the option of leasing icebreakers. What stage of this examination have you reached

Question 2. Given the total absence of Congressional support for leasing icebreakers from foreign entities, what steps are you taking to secure availability of U.S. built icebreakers to meet pressing needs in the Arctic?

Answer. Leasing options continue to be one possible alternative as the Coast Guard continues to work with the Administration to assess future icebreaker requirements. The most recent analysis, which included leasing of currently available platforms and build-to-lease alternatives, was thoroughly examined in the Polar Icebreaker Replacement Business Case Analysis. This analysis was delivered to Congress on 02 November 2011.

The Coast Guard anticipates Coast Guard Cutter HEALY and Coast Guard Cutter POLAR STAR (when returned to service in 2013) are sufficient to address the Coast Guard's most pressing, current icebreaking requirements in the Arctic for the near-term. The Coast Guard continues to work with the Administration on long-term icebreaker recapitalization needs. There are currently no U.S.-built icebreakers available for leases that are capable of operating in the Arctic.

Question 3. Along these same lines, you have been called upon to address the issue of authorizing larger oil spill response vessels (OSRVs) over the past year and a half. The vessels that we're seeing constructed for Alaska's offshore development obviously have to be very large, with the ability to store huge volumes of recovered oil, and they have to be able to operate in heavy seas and in the dark. My understanding, however, is that current policy is based on the post-Valdez idea that OSRVs would be smaller and tasked with responding to contained spills in near shore areas. Is this accurate?

Why is there not yet the authorization for these vessels to be classified as what they are?

Answer.

- Yes, this is accurate; however, that policy is grounded in the governing statute 46 U.S.C. § 3702(f)(2)(A), which requires that an oil spill response vessel (OSRV) must be either under 500 gross tons (GT) or an alternate tonnage created by regulation, or be certified to comply with the tank vessels standards of Chapter 37 of Title 46, U.S. Code.
- OSRVs less than 500 GT are exempt from tank vessel regulations by statute. However, most Offshore Supply Vessels (OSV) built after 1996 exceed 500 GT. In recognition of this trend, the Coast Guard is working on a solution to allow OSVs greater than 500 GT to also serve as OSRVs without restriction on the amount of recovered oil they can be certified to carry. That solution involves a rulemaking project.

As an interim solution, the Coast Guard has approved requests permitting these larger OSVs to be placed into service as non-dedicated OSRVs, provided certain conditions are met. As they relate to this question, these conditions include that the OSVs have been adapted to serve as OSRVs, and they carry no more than 20% of their deadweight in recovered oil. In order to carry more than 20% recovered oil, there must be a demonstrated need articulated by the response authority during an oil spill emergency, and the Coast Guard Officer in Charge of Marine Inspection must certify that the vessel can safely operate under the circumstances. The Coast Guard is confident this approval can be obtained in a timely manner, and that the interim solution meets the needs of industry while the Coast Guard pursues a longer-term solution.

Question 4. Why does a vessel like the Nanuq have to obtain authorization as a vessel of opportunity before it can conduct spill response operations?

Question 5. Why can't the Coast Guard simply develop an advance classification for vessels like the Nanuq?

Answer. The Coast Guard's policy and regulations regarding Offshore Supply Vessels (OSVs), like the NANUQ, and their designation as Oil Spill Recovery Vessels (OSRVs) are under revision.

Until the Coast Guard's policy and regulations are finalized, as an interim solution, vessels like the NANUQ can be designated as a non-dedicated OSRV while retaining their primary designation as an OSV. With this designation, the vessel does not have to obtain authorization as a vessel of opportunity to recover oil during response operations, as long as the vessel does not exceed 20 percent of its deadweight tonnage in recovered oil.

If there is a need for the vessel to recover quantities exceeding 20 percent, authorization may be granted when response authorities determine such carriage is necessary during an oil spill emergency, and it is approved by the Coast Guard.

The Coast Guard has existing standards under which vessels such as the NANUQ can receive advance authorization to serve as an OSRV. In addition, in recognition of the multi-service nature of these vessels, the Coast Guard is developing design

and operating standards for vessels (like the NANUQ) which normally support offshore oil and gas exploration and production, and may only operate occasionally as an OSRV.

Question 6. Is it true that these large, ultra-capable vessels can't work in the Gulf of Mexico, meaning they wouldn't be on hand for an issue in Cuba or Mexico, without getting specific, case by case authority from the Coast Guard?

Answer. These vessels can work in the Gulf of Mexico. As the Coast Guard's Oil Spill Response Vessel (OSRV) policy is under revision, as an interim solution, the Coast Guard has approved requests permitting Offshore Supply Vessels (OSVs) to be placed into service as non-dedicated OSRVs, provided certain conditions are met. Specifically, Coast Guard approval would be needed if the vessel exceeds 20 percent of its deadweight tonnage in recovered oil. However, the Coast Guard is confident such approval would be forthcoming if the response authority required it and the cognizant OCMIs determined it was safe under the circumstances.

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