OFFSHORE DRILLING IN CUBA AND THE BAHAMAS: THE U.S. COAST GUARD'S OIL SPILL READINESS AND RESPONSE PLANNING

(112–70)

HEARING

BEFORE THE

SUBCOMMITTEE ON
COAST GUARD AND MARITIME TRANSPORTATION

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

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January 23, 2012

MEMORANDUM

TO: Members, Subcommittee on Coast Guard and Maritime Transportation

FROM: Staff, Subcommittee on Coast Guard and Maritime Transportation

RE: Hearing on "Offshore Drilling in Cuba and the Bahamas: The U.S. Coast Guard's Oil Spill Readiness & Response Planning"

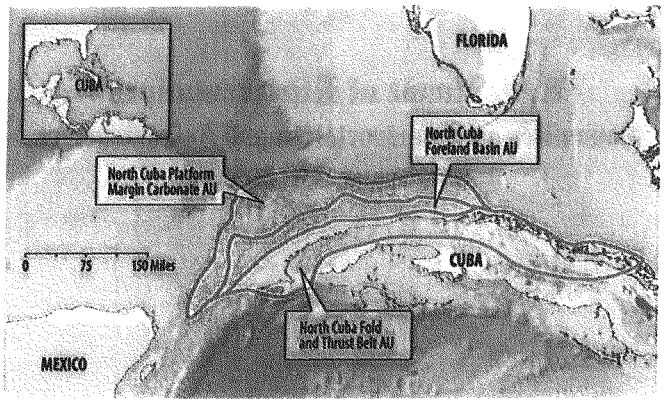
PURPOSE

On Monday, January 30, 2012, at 10:00 a.m. in the Atlantic Room of the Double Tree Hotel in Sunny Isles Beach, FL, the Subcommittee on Coast Guard and Maritime Transportation will hold a hearing to examine Cuban and Bahamian plans to drill in proximity to the U.S. Exclusive Economic Zone (EEZ) and review the Coast Guard's preparedness to handle oils pills occurring at these sites.

BACKGROUND

Cuban Drilling

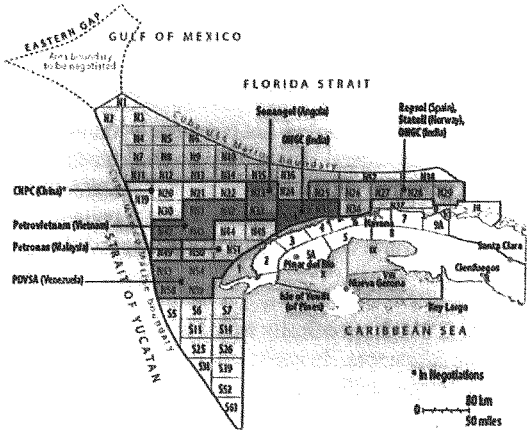
Historically, the Republic of Cuba has been a relatively small producer of oil. However, reassessments of the country's undiscovered natural resources and developments in technology have led Cuba to open up waters in its EEZ for exploration and production. According to the U.S. Geological Survey, the North Cuba Basin, a body of water located off the coast of northwest Cuba and within the Cuban EEZ, could contain as much as 4.6 billion barrels of undiscovered crude oil. This estimate has enticed a number of foreign oil companies to enter into agreements with Cuba to explore and develop this area.



Cuba has signed lease agreements with six companies for offshore blocks in the North Cuba Basin. Five of the six companies are owned by foreign nations. The lone private company with a signed lease agreement, Spain-based Repsol YPF, is expected to begin drilling an offshore exploratory well as early as January 2012. Repsol was the primary party involved in drilling Cuba's only other deepwater well, the Yamagua-1, which was completed in 2004 approximately 65 miles southwest of Florida. The nation-owned companies (NOCs) with lease agreements include India's Oil and Natural Gas Corporation (ONGC), Venezuela's Petroleos de Venezuela S.A. (PDVSA), Malaysia's Petronas, Vietnam's Petrovietnam and Angola's Sonangol. Additionally, China's NOC, China National Petroleum Company (CNPC), is currently in negotiations with Cuba for an offshore block. Several of these NOCs have begun conducting seismic analysis and may soon move to exploratory drilling.

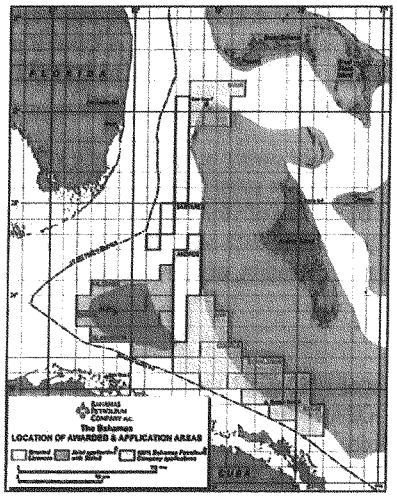
Cuba's Planned Exploratory Well

Repsol has contracted with the Cuban government to drill one exploratory well in the North Cuba Basin. Called the Jagüey Prospect (pronounced HA-gway), the well is planned to be about 55 to 60 miles south of Key West, FL and will be drilled in 5,300 feet of water to a depth of approximately 20,000 feet below the sea floor. Repsol has a 40 percent share in the newest exploratory well, while India's ONGC and Norway's Statoil each hold a 30 percent stake. If successful, the Jagüey Prospect could lead to the drilling of additional wells by Repsol. The company has completed its seismic data analysis and contracted the Italian-owned Scarabeo-9, a mobile offshore drilling unit (MODU), to drill the Jagüey well. Drilling will likely begin in January 2012. The Scarabeo-9 reportedly may also drill additional wells for other companies with leasing agreements in the North Cuba Basin. Cuban authorities have said they currently plan to drill a total of five wells.



Bahamian Drilling

Though the Bahamas has yet to begin serious offshore oil exploration, it hopes to begin drilling in its southern waters by December 2012. The Bahamas Petroleum Company (BPC), a private company with holdings in the U.S., plans to drill an exploratory well in 6,000 feet of water south of Andros Island. This location is approximately 150 miles southeast of Florida. To facilitate this effort, BPC is looking to partner with a larger international oil firm, but has yet to enter into any definite agreements. BPC currently owns the leases to four well sites in the Bahamas and hopes to purchase more. However, after the DEEPWATER HORIZON incident, the Government of the Bahamas imposed a moratorium on all new leases, so BPC maintains a monopoly on potential drilling in Bahamian waters.



Oil Spill Response Framework and Liability under U.S. Law

Clean Water Act

The Federal Water Pollution Control Act (commonly known as the "Clean Water Act" or "CWA") is the principal federal statute for protecting navigable waters and adjoining shorelines from pollution. Since its enactment, the CWA has formed the foundation for regulations detailing specific requirements for pollution prevention and response measures. It also provides criminal, administrative, and civil penalties for violations of such regulations.

Section 311 of the CWA is specifically aimed at preventing and responding to spills of oil and hazardous substances. In conjunction with OPA, Section 311 provides for spill prevention requirements, spill reporting obligations, and spill response planning and authorities. It regulates the prevention and response to accidental releases of oil and hazardous substances into navigable waters, on adjoining shorelines, or affecting natural resources belonging to or managed by the United States. Finally, it imposes strict, joint and severable liability on any party that is responsible for the discharge (or substantial threat of discharge) of oil or a hazardous substance.

Under Section 311(j) of the CWA, a number of pre-drilling safety measures must be taken by the party responsible for the drilling vessel or facility. The Act requires responsible parties to develop tank vessel or facility-specific prevention and response plans for a worst case scenario spill. The Act also lays out requirements for discharge removal equipment, calls for periodic inspections of vessels and facilities, and establishes spill contingency plans for all areas of the U.S.

Section 311(b) authorizes EPA to assess Class I or Class II administrative penalties for violations of Section 311. A Class I penalty may be assessed in an amount of up to $16,000 per violation, not to exceed $37,500. A Class II penalty may be assessed in an amount of up to $16,000 per day of violation, not to exceed $177,500. Each violation may be tabulated on a daily basis.

Section 311(b) also makes the owner or operator of a vessel, onshore, or offshore facility who discharges oil or hazardous substances in violation of Section 311 subject to a civil penalty of up to $37,500 per day of violation, or up to $1,100 per barrel of oil discharged. In instances of gross negligence or willful misconduct, these penalties increase to a $140,000 per day of violation, or up to $4,300 per barrel discharged.

The Oil Pollution Act of 1990

The Oil Pollution Act of 1990 (OPA) was enacted following the EXXON VALDEZ oil spill in 1989. OPA consolidated existing laws and enacted new provisions to create a comprehensive federal legal framework to govern liability and bolster the national response to oil spills occurring in U.S. waters or in areas where there is a

substantial threat of discharge into U.S. waters or the EEZ. OPA allows instant response to oil spills by ensuring that either the Coast Guard for marine spills, or EPA for land-based spills, has the authority to perform cleanup immediately using federal resources, monitor the response efforts of the spiller (responsible party), or direct the responsible party's cleanup activities.

In the event of an offshore spill, the Coast Guard will assume command of the federal response, while designated state agencies and authorities will be responsible for carrying out the regional and local contingency plans. Additionally, the owner or lessee of the vessel or facility conducting the drilling operation will be expected to execute their pre-approved response plan, which may include the use of private contractors to help contain the spill.

Liability Issues Associated with Extraterritorial Drilling

The "responsible party" under section 1001 of OPA is defined as "the lessee of the area in which the facility is located..." Under section 1002 of OPA, responsible parties are liable for all removal costs and specified damages that result from the release (or substantial threat of release) of oil, including injuries to natural resources; loss of personal property; lost revenues, profits and earning capacity resulting from destruction of property or natural resource injury; damages for loss of subsistence use of the resource; and costs of providing extra public services during or after spill response.

The entity responsible for a release of oil from a vessel or MODU (when acting in its capacity as a vessel) outside U.S. waters which pose a substantial threat of discharge into U.S. waters or the U.S. EEZ would still be a responsible party and would be liable under OPA 90 and the CWA. However, if the release came from an offshore facility or MODU (when acting in its capacity as an offshore facility) located outside the U.S. EEZ, liability under OPA is questionable.

Additionally, the U.S. does not have jurisdiction to enforce this liability on entities operating outside its territory. The Coast Guard has claimed that it is committed to making polluters pay, but has conceded that holding lessees of foreign platforms liable would be difficult. In the case of the Jagüey Prospect, the federal government would attempt to hold Repsol, along with ONGC and Statoil, responsible if the spill posed a substantial threat to U.S. waters or the U.S. EEZ, but there is no guarantee that they would assume full liability as a responsible party.

The entity (Repsol in this case) often has business interests in the U.S., which provides the federal government some leverage to hold that entity responsible for a release. However, there are several companies world-wide, including many NOCs, which do not operate at all within the U.S. If those companies were to be responsible for a release, the federal government would have to rely on diplomatic relations to pressure the offending entity to assume responsibility. If those efforts failed, the U.S. would be left alone to finance and manage the response.

The 1979 Ixtoc Incident

In 1979, Pemex (a Mexican NOC) suffered a massive blowout at its Ixtoc well, which released between 10,000 and 30,000 barrels of oil a day for 10 months. Ixtoc was located in 150 feet of water in the Bay of Campeche, several hundred miles from the U.S. coast. The distance and unique current flow kept the oil at bay long enough for the U.S. to stage a massive amount of oil response resources along the Texas coast. However, 71,500 barrels of oil still managed to impact 162 miles of U.S. beaches.

U.S. businesses and individuals sued Pemex for over $300 million. Though Pemex was liable for damages under U.S. law, it claimed sovereign immunity as a NOC. The U.S. disputed this claim, but Pemex (and Mexico) and largely avoided payment. A similar situation could occur with the proposed Cuban and Bahamian wells, leaving the U.S. to cover response costs and damages for a spill occurring outside its EEZ.

Under OPA, such a response would be paid for out of the Oil Spill Liability Trust Fund (OSLTF). The OSLTF currently has a balance of only $2.3 billion. The cost of the DEEPWATER HORIZON oil spill may exceed $40 billion, but those costs are being paid by the Responsible Party. Current law limits the per incident exposure to the fund to $1 billion, which includes no more than $500 million for natural resource damages. There is no clear source of funding for the remaining costs associated with a response that exceeds $1 billion and for which no party could be held liable.

Diplomatic Relations with Cuba

U.S. policy toward Cuba has centered largely on isolating Cuba from the rest of the western world. However, the U.S. does have a diplomatic presence in the nation. Located in Havana, the United States Interests Section of the Embassy of Switzerland was established by the Carter Administration in 1977. The office is staffed by State Department officials whose goal is to promote democracy and human rights in Cuba. In addition to the U.S. Interests Section, the U.S. Coast Guard has a liaison officer in Havana.

The Foreign Assistance Act of 1961 was the first piece of legislation prohibiting assistance to Cuba. It allowed for the President to establish an embargo in order to meet the prohibition. Under the authority of the Foreign Assistance Act, President Kennedy issued Proclamation 3447 in 1962, which established a total economic embargo on Cuba. The proclamation prohibited the importation of goods from Cuba and also ordered the Commerce Department to continue a prohibition on exports first established by the Export Control Act of 1949.

The Cuban Assets Controls Regulations (CACR) prohibits a number of trade and financial transactions between a person subject to U.S. jurisdiction and Cuba or a Cuban

national. The Secretary of the Treasury may modify the restrictions and has established certain exceptions for those traveling to Cuba for the purpose of professional research, family visits or journalistic activity. Additionally, the CACR allows for the licensing of limited trade with Cuba and authorized remittances to Cuban nationals through the Department of Commerce.

The Cuban Democracy Act of 1992 (CDA) and the Cuban Liberty and Democratic Solidarity (LIBERTAD) Act of 1996 both tightened restrictions on trading with Cuba. The CDA bans U.S. subsidiaries from trading with Cuba and prohibits vessels from unloading or loading freight in the U.S. if they have engaged in trade with Cuba within the previous 180 days. LIBERTAD codified the embargo for the first time, including the sanctions laid out in the CACR. The law prohibits U.S. individuals or agencies from indirectly financing any transaction involving property of U.S. nationals confiscated by the Cuban government. LIBERTAD also granted the president the power to lift the embargo if he determined a transition to a democratically elected government to be underway. Furthermore, LIBERTAD requires the termination of the embargo if a democratically elected government is in place.

In 2000, Congress passed the Trade Sanctions Reform and Export Enhancement Act of 2000 (TRSA). TRSA directed the President to end unilateral medical and agricultural sanctions. The law required the Commerce Department to authorize the export of agricultural commodities to Cuba. However, TRSA does not allow for U.S. government or private assistance to finance these exports. In 2009, President Obama issued a presidential policy directive removing or significantly easing several restrictions on cash remittances, gift parcels, and family travel. The directive also expanded telecommunication services between the U.S. and Cuba.

Prevention and Response Planning Efforts

Despite limitations on enforcement and oversight capability, the Coast Guard has taken a number of steps to prepare for a potential spill in the North Cuba Basin. In order to prevent a spill from occurring, the Coast Guard has engaged with Repsol officials from the company to review their spill prevention and response plans. Repsol agreed to allow Coast Guard and BSEE inspectors to visit the MODU and review its safety systems. These inspectors completed a review of the Scarabeo 9 on January 9, 2012, off the coast of Trinidad and Tobago. U.S. personnel found the vessel to generally comply with existing international and U.S. standards by which Repsol has pledged to abide.

In addition to engaging with the company, the Coast Guard has conducted exhaustive planning exercises to prepare for a response that involves a release in Cuban waters. At the local-level, Florida Coast Guard Sectors Jacksonville, Miami, Key West and St. Petersburg are updating their Area Contingency Plans, which will provide guidance for near and on-shore response efforts along the coast. In addition, the Coast Guard's Seventh District, headquartered in Miami, is overseeing work on an Offshore

Drill Response Plan and Regional Contingency Plan that focuses on response strategies and tactics to combat a spill at sea.

The Coast Guard has worked with a number of other agencies involved in this endeavor, including the National Oceanic and Atmospheric Administration (NOAA), the Department of Interior's Bureau of Ocean Energy Management (BOEM), the Treasury Department's Office of Foreign Assets Control (OFAC) and the Department of Commerce's Bureau of Industry and Security (BIS). Preliminary actions taken include the following:

- Working with state and local agencies to bolster area contingency plans covering Florida. (Interagency).
- Hosted a table top exercise on November 18, 2011 with more than 80 federal, State of Florida, Florida coastal county and maritime industry representatives (Interagency).
- Running trajectory models to identify potential landfall areas along U.S. Coasts to assist with the development of area contingency plans. (NOAA and Coast Guard).
- Developing an International Offshore Drilling Response Plan. (Interagency).
- Granting licenses to U.S. oil spill mitigation service companies to assist operators in Cuba with contingency plans, as well as authorizing the International Association of Drilling Contractors (IADC) to brief Cuban authorities on safety measures and environmental hazards. (BIS, OFAC).
- Reviewing applications for U.S. companies to provide post-incident containment and cleanup services. (OFAC, BIS, Coast Guard, State).

The Coast Guard has also engaged both Cuba and the Bahamas through international and diplomatic channels. Since the U.S. does not have normal diplomatic relations with Cuba, the Coast Guard has used the International Maritime Organization (IMO) as the primary platform for this engagement. The IMO, through the Regional Maritime Pollution, Emergency, Information, and Training Center (REMPEITC) for the Wider Caribbean Region, has facilitated two meetings between nations concerned about drilling in the Caribbean Basin. The U.S., the Bahamas, Cuba, Jamaica, and Mexico have all attended.

Through these meetings, the Coast Guard has shared best management practices and lessons learned from previous spill responses with all attendees. Additionally, the IMO has facilitated discussions on coordination and cooperation during a response scenario.

Additionally, the U.S. is party to two international conventions that are helping shape cooperation on oil drilling throughout the Caribbean. The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena) came into being in 1983. It mandates cooperation among participating nations within the region. With specific regard to potential pollution from operations Sea-Bed Activities, Cartagena dictates that "The Contracting Parties shall take all appropriate measures to prevent, reduce and control pollution of the Convention area resulting directly or indirectly from exploration and exploitation of the sea-bed and its subsoil."

In 1990, the U.S. participated in and became party to the International Convention on Oil Pollution Preparedness, Response and Co-Operation (OPRC). Among other things, OPRC mandates oil pollution response plans, reporting procedures, national-level planning, and government actions. Additionally, it provides for extensive international cooperation among signatory nations.

The IMO drafted the Caribbean Island Oil Pollution Response and Cooperation Plan (Caribbean Plan) in 2009 to help implement the two conventions. The overall objective of the Caribbean Plan is to provide a cooperative scheme for mutual assistance from member states, territories, and organizations in the event of a major oil spill incident which exceeds the response capability of a national government or oil industry. Specifically, it covers issues related to National Response Plans, requesting response assistance, reporting pollution to other states, equipment available Caribbean sub-region, a regional plan for mobilization of personnel and equipment, response financing when multiple nations are involved, cost recovery, use of specific response techniques (dispersants, in-situ burning, and bioremediation), and sensitive areas in the Caribbean sub-region.

WITNESSES

The Honorable Jennifer Carroll
Lieutenant Governor
State of Florida

Rear Admiral William D. Baumgartner
Commander, District 7
United States Coast Guard

Rear Admiral Cari B. Thomas
Director of Response Policy
United States Coast Guard

Dr. Debbie Payton
Chief of the Emergency Response Division
NOAA Office of Response and Restoration

Mr. Lars Herbst
Regional Director, Gulf of Mexico Region
Bureau of Safety and Environment Enforcement
U.S. Department of Interior

Dr. John Proni
Executive Director
Florida International University Applied Research Center (ARC)

OFFSHORE DRILLING IN CUBA AND THE BAHAMAS: THE U.S. COAST GUARD'S OIL SPILL READINESS AND RESPONSE PLANNING

MONDAY, JANUARY 30, 2012

HOUSE OF REPRESENTATIVES
COMMITTEE ON THE TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to call, at 10:04 a.m., in The Atlantic Room, Double Tree by Hilton Ocean Point Resort and Spa, 17375 Collins Avenue, Sunny Isles Beach, Florida, Hon. John Mica (Chairman of the committee) presiding.

Present: Representatives Mica, Hultgren, Long, and Gibbs.

Also Present: Representatives Ros-Lehtinen, Diaz-Balart, Rivera, and West.

Mr. MICA. Good morning. I would like to call this hearing of the United States House of Representatives Transportation and Infrastructure Committee, and the Subcommittee on the United States Coast Guard hearing to order.

I am pleased to be here in South Florida, and first want to welcome my colleagues who have come from across the country to be with us today, and I will introduce them in just a second.

The order of business today is we will be conducting a hearing that will focus on Cuban and Bahamanian oil drilling off of Florida shores.

The order of business will be opening statements by Members of Congress, then we will turn to the distinguished panel who has been assembled to assist our subcommittee. And we will then move to questions after we have heard from all the witnesses.

I want to particularly welcome members of the committee that have traveled from colder climates to be with us, it is a very intense time in Washington and I know in their districts right now. But I am very pleased that they have joined us. I will introduce them: Randy Hultgren, and Randy is from the 14th District of Illinois. That is east of Chicago. Pleased to have him in this subcommittee hearing today. And Billy Long next to him, the Seventh District of Missouri, and southwestern Missouri, Springfield, and some of that area. Bob Gibbs, Bob is also the chair of the Water Resources Subcommittee in the House of Representatives, and he is the 18th District of Ohio, central Ohio.

Then we are very pleased with the response we have had from Members of South Florida to attend and also participate in this hearing today. A senior Member from South Florida is Ileana Ros-Lehtinen, and, of course, she chairs the Foreign Affairs International Relations Committee in the U.S. House of Representatives. And she also is the representative from the Florida Keys, and of course the Miami area.

Mario Diaz-Balart, a former and distinguished member of this committee, and represents us well on the Appropriations Committee. And he has the 21st District, which is, again, part of South Florida. David Rivera, and David has western Miami. He is one of the newer Members, but he also has Homestead and the Everglades. And then, Allen West, pleased that he could join us. He has the area from Fort Lauderdale to Jupiter, another area that may be impacted by the subject of this hearing.

So, I am pleased that we have this excellent turnout of Members both from the committee and also from South Florida join us today.

I will introduce the panel of witnesses and recognize them, and we will proceed from there.

So, that being the preliminary introductions, we turn now to opening statements. And I will yield myself time, and we will go to other Members in the order in which I announced.

First, I would like to ask unanimous consent that all of the Florida Members who are attending today that are not a member of this panel have ability to participate both to open with their opening statements, and also to ask questions.

Without objection, so ordered.

And they will be recognized in order after we hear from the members of our subcommittee and committee.

So, with that, let me just say, the reason we are holding this hearing is that we have all heard about Cuba and the Bahamas opening their shores to offshore and maritime drilling off of Florida's coast. As a committee, people wonder what the Transportation Committee is doing on this subject, and just for purpose of explanation, one of our six subcommittees is the United States Coast Guard Subcommittee. And our committee historically, traditionally has overseen the United States Coast Guard, and we have legislative jurisdiction.

We have also conducted hearings on the Coast Guard and oil spills that we had in the Gulf, and we also have responsibility for dealing with legislation pertaining to those matters, and the Coast Guard, as you may know, too, is our first response agency, and it is important that we find out where we are in this whole process.

So today, it is my hope that we can actually hear, and I have heard bits and pieces and read the beginning of some reports. I was quite startled last week. Folks must understand our committee has pretty broad jurisdiction. We are trying to get out this week an FAA bill and a transportation bill. We have just finished a major pipeline bill, a safety bill, reauthorization. But sometimes at the end, you do not get all of the information, so you conduct a hearing.

But I was quite surprised to learn that, in fact, that the exploratory rigs and drilling platforms were moved into place, and as staff informed me last week that Cuba, in fact, may have already started drilling or will begin drilling. So, that was kind of startling

to find out this is not something coming; this is something that is actually taking place.

I was further surprised to learn that this platform is some 56 miles from Key West, this first platform, and another platform is on its way. And, again, we will find out the details. This is some of the information that I was provided with.

And so, that was kind of a surprise, and I think the most important thing is we find out how we are prepared for this. We have a very unique diplomatic and international strained relationship with Cuba. The Bahamas has been fairly cooperative, and we will hear more about what they are doing with their plans for offshore drilling.

The other thing that we will hear is we have some experts that can tell us on the conditions. And this area, I believe it is the Florida Straits, where we have very strong currents, which do feed into the Gulf Stream, and the Gulf Stream is just maybe 20 miles or so off this coast. So, this is not the same as the situation we found ourselves in with the Gulf where currents did not move quite as fast, and the impact might not be as great. So, that was somewhat surprising.

The other fact that I have learned is, and we will get this confirmed, is the fact that, again, the purpose of this hearing is to find the facts. But I understand these are deep water exploratory drilling activities at 6,000 feet, which is greater than what we saw with the *Deepwater Horizon* disaster in the Gulf. Again, that concerns me, and I would like to hear more about that.

Finally, we wanted to hold this hearing, and we probably could have done it in the city hall or maybe another facility here. But I thought it was important to hold the hearing with the beach and the ocean that is such an important treasure to Florida. Tourism accounts for at least a third of our economy. It is so important and essential not only historically, but for the future, so we can be dramatically impacted. I do not want folks to say where was the committee when they started this, and where was the Coast Guard. Where was the United States when they began this drilling. And if something happens, we do need to be prepared, and there are many, many issues dealing with the situation that we find ourselves in today.

So, with those comments, again, I want to thank our Members for joining us. I will yield now to Mr. Hultgren from Illinois and welcome your opening statement.

Mr. HULTGREN. Thank you, Mr. Chairman. It really is a privilege to be here. Thank you for hosting this committee, and I think this is a very important discussion for us to have, and I will be very brief because I want to get to the witnesses and get as much information as we possibly can during this hearing.

I think this is so important. It is not only a treasure to Florida; it really is a treasure to our Nation. I come from Illinois, and we do not enjoy these kinds of treasures. I need to come here to enjoy that. But it really is very important for us, again, to see the impacts that this type of activity could have on such a wonderful resource that we have a Nation here. So, looking forward to gathering information.

Again, Chairman, thank you for calling this committee hearing, and looking forward to learning very much this morning. I yield back.

Mr. MICA. Thank you. I will yield to the gentleman from Missouri, Mr. Long.

Mr. LONG. Thank you, Chairman, and thank you all for being here today. I think this is vitally important. And the Chairman's right; we are not used to seeing breakers like this on the Potomac.

[Laughter.]

Mr. LONG. So, it is a pretty good room to hold it in to see what kind of devastation and havoc that a spill has on this area.

And I want to thank Congressman Rivera for his work on this and bringing it to everyone's attention. I thank Chairman Mica because he is always preempting versus responsive, which I think is extremely, extremely important in a situation like this. And he is one that wants to act instead of react, so that is why we are here today. And thank you for your attendance.

Mr. MICA. Thank you, and the gentleman from Ohio, Mr. Gibbs.

Mr. GIBBS. Thank you, Mr. Chairman. It is a privilege to be here. It is great to see the great turnout. Obviously it shows the interest and the concern. And as the chairman said, the Water Resources Environment Subcommittee had a joint hearing with the Coast Guard last year. We brought Coast Guard officials in to hear from their side what was happening and what they were doing in their analysis and their study, and I think we should be getting another update on that.

But I think, as the chairman said, it is interesting when you look at *Deepwater Horizon*, what is happening not too far from here in the Cuban waters is actually deeper drilling and central for greater devastation.

So, I think I want to hear from the witnesses to hear your thoughts on what we are doing and what we can do to improve if there is a spill or a problem, the best way to address that, especially when we are working with a foreign country that we do not have the kind of relationship we need.

So anyways, glad to be here, and I yield back.

Mr. MICA. Thank you, and let me recognize now Chairman Ros-Lehtinen, welcome her to our committee.

Ms. ROS-LEHTINEN. Thank you so much, Chairman Mica. Thank you for the Members for giving us, the South Florida congressional delegation, some of us the opportunity to testify at this very important hearing.

The Chinese oil rig *Scarabeo 9* reached Cuban waters earlier this month, as we all know, and reports indicate that the Spanish company Repsol and the Cuban regime have already commenced their preparations; they are drilling for oil.

Instead of the Obama administration attempting to prevent oil drilling from occurring so close to our shores, President Obama's administration have held Repsol's hand every step of the way along Cuba's coast. Some critics have argued erroneously that we should ease sanctions against Cuba in order to protect ourselves from an oil spill. This is merely a backdoor attempt to ease sanctions on the Cuban regime, a State Sponsor of Terrorism, because the Departments of Commerce and Treasury have already granted licenses to

U.S. companies in the event that we are threatened by an oil spill from Cuba. And further license agreements would not prove beneficial to U.S. foreign policy.

But the concerns go well beyond Repsol. Reports indicate that Malaysia's company, Petronas, in cooperation with Russia's State-owned Gazprom, will be the next lease holder to drill for oil in Cuban waters. These are the same companies that helped the Iranian regime develop its energy sector, and by doing so, gave Iran the financial resources to pursue its nuclear weapons program.

These companies do not care about U.S. security concerns, nor our immediate environmental safety. The media, of course, has stated that the oil drilling in Cuba would take place just perhaps 50 miles off the Florida Keys or Florida Straits, an area that I am so proud to represent. This is three times as close as operations located in U.S. waters are permitted to drill. An oil spill off the coast of Cuba would take mere days to reach the fragile shores of Florida.

We cannot prevent Repsol from drilling now, but we can apply pressure to these companies and these countries that seek to drill next.

I urge my congressional colleagues to push the Obama administration to act in order to prevent new potential leaseholders from moving forward so that we can prevent the Castro brothers from becoming the oil tycoons of the Caribbean. We can deter companies like Petronas, like PDVSA, like Gazprom from exploratory drilling in Cuban waters through tools that are already available to us, as well as implement new measures in order to guarantee that entities think twice before entering into agreements with a U.S. State Sponsor of Terrorism.

My colleagues and I have introduced legislation that takes further steps in order to deter companies and individuals from entering into oil agreements with the Castro regime, as well as prevent an oil spill just miles from our beautiful coral reefs.

I have authored the Caribbean Coral Reef Protection Act, legislation that would sanction companies and individuals who aid the Castro brothers in their oil drilling activities. My colleague from South Florida, Congressman David Rivera, has introduced the Foreign Oil Spill Liability Act in order to apply liabilities and penalties faced by foreign entities if an oil spill were to reach U.S. shores. In addition, Mr. Rivera's legislation would seek to triple the liabilities cap for spills that originate from a State Sponsor of Terrorism.

Mr. Chairman, Mr. Rivera's bill has been referred exclusively to your committee, so I hope that you and your colleagues consider this legislation as soon as possible.

Also, passage of the bipartisan Caribbean Coral Reef Protection Act and the Foreign Oil Liabilities Act would discourage individuals, discourage companies, and countries from engaging with the Castro brothers in their dangerous oil drilling scheme because it would enforce sanctions and apply liability caps. These pieces of legislation ensure that if an oil spill reached U.S. shores, the American people and American businesses would be properly compensated.

An oil spill off the coast of Cuba would wreak havoc not only on our environment, but also, as you pointed out, Mr. Chairman, on the tourism industry in Florida, impacting our economy through this difficult downturn in our State.

The United States cannot stand idly by as the Castro brothers enter into these oil drilling agreements with companies like the Russian-owned Gazprom, or the Venezuelan-owned PDVSA, which has already been sanctioned by the U.S. due its dealings with the Iranian regime.

President Obama has failed miserably to use any and all means available to prevent Repsol from drilling, and now we must deal with the results of this administration's dangerous complacency.

Thank you, Mr. Chairman, for this opportunity.

Mr. MICA. Thank the gentlelady. I would recognize now a former member of the panel, Mr. Diaz-Balart. Welcome.

Mr. DIAZ-BALART. Thank you, Mr. Chairman. Always a privilege to be with you, sir. I want to thank also the members of the committee for bringing attention, you, Mr. Chairman, the members, to this very important matter.

I also want to thank the Lieutenant Governor, the Federal Government agencies that are here, the Coast Guard, NOAA, the Department of Interior, and FIU with Dr. Proni, for testifying here this morning.

Cuba, as the chairman of the International Relations Committee has mentioned, is a U.S. designated State Sponsor of Terrorism, which is directly responsible for acts of international terrorism, harbors fugitives from U.S. law, actively partners with other terrorist States, such as Iran and Syria, and terrorist groups, such as Hezbollah and FARC, just to name a few.

This is a regime that does not have transparency. It does not have any accountability. It does not have the ability to or the will frankly to either protect its people, its coastline, and much less the coastline of the United States of America.

In Florida, Mr. Chairman, as you well know, we have 800 miles of beautiful beaches you can see if you right outside the window. More than $2.5 trillion in insured coastal property, and a $60 billion tourism industry, all, all for which are as safe here.

And, again, we are dealing with a regime that for decades, up to the 1980s, was actually asking for unilateral nuclear strikes against the United States. I do not think we should think that they are going to be too concerned about protecting all of that that I just mentioned.

Despite this, the U.S. administration, our administration, appears to be providing assistance, guidance, and advice even to Repsol now to most quickly and efficiently channel dollars to the terrorism business partner of Repsol, the Cuban regime. So, while preparing for disaster is certainly important, prevention obviously, though, is better.

When Secretary Salazar went to Spain and met with Repsol, he should have and he could have strongly dissuaded that Spanish company from any drilling in Cuban waters. He did not. He made no real attempt to stop it.

So, even if this support may not technically violate the Trading with the Enemy Act, TRSA, the Cuban Democracy Act, and "Hub"

known as the Helms-Burton Act. The administration certainly is not acting consistently with the principles underlying those laws which are meant to prevent a terrorist regime that brutally oppresses its people and is a threat to our national security.

Because we are dealing, Mr. Chairman, with a close terrorist State that has no transparency, no safeguards, and cannot be trusted, and since, I deeply fear, that the administration of President Obama is allowing for a potential disaster, I must once again really thank you, Mr. Chairman, and this committee for bringing out this issue, for talking about this issue, and for having this hearing.

Thank you, Mr. Chairman. Thank you to our colleagues.

Mr. MICA. Thank the gentleman. Let me recognize Mr. Rivera now.

Mr. RIVERA. Thank you very much, Mr. Chairman, for having this hearing. Thanks to all of the committee members that have traveled to come down to South Florida, even though, as we can see from the scene around us, it is not such a bad place to have a hearing.

I also want to thank the witnesses for taking the time to come here today, particularly my former colleague in the House of Representatives, Lieutenant Governor Jennifer Carroll, who is doing such a wonderful job not only promoting Florida, but her presence here demonstrates how important it is for her and for Governor Rick Scott to protect Florida and protect Florida's natural resources and our economic interests.

From many dangers that are posed by what is going on right now off the coast of Cuba, dangers that first and foremost would impact our region, the southern cone of Florida, as one of those maps so clearly demonstrates, the map all the way to the right. When you look at the loop current, you will see immediately who will be impacted if there is any accident off the coast of Florida. And that is, first and foremost, the Florida Keys and the entire South Florida region.

And we need to make sure that those dangers that are represented by the activities off of Cuba are prevented to the greatest extent possible. Right now, we know there will be no protection whatsoever from the Castro dictatorship. The Castro brothers will certainly have no concern with respect to the environmental integrity of Florida or the United States. We know what their dismal environmental record is in Cuba, and we need to make sure that we hold all parties accountable.

As has already been stated, the Obama administration has made no effort whatsoever to dissuade this activity. In fact, by not dissuading them, they have encouraged the Castro dictatorship to move forward.

So, since we are not going to do anything with respect to the Castro dictatorship certainly in this administration, we need to make sure to ensure that all the parties that are collaborating with the regime are also held responsible and understand that they will be liable as well.

Chairman Ros-Lehtinen mentioned earlier my legislation, the FOSL bill, which I think makes the point that legislation is needed

to increase sanctions on collaborators of the regime, as well as the regime itself.

We know that the Oil Pollution Act of 1990 ensured that if there is a rig disaster in American waters, the responsible party must pay for all cleanup costs, and to reimburse the Oil Liability Trust Fund up to $1 billion to pay out claims. However, if that same accident happened off the coast of a foreign nation and the oil reached American waters and beaches, the Oil Liability Trust Fund would pay $150 million for cleanup and up to $850 million for claims.

The Attorney General has existing authority to seek compensation for the fund from the responsible party, but the most they would have to pay is $1 billion. If the spill exceeds $1 billion, then the American taxpayer, or the affected States in this case, certainly the State of Florida, would have to pay the difference.

So, my legislation, the Foreign Oil Spill Liability Act, will ensure the responsible foreign party pays for all cleanup costs by applying the Oil Pollution Act to them as well.

Furthermore, the bill would also apply the Clean Water Act penalties on the responsible foreign party. So, therefore, if the rig was operated in the waters of a U.S. State Department designated State Sponsor of Terrorism, then the liabilities and penalties on the responsible party would be tripled.

This is the only way I believe that we will be able to move this administration toward a more proactive policy of ensuring that State Sponsors of Terrorism, as Congressman Mario Diaz-Balart so eloquently stated, and which Cuba is one of those listed on the official list of State Sponsors of Terrorism, as designated by our Government, make sure countries like those and their collaborators, their private sector collaborators from around the world, understand that they are going to be held responsible if anything happens to the coast of Florida as a result of their activities in working with a terrorist dictatorship like the Castro dictatorship, to promote their economic interests.

So, not only do we need to make sure and make the public aware of the dangers represented by having the Castro dictatorship participate in this type of activity, but we need to make sure their collaborators are aware that we are going to hold them responsible as well for any activity or any participation they may have with that dictatorship.

And with that, I yield back. Thank you again, Mr. Chairman.

Mr. MICA. Thank the gentleman. We will now recognize and welcome Mr. West to be recognized.

Mr. WEST. Thank you, Mr. Chairman. Can you hear me OK? Good morning, ladies and gentlemen. Thank you, Mr. Chairman, and other members of this panel from outside of the State of Florida for hosting today's important hearing down here in Florida. Also welcome to our Lieutenant Governor Carroll, dear friend of mine, Admiral Baumgartner, and the other members of this panel.

I just want to say that I sit on two committees, the Armed Services Committee and also the Small Business Committee. And when I think about the fact that 2 weeks ago the President of Iran, Mahmoud Ahmadinejad, was visiting the nation of Cuba. So for me, this is an economic issue. It is an economic security issue, and

it is also a national security issue. And I thank the chairman for bringing this issue here for us to understand.

Let me first state that I strongly support all of the above energy approach that includes development of natural gas, clean coal, and American produced oil, as well as alternative energy sources, such as wind, solar, hydro power, nuclear, geothermal, and biomass.

Offshore drilling is an important part of this type of comprehensive energy plan. However, it is critical that offshore oil and gas exploration be conducted in a safe and responsible manner, a balanced regulatory structure which does everything possible to avoid another disaster, while ensuring that this vital component of our energy portfolio can continue safely and will provide the best solution.

The Obama administration is not only aware that Spain's State-owned energy company, Repsol, has entered into an agreement with the Cuban regime to drill off Cuba's coast, and that a Chinese built deep water oil rig will be used for this project. The Department of Interior has been actively providing assistance, guidance, and technical advice to Repsol. This is inconsistent with numerous U.S. foreign policy and national security objectives our country has with regards to Cuba.

Let me perfectly clear. Offshore drilling by foreign companies in Cuba's territorial waters is incredibly dangerous to the State of Florida. And make no mistake, Cuba, through their Chinese allies, will find a way to engage in slant drilling that would tap oil from the intercontinental shelf. The assistance from the Department of Interior to Repsol will result in a financial windfall to the Cuban regime. You have heard other Members address this.

And if this were not troubling alone, it may also facilitate processes that could lead to an environmental disaster off the Florida coast, with which the United States would have no jurisdiction.

Tourism is the lifeblood of the economy in South Florida. A lot of small businesses depend upon that. Our beaches, cruise ports, two of which Congressional District 22 I have the privilege of representing, Port Everglades and the Port of Palm Beach. And waterways for what brings millions of tourists and boaters to this area every year. An environmental disaster on par with the *Deepwater Horizon* accident, but this time by a foreign company using Chinese made equipment operated within Cuban territory would be a disaster for our beaches and ecosystems that is located just 90 miles from mainland Cuba, and an absolute nightmare in terms of economic costs.

If an accident occurred by foreign-owned Chinese made equipment operated within Cuban territory, who do you think would clean up the mess, China? Cuba? Or the United States Coast Guard? The bill payers will be you, the American taxpayer. And the victims? South Florida's beaches, its ecosystem, and tourism.

The Oil Pollution Act quite simply does not have sufficient taxpayer protections for major spills that originate in foreign waters. And that is why I have joined with my colleague, and I co-sponsored and strongly support the Foreign Oil Spill Liability Act by Congressman Rivera, which requires the responsible party to pay for the cleaning up of their spill regardless of where it originates

from, and holding them to the same civil liability consequences an American company would face in the event of a spill.

Our coastal communities need peace of mind that if they are impacted by a foreign spill, resources are available to cover their losses. The American taxpayers should not have to foot the bill to bail out the irresponsible behavior of foreign companies.

It goes without saying that the topic of this hearing is incredibly important, and the consequences of the administration's actions to date could be significant for our State as well as our local communities.

I look forward to hearing from each one of you on your perspectives on this matter, and have high hopes that the decisionmakers within the Obama administration will take note of what is being said today.

And with that, Mr. Chairman, I yield back my time.

Mr. MICA. Thank you, Mr. West, and all of the Members for their opening comments.

And without objection, we will leave the record open for 2 additional weeks for additional submission by Members and for the record.

We will turn now to the next order of business is to hear from our witnesses. And let me say at the outset, I am absolutely delighted that the Lieutenant Governor could join us today. I did not think that the Lieutenant Governor would be able to be with us. There is a slight thing happening in the background there.

[Laughter.]

Mr. MICA. There is also a little action going on in Tallahassee which happens to be our legislative session, in which as a former member, she is very actively involved and the key player. So, I cannot thank her enough to break away and come down here and address this issue. And it is an important issue to the State of Florida, but I am very pleased that you would join us today.

I will recognize you first, and I know you have to return after you comment. But on behalf of our panel and a tough time in the State, we appreciate your being here, and you are recognized for comment.

TESTIMONY OF HON. JENNIFER CARROLL, LIEUTENANT GOVERNOR, STATE OF FLORIDA; REAR ADMIRAL WILLIAM BAUMGARTNER, COMMANDER, SEVENTH DISTRICT, UNITED STATES COAST GUARD; REAR ADMIRAL CARI THOMAS, DIRECTOR OF RESPONSE POLICY, UNITED STATES COAST GUARD; DEBBIE PAYTON, CHIEF, EMERGENCY RESPONSE DIVISION, OFFICE OF RESPONSE AND RESTORATION, NATIONAL OCEAN SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION; LARS HERBST, REGIONAL DIRECTOR, GULF OF MEXICO REGION, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, U.S. DEPARTMENT OF THE INTERIOR; AND JOHN R. PRONI, PH.D., EXECUTIVE DIRECTOR, FLORIDA INTERNATIONAL UNIVERSITY APPLIED RESEARCH CENTER (ARC)

Ms. CARROLL. Thank you, Chairman Mica, and Members. Chairman Mica, you are definitely a visionary because a picture speaks volumes and a thousand words.

Mr. Chairman and Members, thank you for the opportunity to speak to the committee today to outline the State of Florida's concerns and preparedness to respond to oil spills in light of the looming oil drilling off the coast of Cuba.

The Communist government of Cuba and its leader, Raúl Castro, according to the Department of State, continues to hamper private sector growth with tight restrictions on supply of goods and labor, high taxation that discourages hiring and profits, a ban on professional entrepreneurs, limited access to transportation and credit, a monopoly on importation, legal uncertainty, and lack of transparency, and a host of other disincentives and restrictions.

With this track, Cuba cannot be trusted to provide even the bare essentials to its own citizens, and it certainly cannot be trusted to oversee safe and environmentally sound oil drilling only 90 miles off the pristine Florida coast.

With these facts in mind, over the past year under the direction of Governor Rick Scott, the State of Florida has endeavored to be prepared for any drilling-related disaster that may impact Florida's shores.

Florida's preparedness plan has three main aspects: emergency management, led by Bryan Koon, the director of Division of Emergency Management, economic, led by Gray Swoope, who is the Secretary of Commerce and president of Enterprise Florida, and environmental, led by Herschel Vinyard, secretary of Department of Environmental Protection.

The *Deepwater Horizon* incident in 2010 has shown us that a spill that poses even a potential of impact on Florida's water or land causes a huge negative impact on the economy. Florida's two largest industries are agriculture, including aqua culture and fisheries, and tourism. These are real, or even perceived negative impacts on these industries, which may caused by a direct harm, or the appearance of harm, to the marine environment, reduces tourism by discouraging people from visiting Florida's beaches and attractions, and it sends economic shockwaves through the State.

The panhandle of Florida is still recovering from the negative economic impacts resulting from the *Deepwater Horizon* spill. Florida's coastline was spared from a more severe oil spill impact because weather conditions directed most of the oil away from the State. However, many people throughout the State, as well as potential out-of-State and international visitors, canceled trips to Florida's vacation spots, fishing excursion, beach visits, because of the perception that our shoreline was not safe. News coverage of the spill contributed to canceled visits because it created the impression that spill effects were evident and widespread throughout the State.

I would like to take this opportunity to remind the committee and the American public that Florida's beaches are as clean as beautiful as ever. Tourism in the State has risen, and there are great bargains for many people to come and visit Florida.

[Laughter.]

Ms. CARROLL. One of the reasons Florida has been able to adequately respond to the DWH spill is because our State and our businesses were protected by Federal law, such as the Oil Pollution

Act of 1990. OPA '90 has been a key component in Florida's recovery effort.

Chairman and Members, Florida is greatly concerned about the uncertainty of the application of OPA '90 to drilling in foreign waters. OPA '90 identifies a responsible party that is held accountable financially for response, recovery, remediation, economic and natural resource damages. Without the protection afforded by the Federal law, all costs would be borne by Federal, State, and local governments. Furthermore, Florida is very concerned with the ability to have funding for third party claims in the event of a spill.

Florida had more third party claims than any other State as a result of the *Deepwater Horizon* incident, despite the less than expected oil which reached its shores. Much of this effect was due to the large negative impact on the vital tourism industry throughout the State. There is uncertainty in a scenario with a foreign source of spilled oil on the funding and processing of third party claims and the associated timeline for such claims.

A tremendous number of Florida's citizens depend on a vibrant tourism industry to sustain their livelihood, and they would be devastated economically by a major foreign oil spill, even if the oil does not reach our shores.

Florida strongly urges the Federal Government to develop and market a plan to address how our citizens can be compensated for damages created by a foreign oil spill. It is imperative that the Federal Government develop an international agreement that will give clear direction and guidelines for financial responsibility, recovery, remediation, economic and natural resource damages, in the event of an oil spill like those outlined in OPA '90 or the legislation that Congressman Rivera has sponsored.

Working with our Federal, local, and private sector partners, Florida believes that we have positioned ourselves to be as ready as possible in the event of a spill. In addition, we have been assured that the Coast Guard has worked with Repsol YPF, the company conducting initial exploration drilling off Cuba, to develop a good relationship and specific plans should a response ever be necessary.

Unfortunately, response plans does not provide legal remedies to make injure parties hold or assume responsibility for restoring Florida's natural environment that may be harmed.

Florida is also heartened that multilateral discussions are ongoing with all of the Nation's drilling in the North Caribbean Basin, or those potentially impacted by offshore oil exploration. These talks need to continue in order to ensure the Federal Government has the necessary authority and relationship to respond swiftly and effectively in an offshore environment to minimize the amount of oil spill which may reach Florida's shoreline.

There were many lessons learned from Florida's experience with the DWH incident, and several organizations, including the U.S. Coast Guard, spent many hours developing a thorough analysis outlining those issues.

As a followup to that analysis, the State of Florida, Department of Environment Protection, the Division of Emergency Management have worked diligently with the Coast Guard and local govern-

ments to apply the lessons learned, and ensure that more specific protection plans are developed for coastline counties.

In addition, on November 2011, the major Federal, State, local, and corporate parties who would be involved in a potential Cuban oil response, performed a table top exercise to ensure that everyone understood their roles and responsibility in the event of a spill, and to identify any gaps in that response planning to date.

In conclusion, Mr. Chairman and Members, the State of Florida has been prepared for the eventuality of oil drilling off Cuba's coast. We have been working with the U.S. Coast Guard and organizing our State agencies. Additionally, we have applied the lessons learned from the *Deepwater Horizon* incident, and we are determined to keep Florida's beaches, coral reefs, waterways, fisheries clean and open.

We are also aware of the type of government that we are dealing with in Cuba. The dubious track record only focuses Florida and our private and public sector partners on being even more prepared.

On behalf of Governor Rick Scott and the people of Florida, I thank you and the committee in taking the initiative to address this critical issue and to look forward to working with you on this and many other issues that the Transportation Infrastructure Committee has before it that can help us continue Florida's strong economy.

Thank you, Mr. Chairman and Members.

Mr. MICA. Thank you, again, Lieutenant Governor Carroll. And I do know you have to scoot back to the State capital, and any time that you want to go, feel free to leave. But we, again, are just very grateful that you would take time, and also state the position of the State of Florida before the panel today. And we look forward to working with you. So, thank you again.

We will turn now to our second witness. We are pleased to have Rear Admiral William Baumgartner, who is the commander of United States Coast Guard Seventh District. Admiral Baumgartner, thank you for being with us, and I will yield to you for your statement.

Admiral BAUMGARTNER. Good morning, Chairman Mica, subcommittee members, Members of the Florida delegation. As commander of the Seventh Coast Guard District, I am the pre-designated Federal on scene coordinator for any spill that threatens the U.S. exclusive economic zone within my district, even if that spill originates in foreign waters. As such, I will focus my testimony on tactical matters.

A spill from offshore drilling in the Cuban, Bahamanian, or Mexican EEZ would present a significant threat to the United States. The international nature of the incident, along with swift currents, would generate additional challenges. I assure you that I will use the full extent of the authorities available to me to attack any oil spilled as aggressively as I can as close to the source as possible so that we can best protect the environmental, economic, and security interests of the United States.

Prompt notification will be critical to any response effort. The expected drilling sites areas are already patrolled extensively by Coast Guard aircraft and cutters engaged in our drug and migrant

smuggling interdiction missions. We have increased the training of those crews to improve their ability to spot and identify potential oil pollution. We have also been actively engaged with the maritime industry, including the Cruise Line International Association and others to educate them on these dangers. These partners will provide an additional layer of awareness and vigilance for us.

Based on the lessons learned from *Deepwater Horizon*, we revised our regional contingency plan and added an annex to address international sources of oil pollution. We completed revamped the area contingency plans, and we also developed a special offshore response plan.

During our planning efforts, we conducted extensive engagement with Federal, State, and local agencies as well as industry, academia, and nongovernmental organizations. I have briefed Governor Scott and Lieutenant Governor Carroll on several occasions.

Both the Florida Division of Emergency Management and the Department of Environmental Protection have been exceptional planning partners. I have also talked and worked with Visit Florida.

Likewise, my sector commanders throughout Florida have engaged their area committees in revising area contingency plans. These committees include not only Federal, State, and local agencies, but also nongovernmental organizations with a wide range of maritime and environmental interests.

We updated our geographic response plans which highlight environmentally sensitive areas and identify appropriate spill response tactics. In addition, we updated 80 tidal inlet protection strategies. These strategies are designed to prevent oil from entering the fragile ecosystems of inshore areas. We have included the Corporation for National and Community Service to help us coordinate volunteers who want to assist cleanup efforts.

Based on the lessons learned from the *Deepwater Horizon*, we developed an offshore response plan with strategies, tactics, and command and control features for a spill in the offshore environment, including coordination with foreign response efforts.

The offshore command will work directly for me and will complement command posts established by our sectors in nearshore areas. The offshore command will integrate Federal, State, industry, and nongovernmental organizations into a unified command for offshore response activities, including source control, dispersants, in-situ burning, and offshore mechanical recovery of oil. This plan has received attention from all levels of government and industry. More than 80 persons participated in our exercise last November.

The Coast Guard has also been issued OFAC and BIS licenses that will allow us and U.S. response companies working under our direction to attack oil in the Cuban EEZ.

In the event of a major spill, we will immediately begin deployment of critical resources to the areas with the greatest probability of shoreline impact. Aircraft and vessels will monitor the situation offshore and coordinate the need for any search and rescue support. We will employ every response tool, including surface dispersants, in-situ burning, and mechanical recovery, to attack the offshore oil quickly.

However, in any large spill, some portion of the oil will likely evade all offshore response efforts. Command posts in Key West, Miami, Jacksonville, and potentially other locations will focus on protecting the nearshore environment. Their top priority will be implementing tidal inlet protection strategies to prevent the oil from passing between barrier islands.

In addition, they will activate plans to protect critical and unique resources, including power plan cooling intakes and marine mammal research facilities. They will also work hard to maintain the maritime transportation system in South Florida's critical ports of Miami and Port Everglades.

While I am confident that we have a sound plan, we will face challenges. The fast currents of the Florida State will challenge additional response activities. The use of boom will also be different than the public might expect. Boom will be used primarily for tidal inlet protection. We should not expect to see a cocoon of boom around the entire Florida coast. Booming near strong currents must be done with precision and restraint; otherwise, endangered sea grass and coral unique to South Florida ecosystems could be at greater risk from the anchoring systems required to hold the boom in place than from the oil itself.

I thank you for the opportunity to testify today, and I look forward to any questions you might have.

Mr. MICA. Thank you, and we will hold questions until we have heard from all of the witnesses. Is Rear Admiral Cari Thomas going to also testify? OK.

Admiral BAUMGARTNER. Yes.

Mr. MICA. Then let us recognize her, and she is the director of the response policy activities for the United States Coast Guard. Welcome, and you are recognized.

Admiral THOMAS. Thank you, Mr. Chairman. Good morning, Mr. Chairman, subcommittee members, and Members of the South Florida delegation. I am pleased to have this opportunity to discuss the Coast Guard's plan for responding a spill that occur outside our exclusive economic zone, and our ongoing efforts to protect U.S. interests and U.S. waters by minimizing the risk of a discharge.

As the director of Coast Guard Response Policy, my duties include overseeing incident management policies. Drawing upon my 14 different assignments, including three separate duty stations in South Florida, I have been involved with a number of incidents or disasters, including hurricanes, ship groundings from fires, airplane crashes, mass migrations, as well as hundreds of search and rescue cases in the Straits of Florida and off Cuba and Haiti. Each of these events reinforce the principle of preparedness. Advanced and extensive planning exponentially improves the quality of response. The Coast Guard has been fully engaged to prepare and prevent a spill so it minimizes affecting the economy and the environment.

Under the International Maritime Organization, the Coast Guard participated in a series of multilateral seminars focused on oil spill contingencies in the Caribbean. These engagements are fostering a common understanding of international obligations and standards for oil spill preparedness, prevention, and response. The seminars

build upon the framework of the Caribbean Island Oil Pollution Response and Cooperation Plan.

Participants included technical level planning experts in drilling, plans, and equipment, emergency spill preparedness and response, and ocean modeling. Our engagements with the Northern Caribbean countries is well under way in improving collaboration essential to contingency planning.

The Coast Guard also has a full visibility of Repsol's response strategies, resources, and capabilities. Repsol invited Coast Guard observation and preparedness exercise in July 2011. They also provided access to key documents, including their oil spill response plan, and extensive review of that plan found it to be aligned with U.S. and international standards.

Repsol volunteered to undergo a pre-arrival review of their drilling rig. The review compared this vessel with applicable international safety and security standards, as well as U.S. standards for units operating on the Outer Continental Shelf. The vessel was generally compliant with existing international and U.S. standards.

The Coast Guard has asked the international consortium oil and gas producers to engage other companies planning to drill in the Caribbean offshore. We would like to include all prospective drilling companies in future multilateral efforts on regional oil spill prevention and response efforts.

As I mentioned earlier, contingency planning, training, and exercises are fundamental to our readiness. Contingency planning occurs under the national contingency plan at several levels. At the national level, the Coast Guard serves as the vice chair of the National Response Team, which ensures national capabilities are available to support response efforts. Specific to readiness for Caribbean drilling, we have leveraged the Federal Interagency to ensure a united approach to readiness. The Coast Guard has obtained license from OFAC and BIS, which allow us to direct U.S. response operations in the Cuban EEZ in the event of a spill.

As you heard Admiral Baumgartner state, the district participates through the regional response teams on issues such as dispersants and in-situ burning on preauthorizations. Response Team 4, which is co-chaired by District 7, has updated the regional contingency plan, and, as he said, includes an annex on international offshore oil spills.

The Coast Guard is confident that our partnerships at the national, regional, and local levels strengthen our planning process and our readiness for oil spill response.

Any disaster response requires the whole of community and a unity of effort across all levels of government, industry, and the private sector. In the event that a spill does occur within the Cuban EEZ, the Coast Guard will mount an immediate response in partnership with other Federal, State, tribal, and local agencies. We will focus on combatting the spill as far offshore as possible and as close to the source as possible using all viable response tactics.

As a Florida resident for over 20 years and a property owner in Miami-Dade County, I understand a citizen's concern for the economy and the environment. The Coast Guard initiated aggressive preparedness measures to ensure readiness to respond to what would be a low probability, but high consequence event.

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

Mr. MICA. Thank you, and, again, we will withhold questions.

We will now recognize Debbie Payton. She is the chief of the Emergency Response Division at the NOAA office of Response and Restoration. Welcome. You are recognized.

Ms. PAYTON. Thank you, Mr. Chairman and members of the subcommittee and Members of the Florida delegation for the opportunity to speak with you today.

Mr. MICA. I do not think we can hear her.

Ms. PAYTON. I do not think it is on.

Mr. MICA. Pull it up as close as you can.

Ms. PAYTON. OK. Can you hear now? Yeah, I do not think this one—now it is on.

Mr. MICA. There you go.

Ms. PAYTON. OK. Now it is on. Thank you. OK.

My name is Debbie Payton, the chief of the Emergency Response Division for the National Oceanic and Atmospheric Administration's Office of Response and Restoration.

I am going to switch mics. OK. Let us try this again. OK.

With over 30 years of experience in oil spill response, NOAA clearly understands spills can harm people and the environment and can cause substantial disruption to marine transportation and tourism, with potential widespread economic impacts.

NOAA has three critical roles in spill response. That first role is during emergency response, NOAA serves as the conduit for bringing science information into a response so that decisions that the Federal on-scene coordinator and unified command are making are based on the best available scientific information. We do that through regionally distributed Scientific Support Coordinators.

The second role is as a natural resource trustee, NOAA conducts, with co-trustees, natural resource damage assessments to evaluate the impact and lost resources during a spill event.

And then, finally, NOAA represents the Department of Commerce in spill response decisionmaking and preparedness activities through the National Response Team.

In addition to those roles that NOAA plays directly for spill response, NOAA provides weather forecasting, satellite services, navigational services, fisheries and sanctuaries management, ecosystem mapping and analysis, and research labs, one of which is located right here in Miami-Dade, the Atlantic Oceanographic and Meteorological Lab, that do research into all of these things so they can be brought into the service part.

As mentioned by previous speakers, the Coast Guard has been working very aggressively to update the area contingency plans, and NOAA has been involved in that effort in a number of ways. The one which I am going to speak with the committee about today is focused particularly on the potential threat from a modeling and oceanographic standpoint to the coast of Florida, and actually farther up the eastern seaboard as well.

This modeling study follows on the earlier efforts conducted by then MMS, the Bureau of Ocean Energy Management, and some studies that the U.S. Coast Guard was able to get access to

through Repsol for their oil spill response planning modeling efforts.

In a real spill, the scenario is known. You know where the oil is being released from nominally, how much oil and what type of oil. And you know the environmental conditions, what the currents are, what the winds are, any storms coming up or anything else. In planning like this, you do not have the benefit of knowing that, so you have to count on climatological/historical information. And that is what the studies that I am going to briefly touch on today will talk about.

Surface oil movements generally are affected by winds and currents and the characteristics of the oil itself. And, Chairman, as you mentioned, as you identified in your opening speech, the Florida area is very unique in that you have a very, very persistent current here in the Gulf Stream system. Between the loop current and the Florida current and the Gulf Stream current, that is a very strong system that will dominate the movement of the oil.

The significance of these strong currents is they can move oil very quickly, potentially up to 70 or 80 nautical miles in a 24-hour period, much faster than the hundreds of spills that we respond to each year.

The modeling results can be significantly different depending on where you look at for an initial release site. And, with the Coast Guard, we have identified a number of sites. If you look at that second map all the way to the west, all the way to the east. The results that I will speak really briefly about are only from the first potential drilling site, Repsol's site, about 16 miles north of the Cuban coast. If people are interested, in the Q&A I would be happy to address results from other sites as well.

We made assumptions for the modeling. We do not know what kind of oil it will be, how much could potentially be released. So, we assumed a 75,000 barrel per day release for 90 days from that site of a medium crude oil. The model has been set up with fairly large squares, 100 nautical mile squares. And what you do, since you are looking at historical data, is count how many scenarios impact a square. You run hundreds of scenarios with tens of thousands of particles and count how many scenarios impact each area.

What we find from that is, in general, from that first site and looking at surface oil only, while a good portion of the oil remains offshore, there are a number of scenarios, at least 40 percent, and upwards of that in some portions of Florida coast, that could have some oil from a release at that site impact Florida coastlines.

The fastest is in one of the scenarios, oil reached the east coast of Florida in 5 days, but in 95 percent of the scenarios the first oil reaches the east coast in 10 to 20 days.

The Florida Keys show lower impact probabilities, on the order of 20 to 30 percent. And the reason for that is, from that site, you have to cross a very strong current to get to the Florida Keys. As a matter of fact, most of the impact showing the Florida Keys are under scenarios where the oil goes to the west first, then goes north, gets into the loop current, and comes to the Florida Keys. So, actually, although one scenario had an impact in 3 days in the Keys, 95 percent were 20 to 30 days to impact the Keys. So, actu-

ally longer because you've got to get across that very strong current.

Probabilities decrease northward from the Florida border, but increase again as you get near Cape Hatteras where the Gulf Stream comes very close to the coastline.

North of Chesapeake Bay, none of the modeled scenarios showed impact above a level of concern. And in doing these kinds of analyses, you have to decide what your level of concern is; the level that we chose was 500 barrels per grid cell, so that is 500 barrels over 100 square nautical miles. That is equivalent to about 25 percent of that 100 nautical miles square being covered with a sheen, or the equivalent of what we are more likely to see impacts in Florida of 124 tarballs per football field.

Inside the Gulf of Mexico, from that first site, the risks are relatively low, more on the order of 10 percent.

NOAA is committed to continuing to work with the spill response community and the Coast Guard to provide the best possible science to support a robust and effective planning process to ensure we are as prepared as possible should a spill occur in this offshore region.

Thank you for the opportunity to testify before you today, and I look forward to questions.

Mr. MICA. Well, thank you, and we will hear now from Lars Herbst, and he is the regional director of the Gulf of Mexico region for the Bureau of Safety and Environmental Enforcement, U.S. Department of Interior. Welcome, and you are recognized.

Mr. HERBST. Thank you, Mr. Chairman, and members of the committee. I would like to thank you for the opportunity to participate in today's hearing. I am Lars Herbst, regional director of the Gulf of Mexico region for the Bureau of Safety and Environmental Enforcement.

BSEE is the agency responsible for enforcing safety and environmental standards regarding oil and gas exploration development and production activities on the United States Outer Continental Shelf.

Today I would like to share with you information on the actions taken to ensure, within our ability to do so, that oil and gas operations in neighboring waters outside the United States jurisdiction are undertaken in a safe environmentally responsible manner consistent with international and industry standards.

As you know, the 2010 *Deepwater Horizon* blowout and oil spill 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 promote safety and protection of ocean environments and coastlines and the exploration, development, and production of U.S. offshore mineral resources.

The Department of Interior and BSEE have taken an active approach to identify and become involved in international initiatives that promote integration of safety and environmental concerns in offshore development decisionmaking. This approach includes sharing lessons learned and best practices for safety and environmental standards, participating in technical and information exchanges with our international regulatory counterparts, and providing tech-

nical advice to the U.S. Department of State, other relevant U.S. agencies, and the next generation of oil and gas producing countries.

This international engagement is in addition to our continued coordination with key agencies across the Federal Government, including the Department of State, U.S. Coast Guard, the Environmental Protection Agency, and the National Oceanic and Atmospheric Administration.

We also engage in ongoing communications with offshore industry, and oil response, and blowout containment companies. In particular, the Department of Interior and BSEE are working closely with other Federal agencies to address the potential threat of an oil spill in neighboring parts of the Gulf of Mexico that could affect U.S. waters, shorelines, and resources.

Several countries on or near the Gulf of Mexico are expected to proceed with offshore drilling in their exclusive economic zones, or EEZ, in the near future. As you are aware, the Spanish oil and gas company, Repsol will soon begin to drill its offshore wells in Cuba's EEZ using a newly constructed mobile offshore drilling unit, or MODU, the *Scarabeo 9*. We also expect additional offshore drilling activity in the EEZs of Bahamas and Jamaica, and continuing offshore activity in Mexico's EEZ.

BSEE is actively engaged in U.S. Government efforts to promote drilling safety measures to prevent oil spills. These activities including cooperating with our regulatory agency counterparts in the region, including Mexico, through bilateral and multilateral mechanisms to develop common safety and response standards, and communicating with Repsol to encourage its compliance with U.S. drilling safety and related environmental standards.

While BSEE does not have oversight authority over Repsol's activities in the Cuba EEZ, beginning in February of 2011, at Repsol's request, we entered into discussions concerning Repsol's potential activity offshore Cuba and its plans related to drill and well control.

We have made clear in our numerous communications with Repsol that we expect Repsol 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. Subsequently, Repsol officials have stated publicly that in carrying out its exploratory drilling plans in Cuban waters, it will voluntarily adhere to U.S. regulations and the highest industry standards.

Repsol offered U.S. agencies an opportunity to board the *Scarabeo 9*. BSEE and the U.S. Coast Guard accepted. On January 9, 2012, experts from BSEE conducted a review of the *Scarabeo 9* while the rig was off the coast of Trinidad and Tobago.

While aboard the *Scarabeo 9*, BSEE officials examined the rig's vessel construction, drilling equipment, and safety systems, including the blowout preventer. Based on the information shared by Repsol, BSEE was able to use its well containment screening tool to conclude that the well could be safely capped using existing methods.

The review was designed to familiarize ourselves with the rig and provide guidance to Repsol on how to ensure that its safety

measures meet U.S. standards. The review was consistent with U.S. regulatory efforts to minimize the potential for a major oil spill that would hurt U.S. economic and environmental interests.

The review evaluated the vessel for consistency with both applicable international safety standards and U.S. standards for drilling units operating in the Outer Continental Shelf of the United States. The review's work scope involved a comprehensive pressure and function testing of the BOP, focused discussions with rig personnel, and a walk through of the rig that included key visual observations and a physical testing of devices.

As I noted earlier, BSEE does not exercise oversight authority over the *Scarabeo 9* or its intended operations in the Cuban EEZ. Accordingly, our review does not confer any form of certification or endorsement under U.S. or international law. While our review of the rig was not as exhaustive as our review of a rig operated in the U.S. OCS would be, BSEE officials found the vessel and the drilling safety equipment, including the BOP, to be generally consistent with existing international and U.S. standards by which Repsol has pledged to abide.

We will remain in communication with Repsol as it moves forward with its activities to provide any further guidance it may seek.

In anticipation of an increase in drilling activities in the Caribbean Basin and the Gulf of Mexico, the United States is participating in multilateral discussions with the Bahamas, Cuba, Jamaica, and Mexico on a broad range of issues, including drilling safety related to prevention of an accident and oil spill preparedness in response, such as subsidy containment were a spill or subsidy blowout to occur.

A series of multilateral meetings are being conducted under the auspices of the International Maritime Organization. The most recent meeting was hosted by the Bahamas in early December. The next meeting is scheduled to begin tomorrow in Curacao.

I was one of BSEE's representatives at the most recent multilateral discussion. All of the country's delegates were highly engaged in constructive discussions regarding preventive regulatory frameworks, safety standards for mobile offshore drilling units, and best practices in oil spill prevention and containment. Our goal is to increase regional cooperation and joint planning for oil spill prevention, preparedness, and response measures for offshore units with a goal of minimizing pollution of marine and coastal environments.

I expect that this week's seminar will continue these positive interactions and provide BSEE personnel the opportunity to share further lessons and recommendations.

In addition, 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 safe and responsible development of oil and gas resources in the Gulf of Mexico. This cooperation has increased substantially in the aftermath of the *Deepwater Horizon* and after the creation of the National Hydrocarbons Commission, or CNH, the Mexican agency responsible for regulating offshore drilling activity.

BSEE and CNH are working towards a set of common safety environmental standards through a series of bilateral technical work-

shops. Following a workshop held this summer at BSEE's Gulf of Mexico regional office, the U.S. and Mexico developed an action plan to define subject areas for the creation of common standards would be appropriate.

In summary, the Department of Interior and BSEE, through ongoing bilateral and multilateral engagement with our foreign counterparts in areas of shared interest and concern, is an essential component for the protection of U.S. environment and economic interests, and an effort that can be mutually beneficial.

Thank you, and I look forward to your questions.

Mr. MICA. And we will now recognize Dr. John Proni, and he is the executive director of the Florida International University Applied Research Center. Welcome, sir, and you are recognized.

Mr. PRONI. Thank you, Mr. Chairman, and members of the committee for giving me the opportunity to talk here today.

I applaud the response plan that has mentioned by Admiral Baumgartner and the work that the Coast Guard has done. As you will see in a few minutes, I consider that we should have a broader plan, a proactive plan, which should go into effect now, which will enhance the scientific understanding that is required to deal with a prospective oil spill, and to improve our ability to respond to such spill.

The direct answer to the question as to whether oil, either in episodic event releases or in chronic releases which can occur in the development of an oil field reaching U.S. coastal waters, is yes. There is a finite probability that this will occur.

To compare and to enhance our discussion, we could make a comparison quickly with the *Deepwater Horizon* versus what might arise in the Cuban exclusive economic zone. If we look at the middle chart of the three charts shown here, you see the location of multiple sites that are programmed for either present or future development. This is a multiyear operation, so we may expect multiyear releases and impacts arising, not just from oil spill, but from chronic releases due to such things as drilling fluid releases, reduced water releases, and a host of other type releases. This is a not a short-time, one-event circumstance.

If you look at those sites and then you look at the next chart, and you see there the oil spill indicated, that is the site of the *Deepwater Horizon* spill. If you look below where you see South Florida, and the Cuba, and the Yucatan Channel, and you see that line that enters in the form of a loop and then proceeds to the east of the Florida coast, that is one general model of the loop current Gulf Stream system.

The point out of that chart is if you look at the distance from the *Deepwater Horizon* oil spill to the site of the Cuban dredging oil drilling, and compare it to the proximal location of that current to the Cuban coast, it is immediately apparent that the likelihood and possibilities of entrainment of the oil, either an event type or chronic releases, can occur very quickly. That is the first significant difference between the *Deepwater Horizon* and the Cuban possibility.

The second difference lies in the way the oil may get into the stream. For the sites shown in the Cuban area, there will be a possibility of the oil being released south of the stream, under the

stream, and north of the stream, depending on the variations in the motion of the stream and the sites.

Entrainment under the stream was not a phenomenon seen to any significant degree in the *Deepwater Horizon* spill, but it is likely to be a phenomenon seen in the Cuban exclusive economic zone drilling.

The third significant feature is we lack the ability to carry out comprehensive drilling fluid evaluation. We lack the ability to fully characterize the oil in the near to Cuban sites. And we lack the ability to apply near site remediation possibilities, including advanced technologies that were not significantly utilized in the *Deepwater Horizon* spill.

For example, we have heard discussions of reparations for the impacts of Cuban oil on the U.S. coast. To put strength under the claim of a reparation, you have to be able to show that the oil that is in your coast did, in fact, originate from the Cuban site. To do that, you have to characterize the Cuban oil, and you have to characterize not only at the site, but you have to characterize it at different distances from where it originates.

In any case, I believe we should put into a place a proactive plan that utilizes the outstanding local expertise available and multiyears of experience that a group of universities and the regional Federal labs have. And that situation should be implemented now so that there is not a delay in the gathering of knowledge, and not a delay certainly in administrative and financial matters regarding such an event.

Finally, I will just close with a comment about the probability of Deepwater. If you look at the third chart, you will see that chart is effectively a sonogram of oil from the IXTOC oil well release in 1979. It is a picture made using sound of oil plumes in the body of water that are moving away from the well site. That first picture is made at about half a nautical mile away from the well site; the second picture is made about 13 nautical miles.

Now, I would say that the possibility exists that for deep drilling, that multiple such plumes occur, and we have to be prepared to know they exist and to be able to respond to that existence.

So, again, I thank the committee, and, again, I stress that we have a consortium of universities and Federal laboratories. The local regional NOAA labs, AOML, NHC, and the Southeast Fishery Centers, and NOVA University, the University of Miami, and FIU, are people with the expertise and modeling, the high resolution modeling, that is going to be required to really address this problem.

So, Mr. Chairman and members of the committee, thank you so much for your attention.

Mr. MICA. Thank you for your testimony, and I want to thank all of the witnesses for their participation today. We will go immediately now to questions, and I will start. And then we will recognize other Members.

Admiral Baumgartner, first of all, there is one rig out there, and that rig is in place. Are they drilling? Do we know if they are drilling now?

Admiral BAUMGARTNER. My information is that it is close to where the drill is, but is not necessarily at the drill site.

Mr. MICA. See, I was told that it is at the site and the drilling would start immediately.

Admiral BAUMGARTNER. We had expected that——

Mr. MICA. Do we know? We do not know?

Admiral BAUMGARTNER. We know where it is at right now. We have ways of knowing those things.

Mr. MICA. Yes, but, I mean, and that should be something the United States knows is is that in place, and have they begun drilling.

Admiral BAUMGARTNER. My information from this morning is it is not quite at the location, and the oil rig is not——

Mr. MICA. OK, but it should be fairly imminent?

Admiral BAUMGARTNER. Yes.

Mr. MICA. Then I was told because of the cost of these rigs, this is a half-a-billion-dollar rig or whatever it is, and it is millions of dollars a day, that they will start almost immediately? Is that your information?

Admiral BAUMGARTNER. Yes, sir. I think probably three-quarters probably in that neighborhood to buy it, and then a half a million dollars a day in leasing costs.

Mr. MICA. So, they will start——

Admiral BAUMGARTNER. So, they will start as soon as they can.

Mr. MICA. So, probably within days, they will be actually drilling. And is it 56 miles that first site off the Florida Keys, do we know?

Admiral BAUMGARTNER. Sir, first——

Mr. MICA. Because the site was already pre-identified.

Admiral BAUMGARTNER. Right. The pre-identified site is about 16 miles north of the Cuban coast, and it is about 80 miles from Key West.

Mr. MICA. Eighty miles from the Keys.

Admiral BAUMGARTNER. About 80 miles, yes, sir. But it is still about the same distance from the Keys.

Mr. MICA. OK. All right. So, the other thing, too, is, these are deep water, and this is a deep water well, and it is expected to be deeper than the *Deepwater Horizon*?

Admiral BAUMGARTNER. Yes, sir. We expect this to be about 5,870 feet of water depth for this first drill site.

Mr. MICA. And I understand the same thing that we are looking at with the Bahamas? That is also deep water?

Admiral BAUMGARTNER. There are some deep water sites there. There are also some shallower water sites there.

Mr. MICA. How far off are the Bahamanians from having a rig off their shores, do we know?

Admiral BAUMGARTNER. The latest estimates that we have is that at best case, the middle of next year.

Mr. MICA. OK. The other thing that came to mind, I mean, we try to make certain that you have the resources necessary. We are in a horrible budget deficit situation here. We are spending over $1 trillion more than we are taking in a year. Your agency has been hard hit. Is this stretching your resources? Have you been working with the administration on your budget for this—well, it will be announced by the President, I guess, by April. Have you asked for more money to be able to respond now that the area sort of danger has expanded?

Admiral BAUMGARTNER. Well, sir, the principle response costs come out of the Oil Spill Liability Trust Fund, so it does not come out of the appropriated budget for my particular——

Mr. MICA. And that is another nice thing I am finding out, too, from staff that we have no way to replenish that. And Mr. Rivera's bill tries to claim money from those who do damage to us, but they have really no obligation to pay, at least under existing law. So, that is going to take a big hit, that fund. And it would not be replenished.

Admiral BAUMGARTNER. Well, sir, the legal obligations and the status of responsible parties and responsible entities are something that the Justice Department has been working very hard on, and there are not necessarily set answers there. But certainly there are possibilities to assert and make sure that the polluting parties are held responsible.

Mr. MICA. Well, again, I am not sure how you do that. And, again, I think they are outside the reach of the United States and Department of Justice. We have not had exactly the greatest working relationship with the Cubans at last check.

OK. Now, you also testified that you reviewed the spill containment plan, is that true, that Repsol has?

Admiral BAUMGARTNER. My staff has reviewed and had been able to look at it.

Mr. MICA. Now, wait a second. That is not something that you are normally charged with. Is that not Department of Interior? If we were in a situation, the Department of Interior and you have a licensing and all. Your enforcement, but we divided that up. Does not the Department of Interior review any of those permits or plans? In fact, that was one of the problems that we had the spill in the Gulf is the Department of Interior carte blanche and almost no time approved an oil response plan. It just so happened that they took one, I guess, that was from Alaska because it included walrus, polar bears, and some other things we found out after the fact.

Did you participate with the Coast Guard or anyone from Interior in looking at this plan?

Mr. HERBST. Mr. Chairman, we did have folks from our headquarters office that are involved with regional oil spill response planning on this. But it was not reviewed at the same level that we would have if it was——

Mr. MICA. In fact, we have some control, but we have no control. OK. So, are you taking their word for it then? Again, I do not think the Coast Guard normally reviews oil spill plans and checks off on them, do you?

Admiral BAUMGARTNER. Well, there are two different parts of the plans. There is the drill plan, which the Coast Guard really has no expertise in.

Mr. MICA. That is what I am talking about.

Admiral BAUMGARTNER. Then there is the contingency response plan.

Mr. MICA. OK.

Admiral BAUMGARTNER. And the contingency response plan as to how they would address oil that has been spilled is something

that—my staff has reviewed Repsol's plan and been able to look at that.

Mr. MICA. Well, again, I am very concerned. I know the limited resources we have, the Coast Guard has, and to be doing cleanup work off of Cuba or for Cuba, just does not sit well with me. But, again, I think we are going to face some challenges.

Dr. Proni said that we will probably get chronic releases. Is that right, chronic releases you said?

Mr. PRONI. That is correct.

Mr. MICA. And then, the other thing that was startling was, Ms. Payton, you said that, wow. How far does this stuff go in 24 hours?

Ms. PAYTON. Given the strength of the current system, the loop current to Florida's current in the Gulf——

Mr. MICA. You said 70 or 80 miles in 24 hours?

Ms. PAYTON. Yes, if it was in the core of the current it could move that fast.

Mr. MICA. I mean, God bless the Coast Guard to respond and by the time we could find somebody who was not paddling down the Colorado River or wherever he was to even look at what was going on.

Well, again, you have to come in. And you said that containment cannot be done in the same manner. I think everybody agrees to this because of this rapid moving current. Is that correct, Admiral?

Admiral BAUMGARTNER. There are a couple of things that the current does affect in our ability to respond to a spill, and I mentioned some things in my testimony. I will kind of try to separate them a little bit.

One is when you are out near the source, if the oil is moving in a swift current there, it does make things like in-situ burning—corralling the oil and then lighting it on fire and burning it—more difficult because everything is moving.

Mr. MICA. It would look nice at night, though, off the beach.

[Laughter.]

Admiral BAUMGARTNER. Yes, sir. It makes mechanical skimming or skimming more difficult because the oil will move faster. It will disperse more quickly, so that is less effective. And it does the make the use of dispersants actually more effective because there is more mixing, and you need mixing for——

Mr. MICA. We do not want to get into dispersants.

Admiral BAUMGARTNER. No.

Mr. MICA. Has EPA figured out what we can use?

Admiral BAUMGARTNER. Sir, the Regional Response Plan already addresses dispersants and what dispersants would be pre-approved for initial use. But as we would go into the spill——

Mr. MICA. Do we have great stores of that that is pre-approved that EPA has approved? Do we have great stores?

Admiral BAUMGARTNER. We have tens of thousands of gallons of that. If we had a potential worse case spill of *Deepwater Horizon* proportions, the manufacturer can begin manufacturing large quantities of more skilled——

Mr. MICA. If they do not get stopped by EPA.

Admiral BAUMGARTNER. Well, the primary dispersant is on the EPA approved list, so they can begin manufacturing more dispersant within 24 hours.

Mr. MICA. Well, thank you. I am just a little bit shocked by the administration, what is it, 2 weeks ago, the President shot down and the administration, Keystone which they looked at for 3½ years. It looks like we are doing everything we can to accommodate the Cuban regime, and that we are going to get stuck with both the damage and also the cleanup costs.

Let me yield to Mr. Hultgren?

Mr. HULTGREN. Thank you, Chairman. I have several questions to throw out, and so I wonder, if possible, if we could keep answers brief; it would be great.

But I am going to start with Dr. Proni. I just have a question. If there was an oil spill from the North Cuba Basin, what would be the impact on U.S. waters and coastline? And I wonder specifically where you think oiling would likely occur on the U.S. coast, which areas would be hit first, and which areas would be most severely impacted?

Mr. PRONI. Well, sir, I have not yet made a detailed study of the transport of the oil, and it has been made with a high resolution model, which is what is needed here.

But I do know from many years of study of pollution releases in the South Florida area that there are mechanisms for oil that might be entrained, say, within the first 100 meters of the ocean to come onto our coral reefs as deep cold water events, which may be the meandering of the Gulf Stream, or may be eddy systems.

But those systems occur all the way along the Florida coast. So, if you say where are the likely areas that it might come to shore in Florida, much of the coast is a likely area.

Mr. HULTGREN. Mr. Herbst, on January 9, 2012, you had mentioned the review systems of the Repsol mobile offshore drilling unit. I wondered would you have certified Repsol's mobile offshore drilling unit for operations in U.S. waters?

Mr. HERBST. Our review is what we call a pre-spud review that we do. It is an informal review. It finds any issues that may exist on the rig. We did find some of those.

Normally what we would do in the U.S., we would do a followup full inspection before the rig starts working. So, pretty much the first review, the pre-spud review, is a cursory review. It did find some issues. Repsol has indicated to us that they will resolve those issues before drilling.

Mr. HULTGREN. What were the most significant issues you saw?

Mr. HERBST. There were some issues associated with a safe welding area on the rig. Also at the time that we did the review, wiring was not completed on several of the safety system, the gas detection systems, on the rig. Those are things that if it was going to enter the U.S. OCS, we would have done a followup to ensure that those were in place and tested.

Mr. HULTGREN. But with the review that was done, if there was not enough information to be able to give approval for that type of rig, to get approval or certification in U.S. waters, is that correct?

Mr. HERBST. Right. The level of review that we did offshore in Trinidad and Tobago were not thorough enough to actually allow to drill in the U.S.

Mr. HULTGREN. OK. Rear Admiral Thomas, just a quick question for you. We have talked a little bit about the Clean Water Act and

also the Oil Pollution Act of 1990. I just wondered if you could discuss briefly what actions, if any, are at our disposal to ensure international polluters comply with OPA or CWA, who might otherwise resist. Are there penalties encouraging them to cooperate with those?

Admiral THOMAS. One of the very important parts of the Oil Spill Liability Trust Fund is this concept that a polluter pays. And so, for those scenarios in which an identified ship can be held accountable for that, such as in *Deepwater Horizon*, we saw BP pay upwards of almost $22 billion as of earlier this month is what they have paid in that scenario.

Now, if there is not a responsible party, the reason that the Oil Spill Liability Trust Fund was created was to provide for the U.S. claimants, if you did not know who spilled, could submit a claim to the United States and be made whole.

And so, our finding is that irrespective of whether or not Repsol can be held accountable in this scenario, that the Oil Spill Liability Trust Fund could be used for both removal costs as well as claim costs. And, of course, we would have to work immediately with the committee to provide legislative relief for those caps that exist on the $50 million annually as the chairman indicated before. And it is up a $1 billion per incident cap. And any kind of catastrophic event would cause us to come to the committee right away for relief on those.

Mr. HULTGREN. Real quickly, my time is running out. But, Rear Admiral Baumgartner, I wonder if you could just address through what means the Coast Guard would be made aware of an incident on Repsol's mobile offshore drilling unit, and how much time would you expect to last between an incident and notification?

Admiral BAUMGARTNER. I would say if they have a major catastrophic release well blowout, we will know very, very quickly. We fly and we patrol in those waters, so we might actually see the incident as it developed.

We also know that under international treaties and so forth, the Cuban Government has a duty to notify us promptly of any release that might affect our waters. And we would expect that we would get a fairly quick notification. So, I am not expecting that there would be much of a delay. However, since we patrol that area ourselves and we have other means to watch, we are going to do everything we can.

So, I do not expect there will be a huge delay.

Mr. HULTGREN. So, it would have to be through our patrolling, or the Cuban Government notifying us.

Admiral BAUMGARTNER. We might also get it directly from Repsol, although they do not have a legal requirement to notify us necessarily. But I would expect that we might get it from all of those sources pretty promptly if there was a significant spill.

Mr. HULTGREN. Is there any way to require them, for Repsol to notify us? I mean, they would be the ones to know immediately if something happened, I would think. Is there any way for them to be required to notify us?

Admiral BAUMGARTNER. There are some possibilities, but in general, it is drilling in the Cuban EEZ. It is those rules that apply

and the Cuban Government's rules that apply to them while they are drilling there.

Mr. HULTGREN. I have gone over my time. I yield back to the chairman.

Mr. MICA. Mr. Long? Mr. Long, you are recognized.

Mr. LONG. Thank you. It is interesting to find out that Cuba is interested in international treaties provided by them.

[Laughter.]

Mr. LONG. And I do want to make a note for the record how awestruck I am that we are sitting here having this discussion about apparently an administration aiding and abetting the Castro brothers in this endeavor.

At the same time, we have a Keystone XL pipeline. Now, we do not have a chart here today, but if you had a chart of the United States of America that showed the pipelines in the United States, I think if you take a chart of the land the Government owns, they own more than anybody else, and more than half of the U.S., I think, is owned by the United States Government. Well, the chart of the pipelines look very similar.

There are pipelines everywhere, and we are talking about state-of-the-art, XL pipelines, Keystone XL pipelines, from Canada to deliver to deliver the oil down to Houston. And we are sitting here today having this discussion about the chances of an environmental disaster in that situation are miniscule about what we are talking about here today.

And, to me, that is just absolutely appalling that that project cannot move forward at zero cost to the Government, and we are talking about what I think Congressman Rivera says is a $1 billion cap on payments right now. And we just heard testimony that BP paid $22 billion on their fiasco here at the *Deepwater Horizon*. So, it is just a little mind boggling.

Rear Admiral Baumgartner, on the lease payments, I think you said, how much a day is it, a half a million dollars a day?

Admiral BAUMGARTNER. It is somewhere in that neighborhood, yes.

Mr. LONG. Now, is that the lease payment made to the guy that owns the rig? Is that what that is? Does that go to the Castro brothers or what?

Admiral BAUMGARTNER. No, no, no. The *Scarabeo 9* is owned by an Italian company.

Mr. LONG. That is what their lease would be.

Admiral BAUMGARTNER. That is right, and Repsol would pay a lease fee to that owner of the.

Mr. LONG. Right. That is what——

Admiral BAUMGARTNER. Yes.

Mr. LONG. I wanted to make sure on that.

What the protocol and the overreaching authority I heard back at the time that the *Deepwater Horizon* was OK for safety procedures from some office on some island somewhere. Is that the same protocol that is followed here as far as safety and concerns? Is there a big difference in *Deepwater Horizon* and the wells that are going to be drilled down here? Has anything changed in that last case?

Admiral BAUMGARTNER. I am not sure that I follow the question. It might be better off for Mr. Herbst?

Mr. HERBST. Mr. Congressman, I am not sure if I understand the question. If the question is just about——

Mr. LONG. The protocol and the safety concerns about the *Deepwater Horizon*, when we found out where that was licensed out of what was some island somewhere, the licensing authority.

Mr. HERBST. Oh, OK.

Mr. LONG. Is this the same protocol here is my question.

Mr. HERBST. I think it would be a Coast Guard flag state maybe issue.

Admiral BAUMGARTNER. That is right. The *Scarabeo 9* is actually registered in and flies a Bahamanian flag. So, I think what you are talking about, in *Deepwater Horizon*, the *Deepwater Horizon* itself was the Republic of the Marshall Islands was the actual flag state. So, it is not a U.S. flagged drilling rig obviously. It is flagged in the Bahamas.

Mr. LONG. OK. Another question for you, Rear Admiral Baumgartner. Would a response to a spill in Bahamanian waters be different, and, if so, how than in Cuban waters? Are you able to respond differently there?

Admiral BAUMGARTNER. Well, for both of them, the primary response is obviously the Cuban Government or the Bahamanian Government. So, on the other hand, we obviously have better and open relationships with the Bahamanian Government. We work very closely on many things, smuggling, tourism, all kinds of things. So, we work every day with the Bahamanians. So, there would be an obviously closer relationship with them.

Mr. LONG. On sort of that same theme, while things have changed over time, the U.S. has maintained a full economic embargo against our friends in Cuba since 1962. And how will the current embargo most directly affect U.S. response operations if a spill were to occur in the North Cuban Basin?

Admiral BAUMGARTNER. Well, right now, I have authority to respond to oil that threatens the U.S. EEZ, so that is independent of the embargo.

Licenses have also been issued to spill responders so that the U.S. companies can go into the Cuban EEZ to respond to oil that will eventually be coming to the United States. I mentioned in my testimony, and Admiral Thomas did as well, the Coast Guard has a license that allows us to take action in the Cuban EEZ as necessary, and U.S. companies that are acting under our direction in the Cuban EEZ can also enter into the Cuban EEZ and take action and to attack oil before it comes into U.S. waters and attacks our shores. So, those licenses are in place.

Mr. LONG. OK, thank you. I have several more questions, but my time has expired. I cannot yield back because I do not have any time, but if I could I would.

Mr. MICA. Thank you. Mr. Gibbs, you are recognized.

Mr. GIBBS. Thank you, Mr. Chairman.

It seems like there are two major concerns. The drilling is probably going to occur, and the concern about containing it if there is a spill, and also liability of who is going to pay for any cleanup.

And fortunately in the *Deepwater Horizon*, taxpayers did not really get stuck with the bill because BP had the resources to do that.

Now, when it comes to reacting to a problem, and I heard the Coast Guard mention about the flights over, and you have got ways to obviously with all the other stuff you are doing, drug interdiction and all that. I am really concerned. You read about and hear about this administration, the massive cuts coming from the Defense, and hear Defense, the Navy in general and particular, the number of ships they are going to have comparable to what they had a few years ago. It is half.

The question is for the Coast Guard, are you factoring in, are you seeing cuts in the number of assets you will actually have in place? And do you rely, because we are talking about 24 hours.

It looks like, from what I can see from the determination of testimony, that the Florida Keys might be protected because of that strong Gulf Stream. When it comes around, it probably would hit right out here, and within 24 hours potentially I think it was noted.

Do you have enough assets to actually move that quick, or do you also depend on private sector assets? And is that a factor in what you are looking at if these defense cuts come about?

Admiral BAUMGARTNER. Yes, sir. First, we ought to clarify. The oil could move as far in 24 hours as 80 miles, but it did not mean that it is not going to move directly towards the State of Florida. It will move mostly coast wise parallel to our coast.

Most of the projections would have oil at the quickest being somewhere around 5 days, although I probably should defer to Ms. Payton. But we are looking at more in the neighborhood of 5 to 10 days before oil would actually be showing up near our shores because of all the different ways that it interacts.

Second, you said what resources would we rely upon. In the United States and in most countries, the primary resources that are actually touching the oil are private sector. The Coast Guard and other governments or the EPA if it is in the right zones would oversee, coordinate, and direct the spill, but we rely upon the private sector to actually go out and do the work. So, that is where the bulk of the resources come from.

There are Coast Guard resources that can go out and attack the oil. So, we have some buoy tenders under my control and other places in the Coast Guard on the eastern coast that have spill recovery systems that they can rig up and actually go out and recover oil. And we would have other ships that would go out there and monitor and direct operations and coordinate them. But the vast bulk of it is going to be private sector.

Mr. GIBBS. You said dispersants would be really effective. Is that done by air?

Admiral BAUMGARTNER. Aerial dispersants is the most effective way. Well, that is not area. But aerial dispersants would be used. The first resource that is looked at are commercial activities, so one of the companies that is licensed in this area already has contracts for aircraft to actually apply those dispersants.

Now, there are Coast Guard aircraft that also have crews that are trained to go out if necessary and apply the dispersants. And the Air Force Reserve or Air National Guard also has a squadron

that is specially prepared for this. It is up in Ohio actually up at Youngstown, Ohio. And they are set up to do this as well.

Mr. GIBBS. Thank you. On liability, the International Maritime Organization, working through that and also Repsol is the Spanish company. I know Mr. Herbst requested you have discussions with countries around the Caribbean. Have the administration had any discussions with the Spanish Government on what they could do if there was an issue? And also how does that relate with the International Maritime Organization? Put pressure on, you know, a bad actor if there is a spill.

Mr. HERBST. Yeah. I am not aware of any direct communication with the Spanish Government as far as oil spill response. The Coast Guard maybe, but not aware of anything in that area.

Again, Repsol is an operator on the United States Outer Continental Shelf, so we are aware of their oil spill capabilities within the Gulf of Mexico, which is similar to other major operators in the Gulf of Mexico.

Mr. GIBBS. I just have one other question. Do you anticipate that this drilling in these zones that there will horizontal drilling, too, or is it just conventional type straight down drilling?

Mr. HERBST. I believe what our staff has reviewed is more of a conventional drilling, not a horizontal drilling, on this first well at least.

Mr. GIBBS. Up in my area, fracking is a big concern, big issue. Are these wells typically fracked?

Mr. HERBST. I am not real familiar with the zone, but they will be perforating. It is somewhat different than the Gulf of Mexico. I believe it is carbonate formation.

Mr. GIBBS. Thank you.

Mr. MICA. Thank you. Let me yield to Mr. Diaz-Balart now.

Mr. DIAZ-BALART. Thank you, Mr. Chairman. Is this on? Mr. Chairman, let me first publicly thank Admiral Baumgartner, because he actually was very proactive and actually met with just about all the Members of the delegation, I know that. And he gave us briefings, and that is something I greatly appreciate, and I want to thank you for that.

I want to thank all the members of the panel for being here as well. But I have a number of questions to Dr. Proni.

Dr. Proni, I read your presentation, and I will tell you that it is probably one of the best presentations that I have read in a long time.

Mr. PRONI. Thank you.

Mr. DIAZ-BALART. And most thorough presentations. And I have a million questions, but I do not have time, so let me just throw some things out there for you real quickly.

You mentioned that the response of the ecosystems, the different aspects, and I am quoting you, are unclear, yet without such information, it is impossible to best respond. You also mentioned that it is about 70,000 jobs. Just the coral system, I guess, might create about 70,000 jobs in South Florida alone.

You talk about establishing partnerships, not only between the Federal Government, but also between local institutions that have experience, local knowledge data, expertise, et cetera. And has that

taken place already as far as understanding a real effort to do that?

Actually let me just let you respond to that, and I will throw some other questions out there.

Mr. PRONI. We have been having discussions among the scientific institutions in South Florida, which have included NOVA University, University Miami, and Florida International, and the three regional Federal laboratories that are located down here, AOML, the National Hurricane Center, and Southeast Fisheries Centers.

For the last 2½ years, some of my colleagues and I have been visiting Washington talking to the agencies, trying to suggest to them the best time to start doing things is way in advance of an actual oil spill occurring. The responses we have been getting have been very sympathetic, but everyone seems to say it is somebody else bailiwick. And then when you look at it in detail, it is not clear whose responsibility it is other than the response of the Coast Guard. The rest is vaguer.

So, yes, we are preparing for it. We have assembled the capability that is required, and we stand ready to proceed.

Mr. DIAZ-BALART. Thank you, Doctor. I was also surprised to learn what you report, only about 50 percent of the Florida Reef Track coral resources have been mapped, which frankly was a big shock to me, knowing what resource that is, and something that is so utilized as to be part of our economy.

But you mentioned that the U.S. Coast Guard response appears focused on surface modernization with Cuban oil and the use of dispersants. And you mentioned how with *Deepwater Horizon* millions of gallons of dispersants were also used in deep water.

And you mentioned how, I guess there are a lot of questions as to what the impact of those dispersants could be, even, I guess, the makeup of the oil dispersants on ecosystems.

Do you care to comment on that a little bit as to, again, that is the question I had concerning the *Deepwater Horizon* issue, and I never really got an answer. We do not have those answers, would that be fair to say, as to what the effects could be?

Mr. PRONI. Well, there are potential concerns with the notion of dispersants added to oil. The EPA colleagues are concerned about it, but also some colleagues that I have outside the EPA are concerned about whether—basically that you would have to evaluate environmental effects not only of the oil, but of the dispersants plus oil. You have to do both of those things.

Mr. DIAZ-BALART. Kind of changing the subject now also to the Coast Guard. You know, we are dealing with a regime that reportedly has plans or has had plans to attack at a certain point their facilities if, in fact, they felt threatened. Has the administration has the Department of Defense looking at worst case scenario, the possibility that the regime is, you know, on the border of collapse or whatever for whatever reason, or just because it either tried to blackmail the United States like they have done with different administrations with migrant issue, number one, and number two is, if they did a Saddam Hussein type oil field attack for whatever reason. Are you contemplating both those scenarios?

Admiral BAUMGARTNER. Well, sir, probably the easiest thing to say is that with Cuba so close, we contemplate many, many sce-

narios. We have thought about different security implications and so forth.

One thing that we do know is that the primary shoreline that will be impacted and devastated by a spill in most of these sites, particularly where the first site is located, is going to be the Cuban coast. And there could be catastrophic impacts to much of their northern coast where their tourism industry, their budding tourism industry is trying to take root.

So, there are definitely a lot of self-interest issues there for the Cubans if they going to deliberately release oil from these sites. They would be significantly impacted.

Mr. DIAZ-BALART. Thank you. I see my time has run out. Mr. Chairman, thank you. I will talk to you when we get back to Washington about the possibility of seeing if we can get some movement on Dr. Proni's about all the local and other resources that are available.

Mr. MICA. I would be glad to work with you, and thank you. Let me recognize Mr. Rivera.

Mr. RIVERA. Thank you, Mr. Chairman. I will start my questions for Mr. Herbst, if you will. I was quite struck by your testimony and your response to the questions of some of my colleagues regarding what you stated was an informal review and a cursory review of the oil rig *Scarabeo 9*, and where you stated you did find some issues. And I thought those issues were quite extraordinary.

You said there was cases of unsafe welding, incomplete wiring, and so forth that you were assured would be corrected. How will we know?

Mr. HERBST. Well, unfortunately, in this situation where we do not have a followup visit prior to operations commencing, we will only have the word from Repsol since we cannot go out there and verify ourselves.

Mr. RIVERA. Well, that is pretty extraordinary testimony, the fact that we are going to have imminently an oil rig drilling off the coast of Florida that you yourself have said, based on your inspection, would not have been certified for U.S. waters. Is that correct?

Mr. HERBST. Without a followup inspection, we would not allow it to drill.

Mr. RIVERA. Well, we have a problem then. We have got a major problem. If there is a rig 80 miles off the coast of Florida that our own Government has said would not be certified for drilling in U.S. waters, then I need to ask you, what can we possibly do? What else can we possibly do? And let us forget about the Castro dictatorship for right now. Let us focus on Repsol.

I want to know what we can do to make sure that if something does happen, how we inflict maximum pain on Repsol, how we bleed Repsol, if you will, to whatever extent possible if something does happen on a rig that we ourselves have said would not be certified for U.S. operation?

Mr. HERBST. Again, I should emphasize that we cannot go verify physically ourselves now.

Mr. RIVERA. I understand. What can we do? How can we inflict maximum pain on Repsol if something does happen?

Mr. HERBST. Again, let me state that we are in continual negotiations—not negotiations, but discussions with Repsol on the sta-

tus of what we have found there. I do not have that update for you today.

Now, as far as what we can do for Repsol, who we deal with in the U.S. as far as Gulf of Mexico OCS operations, is a subsidiary of Repsol that is incorporated in the United States.

Mr. RIVERA. Well, in other in other cases, are there sanctions in other cases, whether it be denial of mineral rights or minerals easements, are there other cases, examples, of inflicting punishment on companies that may inflict damages on our natural resource interest?

Mr. HERBST. What we do is we continually review performance of various operators. That performance, a poor performance, can lead to various steps, first being probation, second being disqualification.

Mr. RIVERA. Disqualification of the current exploration.

Mr. HERBST. It can be of their current operations, and it can also prohibit them from acquiring any more leases in the U.S. OCS. And the Department also has Department procedures as well.

Mr. RIVERA. Department procedures. And all of those procedures, all of those denials would apply to Repsol?

Mr. HERBST. Generally they apply to performance on the Federal OCS, or the Outer Continental Shelf.

Mr. RIVERA. So, they would not apply to Repsol in a case where, for example, where you have said there is unsafe welding, incomplete wiring. If there is something that happens, those prohibitions, those punishments would not apply to Repsol?

Mr. HERBST. I cannot confirm at this point for operations that occur outside the OCS.

Mr. RIVERA. Well, we need to confirm that. We need to confirm that. We need to confirm that pronto, because if you look at that map that I pointed to earlier, and you look at that Gulf loop current, if something happens, that oil is coming right here to these beaches that you see right here. And even if there is not a spill, even if there is a blackout, an electrical failure because of the wiring, the incomplete wiring you talked about, even if something happens with the unsafe welding and there is a report about that, that map you see there is going to be on CNN, and MSNBC, and Fox News. And those folks on the beach that you see here that out there, they are not going to be out there because they are going to be worried about some sort of unsafe welding or incomplete wiring going on off the coast of Florida and a potential spill. They will not be out there. They will be on other beaches somewhere else.

So, we need to figure out what we can do to inflict maximum pain, maximum punishment, to bleed Repsol of whatever resources they may have if there is a potential for a spill that will affect the U.S. coast. So, I hope you will look into that and verify that for us.

Thank you very much, Mr. Chairman. I yield back.

Mr. MICA. Thank you. Let me yield now to Mr. West.

Mr. WEST. Thank you, Mr. Chairman. And, you know, Admiral Baumgartner, it seems pretty funny that a year ago we were up at the Lakewood Inlet Coast Guard station with Captain Graham and Captain Scraper. We were talking about this exact same issue just a year ago, and here we are right now. So, I think that is one of the failures we have to look at is that I do not think anyone was

taking you very seriously. And it is sad that we have gotten to this point.

With that being said, I know that you had a table top exercise that you conducted. What do you think are the two to three maybe critical lessons learned that you got from that table top exercise, because as Dr. Proni brought out, and, you know, having a military background, I do not like ad hoc formulations. So, I want to make sure that as best we possibly can we are ready to get going from the start.

Admiral BAUMGARTNER. Yes, sir. Some of the critical lessons learned from that one is although we think we will get, we believe we will get prompt notification or detection of a spill, but the ability to coordinate response efforts once there is oil in the water is important. And that was one of the things highlighted in that particular exercise.

Repsol, the Cuban Government, will be responsible for their efforts in the Cuban EEZ. We have authority to go in there if it is cooperative and coordinated with them. So, having a mechanism to go ahead and do that so we can attack oil there before it gets to us is important. That is probably the biggest thing that was highlighted in that particular exercise.

I think one of the other things there is the continued importance of ensuring that local governments, including local elected officials, are aware of the plans, not just their emergency managers, but they are all aware of that.

So, after that exercise, I personally had a phone conversation with all the directors of emergency management, and I have engaged myself with some of the critical elected local officials, including Mayor Gimenez here in Miami-Dade and other places. Those are some of the most important things.

Understanding the cascading of resources that needs to happen to get spill equipment down into the area is critically important as well.

Mr. WEST. Do you have and identified an organizational structure, chain of command, you know, because with a manning document that we could quickly get filled?

Admiral BAUMGARTNER. Yes, sir. Yes, sir. And there are a couple of key things here.

We have left in place the normal structure for protecting the actual shoreline areas, so we have incident command posts that we would set up at my sectors in Key West, Miami, and actually up in Jacksonville. They have good relations with the local officials, NGOs, and everything in that area. That would be basically the nearshore, the beach line defense, the inlet defense.

We have a new command that we established that was the focus of this exercise, which is an offshore response command. We do have a manning chart. Key people are pre-identified so we know exactly how to go through that. We have checklists that look at what we need to do in the first 12 hours, the first 24 hours, then 24 to 48 hours, so we can go through a checklist.

Our command centers have pre-scripted quick response sheets so the moment a command report comes in, actually even if it comes in to our national command center in Washington, they know the exact sheet of information and what to start going so that we can

respond immediately. So, those are identified, and that is the kind of stuff that, well, you would expect, and that is what we are going to do.

Mr. WEST. Last question. When we talk about being prepared and having a pre-position of equipment, emergency response equipment, have we identified the type of equipment that we would need, and do we have the facilities here or capabilities to be able to pre-position some of that equipment so, as you say, we are not dialing out and trying to get these things here while this incident has occurred? So, I will ask that to the broader panel.

What type of things do you think we should have pre-positioned here, and do we have the facilities by which we can have some of this equipment pre-positioned so we are not having to jump start?

Admiral BAUMGARTNER. OK, sir. Some of the important things are, of course, vessels, vessels that can go out and do either in-situ burning if you need that, or offshore skimming and nearshore skimming. So, those have been identified.

Some of the assets are there, particularly, say, skimmers that can work close into shore and the inshore environment. We have 107 different oil skimmers in the State of Florida already.

The biggest resource that we probably do not have that we would have to cascade and move in are offshore skimmers, so large vessels that can go, you know, a dozen miles or 100 miles away from Miami and conduct operations. Fortunately, we have one of the largest and most capable offshore oil skimmers that is permanently based here in this part of Miami, and that belongs to one of the private spill response organizations.

The ability to apply to dispersants, that is something that we have identified. Boom is another critical resource, especially the right type of boom and how we would use that. We have over 300,000 feet of boom in the State of Florida already.

In any particular response, though, you are going to look to cascade and move in resources from all over the country, and we have a pretty good organization that has identified these, inventoried them, and is ready to move those through. We have talked to oil spill response organizations throughout the eastern part of the country. We have talked to oil spill—I am sorry, oil industry support vessels, OSV owners, over in the Gulf of Mexico where they have a significant amount of capability so that they are ready to start moving perhaps as many as 80 offshore supply vessels in our direction within 48 to 60 hours. So we are looking at all of those things.

Mr. WEST. Thank you, Mr. Chairman. I yield back.

Mr. MICA. Well, I thank all of the Members for participating today, especially those from out of town for coming, being with us, of course serving on the committee, and the South Florida Members. I want to thank all of the panelists and witnesses who have provided us with some preliminary information.

The record is being left open for several weeks now, and we will possibly be submitting additional questions to you. I want to recognize Dave Jansen, who is with Ranking Member Rahall. He has joined us today, and if either side of the aisle wants to submit additional questions, they will be made part of the official record of this proceeding.

So, this hearing has probably raised more questions than it has answered, but it is a preliminary review of the consequences of offshore drilling in Cuba and the Bahamas, and also trying to meet our responsibility in oversight of the United States Coast Guard, which is responsible as our primary agency for response in the event of a spill. Plus our committee oversees the Oil Spill Liability Trust Fund.

So, we will probably continue these proceedings back in Washington, and we will look additionally at what challenges we face and where the committee goes from here.

Thank Mr. Rivera for his legislation, and we will try to get that reviewed and see, again, what other legislative and administrative responses are necessary.

That being said, there being no further business before this Subcommittee on United States Coast Guard or the Committee on Transportation and Infrastructure, this meeting is adjourned. Thank you.

[Whereupon, at 12:08 p.m., the subcommittee was adjourned.]

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TESTIMONY OF
REAR ADMIRAL WILLIAM BAUMGARTNER
COMMANDER, COAST GUARD SEVENTH DISTRICT
AND
REAR ADMIRAL CARI THOMAS
DIRECTOR OF RESPONSE POLICY, U.S. COAST GUARD

ON "OFFSHORE DRILLING IN CUBA AND THE BAHAMAS: THE U.S. COAST GUARD'S OIL SPILL READINESS AND RESPONSE PLANNING"

BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE SUB COMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION JANUARY 30, 2012

We are pleased to provide you with the Coast Guard's plans and ongoing efforts to prepare for and respond to a pollution discharge that, while occurring outside of the U.S. Exclusive Economic Zone (EEZ), may threaten to impact our waters or natural resources. The Coast Guard is committed to protecting U.S. interests, particularly U.S. coastlines and natural resources, from potential discharges from deepwater drilling in waters of nations adjacent to the United States. The Coast Guard is the pre-designated Federal On-Scene Coordinator (FOSC) under the National Contingency Plan (NCP) for the coastal zone, and has the authority under the Federal Water Pollution Control Act of 1972 (FWPCA), and the Oil Pollution Act of 1990, to oversee and direct removal actions for spills within U.S. waters or threatening U.S. waters and adjoining shorelines, or that may affect U.S. natural resources. The NCP provides a coordinated, efficient, and effective whole-of-government response to marine pollution discharges to protect the waters, shorelines, natural resources, and welfare of the U.S.

International and National Response Framework

The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC Convention) provides a global framework for international co-operation in combating major incidents or threats of marine pollution. The International Maritime Organization has established an OPRC technical working group under its Maritime Environment Protection Committee, and a Regional Emergency Information and Response Center (RAC/REMPEITC-Caribe) in Curaçao focused on supporting international cooperation for combating spill events in the Caribbean.

The United States, the Bahamas, Cuba, and other countries in the region are parties to the Cartagena Convention and its Oil Spills Protocol. These international agreements provide a framework for cooperation similar to that provided by the OPRC Convention, but on a regional basis for the wider Caribbean region. These countries also participate in the regional Caribbean Island Oil Pollution Response and Cooperation Plan (Caribbean Island OPRC Plan). Although focused on threats to Caribbean islands (including Pureto Rico and the U.S. Virgin Islands) rather than to the U.S. mainland, the Caribbean Plan provides a cooperative scheme for a response in the event of a major oil spill incident which exceeds the response capability of a national government or oil industry. The Caribbean Plan contains detailed provisions for organization, initial response activities, reporting to

signatory states and organizations, mobilization of personnel and equipment for response, and assistance from foreign governments that are not parties to the Plan or commercial response teams.

At the national level, the NCP is supported and maintained by the National Response Team (NRT). Chaired by the Environmental Protection Agency (EPA), with the Coast Guard as Vice-Chair, and comprised of the 15 NRT member agencies, the NRT meets monthly to oversee the National Response System (NRS) and maintain national level policy and doctrine. With regard to Cuban offshore drilling, the NRT Preparedness Committee is actively canvassing member agencies to validate existing environmental, hydrologic, oceanographic and other relevant risk data in the Caribbean and mid-Atlantic that has been, and will continue to be, useful in our planning.

At the regional level, the NCP mandates the establishment of Regional Response Teams (RRT). As with the NRT, the RRT members include regional representatives of the 15 primary federal agencies. In addition, the RRT includes state representatives from each state in the region. For regions bordering Canada, Mexico and Russia, the active relationships between the RRTs and those countries promote transboundary cooperation in preparedness and response. RRT IV is responsible for planning and preparedness in the Straits of Florida and the South Atlantic coast (areas of potential immediate impact in the event of a Cuban offshore incident). The Coast Guard RRT IV chair is held by Coast Guard District Seven (D7). Led by D7, the RRT is proactively working with state and coastal communities of Florida and with the private sector to monitor developments and to begin planning strategies, and to identify equipment and personnel capabilities, gaps and shortfalls to combat an incident if it were to occur.

Preparedness Planning

Since March 2011, the Coast Guard has been actively engaged with Repsol-YPF S.A., a publicly traded Spanish company, which plans to drill in the Cuban EEZ starting in early 2012. We have engaged with Repsol to gain their cooperation and to study their response strategies, resources, and capabilities in order to protect U.S. interests in the event of an oil spill incident. The Coast Guard attended a spill response exercise hosted by Repsol in July 2011, and Repsol attended a Coast Guard response exercise in November 2011. Repsol also provided Coast Guard response personnel with access to key documents, including its Oil Spill Response Plan. Additionally, Repsol offered, and the Coast Guard and Bureau of Safety, and Environmental Enforcement (BSEE) accepted, the opportunity to embark the rig during its port call in Trinidad and Tobago earlier this month to review equipment, relevant documentation, and improve our awareness of the rig's safety and emergency systems. Such actions are consistent with our ongoing efforts to minimize the possibility of a major oil spill that could potentially endanger or damage U.S. interests. Because the rig is foreign flagged, owned by a foreign corporation, and will be drilling on another country's continental shelf, it is not subject to U.S. inspections. The purpose of the review was to provide information concerning Repsol's adherence to its voluntary commitment to conform to all International and U.S. offshore drilling safety standards. The Coast Guard will continue to discuss any areas of concern with the company, the master, and, as appropriate, the flag state (the Bahamas) to further minimize risk and ensure response preparedness. Repsol has made clear that it intends to abide by U.S. standards for safety, oil spill prevention and response.

To ensure that we are prepared to respond to a discharge, the Coast Guard develops and maintains contingency plans that will be activated if an oil spill occurs in the waters of a neighboring nation, yet threatens to impact U.S. waters, adjoining shorelines, or our natural resources. As a result of the proposed North Cuba Basin oil exploration, the Coast Guard updated its plans to ensure we are ready to respond to any spill from drilling activities off the coast of Cuba that could impact the U.S. Our

engagement in this preparedness effort is far-reaching and includes collaboration with a host of Federal, state, local, and private entities. As the Coast Guard focuses on the near-term drilling that is to occur off Cuba, we are mindful of the potential for future offshore oil exploration in Bahamian waters.

Lessons learned from the 2010 BP Deepwater Horizon oil spill have been incorporated into Coast Guard planning efforts, including forging partnerships with other Federal agencies, and state and local government officials, to ensure a united approach to readiness. While we are preparing to take response actions necessary to protect U.S. interests, a major discharge from drilling off the United States in adjacent nations' waters likely will require a broad international response. As described above, the United States is a party to several important multilateral treaties on pollution response that promote this type of multilateral cooperation.

The NCP is the nation's blueprint for preparedness and response to an oil spill incident that threatens to impact U.S. waters, adjoining shorelines, or natural resources. The NCP calls for a tiered planning approach that builds on efforts at the regional and local levels. At the regional level, a litany of Federal, State, and local agencies, as well as industry, academia, and other non-governmental organizations have and continue to engage in contingency planning to be ready for the low probability, but high consequence event, of an oil spill from foreign offshore oil drilling adjacent to Florida. The Regional Response Plan has been revised to include an annex on international offshore spills.

An Offshore Response Plan has been developed to address the unique characteristics of oil spill response in the Florida offshore environment. The plan creates an Offshore Response Command and provides a command and control structure that is accountable to the FOSC to address all aspects of offshore pollution response from a foreign source. This plan includes the capability to liaise with foreign governments and corporations to address communication and coordination issues inherent with international response efforts.

At the local level, the Coast Guard has expanded and enhanced our efforts with State and local officials in oil spill response planning. Beginning in March 2011, in Florida, we conducted extensive outreach to engage such officials in updates to the Area Contingency Plans, including revisions to the Geographic Response Plans and Tidal Inlet Protections Strategies. Our State and local partners have been and will continue to be an important part of the planning effort. They have been involved in our bi-weekly planning calls and our November 2011 response exercise. These recent updates and strong partnerships have strengthened our readiness to respond to a spill.

Response Activities

For oil spills that occur within Cuban waters, oil rig operators and Cuba have the responsibility to conduct cleanup operations and prevent damage to the United States. In accordance with the NCP, if a spill occurs within Cuban waters that threatens to impact U.S. waters, shorelines or natural resources, the Coast Guard would mount an immediate response, in partnership with other Federal, State and local agencies. Such response would focus on combating the spill as far offshore and as close to the source as possible, using all viable response tactics in a manner consistent with domestic and international law. The Coast Guard has obtained licenses from the Department of the Treasury's Office of Foreign Asset Control and the Department of Commerce's Bureau of Industry and Security, which allow us to broadly engage in preparedness and response activities, and positions us to direct an immediate response in the event of a catastrophic oil spill.

Holding parties responsible for damages to U.S. interests arising from extraterritorial activities involves complex legal questions. Because of these challenges, the Coast Guard must be prepared to direct and fund most or all of the response actions and mitigation efforts using the OSLTF. The OSLTF is available to fund the removal actions that are consistent with the NCP. Nevertheless, we anticipate that in a catastrophic spill, the expenses associated with the response would quickly exceed the current statutory limits on expenditures by the OSLTF.[1] Timely legislative action could be required to access additional funds for spill response activities.

International Engagement

A multilateral approach is essential to ensure common understanding and effective implementation of international obligations and standards for oil spill preparedness, prevention and response. The Coast Guard is working with BSEE to lead the effort to conduct a series of multilateral seminars focused on regional prevention, preparedness and response for a potential worst case oil discharges in the Caribbean. The seminars are designed to build on the existing framework of our international agreements and the Caribbean Island Oil Pollution Response and Cooperation Plan and enhance regional readiness and cooperation related to offshore drilling, with an emphasis on better preparing us to protect U.S. interests.

The first of these seminars, conducted under the auspices of the International Maritime Organization (IMO), was hosted in Mexico in late November 2011 and covered prevention topics related to drilling operations. The second seminar, also sponsored by the IMO, hosted by the Bahamas in early December, provided a forum to discuss a number of prevention, planning, and response issues between the United States and our Caribbean neighbors in a multilateral setting. Participants for both seminars included delegations from Jamaica, Mexico, the Bahamas, and Cuba. The Bahamas seminar presented an opportunity to identify other nations' infrastructure and plans for emergency well control, notification procedures, and oil spill response. Departing that seminar, the delegates from the participating nations agreed to engage in continued multilateral exchanges with the objectives of establishing a framework for ongoing communications, developing a compilation of international and domestic prevention and response authorities, and coordinating future workshops. A third IMO-sponsored workshop designed to help develop greater detail on a prevention and response topics is being held in Curaçao on 31 January. The multilateral engagement is intended to provide a common understanding and effective implementation of international obligations and standards for oil spill preparedness, prevention and response. The IMO will host this seminar for participants from the United States, Jamaica, Mexico, the Bahamas, and Cuba.

Conclusion

As was highlighted by the BP Deepwater Horizon oil spill, any major spill, regardless of its source, will require unity of effort across all levels of government, industry, and the private sector. A spill originating in the Caribbean, in another nation's waters, adjacent to the United States, undoubtedly will require international cooperation. The Coast Guard will participate in upcoming IMO-sponsored multilateral discussions to ensure coordinated prevention programs, contingency planning efforts and development of robust response strategies. The Coast Guard will continue outreach and coordination of Federal, State and local efforts for potential oil spills originating in foreign waters adjacent to the U.S.

Thank you for the opportunity to testify today. We look forward to your questions.

[1] Such limits include: (1) the limited amounts available to the President for response pursuant to 33 USC 2752(b) ($50 million annually, with up to an additional $100 million in annual advances with a report to Congress); (2) the $1 billion per incident cap (natural resource damage assessments and claims in connection with any single incident shall not exceed $500,000,000) on what may be expended from the Fund, as provided paragraph (c) of the Internal Revenue Code provision creating the OSLTF (26 USC 9509), and (3) the practical limit imposed by the Fund balance, currently approximately $2.3 billion which may need to be supplemented from other resources in the event of a Federal response that could cost billions of dollars.

Testimony of Lieutenant Governor Jennifer Carroll
January 30, 2012
Subcommittee on Coast Guard and Maritime Transportation

Mr. Chairman and Members thank you for the opportunity to speak to the Committee today to outline the State of Florida's concerns and preparedness to respond to oil spills in light of looming oil drilling off of the Cuban coast.

The Communist government of Cuba and its leader Raul Castro, according to the Department of State, continues to hamper private sector growth with tight restrictions on the supply of goods and labor, high taxation that discourages hiring and profits, a ban on professional entrepreneurs, limited access to transportation and credit, a monopoly on importation, legal uncertainty and lack of transparency, and a host of other disincentives and restrictions. With this track record, Cuba cannot be trusted to provide even the bare essentials to its own citizens and it certainly can't be trusted to oversee safe and environmentally sound oil drilling only 90 miles off of our pristine Florida coast. With these facts in mind, over the past year, under the direction of Governor Rick Scott, the State of Florida has endeavored to be prepared for any drilling related disaster that may impact Florida's shores.

Florida's preparedness plan has three main aspects: emergency management led by Brian Koon, Director of the Division of Emergency Management, economic led by Gray Swoope, Secretary of Commerce/President, Enterprise Florida, and environmental, led by Herschel Vineyard, Secretary of the Department of Environmental Protection.

The Deepwater Horizon (DWH) incident in 2010 has shown us that a spill that poses even a potential of impacting Florida's water or land causes a huge negative impact on the economy.

Florida's two largest industries are agriculture -- including aquaculture and fisheries -- and tourism. Real or even perceived negative impacts to these industries, which may be caused by direct harm or the appearance of harm to the marine environment, reduces tourism by discouraging people from visiting Florida beaches and attractions and sends economic shock waves throughout the state.

The Panhandle of Florida is still recovering from the negative economic impacts resulting from the DWH spill. Florida's coastline was spared from a more severe oil spill impact because weather conditions directed most of the oil away from the state. However, many people throughout the state, as well as potential out-of-state and international visitors, cancelled trips to: Florida vacation spots, fishing excursions and beach visits because of a perception that our shoreline wasn't safe. News coverage of the spill contributed to cancel visits because it created the impression that the spill effects were evident and widespread throughout the state.

I would like to take this opportunity to remind the Committee and the American public that Florida's beaches are as clean and beautiful as ever. Tourism is on the rise and there are many great bargains for families to come and visit Florida.

One of the reasons Florida has been able to adequately respond to the DWH spill is because our State and our businesses were protected by federal laws such as the Oil Pollution Act of 1990 (OPA 90). OPA has been a key component in Florida's recovery efforts.

Chairman and Members Florida is greatly concerned about the uncertainty of the application of OPA to drilling in foreign waters. OPA 90 identifies a responsible party that is held accountable financially for response, recovery, remediation, economic and natural resource damages. Without the protection afforded by this federal law, all costs would be borne by federal, state and local governments. Furthermore, Florida is very concerned with the ability to have funding for third party claims in the event of a spill.

Florida had more third party claims than any other state as a result of the Deepwater Horizon incident despite the less than expected oil which reached its shores. Much of this effect was due to the large negative impact to the vital tourism industry throughout the state.

There is uncertainty in a scenario with a foreign source of spilled oil, on the funding and processing for third party claims and the associated timeline for such claims. A tremendous number of Florida's citizens depend on a vibrant tourism industry to sustain their livelihood and they would be devastated economically by a major foreign oil spill, even if oil does not reach our shores.

Florida strongly urges the federal government to develop and market a plan to address how our citizens can be compensated for damages created by a foreign oil spill. It is imperative that the federal government develop an international agreement that will give clear direction and guidelines for financial responsibility, recovery, remediation, economic and natural resource damages in the event of an oil spill, like those outlined in OPA 90.

Working with our federal, local and private sector partners, Florida believes that we have positioned ourselves to be as ready as possible in the event of a spill. In addition, we have been assured that the Coast Guard has worked with REPSOL YPF, the company conducting initial, exploratory drilling off Cuba, to develop a good relationship and specific plans should a response ever be necessary. Unfortunately, response plans does not provide legal remedies to make injured parties whole or assume responsibility for restoring Florida's natural environment that may be harmed.

Florida is also heartened that multi-lateral discussions are ongoing with all of the nations drilling in the North Caribbean Basin or those potentially impacted by offshore oil exploration. These talks need to continue in order to ensure the federal government has the necessary authority and relationships to respond swiftly and effectively in the offshore environment to minimize the amount of spilled oil which may reach Florida's shoreline.

There were many lessons learned from Florida's experience with the DWH incident, and several organizations, including the U.S. Coast Guard, spent many hours developing a thorough analysis of this issue. As a follow up to that analysis, the State of Florida Department Environmental Protection and Division of Emergency Management have worked diligently with

the Coast Guard and local governments to apply the lessons learned and ensure that more specific protection plans are developed for coastal counties. In addition, on November 17, 2011, major federal, state, local and corporate parties who would be involved in a potential Cuban oil response performed a "tabletop" exercise to ensure that everyone understood their roles and responsibilities in the event of a spill and to identify any gaps in the response planning to date.

In conclusion Mr. Chairman, the State of Florida has been preparing for the eventuality of oil drilling off the Cuban coast. We have been working with the U.S. Coast Guard and organizing our State agencies. Additionally, we have applied the lessons learned from the Deepwater Horizon incident and we are determined to keep Florida's beaches, coral reefs, waterways and fisheries clean and open. We are also aware of the type of government that we are dealing with in Cuba – their dubious track record only focuses Florida and our private and public sector partners on being even more prepared.

On behalf of Governor Scott and the people of Florida, I thank the Committee for its leadership in taking the initiative to address this critical issue and we look forward to working with you on this and the many other issues that the Transportation and Infrastructure Committee has before it that can help us continue Florida's strong economic recovery.

STATEMENT OF LARS HERBST
REGIONAL DIRECTOR
GULF OF MEXICO REGION
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
UNITED STATES DEPARTMENT OF THE INTERIOR

HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE,
SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION

MIAMI FIELD HEARING ON OFFSHORE DRILLING
IN THE BAHAMAS AND CUBA: THE U.S. COAST GUARD'S OIL SPILL
READINESS & RESPONSE PLANNING

January 30, 2012

Mr. Chairman and Members of the Committee,

Thank you for the opportunity to participate in today's hearing. I am the Regional Director of the Gulf of Mexico Region for the Bureau of Safety and Environmental Enforcement (BSEE), the agency responsible for enforcing safety and environmental standards regarding oil and gas exploration, development, and production activities on the United States Outer Continental Shelf. I would like to share with you information on the actions taken to ensure, within our ability to do so, that oil and gas operations in neighboring waters outside of United States jurisdiction are undertaken in a safe and environmentally responsible manner consistent with international and industry standards.

As you know, the 2010 *Deepwater Horizon* blowout and oil spill 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 promote safety and protection of ocean environments and coastlines in the exploration, development and production of U.S. offshore mineral resources.

The Department of the Interior (DOI) and BSEE take an active approach to identify and to become involved in international initiatives that promote better integration of safety and environmental concerns into offshore development decision making. This approach includes sharing lessons learned and best practices for safety and environmental standards; participating in technical and information exchanges with our international regulatory counterparts; and providing technical advice to the U.S. Department of State, other relevant U.S. agencies, and countries seeking to be part of the next generation of oil and gas producers.

This international engagement is in addition to our continued coordination with key agencies across the Federal government, including the Department of State, United States Coast Guard (USCG), the Environmental Protection Agency (EPA), and the National Oceanic and Atmospheric Administration (NOAA), among others. In addition, we engage in ongoing communications with the offshore industry, and the oil spill response and blowout containment companies.

In particular, DOI and BSEE are working closely with other Federal agencies to address the potential threat of an oil spill in neighboring parts of the Gulf of Mexico that could affect U.S. waters, shorelines and resources. Several 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. For example, the Spanish oil and gas company Repsol YPF, Cuba, S.A. (Repsol) will soon begin to drill offshore wells in Cuba's EEZ using a newly constructed mobile offshore drilling unit (MODU), the *Scarabeo 9*. We also expect additional offshore drilling activity in the EEZs of the Bahamas and Jamaica, and continuing offshore activity in Mexico's EEZ.

The Department of the Interior, through BSEE, is actively engaged in U.S. Government efforts to promote drilling safety measures to prevent oil spills. These activities include cooperating with our regulatory agency counterparts in the region, including Mexico, through bilateral and multilateral mechanisms to develop common safety and response standards, and communicating with Repsol to encourage its compliance with U.S. drilling safety and related environmental standards.

Engagement with Repsol

While BSEE does not have oversight authority over Repsol's activities in Cuba EEZ, beginning in February of 2011 at Repsol's request, we entered into discussions concerning Repsol's potential activity in the Cuba EEZ and its plans related to drilling and well control. In our numerous communications with Repsol, we have made clear that we expect Repsol 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. Subsequently, Repsol officials have stated publicly that in carrying out its exploratory drilling plans in Cuban waters, it will voluntarily adhere to U.S. regulations and the highest industry standards.

Repsol offered U.S. agencies an opportunity to board the *Scarabeo 9* rig that it will be operating in Cuban waters, which BSEE and the U.S. Coast Guard accepted. On January 9, 2012, experts from BSEE conducted a review of the *Scarabeo 9*, off the coast of Trinidad and Tobago. While aboard the *Scarabeo 9*, BSEE officials examined the rig's vessel construction, drilling equipment, and safety systems, including the blowout preventer (BOP), in anticipation of Repsol's scheduled drilling operations in Cuba's EEZ in the coming months. Based on information shared by Repsol, BSEE was able to use its well containment screening tool to conclude the well could be safely capped using existing methods.

The review was designed to familiarize ourselves with the rig and provide guidance to Repsol on how to ensure that its safety measures meet U.S. standards. The review was consistent with U.S. regulatory efforts to minimize the potential for a major oil spill that would hurt U.S. economic and environmental interests. The review evaluated the vessel for consistency with both applicable international safety standards and U.S. standards for drilling units operating in the Outer Continental Shelf of the United States.

The review's work scope involved a comprehensive pressure and function testing of the BOP, focused discussions with rig personnel and a walk-through of the rig that included key visual observations and the physical testing of devices.

As noted earlier, BSEE does not exercise oversight over the *Scarabeo 9* or its intended operations in the Cuban EEZ. Accordingly, our review does not confer any form of certification or endorsement under U.S. or international law. While our review of the rig was not as exhaustive as our review of a rig operated in the U.S. OCS would be, BSEE officials found the vessel and the drilling safety equipment, including the BOP, to be generally consistent with the existing international and U.S. standards by which Repsol has pledged to abide. We will remain in communication with Repsol as it moves forward with its activities to provide any further guidance it may seek.

International Initiatives

In anticipation of an increase in drilling activities in the Caribbean Basin and the Gulf of Mexico, the United States is participating in multilateral discussions with the Bahamas, Cuba, Jamaica and Mexico on a broad range of issues, including drilling safety related to prevention of an accident, and oil spill preparedness and response such as subsea containment were a spill or subsea blowout to occur. A series of multilateral meetings are being conducted under the auspices of the International Maritime Organization. The most recent meeting was hosted by the Bahamas in early December. The next multilateral meeting is scheduled to begin tomorrow in Curacao.

I had the opportunity to be one of BSEE's representatives at the most recent multilateral discussion. All of the countries' delegates were highly engaged in constructive discussions regarding preventive regulatory frameworks, safety standards for mobile offshore drilling units, and best practices in oil spill prevention and containment. Our goal is to increase regional cooperation and joint planning for oil spill prevention, preparedness, and response measures for offshore units with the goal of minimizing pollution of marine and coastal environments. I expect that this week's seminar will continue these positive interactions, and provide BSEE personnel the opportunity to share further lessons learned and recommendations. In addition, 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.

BSEE and CNH are working towards a set of common safety and environmental standards through a series of bilateral technical workshops. Following a workshop held this summer at 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.

In summary, DOI and BSEE view ongoing bilateral and multilateral engagement with our

foreign counterparts in areas of shared interest and concern as an essential component for the protection of U.S. environmental and economic interests, and an effort that can be mutually beneficial.

Thank you and I look forward to your questions.

WRITTEN STATEMENT OF
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NATIONAL OCEAN SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

ON
OFFSHORE DRILLING IN CUBA AND THE BAHAMAS: THE U.S. COAST GUARD'S OIL SPILL READINESS & RESPONSE PLANNING

BEFORE
SUBCOMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES

January 30, 2012

Thank you Chairman LoBiondo and Members of the Subcommittee for the opportunity to testify on the Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) role in emergency response to oil and chemical spills and, more specifically, activities taken in support of the United States Coast Guard (USCG) efforts to ensure that U.S. waters and shorelines are prepared for potential threats from drilling in foreign waters off of Florida.

My name is Debbie Payton and I am the Chief of the Emergency Response Division within NOAA's Office of Response and Restoration. My testimony today will focus on NOAA's response and preparedness role and what NOAA's role has been in supporting the USCG for preparedness activities for upcoming drilling in the waters off Cuba and the Bahamas.

NOAA's mission is to understand and predict changes in the Earth's environment and conserve and manage coastal and marine resources to meet our nation's economic, social and environmental needs. NOAA serves the nation with forecasting of atmospheres and oceans, oceanographic, hydrographic and meteorological observations, research on oceans, atmospheres and the environment, and services to integrate these sciences with societal needs.

NOAA's Response and Preparedness Role

Thousands of incidents occur each year in which oil or chemicals are released into the environment as a result of accidents or natural disasters. Spills into our coastal waters, whether accidental or intentional, can harm people and the environment and cause substantial disruption of marine transportation with potential widespread economic impacts. The USCG is the Federal On-Scene Coordinator and has the primary responsibility for managing coastal oil spill response and clean-up activities in the coastal zone. During an oil spill, NOAA's Scientific Support Coordinators deliver technical and scientific expertise to the USCG. NOAA's Scientific Support Coordinators are

located around the country in USCG Districts, ready to respond around the clock to any emergencies involving the release of oil or hazardous substances into the oceans, shorelines, and related areas.

NOAA has three critical roles in spill response and damage assessment mandated by the *Oil Pollution Act* of 1990 and the National Contingency Plan:

1. During the emergency response, NOAA serves as a conduit for scientific information to the Federal On-Scene Coordinator. NOAA provides scientific expertise in the fields of biology, chemistry, oceanography, toxicology, and economics. We also specialize in trajectory predictions for spilled oil, observations of oil on water, assessment of highly valued or sensitive environmental areas, and shoreline surveys to determine clean-up priorities.
2. As a natural resource trustee, NOAA conducts a joint Natural Resource Damage Assessment (NRDA) with other federal, state and tribal trustees to assess and restore natural resources injured by an oil spill. NRDA also assesses the short and potential long term lost uses of those resources, such as recreational fishing, canoeing, and swimming, with the goal of implementing restoration projects to address these injuries.
3. Finally, NOAA represents the Department of Commerce in spill response decision-making activities through the 15-agency National Response Team.

With over thirty years of experience and using state-of-the-art technology, NOAA continues to serve the nation by providing its expertise and a suite of products and services for making science-based decisions. NOAA develops tools, guidelines, and small, field-oriented job aids to assist preparedness for response communities. In addition, NOAA provides standard techniques for observing oil, assessing shoreline impact, and evaluating and selecting cleanup technologies that have been widely accepted by response agencies.

Environmental Sensitivity Index (ESI) maps are used to identify vulnerable resources and habitats in advance of emergencies so that appropriate response actions can be planned. NOAA works with local experts to develop or update these maps throughout the country. ESI maps are published in hardcopy and digital formats, and translators are maintained to assist in using the data in geographic information system environments.

Some of the more widely distributed tools that NOAA develops include a trajectory forecasting tool, GNOME (General NOAA Operational Modeling Environment); the oil weathering model, ADIOS (Automated Data Inquiry for Oil Spills); the chemical hazards tools, CAMEO (Computer Aided Management of Emergency Operations); and the Chemical Reactivity Worksheet. Used with pre-determined oceanographic information and user-specified winds and scenario data (Location Files), GNOME provides a mechanism for end-users to explore various potential spill scenarios. ADIOS provides planners and responders with information on how thousands of different oils could physically or chemically change over time under various scenarios. The CAMEO program, developed jointly with the Environmental Protection Agency, provides first responders with information and tools for chemical incidents.

NOAA also provides training to individuals in industry and government on the scientific aspects of oil and chemical spill response. The goal of NOAA's training is to transfer scientific expertise and experience to the broadest possible audience. Successful training promotes more efficient planning and spill response.

Current Status of Threat Assessment from Deepwater Drilling off Cuba

Over the past year, a NOAA Scientific Support Coordinator has worked with District 7 Coast Guard staff to review and update Area Contingency Plans. As part of that effort, NOAA studied the potential threat to U.S. East Coast and Gulf of Mexico shorelines from deepwater oil well development in the Florida Straits and off of the Bahamas.

This NOAA study follows on earlier modeling studies by the Bureau of Ocean Energy Management (BOEM) and by Applied Science Associates for REPSOL, the energy company that will conduct the exploratory drilling at the first proposed drilling site approximately 16 miles offshore of the northern coast of Cuba. These modeling efforts, while carried out by NOAA, were supported with data from BOEM.

It is critical to note that in conducting a study using a range of environmental conditions based on historical information, the results are a composite of a number of scenarios. The results give percentages of the scenarios that impact each area (represented as grid cells) and do not say where the oil will go for any specific spill; the results provide statistics on where the oil is most likely to go based on historical oceanographic and meteorological information. The grid cells considered in these modeling studies are quite large, 10 nautical miles x 10 nautical miles. The oil is represented as particles in the model. Any time there are enough particles in a grid cell to reach a "level of concern" the cell is considered "impacted." What that means is that the oil may be 10 nautical miles offshore, but the model will count it as a shoreline impact. This choice of resolution is driven by the size of the model and the resolution of the current and wind data available. For planning purposes, this is a conservative approach.

In addition, given the distance the oil would have to travel, any oil that might reach U.S. shorelines would likely be in the form of widely scattered tar balls. In the event of a spill, only one scenario will play out and how much oil comes to the United States and in what form will be dependent on the scenario characteristics, e.g., how much oil is released over what period of time. In the event of a real incident, NOAA will support the USCG efforts to protect U.S. interests by providing daily forecasting based on the actual scenario and environmental conditions at that time.

NOAA used GNOME to run thousands of trajectory scenarios. A GNOME scenario predicts how an oil spill will spread and move based on a set of release characteristics, currents, winds and oil type. A tool called the Trajectory Analysis Planner (TAP) was used to compile these results and provide a way to view the statistics. For this study, 20 start sites were considered, covering the region from the western edge of Cuba to the Bahamas. The following data were used:

1. Predicted ocean current fields generated by the Princeton Regional Ocean Forecast System, which is an ocean circulation model developed for BOEM.

2. Modeled wind data assimilating actual wind measurements collected in the region during the six-year period from late 1993 to 1998.

For this study, the spilled oil was assumed to be medium crude oil, which industry experts consider the type of oil most likely to be found at the potential well sites. The actual oil may prove to have different characteristics than assumed in this study. The results provided here will specifically address the first known drill site. For this site, a release of medium crude over 90 days at 75,000 barrels per day was considered. The model was run out for 120 days (30 days beyond the release duration).

TAP and GNOME account for the weathering processes of evaporation, dispersion, photo-oxidation, and biodegradation, which reduce the amount of oil on the water over time. TAP and GNOME do not account for emulsification which would increase the volume of oil without changing the mass of oil on the water. It is important to note that neither model accounts for subsurface movement of oil. For this study, neither model accounted for any response actions, such as dispersant application, burning, or skimming.

Three major ocean currents dominate the movement of spilled oil in the region.

1. The Loop Current flows northward into the Gulf of Mexico, and then loops clockwise turning southeastward along the west Florida coast to join the Florida Current.

2. The Florida Current is a strong current (3 – 6 knots at the core) that flows eastward from the Gulf of Mexico through the Florida Straits then turns northward, joining the Gulf Stream.

3. The Gulf Stream, a powerful Atlantic Ocean current (up to five knots at the core), flows northward along the East Coast of the United States before separating from the coast near Cape Hatteras, eventually crossing the Atlantic.

The Florida Current – Gulf Stream current system would dominate the movement of spilled oil from the first proposed drilling site offshore of the northern coast of Cuba at any time of the year. The strong surface currents at its core could potentially move spilled oil more than 70 nautical miles in 24 hours. This powerful current system would make it difficult for oil spilled from the drilling site to cross the 80-mile-wide Florida Straits to impact the Florida Keys before being swept northeastward. Winds also would play a key role in determining where and when oil comes ashore.

The study was carried out for several sites from west of Cuba (in the Yucatan Straits) to areas east of Cay Sal and offshore of Grand Bahamas. The following is a summary of the major findings from the study for consideration of oil released from the site of the first proposed drilling site offshore of Cuba; results from other potential release sites vary considerably. Given the scope of potential results, this summary provided in this testimony focuses on the first site:

1. In general, while most of the oil remains offshore in the Gulf Stream, the most threatened area of the US Coast is the eastern shore of Florida. Approximately 40 percent of the scenarios modeled resulted in some portion of the spilled oil coming into cells that could impact areas on the east side of Florida. The Florida Keys are less at risk because of the powerful eastward currents in the Florida Straits.

2. Although probabilities decrease northward from the Florida border, some scenarios result in shoreline risk as far north as Charleston, South Carolina.

3. From Charleston north to the Chesapeake Bay, probabilities again decrease, but, given the closeness of the Gulf Stream where it turns offshore near Cape Hatteras and the 100 square nautical mile grid size, the Cape Hatteras area risk is higher.

4. North of Chesapeake Bay, none of the modeled scenarios predicted shoreline threats above what would be discernable from background tar balls.

5. Gulf of Mexico shorelines are at low risk.

Using these results, the USCG is working with area committees, consisting of representatives from federal, state, and local governments, to update Area Contingency Plans in areas that have a potential for impact.

Conclusion

In the wake of the Deepwater Horizon oil spill, we are all reminded of the fragility of our coastal ecosystems and the dependence of coastal economies on the health and prosperity of our seas.

NOAA is committed to working with our state and federal partners, the oil industry, as well as the international community to provide cutting edge science to support a robust and effective planning process to ensure we are as prepared as possible, should a spill occur in this region.

Thank you for the opportunity to testify before you today. I look forward to any questions you may have.

Testimony before the Committee on Transportation and Infrastructure, U.S. House of Representatives

RE: PREPARING THE UNITED STATES FOR potential IMPACTS FROM DRILLING ACTIVITIES IN CUBA and the Bahamas:

EARLY-WARNING, BIOLOGICAL AND PHYSICAL OCEANOGRAPHY BASELINES, IMPACTS RESEARCH, PREDICTIVE MODELING, and MITIGATION RESPONSE

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1. INTRODUCTION & STATEMENT OF THE PROBLEM

Mr. Chairman and Honorable Members and Representatives of the Subcommittee on Coast Guard and Maritime Transportation, thank you for convening this hearing. It is my privilege to address the matter of oil drilling and production in the Cuban Exclusive Economic Zone and in Bahamian waters as well as the attendant likelihood of spilled oil or chronic oil releases reaching US coastal waters.

Based upon the current status of ocean science and pollution release studies in the semi-tropical waters in the southeastern US, the most direct answer is yes, a finite likelihood does exist for oil-bearing subsurface water, surface water, or both to reach US coastal waters. The operational detail of the science and the data on which the above is based is largely incomplete and, indeed, should be expanded as soon as practicable for more accurate predictive capability of impacts and effects.

Contrasting the Deepwater Horizon Spill and prospective Cuban spills

An oil spill in the Cuban exclusive economic zone, while having some features in common with the recent Deepwater Horizon spill, also has key distinguishing features which increase the potential peril. The location of drill sites is far more proximal (close beside or beneath) to the major, generally eastward, Gulfstream current system. In addition to the lateral entrapment (entrainment) of spilled oil into the Gulfstream flow, there is an additional possibility of

entrapment by positive rising plume buoyancy. Both of these factors can help introduce spilled oil, associated drilling products, and chemical dispersants into the US Coastal Zone that can cause substantial damage to a number of vital interests of the US, including beaches, recreational and tourism industries, and marine and coastal ecosystems. Given proximity and currents, it is likely the initial impact of a drilling-related accident, especially (but not only) in the case of a Cuban spill, will be to the iconic Florida coral reef system, important fisheries and breeding grounds, location of threatened and endangered sea grass and coral, and habitat for rare and endangered species (birds, sea turtles, and marine mammals including manatees). The Florida Reef tract comprises up to 84% of the nation's coral reefs, is already under numerous environmental stresses, and ranges some 360 miles from the Dry Tortugas in the west to Martin County in the north. Florida has one of the most densely populated and highly developed coastlines in the United States. Coasts and ecosystems to the Carolinas and northward are also at risk and are of critical biological, ecological, economic, and human health importance. In the longer term, residual oil could impact possible desalination water supply activities along the US east coast and other coastal spatial planning activities. Florida's Coastal and Ocean economies contribute $587 billion to the State GDP. Nearly half of that activity 45% is from the atlantic coast counties that will be most immediately impacted by Cuba drilling. This represents 3.4 million jobs. Disruption to this economic engine be it through a spill or long-term chronic effects can have very serious consequences for our State's economy.

The components of the threat posed to Florida and other US waters consists primarily of spilled oil and releases of oil-bearing produced waters. These could occur during drilling and over much of the lifetime of the oil producing operations. Such discharges may be episodic and massive in size as in the case of the DWH event or chronic lingering events releasing smaller amounts of hydrocarbons at a time.

Some limitations Imposed by the Cuban Situation

At present there is no assurance of timely notification of the initiation of a spill or that proper treatment of produced waters will be accomplished. While satellite, aircraft, ship, and radar systems are useful in detecting ocean surface manifestations of an oil spill, subsurface oil releases are far more difficult to address without continuous access to the drilling sites or without a subsurface, remote sensing system for monitoring of drilling/production activities. In addition, certain preventive and mitigation activities may be hindered by the location of the drilling sites.

The United States has certain safeguards in the development of oil fields which may or may not be maintained in the Cuban drilling operations. For example steps have been taken in the US to ameliorate the toxicity and mercury levels in drilling fluids. Various mixtures of constituents are present when drilling fluids are released into the ocean. The fluid releases constitute another consideration in the impact of releases upon US coastal waters and may be largely unknown or unknown in detail by US responders. Indeed, in his State of the Union address given on January 23, 2012, the President of the United States indicated that he expected the companies that drill for oil and gas to disclose the chemicals they use and not put the health and safety of citizens at risk. How much disclosure may be expected from the various corporations anticipated to drill in Cuban waters? Developing preventative and mitigation methodologies may lack an opportunity for application. For example as shown in Figure three, underwater sound methods (applied to the Gulf of Mexico IXTOC oil spill, 1979) indicate the existence of a subsurface pool/plume of released oil was present in an area of many kilometers in extent about the spill site. A valuable study would be to seek if pumping this subsurface pool into oil carriers and out of the ocean is viable. The application of

dispersants, while controversial, was done both proximally and distally from the spill site. Will that opportunity remain?

Multi-institution/agency Plan

Because of the broad potential and considerable threat to US coastal waters, a multi-agency, integrated plan is needed. This plan must be put in place now and become fully operational before any oil spill has actually occurred. For more than two years, members of the scientific community in South Florida have been visiting multiple agencies in Washington DC outlining key ocean resource imperilment and scientific concerns regarding nearby foreign oil drilling. Although, each agency visited has recognized the serious nature of the threat and the validity of both the resource and scientific concerns, there seems to be uncertainty as to how to implement a plan and action to address information gaps in order for the US to be best prepared to respond to and mitigate the next major oil spill emanating from Cuban waters. Such a plan would provide the opportunity for joint proactive action now, not awaiting a disaster to actually occur.

The US Coast Guard has operational leadership with regard to a Cuban oil spill and has developed an aggressive response plan focused upon oil spill transport, the use of dispersants, and the surface manifestations of an oil spill. While it is imperative to address these components of the spill, it is equally important to develop and implement a much expanded plan now to address other critical issues. The goal is to better understand current transport of both surface and subsurface oil whether concentrated or dispersed, establish a baseline of existing biological and physical conditions in order to both enable early detection against which impact can be measured, and study differential toxicity of oil compared to dispersed oil so that differential organism sensitivity can be accounted for and best mitigated. The plan can be developed in cooperation with the US Coast Guard and including additional Federal agencies and a partnership of South Florida institutions, both academic and federal, with many years of experience in studying local effects of Gulfstream transport and coastal interactions.

I want to make clear that the plan that is envisioned is not a "response plan". It should be implemented now before any actual spill takes place to provide sufficient time to gain requisite information and to generate a more effective response.

The following activities are suggested to better, and pro-actively, prepare the US to address the reality of nearby foreign (both Cuban and Bahamian) oil drilling and mitigate the consequences.

- Implement an oil spill early-warning monitoring system using acoustic, geophysical, satellite and other relevant methods.
- Baseline assessment of the status of coral reef and associated ecosystems in the likely spill path (Straits of Florida, SE/E Florida coast) to prioritize areas for spill response and to set restoration targets should a spill occur.
- Ocean observations for description of the physical oceanography and current movements to have more complete knowledge of the ocean hydrodynamic movements of the Gulf Stream and Loop Current, shallow to deep, from the Yucatan channel to the Southeast/East coast of Florida.
- Oil and dispersed oil toxicity characterization and toxicity studies to determine effects on a range of coral reef ecosystem and other organisms to develop risk assessments.

- Modeling for prediction of ocean dynamics for spill movement prediction over time and space both in the vertical and horizontal.
- Modeling for prediction of ecological /biological effects under various spill and response scenarios.
- Modeling to assess the potential impact of different observing strategies on baseline data collection, analysis of information, and data required for response and mitigation.

Implementation of the plan would involve the following elements:

1. Inviting and integrating other Federal agencies, in addition to the Coast Guard, into a Cuban oil drilling/production effort for response to a Cuban oil spill.
2. Establishment of a partnership between the US Coast Guard and a consortium of South Florida institutions having the in-depth experience, local knowledge, data, and expertise to be most effective in our unique oceanic and coastal environments. These institutions include, presently, Florida International University, NOVA Southeastern University, the University of Miami, NOAA's South Florida regional science laboratories and centers (AOML, NHC, and SEFC), and private industry. Other partners could eventually include SECOORA, IOOS, FLCOOS and other Universities and Institutes.
3. Jointly planning a system for gathering operational data and concurrently for gathering research data with quick payoff for operational activities, e.g. real-time current information for transport calculations and modeling.
4. Jointly planning and implementing a system to gather data which will be of use in longer term damage and impact issues such as oil characterization (both at well site proximity and US coastal water locations), eco-toxicological impacts, coral reef, inlet and port, spatial coastal planning impacts.
5. Evaluating the use and need for, and implementing as necessary, a non-intrusive monitoring system utilizing water borne and bottom borne energies originating at the Cuban oil operation sites.
6. Utilizing/developing systems and platforms, including optical, acoustical, and sampling systems, both manned and autonomous, capable of detecting, mapping, and sampling subsurface oil.

My testimony presents a suggested plan and scientific consortium team for research and related activities to address gaps in information and to better address our US response to foreign oil drilling and spills. This research is central to understanding and responding to any release affecting US waters. However, the immediate proximity of imminent drilling in Cuba and the Bahamas outside the oversight or control of US regulators or responders makes this preparation an extremely urgent priority.

2. ADDRESSING INFORMATION GAPS TO BEST PREPARE FOR AND MITIGATE EFFECTS OF CUBAN OR OTHER PROXIMAL OIL SPILLS

There are several features to consider in dealing with potential releases or spills of oil in the Cuban Exclusive economic Zone: the nature of the oil sources, the spatial and temporal distribution of the oil in the immediate vicinity of the spill site, entrainment of the oil into ocean currents, transport of the oil by winds and ocean currents, detrainment of the transported oil, both surface and subsurface, into the US coastal zone. These may help answer the following questions.

(A) What might the near-field dispersed pattern of spilled or released Cuban oil?
To help understand the prospective dispersal pattern of spilled or released Cuban oil, it is noted that drilling in the Cuban Exclusive economic Zone will likely occur over a range of water depths ranging from a few hundred meters to more than a thousand meters. If the spill originates with a drilling well then such a spill may initiate near the ocean bottom and disperse/rise vertically through the ocean water column to the ocean's surface. Thereafter spilled oil may disperse over the ocean's surface under the influence of winds, waves, and oceanic currents. The subsurface oil may rise as a plume with multiple plumes at multiple depths possible. Thereafter, the oil plumes will move laterally and vertically under the influence of sub-ocean surface currents. There could also be a near-ocean-bottom plume which would move very slowly.

In contrast to the Deepwater Horizon oil spill, the sites at which Cuban oil drilling will occur are much more likely to be impacted almost immediately by the major current system north of Cuba, namely the Loop current/Gulfstream. At the time of origin of an oil spill the current, depending on the specific drilling site location, may be north of the spill, south of the spill or over the spill. Depending on the duration of the spill, it may be possible for a spill site to be, at various times, north of the current, south of the current or under the current. This circumstance adds substantial variability in the transport of the oil and affects potential impacts to the US coastal zone.

Further complicating the spilled oil transport circumstance is the possible presence of eddies at the "boundaries" of the main current core flow. Depending on the spatial location and depth of the oil source, spilled oil might have to traverse boundary eddy fields before entrainment into the main Gulfstream flow.

(B) How might the water-dispersed Cuban oil be transported to U.S. waters?
Again in contrast to the Deepwater Horizon spill, in the case of a Cuban spill, released oil could rise as a plume and encounter the Gulfstream flowing directly overhead. In this case, potentially far greater entrainment of the oil into the main body of the current, being driven by the positive buoyancy of the plume into the current, could potentially occur. This is in addition to the lateral entrainment of the oil into the Gulfstream current as projected in the Deepwater Horizon spill. The entrained oil will subsequently move with, the primary currents and winds.

(C) How will oil make its way from the passing Gulfstream to the Florida Coastal Zone?
Assuming that the Gulfstream, other ambient currents, and winds result in the transport of both surface and sub-surface oil into the vicinity of South and Eastern Florida, what mechanisms may exist for the detrainment of the oil from the Gulfstream and environs to the Florida coastal zone? Note that I am using the word coastal zone rather than shore because the potential impact area for Florida includes many Florida resources, besides beaches, such as coral reefs and fisheries. There is also the question of impacts of oil entering into inlets, bays, ports and so on. We consider the detrainment process to affect both the surface oil and the subsurface oil. As I understand it, the US Coast Guard response is focused upon the surface manifestation of the Cuban oil. In this plan dispersants are contemplated which should gather the oil into droplets which would then sink with time.

In studies done in the Florida Area Coastal Environment(FACE) program carried out by the Atlantic Oceanographic and Meteorological Laboratory (AOML) a component of the National Oceanic and Atmospheric Administration (NOAA) measurements were carried out on the nutrient concentrations present in the coastal water. Recent measurements in that program suggest that cold, nutrient rich, water make their way over the coastal bottom from the deeper portion of the Gulfstream (and perhaps underlying waters) onto the shallow Florida shelf in the area ranging

from southern Miami-Dade County north. If spilled oil is caught up or entrained in the body of the Gulfstream, it is possible that oil-containing water could be brought up to the Florida shelf as well during these cold-water "upwelling" events. These cold water features can extend many kilometers, occur in the bottom portion of the water column (and thereby have a clear possibility to impact coral reefs and bottom dwelling fish) and ocean at an unknown rate, but might occur ocean at a frequency comparable to western boundary eddys, e.g. about every two to three weeks or so.

2.1. Some Plan Elements

At this time the programmatic solution to the Cuban-Oil Drilling activity is seen to be complex and will require collaboration by a number of entities to fully develop. There is little doubt that significant resources, financial and otherwise will be required. The items in 2.1, 2.2, 2.3, 2.4 and 2.5 below are thoughts that will be considered in the development of the major U.S. plan. They are suggestions and are not intended to be prescriptive and not complete enough to form a programmatic solution to this broad and immediate problem.

Monitoring For Early Warning: To receive the earliest possible warning of drilling operations and any spills of drilling fluids, oil, and produced waters, monitoring is essential. Within the 12 nautical miles limit of the Territorial Waters of Cuba non-intrusive monitoring (no instrumentation placement or ship entries into) would rely on remote sensing measurements using electromagnetic and underwater sound systems as well as satellite imagery. Outside the territorial limit, instrumentation via placement and ships would be utilized.

Acoustic & Geophysical: Cuban oil drilling "system", i.e. drill rigs, machinery, shaft/pumping operations, service ships, etc. will generate radiated energy that can be detectable in non-Cuban-controlled waters. Characterization of the source and signal loss of such underwater sound and in the ocean bottom (seismic energy) is critical. Ambient "noise field" measurements can provide "background" measurements to evaluate and tune detection abilities. As a precursor source levels and frequency content or distribution of the radiated underwater sound and bottom sound energies will be measured and modeled for a group of existing drilling and production platforms in US waters and other available waters.

More extensive data on oceanic temperature, salinity, and density profiles over multiple years and high special distribution will improve the accuracy of transmission loss predictions, helping identify the transport and vertical distribution of sub-ocean surface oil, oil and dispersants, and related pollutants.

Remote Sensing (Satellite and Airborne Systems): Existing satellite systems (altimetry, infrared, microwave, and visible (hyperspectral) range sensors) will be significant contributors to detecting ship and drill rig activities. This data will be corroborate/compliment underwater sound data for anomaly detection as well as insight into the effects of frontal systems and other ocean phenomena on surface oil and drilling fluid transport.

New polarmetric Synthetic Aperture Radar (SAR) can allow effective discrimination of oil spills and for tracking spills. Fusion of multiple daily remote sensing products of ultra-high resolution (centimeters), high resolution (meters), and medium resolution (250 m to several km pixels) imagery over synoptic scales should be assembled from complementary optical, infrared, and synthetic aperture radar satellites. Aircraft will provide ultra-high spatial resolution (centimeters to tens of meters) and high quality observations around the site of a spill using hyperspectral and

multi-spectral optical sensors, calibrated infrared radiometers and X-band SARs. These will help in characterizing and mapping of an oil spill (simultaneous aerial mapping with SARs and optical and thermal instruments and were never utilized during the Deep water Horizon event.

2.2. Ocean and Environmental Baseline Assessments

Ocean Observations: In an oil spill off the north coast of Cuba, currents will likely transport spilled oil in a northeasterly direction. Oil and related pollutants spilled in the Cuban EEZ could reach Florida and the eastern US in a far shorter period of time than that from the Deepwater Horizon (DWH) oil spill. Natural processes to degrade spilled oil and released drilling fluid means oil reaching US waters will have far time than oil from the DWH.

There are complex phenomena associated with current transport north of Cuba including the ambient ocean currents of the US and the Cuban EEZ. The Gulf Stream passes between Florida and Cuba. The Gulf of Mexico is linked with the Atlantic Ocean through the Strait of Florida and to the Caribbean Sea through the Yucatan Channel. The Gulf Stream forms the "loop current" in the Gulf of Mexico for portions of the year. These interact with sea floor bathymetry, coastal topography, seasonality, meteorology, and episodic (hurricane and other storm) influences.

More extensive (in space and time) oceanographic measurements north of Cuba, between Cuba and Florida, and in the Bahamas are critical to provide real-time field data for input into coastal ocean circulation models for the region. Full or partial water column measurements can be made utilizing Acoustic Doppler Current Profiler (ADCP), conductivity-temperature-pressure, acoustical, and hydro-chemical instruments from several platforms including: fixed installations on the ocean bottom and on submerged and/or surface buoys. Data recorded at the instrument site and via real-time data transmission will be needed. Broad area, high resolution surface ocean currents and fronts can be observed using radar instruments on shore, as well as, from space. Sea gliders and autonomous underwater vehicles, or their hybrids, can complement the acoustic and electromagnetic remote sensing tools. Some consideration of transport via deeper westward/southward going currents through the Yucatan Straits could also be envisioned.

Obtaining water samples for analysis or by in situ sensing is a key feature of the observing / monitoring system. Water sampling addresses multiple requirements: (a) prospective oil and/or drilling fluid releases and transport into the US exclusive economic zone, (b) establish arrival of releases at environmental assets of environmental and economic importance, e.g. coral reefs.

Biological Baseline: The environmental and economic impact of an oil spill in foreign waters reaching the US would be devastating with significant impacts to the entire iconic Florida Reef Track coral reef ecosystem, including to fishes and other key organisms that spend portions of their life cycles in foreign and US waters. US Reef ecosystem degradation would have major economic and ecologic ramifications The annual economic value of Florida coral reefs is over $6 billion resulting in over 70,000 jobs in South Florida alone (Hazen & Sawyer, 2000). Substantial economies exist from coastal zone industries and tourism activities of a large portion of the US east coast regarding the value of fishing and tourism. These environmental and economic effects are potentially an order of magnitude greater than that realized from the Deepwater Horizon spill.

Effective evaluation of post-oil spill impacts requires comprehensive knowledge of existing ecosystems. The limited pre-existing information on the baseline status of Gulf of Mexico ecosystems hampered the prioritization of most effective and least harmful response actions, compromised proper assessment of Deep Water Horizon spill impacts and constrained setting appropriate targets for restoration. It is critical to obtain baseline information for the marine

ecosystem between northern Cuba and the Florida reef track and Florida Bay to avoid these pitfalls in the event of a Cuban oil spill.

Only about 50% of the Florida Reef Tract coral reef resources have been mapped. Most existing maps are old, based primarily on aerial photographs, and consequently are less than adequate for best spill response. Remote sensing coupled with *in situ* groundtruthing and assessment could update and provide more complete habitat layers to accurately locate and describe what currently exists. Additional bathymetry measurements are needed throughout the Keys and to the north to provide the underwater topographic template for biological mapping.

Quantitative study at selected sites key fish, invertebrates, plants and plankton at fixed and randomly locations will be utilized to best quantify the resources. Knowledge of present resource status and understanding of trajectories in such populations and communities is critical for the development of meaningful experimental and modeling approaches that evaluate oil-related impacts.

Community diversity and resilience of the Florida reef ecosystem is critically dependent on successful recruitment of reproductive propagules, and the movements of adult organisms. There is close proximity of Cuban and Florida coral reefs. Surface current-based oceanographic models for biological connectivity requires testing for predictive ecological models of foreign oil spill impacts on Florida reefs.

2.3. Toxic Effects

There are large gaps in our understanding of detailed, synergistic, short, and long term effects of oil spills and spill treatments on tropical coral reefs, seagrass, pelagic and benthic ecosystems. Oil spills are known to be detrimental to coral reef ecosystems but the degree of severity varies with hydrocarbon type, dosage, organism, and cleanup or mitigation methods. In summary:

- *"Spill impacts vary in severity with the specific conditions at a given spill, including oil type and quantity, species composition, and the nature of oil exposure....*
- *Longer exposure to lower levels of oil may kill corals as well as shorter exposure to higher concentrations....*

Evaluation of oil toxicity is not an easy task, since each spill presents a unique set of physical, chemical, and biological conditions. ... "Oil" includes substances that are chemically very different, ranging from highly toxic and volatile refined products, to less acutely toxic but persistent, heavier fuel oils. Different species and life stages within a species have varying sensitivities and thus may respond very differently to oil exposure. ... How corals are exposed to oil bears directly on how serious the impact will be... " (NOAA (Oil Spills in Coral Reefs: Planning and Response Considerations, 2nd edition NOAA Office of Response and Restoration, 2010).

Without more knowledge, it is impossible to be well prepared for a spill and, importantly, to best plan for and implement effective mitigation efforts, determine damages caused by a spill, and set restoration targets after a spill.

The US Coast Guard response appears focused upon the surface manifestation of the Cuban oil and in the use of dispersants. In Deepwater Horizon, millions of gallons of dispersants were also used at the deep source.

It is well known that dispersed oil can have differential toxic effects to various components of coral reef ecosystems. Therefore, more complete toxicity evaluation is needed for the interaction of the chemical evolution of oil and dispersed oil with the responses of keystone reef organisms,

encompassing bacteria, macroalgae, invertebrates (e.g., corals, ocotocorals, sponges) and fishes. Species of focus must cover a broad-range of life-history and ecological traits, including sessile and mobile organisms. Studies should focus on the diversity of oil degradation products (which vary greatly in toxicity) that are likely to impact reef and associated ecosystems.

Understanding, quantification, and thresholds for cellular to community impacts of variable severity acting alone or in concert with other stressors (including those that may accompany climate change) can be accomplished using:

- Dose-response laboratory and microcosm experiments, field assessments, and modeling
- Histological, cellular, molecular, biomarker, skeletal growth, and population and community-level parameters as health indicators.

Evaluation of historical effects of past oil spills as a guide to predicting future impacts can be also be assessed through annual growth and skeletal chemical records of corals that were been previously impacted by a major prior spill, IXTOC, in the 1970's that had significant reef impact. Such information will be useful to evaluate effects to still living corals from the past oil spill and to provide important predictive information for gauging effects of subsequent spills.

2.4. Predictive Modeling of Spill Interactions & Impacts

Physical Oceanographic: Modeling of ambient currents north of Cuba and at the western (Cuba and the Yucatan) and the eastern end (Florida Straits) passages is fundamental to understanding of the transport of released drilling fluids and spilled oil. Challenging aspects of this modeling are the requirements for water column current modeling in a wide range of spatial and temporal scales and modeling of currents linking major flows, e.g. the Gulf Stream, to currents between the Gulf Stream and coasts. Outstanding modeling capabilities of the flows in the Gulfstream Florida Cuba environment, with several years of data and experience resides within the institutions of the scientific consortium mentioned in this document.

A set of high-resolution, non-hydrostatic models can be imbedded at critical locations in an existing coastal circulation nowcast/forecast model for the Yucatan Chanel, Gulf of Mexico, Straits of Florida, and South Atlantic Bight. Advantage can be taken of existing models and in expanding modeling efforts.

Ecological: Responses of the ecosystems to the many different aspects and effects of oil and dispersed oil remain are unclear. Yet without such information, it is impossible to best organize the best response.

Experimental exposure results, reef connectivity dynamics, trophic relationships, and past effects can be used to construct ecological models to predict ecosystem responses to oil and dispersed oil spill scenarios. Detailed results obtained from empirical work will provide scaled information (across several levels) of oil and climate change impacts on tissue, cellular, organismal, and population levels. This information will mathematically explicit by a series of dynamical equations that recreate the cascade of impacts. The result will be a master ecological model for numerical experimentation with different pollution scenarios. Depending on the information available, models will be based on Leslie-matrices, will measure life-history event likelihood using Markov chains, and/or will employ ordinary differential equations. Choice of model will depend on availability of data and life-history information of the organisms (i.e. stage or size-explicit life tables versus only general survivability information). The overall model will be parameterized using experimental and connectivity results and will be verified by hindcasting

against known trajectories (experiments). If concordance can be achieved, such models can then be used for forecasting.

2.5. Mitigation

Several models and strategies can be developed specifically to enhance the ability of the US Coast Guard, and other agencies to understand where a spill is going in space and time and what are likely ecological and environmental effects. This information allows planning of best response and mitigation of a spill related to Cuban oil drilling activities.

Models will be appropriately developed or coded in Matlab as a series of inter-linking functions fronted by user-friendly, graphical user interfaces (GUI). Output would be designed for use by resource managers to investigate the potential impacts of various levels of oil/dispersant pollution future. Dynamics among reef organisms will be evaluated by utilizing population growth rates of various organisms to allow exploration of ecological cascades, keystone effects, and multi-species effects. Models will provide explicit parameterization of oil, dispersant and climate change. Sub-models will be combined to an overall, compartmentalized, master model Various levels of stressors (pollution and/or climate change) and empirically determined connectivity dynamics can be set to predict changes in populations and communities resulting from various oil-drilling and spill accident scenarios.

ECOSIM-style models can be developed to incorporate Fisheries and Fisheries management tools and that may act synergistically with oil impacts. This will require data from the empirical studies.

The overall purpose should be is to utilize in-situ and remote sensing observations, knowledge of effects, oceanographic and bio-physical numerical modeling, and data assimilation to trace oil spills, understand effects, and mitigate their impact on sensitive ecosystems.

3. CONSORTIUM SCIENCE TEAM

Current South Florida institutions have the in-depth experience, local knowledge, and data to be most effective in our unique oceanic and coastal environments. These institutions include Florida International University, NOVA Southeastern University, the University of Miami, NOAA's South Florida regional science laboratories and centers (AOML, NHC, and SEFC), and private industry. Other partners could eventually include SECOORA, IOOS, and FLCOOS.

4. FIGURES

Four Figures are attached to the back of this testimony. These figures were provided by members of the Consortium mentioned earlier of from certain news papers or journals.

The first Figure shows the extant oil tracts and leases for Cuba and the Bahamas. This figure come from the named newspaper and is ascribed therein to Jorge Pinon.

The second and third Figures come from Dr. Richard Dodge at NOVA Southeastern University. Both these figures provide a depiction of the Loop Current/Gulfstream.

The fourth Figure comes from a NOAA Technical document and was developed by the writer.

The fifth Figure comes from Dr. Richard Dodge and shows the geographic area of the Deepwater Horizon spill at a particular time. Note that the expected form of the geographic distribution of any prospective Cuban oil spill will likely be different from the DHW distribution.

I thank you for your invitation to speak and for your attention.

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