AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

FINAL REPORT OF THE PRESIDENT'S NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

OVERSIGHT HEARING

BEFORE THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

Wednesday, January 26, 2011

Serial No. 112-1

Printed for the use of the Committee on Natural Resources

Available via the World Wide Web: http://www.gpoaccess.gov/congress/index.html
or
Committee address: http://naturalresources.house.gov

U.S. GOVERNMENT PRINTING OFFICE

63-876 PDF WASHINGTON : 2011

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON NATURAL RESOURCES

DOC HASTINGS, WA, *Chairman*
EDWARD J. MARKEY, MA, *Ranking Democrat Member*

Don Young, AK
John J. Duncan, Jr., TN
Louie Gohmert, TX
Rob Bishop, UT
Doug Lamborn, CO
Robert J. Wittman, VA
Paul C. Broun, GA
John Fleming, LA
Mike Coffman, CO
Tom McClintock, CA
Glenn Thompson, PA
Jeff Denham, CA
Dan Benishek, MI
David Rivera, FL
Jeff Duncan, SC
Scott R. Tipton, CO
Paul A. Gosar, AZ
Raúl R. Labrador, ID
Kristi L. Noem, SD
Steve Southerland II, FL
Bill Flores, TX
Andy Harris, MD
Jeffrey M. Landry, LA
Charles J. "Chuck" Fleischmann, TN
Jon Runyan, NJ
Bill Johnson, OH

Dale E. Kildee, MI
Peter A. DeFazio, OR
Eni F.H. Faleomavaega, AS
Frank Pallone, Jr., NJ
Grace F. Napolitano, CA
Rush D. Holt, NJ
Raúl M. Grijalva, AZ
Madeleine Z. Bordallo, GU
Jim Costa, CA
Dan Boren, OK
Gregorio Kilili Camacho Sablan, CNMI
Martin Heinrich, NM
Ben Ray Luján, NM
Donna M. Christensen, VI
John P. Sarbanes, MD
Betty Sutton, OH
Niki Tsongas, MA
Pedro R. Pierluisi, PR
John Garamendi, CA
Colleen W. Hanabusa, HI

Todd Young, *Chief of Staff*
Lisa Pittman, *Chief Counsel*
Jeffrey Duncan, *Democrat Staff Director*
Rick Healy, *Democrat Chief Counsel*

CONTENTS

	Page
Hearing held on Wednesday, January 26, 2011	1
Statement of Members:	
Flores, Hon. Bill, a Representative in Congress from the State of Texas, Prepared statement of	52
Hastings, Hon. Doc, a Representative in Congress from the State of Washington	1
Prepared statement of	3
Holt, Hon. Rush D., a Representative in Congress from the State of New Jersey, Prepared statement of	69
Landry, Hon. Jeffrey M., a Representative in Congress from the State of Louisiana, Prepared statement of	70
Markey, Hon. Edward J., a Representative in Congress from the State of Massachusetts	4
Prepared statement of	5
Wittman, Hon. Robert J., a Representative in Congress from the State of Virginia, Prepared statement of	70
Statement of Witnesses:	
Graham, Hon. Bob, Senator, Co-Chairman, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling	9
Prepared statement of	11
Joint response to questions submitted for the record	71
Reilly, Hon. William K., Former Administrator of the Environmental Protection Agency, and Co-Chairman, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling	7
Prepared statement of	11
Joint response to questions submitted for the record	71
Additional materials supplied:	
Wall Street Journal editorial "Gulf Political Spill" dated January 13, 2011, submitted for the record	66

OVERSIGHT HEARING ON THE FINAL REPORT OF THE PRESIDENT'S NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING.

Wednesday, January 26, 2011
U.S. House of Representatives
Committee on Natural Resources
Washington, D.C.

The Committee met, pursuant to call, at 2:19 p.m., in Room 1324, Longworth House Office Building, Hon. Doc Hastings [Chairman of the Committee] presiding.

Present: Representatives Hastings, Young, Bishop, Lamborn, Wittman, Fleming, Coffman, McClintock, Thompson, Denham, Benishek, Rivera, Duncan of South Carolina, Tipton, Gosar, Labrador, Southerland, Flores, Harris, Landry, Fleischmann, Runyan, Johnson, Markey, Pallone, Grijalva, Boren, Luján, Christensen, Sarbanes, Tsongas, and Hanabusa.

STATEMENT OF THE HON. DOC HASTINGS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

The CHAIRMAN. The Committee on Natural Resources will come to order.

The Committee is meeting today to hear testimony on the report by the President's National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling.

Under Committee Rule 4(f), any oral opening statements at hearings are limited to the Chairman and the Ranking Minority Member. This will allow us to hear from our witnesses sooner and help keep Members on their schedules. If other Members have statements, they can be included in the hearing record under unanimous consent.

So I ask unanimous consent that all Members' opening day statements be made a part of the hearing record if they are submitted to the Chief Clerk by 5:00 p.m. today. Hearing no objection, so ordered.

We have two witnesses today, and I will make the formal introductions after our opening statements, but I am very pleased that they are here. They are spending all day on the Hill. The first part of the day was spent on the other side of the Capitol, and now they are here, and I will welcome them formally in a moment.

It has been 9 months since the horrific explosion and oil spill in the Gulf of Mexico that resulted in the death of 11 men and the burning and the sinking of the *Deepwater Horizon*. Since then, nearly 5 million barrels of oil spilled into the Gulf, resulting in the economic displacement of tens of thousands of fishermen, tourist workers, and people connected to the offshore energy industry.

The oil spill was a terrible tragedy and the effects are still being felt today. As this Committee proceeds with its oversight duties, we must be mindful of how we respond because that response could significantly impact American energy policy in the future. The response to this event could be the difference between making offshore drilling the safest in the world or locking up our resources, putting more Americans out of work and further relying on foreign countries for our energy needs.

It is because of these serious implications that I have stressed from day one the need to have all of the facts and information surrounding the cause of this incident before there is a rush to judgment or a rush to legislate. When President Obama announced that he was personally appointing an oil spill commission, many in Congress and around the country were deeply concerned with both the makeup and the mandate of the Commission.

There were concerns that the President's Commission didn't have enough experts in engineering or experience in the oil and gas industry and that it was comprised of individuals who had dedicated a significant portion of their career to opposing oil and gas drilling. While understanding these concerns, I kept and am keeping an open mind on the recommendations of the President's Commission.

This is why this is the first scheduled Committee hearing in this Congress, and I am anxious to hear from the Co-Chairs. This report provides further insight into the accident and will be a factor in Congress' discussions. However, even with the Commission's report, we still don't know precisely what caused the explosion or why the blowout preventer failed to work. Now, there will be additional reports from the joint Coast Guard-BOEM Marine Board hearings and the Chemical Safety Board hearings. And hopefully they will provide answers to these lingering questions among others.

Through this uncertainty, what I do know for sure is that America needs American-made energy. We need to keep and create American jobs. And we need to mitigate America's dependence on foreign energy that threatens potentially our national security. The oil spill, as I mentioned, was a terrible tragedy, but it should not be used as an excuse to further reduce America's access to our energy resources.

Some in Congress view this bill as an opportunity to shut down offshore drilling. To me, that is not a solution. That is giving up. Legislation aimed at this goal was introduced last year and will predictably be proposed again in this Congress—this despite the strong support among the American people for continued offshore energy productions.

Republicans want to make offshore energy drilling the safest in the world. We believe in the need to make smart, effective reforms that are centered on improving safety, putting people back to work

and allowing responsible drilling to move forward. The right response to this bill is to focus on making drilling safe, not impossible.

The importance of this Committee's future work cannot be understated. Gas prices are steadily rising. Iran has assumed the presidency of OPEC, and rigs are leaving the Gulf for foreign countries like Cuba, Brazil and Mexico, taking American jobs with them. This isn't speculation. It is happening.

My colleagues from the Gulf can attest to the real economic pain being felt by people and businesses due to this Administration's drilling moratorium. Production in the Gulf of Mexico has already fallen by more than 200,000 barrels per day, and it is predicted by the Energy Information Administration to fall by more than 500,000 barrels per day by 2012. Every barrel that we don't produce from the Gulf means more lost revenue to the Federal Government, more lost jobs, and an additional transfer of American wealth to hostile nations.

I believe in American ingenuity, and I know that we can get this right. The answer is to address what went wrong and make smart reforms and allow drilling to resume. The stakes are too high to give up. Our economic competitiveness, American jobs, and national security are on the line.

And with that, I recognize the distinguished Ranking Member.

[The prepared statement of Chairman Hastings follows:]

Statement of The Honorable Doc Hastings, Chairman, Committee on Natural Resources

It's been nine months since the horrific explosion and oil spill in the Gulf of Mexico that resulted in the death of 11 men and the burning and sinking of the Deepwater Horizon rig. Since then nearly five million barrels of oil spilled into the Gulf; resulting in the economic displacement of tens of thousands of fishermen, tourism workers, and people connected to the offshore energy industry.

The oil spill was a terrible tragedy and the effects are still being felt today.

As this Committee proceeds with its oversight duties, we must be mindful of how we respond, because that response could significantly impact American energy policy in the future. The response to this event could be the difference between making offshore drilling the safest in the world ... or locking-up up our resources, putting more Americans out of work, and further relying on foreign countries for our energy needs.

It is because of these serious implications that I have stressed from day one the need to have all the facts and information surrounding the cause of this incident before there is a rush to judgment ... or a rush to legislate.

When President Obama announced that he was personally appointing an Oil Spill Commission, many in Congress and around the country were deeply concerned with both the make-up and mandate of the Commission.

There were concerns that the President's Commission didn't have enough experts in engineering or experience in the oil and gas industry and that it was comprised of individuals who had dedicated a significant portion of their career to opposing oil and gas drilling.

While understanding these concerns, I kept, and am keeping, an open mind on the recommendations of the President's Commission. This is why it is the first scheduled Committee hearing of this Congress and I'm eager to hear from its Co-Chairs.

This report provides further insight into the accident and will be a factor in Congress' discussions. However, even with the Commission's report, we still don't know precisely what caused the explosion, or why the blowout preventer failed to work.

Additional reports from the joint Coast Guard-BOEM Marine Board hearings and the Chemical Safety Board are forthcoming and I'm hopeful they will provide answers to some of the lingering questions.

Through all this uncertainty, what I do know for sure is that America needs American-made energy.

We need to keep and create American jobs.

And we need to mitigate America's dependence on foreign energy that threatens our national security.

The oil spill was a terrible tragedy, but it should not be used as an excuse to further reduce America's access to our energy resources. Some in Congress view this spill as an opportunity to shut down offshore drilling. That is not a solution . . . that is giving up.

Legislation aimed at this goal was introduced last year and will predictably be proposed again this Congress. This despite the strong support among the American people for continued offshore energy production.

Republicans want to make offshore drilling the safest in the world. We believe in the need to make smart, effective reforms that are centered on improving safety, putting people back to work, and allowing responsible drilling to move forward. The right response to this spill is to focus on making drilling safe . . ., not making it impossible.

The importance of this Committee's future work cannot be understated. Gas prices are steadily rising, . . . Iran has assumed the Presidency of OPEC, . . . and rigs are leaving the Gulf for foreign countries—like Cuba, Brazil and Mexico—taking American jobs with them. This isn't speculation . . . it's happening.

My colleagues from the Gulf can attest to the real economic pain being felt by people and businesses due to this Administration's drilling moratorium.

Production in the Gulf of Mexico has already fallen by more than 200,000 barrels per day, and is predicted by the Energy Information Administration to fall by more than 500,000 barrels per day by 2012.

Every barrel we don't produce from the Gulf means more lost revenue to the federal government, more lost jobs, and an additional transfer of American wealth to hostile nations.

I believe in American ingenuity and I know we can get this right. The answer is to address what went wrong, make smart reforms and allow drilling to resume. The stakes are too high to give up. Our economic competitiveness, American jobs and natural security are on the line.

STATEMENT OF THE HON. ED MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. MARKEY. I thank the Chairman very much, and we thank you.

And on behalf of the Democratic Members of the Committee, please accept our sincere congratulations on your appointment as Chairman.

We, on this side of the aisle, look forward to a productive working relationship with you and with the majority, occasionally punctuated by knockdown drag-out fights over issues that we all care about deeply.

While I applaud the Chairman for holding this hearing today, I am also deeply saddened that this hearing is necessary. Industry and Federal regulators assured the American public that a disaster like the BP *Deepwater Horizon* spill could not happen. The events of last April and the subsequent investigations have demonstrated that those assurances were worthless. The American people are left to count the economic and environmental costs and 11 families are left without their loved ones.

It is vital to our Nation's energy future that we examine the causes of this tragedy with clear eyes, assess the lessons to be learned with open minds, and commit ourselves to fundamental reform with firm resolve.

In the testimony submitted for this hearing, the Commission Co-Chairmen—and we thank you both so much for your service to our country—point out that "the United States has the highest reported rate of fatalities per hours worked in offshore oil and gas drilling among its international peers."

Mr. Chairman, that shocking statistic does not mean that BP or Transocean or Halliburton operate unsafely. It means that the entire American offshore oil and gas industry operates unsafely compared to its international peers.

To quote from our witnesses again: "The central lesson to be drawn from the catastrophe is that no less than an overhauling of both current industry practices and government oversight is now required."

Mr. Chairman, this is not a time for half measures or tinkering around the edges. This is a time for bold reforms. The lives lost and the damage done as a result of this tragedy require nothing short of fundamental change in the way we conduct the business of offshore oil and gas development and production.

I am proud that Democrats in the House took a major step toward such an overhaul by passing the Consolidated Land, Energy and Aquatic Resources Act in the last Congress, known as the CLEAR Act. The legislation included many of the recommendations contained in the Commission's report.

While my colleagues on the Republican side may not have liked all that was in that legislation, it is my hope that now the Commission has made many of the same recommendations, that we can work together in a bipartisan effort to craft new legislation.

To that end, I have joined with Ranking Members Waxman and Rahall, Miller and Johnson, along with Energy Ranking Member Rush Holt and other Members to introduce new legislation combining the best elements of the CLEAR Act with recommendations from the Commission. We welcome review of that legislation by the Commission and by our colleagues on both sides of the aisle.

If we are shortsighted and complacent, today's hearing will be an end. If we are visionary and engaged, today's hearing is only the beginning of having America have the safest and most productive oil and natural gas industry. That should be our goal. And that is the goal I think every American should be aiming to achieve in any legislation we pass.

In closing, again, let me offer my sincere gratitude to Senator Graham; to you, Administrator Reilly; and to all of the Commission members and the staff for their Herculean effort and their willingness to take on this investigation and their dedication to completing it in such a short period of time and with such thoroughness.

This Committee and the American people are in your debt, and I thank you for your efforts. And I thank the Chairman for extending me those few extra seconds.

[The prepared statement of Mr. Markey follows:]

Statement of The Honorable Edward J. Markey, Ranking Member, Committee on Natural Resources

Thank you Chairman Hastings and on behalf of the Democratic members of the Committee, please accept our sincere congratulations on your appointment as Chairman. We on this side of the aisle look forward to a productive working relationship—punctuated by knock-down, drag-out fights over issues we all care about deeply.

While I applaud the Chairman for holding this hearing today, I am also deeply saddened that this hearing is necessary. Industry and federal regulators assured the American public that a disaster like the BP Deepwater Horizon spill *could not happen.*

The events of last April and the subsequent investigations have demonstrated that those assurances were worthless. The American people are left to count the economic and environmental costs and eleven families are left without their loved ones.

It is vital to our nation's energy future that we examine the causes of this tragedy with clear eyes, assess the lessons to be learned with open minds, and commit ourselves to fundamental reform with firm resolve.

In the testimony submitted for this hearing, the Commission Co-Chairmen point out that, "the United States has the highest reported rate of fatalities per hours worked in offshore oil and gas drilling among its international peers."

Mr. Chairman, that shocking statistic does not mean that BP or Transocean or Halliburton operate unsafely; it means that the entire American offshore oil and gas industry operates unsafely, compared to its international peers.

To quote from our witnesses again, "the central lesson to be drawn from the catastrophe is that no less than an overhauling of both current industry practices and government oversight is now required."

Mr. Chairman, this is not a time for half measures or tinkering around the edges; this is a time for bold reforms. The lives lost and the damage done as a result of this tragedy require nothing short of fundamental change in the way we conduct the business of offshore oil and gas development and production.

I am proud that Democrats in the House took a major step toward such an overhaul by passing the Consolidated Land, Energy, and Aquatic Resources Act in the last Congress. Known as the CLEAR Act, that legislation included many of the recommendations contained in the Commission's report.

While my colleagues on the Republican side opposed that effort, it is my hope that, now that the Commission has made many of the same recommendations, we can work together in a bipartisan effort to craft new legislation. To that end, I have joined Ranking Members Waxman, Rahall, Miller, and Johnson, along with Energy Subcommittee Ranking Member Holt and other Members, to introduce new legislation combining the best elements of the CLEAR Act with recommendations from the Commission. We welcome review of our legislation by the Commission and by our colleagues on both sides of the aisle.

If we are shortsighted and complacent, today's hearing will be an end. If we are visionary and engaged, today's hearing is only the beginning.

In closing, let me offer my sincere gratitude to Senator Graham, Mr. Reilly, and all the Commission members and staff for their willingness to take on this investigation and their dedication in completing it so thoroughly. This committee and the American people are in your debt.

The CHAIRMAN. I thank the gentleman.

And I thank the gentleman for his opening comments. I, too, look forward to working with you. And I want to welcome the two witnesses here today. I know that since this event happened and since the appointment of the Commission, there is a lot of work done by both of you.

The Honorable Bill Reilly is a former Administrator of the EPA and, of course, on the Hill people do remember the Florida Senator, Bob Graham, and former Governor, if I am not mistaken, of the State of Florida. So certainly there is expertise.

So, with that, I would just remind you that under Committee rules, you have 5 minutes for your oral testimony. However, your full statement will appear in the record.

You note that over here, we have these little boxes that have green lights, yellow lights and red lights. When the red light comes on, you know you are at 5 minutes. When the yellow light is on, you are up to 4.5 minutes and you have 30 seconds.

With that, we will allow both of you to testify and then we will open up to questions to an eager Committee that wants to talk.

So, with that, I will first introduce Mr. Reilly. Mr. Reilly, you are on.

STATEMENT OF THE HONORABLE WILLIAM K. REILLY, FORMER ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY, CO-CHAIRMAN, NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

Mr. REILLY. Thank you, Mr. Chairman, Ranking Member Markey, members of the Committee, it is a privilege and an honor for us to appear before you as it has been for us to serve on this Commission, particularly for me to serve with my distinguished friend and long time, long time friend and colleague, Bob Graham. I will make a brief statement and ask that my testimony be included in the record.

I want to begin by saying that with respect to oil and gas, we need the resource. It is vital to the economy, to our mobility, to our way of life. It is itself, the oil and gas industry, a significant contributor to productivity, to jobs, to our GDP and to avoiding even more necessity to import from the international oil market.

This Commission believes that we can develop offshore oil and gas resources safely; we can do it in the deep water, and I would signal that the deep water is where it is. That is where the industry has been going and will be going in an even more significant way in the years to come.

But the country's confidence in offshore oil and gas development has been shattered. The Commission determined that the government and industry both were characterized by an aura of complacency. That has attracted a good deal of attention and some criticism. I would just say very briefly that, as I learned from Tony Hayward, the CEO of BP, the week after I took office as Commission Co-Chairman, when you learn from him that there is effectively no subsea containment technology or capability, when you look at response plans that talk about protecting walruses in the Gulf of Mexico, when you see the wholly inadequate response technology that has not evolved since I oversaw it 20 years before in Prince William Sound, and when you see that there have been 79 instances of loss of well control between 1996 and 2009 in the Gulf and that we have, as was mentioned, a fatality rate that is 5 times that of the North Sea in a much more punishing environment—and then finally that you have key omnipresent contractors who are deeply implicated in the bad decisions that contributed to the high risk that we uncovered—you have to conclude both that there was an aura of complacency—and so many industry leaders have said, which I would have said myself, we didn't think this was possible, and we didn't think this could happen—but also that contractors who have supplied faulty cement to a BP rig or who have failed to detect gas rising in the drill pipe on a BP rig, it is inconceivable given their presence in all of the oceans in the world where oil and gas are developed, it is inconceivable to us that this would only have been confined to one company, to a rogue company, which was my own conviction, my own premise starting out.

So we did conclude this is a systemic problem that has been characterized by an atmosphere of complacency.

I want to signal one more thing and that is the history of the budget of the government regulatory agency of which we are quite hard, we are quite critical of its effectiveness, its capability, its lack

of professionalism, to carry out the assignment that the law gives it to monitor and control and regulate this industry. The budget for MMS, the predecessor to the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), has gone down 20 percent since 1984, while offshore oil and gas production has tripled.

So to address these issues, we have three principal proposals: First is for a safety authority within the Interior Department entirely walled off from political interference with a Director appointed for a term much like the FBI Director and adequately resourced and budgeted, provided for.

We recommend that industry establish a safety institute. The high-risk industries that have had catastrophes have learned from them: The chemical industry after Bhopal with Responsible Care® and the nuclear industry after Three Mile Island with the Institute for Nuclear Power Operations (INPO). Those should be focused on best practice and should bring up the game for everybody and allow the best companies to have some means of ensuring that one laggard company, one bad performer does not bring everybody down and cause all their rigs to be shut down in the Gulf, as was the case last summer.

Finally, I just want to signal the international dimensions of our issue. If you look at a map of the Gulf of Mexico, the United States has sovereign jurisdiction over far less than all of it. We now know Mexico intends to go into deep water in two years, Cuba within the next year or two, and we need some kind of international understanding or treaty with respect to the standards that will apply to those activities.

We also need it in the Arctic, where Russia is intending to go into its Arctic waters with BP and Rosneft. Canada. Denmark has already begun, and Greenland last summer. We need the same kind of attention on the part of our State Department to ensure that the Arctic waters are given the kind of special protection that they deserve. We make a number of recommendations particularly relevant to science and the science that is needed to pursue oil and gas development in those very different waters with all of the high risks that special storm action, fog and deep cold entail.

Well, those are some of the principal recommendations I wanted to cover, Mr. Chairman. I would only say that they are relatively modest in my view, in terms, both of money, certainly in terms of bureaucracy and disruption. To reorganize the Interior Department will not take much in the way of money. To budget adequately the BOEMRE, it will take some, but it is relatively small in lieu of both the huge cost of the accident we just experienced and the overall revenues that the United States receives from offshore oil and gas development leases and royalties. I think it is money that would be well invested, and we look forward to your questions and recognize that from the point of view of the Commission, we are just about done. So it really is over to you.

Thank you, sir.

The CHAIRMAN. Thank you, Mr. Reilly. I appreciate very much your testimony.

Senator Graham, you are on.

STATEMENT OF THE HONORABLE BOB GRAHAM, SENATOR, CO-CHAIRMAN, NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

Mr. GRAHAM. Thank you very much, Mr. Chairman, Ranking Member Markey and other members of this Committee.

And I know many of you are commencing your service in Congress, and let me extend my congratulations. You are beginning a journey which will have immense gratification and personal pleasure. I congratulate you and wish you well in your service.

Mr. Chairman, our Commission was established in May of last year. We were given three responsibilities: First was to determine the cause of the *Deepwater Horizon* explosion; second, to evaluate the response to that disaster; and third to advise the Nation about future energy exploration, particularly in the offshore environment.

On January 11th, we submitted our report, called "Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling." We had been initially subject to some criticism. One was that we lacked independence. In the course of our investigation, we were able to make just about everybody mad at us. From time to time, the industry was mad, and the White House was mad. Maybe this Committee escaped that. I believe we established the fact that we were looking at this from the perspective of the American people's interest and none other.

Second, there was some criticism that we weren't competent to carry out this task. It would be immodest to try to defend our competency. I would just submit our report, its findings and recommendations, and you can evaluate whether you think that we had the skills, both among the seven commissioners and in an excellent staff led by Mr. Richard Lazarus, who gave us tremendous support throughout this endeavor.

I would like to make one general comment before I turn to the two areas that I am particularly going to discuss, and that is that there is a difference in the offshore of the Gulf from what we knnw well, which is onshore oil and gas production. Onshore oil and gas production is a combination of drilling on privately owned land and public land. All of the drilling in the Gulf of Mexico is on publicly owned land, land which belongs to the people of the United States of America.

So I think the way to look at this is not just as a regulator, a government regulating a private enterprise going about its private business. We also are in the role of a landlord. We have an obligation to protect this asset that belongs to all of the people of America and to be able to continue to draw upon it for a variety of purposes. Yes, energy, but also it is a major source of American seafood, and it is one of our major tourist areas, just to mention three of the benefits that we derive from the Gulf. So are we fulfilling our responsibility to be a prudent landlord?

I am going to discuss the area of response and containment and then the issue of, where do we go from here in terms of restoration of the Gulf?

My good friend, Bill Reilly, has already mentioned that the response to this event was, to say the least, very disappointing. Although there were some respondents who acted quickly, some heroically, the Commission concluded that neither BP nor the Federal

Government was prepared to conduct an effective response. There was a failure to plan in advance for such an event, a failure to coordinate, particularly between Federal agencies and State and local officials. In addition, neither the industry nor the Federal Government had invested in the research to understand in an anticipatory way what we would be facing if we had such an event as the Macondo blowout.

Much of the technology that we were able to bring to this problem was the same technology that had been used 20 years earlier in the *Exxon Valdez*, which is to say there was almost no technological advances taken as a result of the experience of *Exxon Valdez*.

We have made a number of recommendations on response and containment, including that the Department of the Interior, in consultation with other agencies, should develop a more rigorous set of requirements for industry response plans. No more polar bears or walruses in the response plans for the Gulf of Mexico.

The EPA and the Coast Guard should involve State and local governments as significant players; the Congress should provide adequate and sustained funding for oil spills, including and particularly research into how to mitigate oil spills; and the industry should fund a private organization to develop, adopt and enforce standards of excellence to assure continuous improvement in the technology for oil spill response.

The second area is restoration. The day before this event was April 19, 2010. If we define our goal as being to restore the Gulf to the condition that it was in on April 19th, we have missed an enormous opportunity. Frankly, the Gulf on April 19th was a degraded area. It had suffered from decades of misuse and most dramatically shown by the marshes of Louisiana, which have been receding at a rate of over one football field every 30 minutes.

We felt that this was a chance to begin a major process of restoring this very important part of our Nation. We have recommended that 80 percent of the fines and penalties that we anticipate will be assessed under the Clean Water Act be directed at Gulf restoration. That will require your approval. Only Congress can make that commitment of those fines and penalties. But we believe that it would be money well spent.

We recognize that it will require a significant amount of time, probably in the range of 20 to 30 years, to complete an effective restoration. We believe that these funds would be the basis of a major down payment toward that objective.

I would like to conclude my remarks—and I got the signal, Mr. Chairman—that drilling is inherently risky. We can never reduce it to zero. But we believe the steps that we have recommended will substantially reduce the probabilities of a repeat Macondo and, should that happen, will significantly enhance our capacity to restrain its consequences.

Mr. Chairman, I will submit my full report. I appreciate your willingness to receive it. I look forward to responding to your questions.

[The joint prepared statement of Mr. Reilly and Senator Graham follows:]

Statement of The Honorable Bob Graham and The Honorable William Reilly, Co-Chairmen, National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

I. Introduction

Chairman Hastings, Ranking Member Markey, and members of the Committee, thank you for the opportunity to testify today on behalf of the National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling.

The explosion that tore through the *Deepwater Horizon* drilling rig last April 20, as the rig's crew completed drilling the exploratory Macondo well deep under the waters of the Gulf of Mexico, began a human, economic, and environmental disaster.

Eleven crew members died, and others were seriously injured, as fire engulfed and ultimately destroyed the rig. And, although the nation would not know the full scope of the disaster for weeks, the first of more than four million barrels of oil began gushing uncontrolled into the Gulf—threatening livelihoods, the health of Gulf coast residents and of those responding to the spill, precious habitats, and even a unique way of life. A treasured American landscape, already battered and degraded from years of mismanagement, faced yet another blow as the oil spread and washed ashore. Five years after Hurricane Katrina, the nation was again transfixed, seemingly helpless, as this new tragedy unfolded in the Gulf. The costs from this one industrial accident are not yet fully counted, but it is already clear that the impacts on the region's natural systems and people were enormous, and that economic losses total tens of billions of dollars.

On May 22, 2010, President Barack Obama announced the creation of the National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling (the "Commission"): an independent, nonpartisan entity, directed to provide thorough analysis and impartial judgment. The President charged the Commission to determine the causes of the disaster, and to improve the country's ability to respond to spills, and to recommend reforms to make offshore energy production safer. And the President said we were to follow the facts wherever they led.

This Commission report (the "Report"), which we ask be made part of the hearing record in its entirety, is the result of an intense six-month effort to fulfill the President's charge. As a result of our investigation, we conclude:

- The explosive loss of the Macondo well could have been prevented.
- The immediate causes of the Macondo well blowout can be traced to a series of identifiable mistakes made by BP, Halliburton, and Transocean that reveal such systematic failures in risk management that they place in doubt the safety culture of the entire industry.
- Deepwater energy exploration and production, particularly at the frontiers of experience, involve risks for which neither industry nor government has been adequately prepared, but for which they can and must be prepared in the future.
- To assure human safety and environmental protection, regulatory oversight of leasing, energy exploration, and production require reforms even beyond those significant reforms already initiated since the *Deepwater Horizon* disaster. Fundamental reform will be needed in both the structure of those in charge of regulatory oversight and their internal decision-making process to ensure their political autonomy, technical expertise, and their full consideration of environmental protection concerns.
- Because regulatory oversight alone will not be sufficient to ensure adequate safety, the oil and gas industry will need to take its own, unilateral steps to increase dramatically safety throughout the industry, including self-policing mechanisms that supplement governmental enforcement.
- The technology, laws and regulations, and practices for containing, responding to, and cleaning up spills lag behind the real risks associated with deepwater drilling into large, high-pressure reservoirs of oil and gas located far offshore and thousands of feet below the ocean's surface. Government must close the existing gap and industry must support rather than resist that effort.
- Scientific understanding of environmental conditions in sensitive environments in deep Gulf waters, along the region's coastal habitats, and in areas proposed for more drilling, such as the Arctic, is inadequate. The same is true of the human and natural impacts of oil spills.

We reach these conclusions, and make necessary recommendations, in a constructive spirit: we aim to promote changes that will make American offshore energy exploration and production far safer, today and in the future.

II. The Root Causes of the Explosion

The Commission examined in great detail what went wrong on the rig itself. Our investigative staff uncovered a wealth of specific information that greatly enhances our understanding of the factors that led to the explosion. The results of that investigation are described in detail in Chapter 4 of the Report. The separate report of the chief counsel, to be published soon, will offer the fullest account yet of what happened on the rig and why. There are recurring themes of missed warning signals, failure to share information, and a general lack of appreciation for the risks involved. In the view of the Commission, these findings highlight the importance of organizational culture and a consistent commitment to safety by industry, from the highest management levels on down.

To summarize, the Macondo blowout happened because a number of separate risk factors, oversights, and outright mistakes combined to overwhelm the safeguards—promised by both government and by private industry—to prevent just such an event from happening. But most of the mistakes and oversights at Macondo can be traced back to a single overarching failure—a failure of management by BP, Halliburton and Transocean. Set out below are what Commission investigative staff determined were "key facts."

Key Facts: The investigation team identified several key human errors, engineering mistakes and management failures including:

- A flawed design for the cement slurry used to seal the bottom of the well, which was developed without adequate engineering review or operator supervision;
- A "negative pressure test," conducted to evaluate the cement seal at the bottom of the well, identified a cementing failure but was incorrectly judged a success because of insufficiently rigorous test procedures and inadequate training of key personnel;
- Flawed procedures for securing the well that called for unnecessarily removing drilling mud from the wellbore. If left in place, that drilling mud would have helped prevent hydrocarbons from entering the well and causing the blowout;
- Apparent inattention to key initial signals of the impending blowout; and
- An ineffective response to the blowout once it began, including but not limited to a failure of the rig's blowout preventer to close off the well.

Key Findings: The "key facts" led investigators to make the following "key findings":

- Errors and misjudgments by at least three companies—BP, Halliburton and Transocean—contributed to the disaster.
- Management failures included:
  - Inadequate training of key personnel.
  - Inadequate management of numerous late-stage well design decisions.
  - Poor communication within and between the companies involved.
  - Inadequate risk evaluation and risk mitigation measures.
- The disaster could have been prevented. Notably, workers on the rig incorrectly interpreted clear warning signs of a hydrocarbon influx during the negative pressure test. If recognized, those warning signs would have allowed them to shut in the well before the blowout began.
- Government regulations did not address several key causes of the blowout, and regulators lacked the resources or technical expertise to address others.
- Whether purposeful or not, many of the risk-enhancing decisions that BP, Halliburton, and Transocean made saved those companies significant time (and money).

The Commission's investigation concludes that these failures were preventable. Errors and misjudgments by at least three companies—BP, Halliburton and Transocean—contributed to the disaster. Federal regulations did not address many of the key issues. For example, no regulation specified basic procedures for the negative pressure test used to evaluate the cement seal or minimum criteria for test success. The chapter also notes that, " . . . whether purposeful or not, many of the decisions that BP, Halliburton, and Transocean made that increased the risk of the Macondo blowout clearly saved those companies significant time (and money)."

Attached to this testimony is a table that sets out decisions that increased risk at Macondo, while potentially saving time.

III. Regulatory Oversight and the Need for Reform

Regulatory Oversight

The responsibilities assigned to the Minerals Management Services (MMS) in an effort to regulate the offshore oil and gas industry have created conflicts of interest

and have been subject to pressure from political and industry interests. MMS was not only responsible for offshore leasing and resource management; it also collected and disbursed revenues from offshore leasing, conducted environmental reviews, reviewed plans and issued permits, conducted audits and inspections, and enforced safety and environmental regulations.

Over the course of many years, political pressure generated by a demand for lease revenues and industry pressure to expand access and expedite permit approvals and other regulatory processes often combined to push MMS to elevate revenue and permitting goals over safety and environmental goals. As a result, the safety of U.S. offshore workers has suffered. The United States has the highest reported rate of fatalities per hours worked in offshore oil and gas drilling among its international peers (the U.K., Norway, Canada, and Australia) but has the lowest reporting of injuries. This striking contrast suggests a significant under-reporting of injuries in the United States.

These problems were compounded by an outdated organizational structure, a chronic shortage of resources, a lack of sufficient technological expertise, and the inherent difficulty of coordinating effectively with all of the other government agencies that have had statutory responsibility for some aspect of offshore oil and gas activities. Besides MMS, the Departments of Transportation, Commerce, Defense, and Homeland Security, and the Environmental Protection Agency (EPA) were involved in some aspect of the industry and its many-faceted facilities and operations, from workers on production platforms to pipelines, helicopters, drilling rigs, and supply vessels.

Reorganization Needed

To remedy this conflict of interest, Congress should create an independent agency with enforcement authority to oversee all aspects of offshore drilling safety (operational and occupational) as well as the structural and operational integrity of all offshore energy production facilities, including both oil and gas production and renewable energy production. The roles and responsibilities of BOEMRE should be separated into three entities with clearly defined statutory authorities.

(1) The Offshore Safety Authority would have primary statutory responsibility for overseeing the structural and operational integrity of all offshore energy-related facilities and activities, including both oil and gas offshore drilling and renewable energy facilities. Congress should enact an organic act to establish its authorities and responsibilities, consolidating the various responsibilities now under the OCSLA, the Pipeline Safety Act, and Coast Guard authorizations. This should include responsibility for all workers in energy related offshore activities.

(2) The Leasing and Environmental Science Office would be charged with fostering environmentally responsible and efficient development of the Outer Continental Shelf, and would act as the leasing and resource manager for conventional renewable energy and other mineral resources on the OCS. The Office would also be responsible for conducting reviews under the National Environmental Policy Act (NEPA).

(3) The Office of Natural Resources Revenue would be responsible for revenue collection and auditing.

Congress should review and consider amending where necessary the governing statutes for all agencies involved in offshore activities to be consistent with the responsibilities functionally assigned to those agencies. The safety-related responsibilities of the new offshore safety agency should be included in a separate statute.

Since the Commission issued its final report on January 11th, Secretary of the Interior Ken Salazar has already announced changes in the organization within Interior that reflect many of the Commission's recommendations. Other Commission recommendations will require congressional action, especially those recommendations that seek to promote the independence of the Offshore Safety Authority from politics. For instance, the Commission recommends that the head of the Safety Authority be appointed to a fixed term that cuts across any one Presidential Administration, a change that can be accomplished most effectively only by statute.

Regulation to Better Manage Risk

The Commission also recommends a more comprehensive overhaul of both the leasing program and the regulatory policies and institutions used to oversee the safety and environmental protection of offshore activities. The goals must be to reduce and manage risk more effectively, using strategies that can keep pace with a technologically complex and rapidly evolving industry, particularly in high-risk and frontier areas, and to secure the resources needed to execute the leasing function

and provide adequate regulatory oversight. To accomplish these goals the Commission offers the following three recommendations:

- The DOI should promulgate prescriptive safety and pollution-prevention standards that are developed and selected in consultation with international regulatory peers and that are at least as rigorous as the leasing terms and regulatory requirements of peer oil-producing nations.
- The Department of the Interior (DOI) should develop a proactive, risk-based performance approach specific to individual facilities, operations, and environments, similar to the "safety case" approach in the North Sea which requires drilling rigs to be certified and have safety management obligations separate and apart from the operator.
- Working with the International Regulators' Forum and other organizations, Congress and the DOI should identify those drilling, production, and emergency-response standards that best protect offshore workers and the environment, and initiate new standards and revisions to fill gaps and correct deficiencies. These standards should be applied throughout the Gulf of Mexico, in the Arctic, and globally wherever the international industry operates. Standards should be updated at least every five years, as under the formal review process of the International Organization for Standardization (ISO). (See below for expansion on the development of international regulations.)

BOEMRE currently relies heavily on prescriptive regulations incorporating a number of industry technical standards. Prescriptive regulations must be the basis of an effective regulatory system, but given the many variables in deepwater drilling, prescriptive rules can never cover all cases. The federal agency responsible for offshore activity must have a regulatory approach that integrates more sophisticated risk assessment and risk management practices into its oversight of energy developers operating offshore. The focus should shift from prescriptive regulations covering only the operator to a *foundation* of augmented prescriptive regulations, including those relating to well design and integrity, *supplemented* by a proactive, risk-based performance approach that is specific to individual facilities (production platforms and drilling rigs), operations, and environments. Both the operator and the drilling rig owners would have a legal duty to assess and manage the risks of a specific activity by engaging all contractors and subcontractors in a coordinated safety management system.

To ensure that Interior has the ability to provide adequate leasing capabilities and regulatory oversight for the increasingly complex energy-related activities being undertaken on the OCS, budgets for these new offices as well as existing agencies should come directly from fees paid by the offshore industry, akin to how fees charged to the telecommunications industry pay for the expenses of the Federal Communications Commission, the Nuclear Regulatory Commission, the Office of Pipeline Safety which are essentially fully funded by such regulated industry payments. Through this mechanism, Congress, through legislation, and DOI, through lease provisions, could expressly oblige lessees to fund the regulation necessary to allow for private industry access to the energy resources on the OCS, including renewables.

IV. Environmental Review

As part of its inquiry into the existing regulatory structure for offshore drilling, the Commission reviewed existing mechanisms for protecting the environment. In its work on this question, the Commission focused on two issues: (1) the application of National Environmental Policy Act (NEPA) requirements to the offshore leasing process and (2) the need for better science and greater interagency consultation to improve decision-making related to management of offshore resources.

NEPA

Based on the Commission's review of leasing and permitting processes in the Gulf of Mexico before the *Deepwater Horizon* incident, the Commission concluded that the breakdown of the environmental review process for OCS activities was systemic and that Interior's historical approach to the application of NEPA requirements for offshore oil and gas activities needs significant revision. In particular, the application of tiering, use of categorical exclusions, the practice of area-wide leasing, and failure to develop formal NEPA guidance all contributed to this breakdown. The Commission recommends that the Council on Environmental Quality and the Department of the Interior revise and strengthen the NEPA policies, practices, and procedures to improve the level of environmental analysis, transparency, and consistency at all stages of the OCS planning, leasing, exploration, and development process.

Improved Interagency Consultation and Environmental Science

Under OCSLA, it is up to the Secretary of the Interior to choose the proper balance between environmental protection and resource development. In making leasing decisions, the Secretary is required to solicit and consider suggestions from any interested agency, but he or she is not required to respond to the comments or accord them any particular weight. Similar issues arise at the individual lease sale stage and at the development and production plan stage. As a result, NOAA—the nation's ocean agency with the most expertise in marine science and the management of living marine resources—effectively has the same limited role as the general public in the decisions on selecting where and when to lease portions of the OCS. The Commission recommends a more robust and formal interagency consultation process in which NOAA, in particular, is provided a heightened role, but ultimate decision-making authority is retained at DOI. The Commission further recommends the creation of an Office of Environmental Science, led by a Chief Environmental Scientist, with specified responsibilities in conducting all NEPA reviews, coordinating other environmental reviews, and whose expert judgment on environmental protection concerns would be accorded significant weight in leasing decision-making.

V. Reforming Industry Safety Practices

Changing Business As Usual

Without effective government oversight, the offshore oil and gas industry will not adequately reduce the risk of accidents, nor prepare effectively to respond in emergencies. However, government oversight alone cannot reduce those risks to the fullest extent possible. Government oversight must be accompanied by the oil and gas industry's internal reinvention: sweeping reforms that accomplish no less than a fundamental transformation of its safety culture.

Even the most inherently risky industry can be made much safer, given the right incentives and disciplined systems, sustained by committed leadership and effective training. The critical common element is an unwavering commitment to safety at the top of an organization: the CEO and board of directors.

Industry Self-Policing as a Supplement to Government Regulation

One of the key responsibilities of government is to regulate—to direct the behavior of individuals and institutions according to rules. Many businesses and business groups are involved in internal standard setting, evaluation, and other activities that constitute self-policing or self-regulation. But even in industries with strong self-policing, government also needs to be strongly present, providing oversight and/or additional regulatory control—responsibilities that cannot be abdicated if public safety, health, and welfare are to be protected.

Industry-standard setting and self-policing organizations are widespread in the United States and in most industrialized nations—typically for operations marked by technical complexity, such as the chemical, nuclear power, civil aviation, and oil and gas industries, where government oversight is also present. These processes coexist where there are relatively limited numbers of people with the requisite expertise and experience, making it hard for government to be able to rely solely on its own personnel (especially when government cannot compete with private-sector salaries for those experts). Support for standard setting and self-policing also arises in industries whose reputations depend on the performance of each company, and where significant revenues are at stake. However, industry self-policing is not a substitute for government but serves as an important supplement to government oversight.

After Three Mile Island, the nuclear power industry established the Institute of Nuclear Power Operations (INPO), a nonprofit organization with the ambitious mission "to promote the highest levels of safety and reliability—to promote excellence—in the operation of commercial nuclear power plants." The oil and gas industry, like the nuclear power industry, has both the substantial economic resources and the necessary economic incentive to make it happen. INPO was formed because doing so was in the industry's self-interest. As the *Deepwater Horizon* disaster made unambiguously clear, the entire industry's reputation, and perhaps its viability, ultimately turn on its lowest-performing members. If any one company is involved in an accident with widespread and potentially enormous costs, like those that followed the Macondo blowout, everyone in the industry—companies and employees—suffers, as do regional economies and the nation as a whole. No one, in industry or in government, can afford a repeat of the Macondo explosion and spill.

Like the nuclear power industry in 1979, the nation's oil and gas industry needs now to embrace the potential for an industry safety institute to supplement government oversight of industry operations. To be credible, any industry-created safety

institute would need to have complete command of technical expertise available through industry sources—and complete freedom from any suggestion that its operations are compromised by multiple other interests and agendas. As a consensus-based organization, the American Petroleum Institute (API) is culturally ill-suited to drive a safety revolution in the industry. For this reason, it is essential that the safety enterprise operate apart from the API. API's longstanding role as an industry lobbyist and policy advocate—with an established record of opposing reform and modernization of safety regulations—renders it inappropriate to serve a self-policing function.

The INPO experience makes clear that any successful oil and gas industry safety institute would require in the first instance strong board-level support from CEOs and boards of directors of companies for a rigorous inspection and auditing function. Such audits would need to be aimed at assessing companies' safety cultures and encouraging learning about implementation of enhanced practices. The inspection and auditing function would need to be conducted by safety institute staff, complemented by experts seconded from industry companies. There would also need to be a commitment to share findings about safety records and best practices within the industry, aggregate data, and analyze performance trends, shortcomings, and needs for further research and development. Accountability could be enhanced by a requirement that companies report their audit scores to their boards of directors and insurance companies.

The industry's safety institute could facilitate a smooth transition to a regulatory regime based on systems safety engineering and improved coordination among operators and contractors—the principles of the U.K.'s "safety case" that shifts responsibility for maintaining safe operations at all times to the operators themselves. It should drive continuous improvement in standards and practices by incorporating the highest standards achieved globally.

The industry also needs to benchmark safety and environmental practice rules against recognized global best practices. The Safety and Environmental Management Program Recommended Practice 75 (API RP 75) developed in 1993 by the API and incorporated by reference in the Department of the Interior's new workplace safety rules, adopted in October 2010, is a reasonable starting point.

VI. Response and Containment

As part of its charge from President Obama, the Commission looked at the effectiveness of the response to the spill. There were remarkable instances of dedication and heroism by individuals involved in the rescue and cleanup. Much was done well—and thanks to a combination of good luck and hard work, the worst-case scenarios did not all come to pass. But it is impossible to argue that the industry or the government was prepared for a disaster of the magnitude of the *Deepwater Horizon* oil spill. Twenty years after the *Exxon Valdez* spill in Alaska, the same blunt response technologies—booms, dispersants, and skimmers—were used, to limited effect. On-the-ground shortcomings in the joint public-private response to an overwhelming spill like that resulting from the blowout of the Macondo well are now evident, and demand public and private investment. So do the weaknesses in local, state, and federal coordination revealed by the emergency.

Neither BP nor the federal government was prepared to conduct an effective response to a spill of the magnitude and complexity of the *Deepwater Horizon* disaster. Three critical issues or gaps existed in the government's response capacity: (1) the failure to plan effectively for a large-scale, difficult-to-contain spill in the deepwater environment; (2) the difficulty of coordinating with state and local government officials to deliver an effective response; and (3) a lack of information and understanding concerning the efficacy of specific response measures, such as dispersants or berms. Moreover, the technology available for cleaning up oil spills had improved only incrementally since 1990. The technologies and methods available to cap or control a failed well in the extreme conditions thousands of feet below the sea were also inadequate. Although BP was able to develop new source-control technologies in a compressed timeframe, and the government was able to develop an effective oversight structure, the containment effort would have benefitted from prior preparation and contingency planning.

Improved Oil Spill Response Planning

The Department of the Interior should create a rigorous, transparent, and meaningful oil spill risk analysis and planning process for the development and implementation of better oil spill response. Several steps are needed for implementation:

- Interior should review and revise its regulations and guidance for industry oil spill response plans. The revised process should ensure that all critical information and spill scenarios are addressed in the plans.

- In addition to Interior, other agencies with relevant scientific and operational expertise should play a role in evaluating spill response plans to verify that operators can conduct the operations detailed in their plans. Specifically, oil spill response plans, including source-control measures, should be subject to interagency review and approval by the Coast Guard, EPA, and NOAA. Other parts of the federal government, such as Department of Energy national laboratories that possess relevant scientific expertise, could be consulted. Plans should also be made available for a public comment period prior to final approval and response plans should be made available to the public following their approval.
- Interior should incorporate the "worst-case scenario" calculations from industry oil spill response plans into NEPA documents and other environmental analyses or reviews.

Spills of National Significance

The Gulf oil spill presented an unprecedented challenge to the response capability of both government and industry. Though the National Contingency Plan permitted the government to designate the spill as one of "national significance," this designation did not trigger any procedures other than allowing the government to name a National Incident Commander.

EPA and the Coast Guard should establish distinct plans and procedures for responding to a "Spill of National Significance." Specifically, EPA should amend or issue new guidance on the National Contingency Plan to:

- Increase government oversight of the responsible party, based on the National Contingency Plan's requirement that the government "direct" the response where a spill poses a substantial threat to public health or welfare.
- Augment the National Response Team and Regional Response Team structures to establish additional frameworks for providing interagency scientific and policymaking expertise during a spill. Further, EPA, NOAA, and the Coast Guard should develop procedures to facilitate review and input from the scientific community—for example, by encouraging disclosure of underlying methodologies and data.
- Create a communications protocol that accounts for participation by high-level officials who may be less familiar with the National Contingency Plan structure and create a communications center within the National Incident Command—separate from the joint information center established in partnership with the responsible party—to help transmit consistent and complete information to the public.

Strengthening State and Local Involvement

The response to the *Deepwater Horizon* disaster showed that state and local elected officials had not been adequately involved in oil spill contingency planning, though career responders in state government had participated extensively. Unfamiliarity with, and lack of trust in, the federal response manifested itself in competing state structures and attempts to control response operations that undercut the efficiency of the response overall.

EPA and the Coast Guard should bolster state and local involvement in oil spill contingency planning and training and create a mechanism for local involvement in spill planning and response similar to the Regional Citizens' Advisory Councils mandated by the Oil Pollution Act of 1990.

In addition, a mechanism should be created for ongoing local involvement in spill planning and response in the Gulf. In the Oil Pollution Act of 1990, Congress mandated citizens' councils for Prince William Sound and Cook Inlet. In the Gulf, such a council should broadly represent the citizens' interests in the area, such as fishing and tourism, and possibly include representation from oil and gas workers as ex-officio, non-voting members.

Research and Development for Improved Response

The technology available for cleaning up oil spills has improved only incrementally since 1990. Federal research and development programs in this area are underfunded: In fact, Congress has never appropriated even half the full amount authorized by the Oil Pollution Act of 1990 for oil spill research and development.

Specifically, Congress should provide mandatory funding (i.e. funding not subject to the annual appropriations process) at a level equal to or greater than the amount authorized by the Oil Pollution Act of 1990 to increase federal funding for oil spill response research by agencies such as Interior, the Coast Guard, EPA, and NOAA. In addition, Congress and the Administration should encourage private investment in response technology more broadly, including through public-private partnerships and a tax credit for research and development in this area.

Dispersants

Prior to the blowout, the federal government had not adequately planned for the use of dispersants to address such a large and sustained oil spill, and did not have sufficient research on the long-term effects of dispersants and dispersed oil to guide its decision-making.

EPA should update and periodically review its dispersant testing protocols for product listing or pre-approval, and modify the pre-approval process to include temporal duration, spatial reach, and volume of the spill. EPA should update its dispersant testing protocols and require more comprehensive testing prior to listing or pre-approving dispersant products. The Coast Guard and EPA should modify pre-approvals of dispersant use under the National Contingency Plan to establish procedures for further consultation based on the temporal duration, spatial reach, or volume of the spill and volume of dispersants that responders are seeking to apply. EPA and NOAA should conduct and encourage further research on dispersants.

Containment

The most obvious, immediately consequential, and plainly frustrating shortcoming of the oil spill response set in motion by the events of April 20, 2010 was the simple inability—of BP, of the federal government, or of any other potential intervener—to contain the flow of oil from the damaged Macondo well.

At the time of the blowout on April 20, the U.S. government was unprepared to oversee a deepwater source-control effort. Once the Secretary of Energy's science team, the U.S. Geological Survey, the national laboratories, and other sources of scientific expertise became involved, the government was able to substantively supervise BP's decision-making, forcing the company to fully consider contingencies and justify its chosen path.

The National Response Team should develop and maintain expertise within the Federal government to oversee source-control efforts. The National Response Team should create an interagency group—including representation from the Department of the Interior, Coast Guard, and the Department of Energy and its national laboratories—to develop and maintain expertise in source control, potentially through public-private partnerships.

Industry's Spill Preparedness

Beyond attempting to close the blowout preventer stack, no proven options for rapid source control in deepwater existed when the blowout occurred. The Department of the Interior should require offshore operators to provide detailed plans for source control as part of their oil spill response plans and applications for permits to drill.

These plans should demonstrate that an operator's containment technology is immediately deployable and effective. In applications for permits to drill, the Interior should require operators to provide a specific source-control analysis for each well. As with oil spill response plans, source-control plans should be reviewed and approved by agencies with relevant expertise, including the Interior and the Coast Guard.

Improved Capability for Accurate Flow Rate Estimates

Early flow rate estimates were highly variable and difficult to determine accurately. However, the understated estimates of the amount of oil spilling appear to have impeded planning for and analysis of source-control efforts like the cofferdam and especially the top kill.

The National Response Team should develop and maintain expertise within the federal government to obtain accurate estimates of flow rate or spill volume early in a source-control effort. The National Response Team should create an interagency group—including representation from Interior, the Coast Guard, the national laboratories, and NOAA—to develop and maintain expertise in estimating flow rates and spill volumes. In addition, EPA should amend the National Contingency Plan to create a protocol for the government to obtain accurate estimates of flow rate or spill volume from the outset of a spill. This protocol should require the responsible party to provide all data necessary to estimate flow rate or spill volume.

More Robust Well Design and Approval Process

Among the problems that complicated the Macondo well-containment effort was a lack of reliable diagnostic tools and concerns about the well's integrity. The Department of the Interior should require offshore operators seeking its approval of proposed well design to demonstrate that:

- Well components, including blowout preventer stacks, are equipped with sensors or other tools to obtain accurate diagnostic information—for example, regarding pressures and the position of blowout preventer rams.

- Wells are designed to mitigate risks to well integrity during post-blowout containment efforts.

Industry Responsibilities for Containment and Response

Industry's responsibilities extend to efforts to contain any big spills as quickly as possible and to mitigate the harm caused by spills through effective response efforts. Both government, which must be capable of taking charge of those efforts, and industry were woefully unprepared to contain or respond to a deepwater well blowout like that at Macondo. All parties lacked adequate contingency planning, and neither had invested sufficiently in research, development, and demonstration to improve containment or response technology.

From now on, the oil and gas industry needs to combine its commitment to transform its safety culture with adequate resources for containment and response. Large-scale rescue, response, and containment capabilities need to be developed and demonstrated—including equipment, procedures, and logistics—and enabled by extensive training, including full-scale field exercises and international cooperation.

To that end, at least two industry spill containment initiatives have emerged that build on ideas and equipment that were deployed in response to the Macondo blowout and spill. The nonprofit Marine Well Containment Company was created in July 2010 by four of the major, integrated oil and gas companies. The second spill containment initiative is being coordinated by Helix Energy Solutions Group, which played a role in the Macondo well containment efforts.

Yet neither the Marine Well Containment Company's planned capabilities nor Helix's go past 10,000 feet despite the fact that current drilling technology extends beyond this depth. Also it seems that neither is structured to ensure the long-term ability to innovate and adapt over time to the next frontiers and technologies. What resources, if any, either initiative will dedicate to research and development going forward is unclear.

The primary long-term goal of a spill containment company or consortia should be to ensure that an appropriate containment system is readily available to contain quickly spills in the Gulf of Mexico with the best available technology. Any spill containment company or consortia should ensure that it remains focused on this goal, even when doing so potentially conflicts with the short-term interests of its founding companies, in the case of MWCC, or the parent company, in the case of Helix. An independent advisory board, with representatives from industry, the federal government, state and local governments, and environmental groups could help keep any spill containment initiative focused on innovative, adaptive, effective spill response over the long term.

VII. Financial Responsibility

Oil spills cause a range of harms, including personal, economic and environmental injuries, to individuals and ecosystems. The Oil Pollution Act makes the party responsible for a spill liable for compensating those who suffered as a result of the spill—through human health and property damage, lost profits, and other personal and economic injuries—and for restoring injured natural resources. The Act also provides an opportunity to make claims for compensation from a dedicated Oil Spill Liability Trust Fund. The Oil Pollution Act, however, imposes limits on both the amount for which the responsible party is liable, and the amount of compensation available through the trust fund. In the case of the *Deepwater Horizon* spill, BP (a responsible party) has placed $20 billion in escrow to compensate private individuals and businesses through the independent Gulf Coast Claims Facility. But if a less well capitalized company had caused the spill, neither a multi-billion dollar compensation fund nor the funds necessary to restore injured resources, would likely have been available.

Liability for damages from spills from offshore facilities is capped under the Oil Pollution Act at $75 million, unless it can be shown that the responsible party was guilty of gross negligence or willful misconduct, violated a federal safety regulation, or failed to report the incident or cooperate with removal activities, in which case there is no limit on damages. Claims up to $1 billion for certain damages can be made to, and paid out of, the Oil Spill Liability Trust Fund, which is currently supported by an 8-cent per-barrel tax on domestic and imported oil.

The Oil Pollution Act also requires responsible parties to "establish and maintain evidence of financial responsibility," generally based on a "worst-case discharge" estimate. In the case of offshore facilities, necessary financial responsibility ranges from $35 million to $150 million.

Inadequacy of Current System

There are two main problems with the current liability cap and financial responsibility dollar amounts. First, the relatively modest liability cap and financial respon-

sibility requirements provide little incentive for oil companies to improve safety practices. Second, as noted, if an oil company with more limited financial means than BP had caused the *Deepwater Horizon* spill, that company might well have declared bankruptcy long before paying fully for all damages. In the case of a large spill, the Oil Spill Liability Trust Fund would likely not provide sufficient backup. Thus, a significant portion of the injuries caused to individuals and natural resources, as well as government response costs, could go uncompensated.

Any discussion of increasing liability caps and financial responsibility requirements must balance two competing public policy concerns: first, the goal of ensuring that the risk of major spills is minimized, and in the event of a spill, victims are fully compensated; and second, that increased caps and financial responsibility requirements do not drive competent independent oil companies out of the market. A realistic policy solution also requires an understanding of the host of complex economic impacts that could result from increases to liability caps and financial responsibility requirements.

Options for Reform

As this Committee and others in Congress consider options for addressing these problems, the Commission recommends that first, Congress significantly increase the liability cap and financial responsibility requirements for offshore facilities. To address both the incentive and compensation concerns noted above, Congress should significantly raise the liability cap. Financial responsibility limits should also be increased, because if an oil company does not have adequate resources to pay for a spill, the application of increased liability has little effect. Should a company go bankrupt before fully compensating for a spill, its liability is effectively capped. If, however, the level of liability imposed and the level of financial responsibility required are set to levels that bear some relationship to potential damages, firms will have greater incentives to maximize prevention and minimize potential risk of oil spills and also have the financial means to ensure that victims of spills do not go uncompensated.

Second, the Commission recommends that Congress increase the limit on per-incident payouts from the Oil Spill Liability Trust Fund. If liability and financial responsibility limits are not set at a level that will ensure payment of all damages for spills, then another source of funding will be required to ensure full compensation. The federal government could cover additional compensation costs, but this approach requires the taxpayer to foot the bill. Therefore, Congress should raise the Oil Spill Liability Trust Fund per-incident limit. Raising the Oil Spill Liability Trust Fund's per-incident limit will require the Fund to grow through an increase of the per-barrel tax on domestic and imported oil production. An alternative would be to increase the Trust Fund through a surcharge by mandatory provisions in drilling leases triggered in the event that there are inadequate sums available in the Fund.

Third, the Commission recommends that the Department of the Interior enhance auditing and evaluation of the risk of offshore drilling activities by individual participants (operator, driller, other service companies). The Department of the Interior, insurance underwriters, or other independent entities should evaluate and monitor the risk of offshore drilling activities to promote enhanced risk management in offshore operations and to discourage unqualified companies from remaining in the market.

The Interior Department currently determines financial responsibility levels based on potential worst-case discharges, as required by the Oil Pollution Act. Although the agency's analysis to some degree accounts for the risk associated with individual drilling activities, it does not fully account for the range of factors that could affect the cost of a spill, and thus the level of financial responsibility that should be required. Interior should analyze a host of specific, risk-related criteria when determining financial responsibility limits applicable to a particular company, including, but not limited to: geological and environmental considerations, the applicant's experience and expertise, and applicable risk management plans. This increased scrutiny would provide an additional guard against unqualified companies entering the offshore drilling market.

VIII. Spill Impacts and Gulf Restoration

Even before the highly visible damages caused by the spill became clear, many crucial Gulf economic and ecological resources—fisheries, transportation, tourism—faced long-term threats. First, more than 2,300 square miles of coastal wetlands—an area larger than the State of Delaware—have been lost to the Gulf since the United States raised the massive levees along the lower Mississippi River after the devastating Great Flood of 1927. Exceptionally powerful hurricanes, always a threat to the region, struck the coast in 2005 (Katrina and Rita) and 2008 (Gustav and

Ike), causing even more wetland loss. Second, low-oxygen bottom waters were in the process of forming a massive "dead zone" extending up to 7,700 square miles during the summer of 2010. Referred to as hypoxia, this phenomenon has intensified and expanded since the early 1970s as a result of nutrient pollution, mainly from Midwestern agriculture. And finally, the *Deepwater Horizon* disaster made matters worse: 11 rig workers killed in the explosion and 17 injured; many thousands of people exposed to contaminated waters, coasts, beaches, and seafood; thousands out of work; birds and sea animals killed and significant habitats damaged or destroyed. The Commission's investigation made plain that existing authorities are not adequate to redress these significant harms and ensure restoration of the Gulf.

Human Health Impacts

The National Contingency Plan overlooks the need to respond to widespread concerns about human health impacts. For smaller oil spills, the response effort is generally carried out by trained oil spill response technicians, but given the scale of the response to the *Deepwater Horizon* spill and the need to enlist thousands of previously untrained individuals to clean the waters and coastline, many response workers were not screened for pre-existing conditions. This lack of basic medical information, which could have been collected if a short medical questionnaire had been distributed, limits the ability to draw accurate conclusions regarding long-term physical health impacts. EPA should amend the National Contingency Plan to add distinct procedures to address human health impacts during a Spill of National Significance. Spills of this magnitude necessarily require a significant clean-up effort, potentially exposing workers to toxic compounds in oil and dispersants.

Consumer Confidence

Images of spewing oil and oiled beaches in newspapers and on television set the stage for public concern regarding the safety of Gulf seafood. Additional factors contributed to the lingering impression that the public could not trust government assurances that the seafood was safe: the unprecedented volumes of dispersants used, confusion over the flow rate and fate of the oil, frustration about the government's relationship with BP in spill cleanup, and lawsuits filed by fishermen contesting the government's assurance of seafood safety. The economic blow to the Gulf region associated with this loss of consumer confidence is sizable. BP gave Louisiana and Florida $68 million for seafood testing and marketing, as well as money to assess impacts on tourism and fund promotional activities. As of early December 2010, BP was considering a similar request from Alabama.

In future spills, however, there is no guarantee that a responsible party will have the means or the inclination to compensate such losses. Such indirect financial harms are currently not compensable under the Oil Pollution Act. Nevertheless, losses in consumer confidence are real and Congress, federal agencies, and responsible parties should consider ways to restore consumer confidence in the aftermath of a Spill of National Significance.

The Commission recommends that Congress, federal agencies, and responsible parties take steps to restore consumer confidence in the aftermath of a Spill of National Significance.

Lack of Sustained Funding for Gulf Restoration

A lack of sustained and predictable funding, together with failed project coordination and long-term planning, has resulted in incomplete and often ineffective efforts to restore the Gulf's natural environment. No funding source currently exists to support regional restoration efforts. While cost estimates of Gulf restoration vary widely, according to testimony before the Commission, fully restoring the Gulf will require $15 billion–$20 billion, or a minimum of $500 million per year, over 30 years. A number of different sources currently provide funding to individual states for restoration, however none of these sources provides funds for Gulf-wide coastal and marine restoration, and none is sufficient to support the sustained effort required. Most policymakers agree that without a reliable source of long-term funding, it will be impossible to achieve restoration in the Gulf.

Several Gulf States and the federal government have filed or are expected to file suit against BP and other companies involved in the spill, which will likely create opportunities to direct new restoration funds to the region. In some cases, congressional action will be required to ensure that funds are directed to this purpose. The Commission recommends that 80 percent of any Clean Water Act penalties and fines be directed to Gulf restoration. Should such penalties and fines not be directed to the Gulf, Congress should consider other mechanisms for a dedicated funding stream not subject to annual appropriations. Although such mechanisms face hurdles, the fact remains that resources are needed if progress on coastal restoration is to continue. Inaction is a prescription for further degradation. Should CWA pen-

alties not be redirected to Gulf restoration, Congress should consider other mechanisms for a dedicated funding stream not subject to annual appropriations.

Decision-making Body for Expediting Work

In order for funding to be most efficiently directed at long-term restoration, a decision-making body is needed that has authority to set binding priorities and criteria for project funding. The Gulf Coast Ecosystem Restoration Task Force is now in place, as recommended by the September 2010 report on restoration from Secretary of the Navy Ray Mabus to the President, and subsequently established by Presidential Executive Order. According to the Executive Order, the job of the Task Force is to begin coordinating the different restoration projects being undertaken by various jurisdictions in the Gulf, coordinating related science activities and engaging stakeholders. However, as many in Congress and the Administration have suggested, the Task Force lacks some features necessary to effectively direct long-term restoration efforts in the Gulf—most importantly the ability to set binding goals and priorities.

The Commission recommends that Congress establish a joint state-federal Gulf Coast Ecosystem Restoration Council. The Council should implement a restoration strategy for the region that is compatible with existing state restoration goals. Experience in major restoration endeavors, including those in the Gulf, has shown that, absent binding goals to drive the process, restoration projects are insufficiently funded, focused, or coordinated. Therefore, the restoration strategy should set short- and long-term goals with binding criteria for selecting projects for funding. Key criteria should include national significance; contribution to achieving ecosystem resilience; and the extent to which national policies—such as those related to flood control, oil and gas development, agriculture, and navigation—directly contributed to the environmental problem. Congress should also ensure that the priorities and decisions of the Council are informed by input from a Citizens Advisory Council that represents diverse stakeholders.

Restoration Rooted in Science

Finally, but essentially, restoration decisions must be rooted in science. An approach that draws heavily on information and advice from scientists will result in project selection and funding allocations that are more likely to lead to an effective region-wide restoration strategy. Such an approach will also advance transparency in decision-making and enhance credibility with the public.

The Commission accordingly recommends the establishment of a Gulf Coast Ecosystem Restoration Science and Technology Program that would address these issues in three ways: (1) by creating a scientific research and analysis program, supported by the restoration fund, that is designed to support the design of scientifically sound restoration projects; (2) by creating a science panel to evaluate individual projects for technical effectiveness and consistency with the comprehensive strategy; and (3) by supporting adaptive management plans based on monitoring of outcomes scaled both to the strategy itself and to the individual projects or categories of projects included in it.

Managing Ocean Resources

The Commission recommends that as a part of management and restoration efforts in the marine environment, greater attention should be given to new tools for managing ocean resources, including monitoring systems and spatial planning. Marine scientists have emerged from the *Deepwater Horizon* incident with more precise questions to investigate, as well as a better sense of monitoring needs in the Gulf of Mexico, which because of its multiple uses and economic value should be a national priority. To that end, the National Ocean Council, which the President initiated in July 2010, should work with the responsible federal agencies, industry and the scientific community to expand the Gulf of Mexico Integrated Ocean Observing System, including the installation and maintenance of an in situ network of instruments deployed on selected production platforms. Participation in this system by industry should be regarded as a reasonable part of doing business in nation's waters.

Coastal and marine spatial planning has the potential to improve overall efficiency and reduce conflicts among ocean users. Congress should fund grants for the development of regional planning bodies at the amount requested by the President in the fiscal year 2011 budget submitted to Congress. Ocean management should also include more strategically sited Marine Protected Areas, including but not limited to National Marine Sanctuaries, which can be used as "mitigation banks" to help offset harm to the marine environment. Given the economic and cultural importance of fishing in the Gulf region—and the importance of Gulf seafood to the rest of the country—scientifically valid measures, such as catch share programs,

should be adopted to prevent overfishing and ensure the continuity of robust fisheries.

IX. The Future of Offshore Drilling

The central lesson to be drawn from the catastrophe is that no less than an overhauling of both current industry practices and government oversight is now required. The changes necessary will be transformative in their depth and breadth, requiring an unbending commitment to safety by government and industry to displace a culture of complacency. Drilling in deepwater, however, does not have to be abandoned. It can be done safely. That is one of the central messages of the Commission's final report. The Commission's recommendations are intended to do for the offshore oil and gas industry what new policies and practices have done for other high risk industries after their disasters. The Commission believes that the potential for such a transformation to ensure productive, safe, and responsible offshore drilling is significant, and provides reason for optimism even in the wake of a disaster.

The significance of the *Deepwater Horizon* disaster, however, is broader than just its relevance to the future of offshore drilling. The disaster signals the need to consider the broader context of the nation's patterns of energy production and use, now and in the future—the elements of America's energy policy. The explosion at the Macondo well and the ensuing enormous spill—particularly jarring events because of the belief they could never happen—force a reexamination of many widely held assumptions about how to reconcile the risks and benefits of offshore drilling, and a candid reassessment of the nation's policies for the development of a valuable resource. They also support a broader reexamination of the nation's overall energy policy.

Important decisions about whether, when, where, and how to engage in offshore drilling should be made in the context of a national energy policy that is shaped by economic, security, pace of technology, safety, and environmental concerns. Offshore drilling will certainly be an important part of any such policy, but its relative importance today will not, and should not, be the same a half-century from now. The nation must begin a transition to a cleaner, more energy-efficient future. Otherwise, its security and well-being will be increasingly dependent on diminishing supplies of nonrenewable resources and on supplies from foreign sources.

Drilling for oil in the Gulf of Mexico, however, is not solely a matter for U.S. consideration. Both Mexico and Cuba have expressed interest in deepwater drilling in the Gulf in the near future. Potential sites are close enough to the United States—Cuba's mainland lies only 90 miles from Florida's coast and the contemplated wells only 50 miles—that if an accident like the *Deepwater Horizon* spill occurs, fisheries, coastal tourism, and other valuable U.S. natural resources could be put at great risk. It is in our country's national interest to negotiate now with these neighbors to agree on a common, rigorous set of standards, a system for regulatory oversight, and operator adherence to an effective safety culture, along with protocols to cooperate on containment and response strategies in case of a spill.

Frontier Areas

Our Commission also examined prospects in so called "frontier areas." On December 1, in the wake of the *Deepwater Horizon* experience, Interior Secretary Ken Salazar announced that the Administration would not proceed with drilling in areas where there are "no active leases" during the next five-year leasing plan. As a result, exploration and production in certain frontier areas—the eastern Gulf and off of the Atlantic and Pacific coasts—are deferred. The Secretary also indicated that plans for 2011 drilling in Alaska's Beaufort Sea would be subjected to additional environmental assessments.

The major interest in offshore Alaska reflects the likelihood of finding significant new sources of oil there. The Chukchi and Beaufort Sea off Alaska's north coast rank behind only the Gulf of Mexico in estimated domestic resources. But finding and producing those potentially important supplies of oil offshore Arctic Alaska requires the utmost care, given the special challenges for oil spill response and containment, and heightened risks associated with this frontier, especially its extreme cold, extended seasons of darkness, hurricane-strength storms, and pervasive fog—all affecting access and working conditions—and the extraordinary richness of its ecosystems and the subsistence native communities dependent upon their protection. To deal with these serious concerns about Arctic oil spill response, containment and the heightened environmental stakes the Commission recommends three approaches before the Department of the Interior makes a determination that drilling in a particular area is appropriate. First, the Department should ensure that the containment and response plans proposed by industry are adequate for each stage

of development and that the underlying financial and technical capabilities have been satisfactorily demonstrated in the Arctic. Second, the Coast Guard and the oil companies operating in the Arctic should carefully delineate their respective responsibilities in the event of an accident—including search and rescue—and then must build and deploy the necessary capabilities. Third, Congress should provide the resources to establish Coast Guard capabilities in the Arctic, based on the Guard's review of gaps in its capacity.

The Arctic is shared by multiple countries, many of which are considering or conducting oil and gas exploration and development. The extreme weather conditions and infrastructure difficulties are not unique to the U.S. Arctic. Damages caused by an oil spill in one part of the Arctic may not be limited to the waters of the country where it occurred. As a result, the Commission recommends that strong international standards related to Arctic oil and gas activities be established among all the countries of the Arctic. Such standards would require cooperation and coordination of policies and resources.

Bringing the potentially large oil resources of the Arctic outer continental shelf into production safely will require an especially delicate balancing of economic, human, environmental, and technological factors. Both industry and government will have to demonstrate standards and a level of performance higher than they have ever achieved before.

Creating and implementing a national energy policy will require enormous political effort and leadership—but it would do much to direct the nation toward a sounder economy and a safer and more sustainable environment in the decades to come. Given Americans' consumption of oil, finding and producing additional domestic supplies will be required in coming years, no matter what sensible and effective efforts are made to reduce demand—in response to economic, trade, and security considerations, and the rising challenge of climate change.

The extent to which offshore drilling contributes to augmenting that domestic supply depends on rebuilding public faith in existing offshore energy exploration and production. We have proposed a series of recommendations that will enable the country and the oil and gas industry to move forward on this one critical element of U.S. energy policy: continuing, safe, responsible offshore oil drilling to meet our nation's energy demands over the next decade and beyond. Our message is clear: both government and industry must make dramatic changes to establish the high level of safety in drilling operations on the outer continental shelf that the American public has the right to expect and to demand. It is now incumbent upon the Congress, the executive branch, and the oil and gas industry to take the necessary steps.

Examples of Decisions That Increased Risk At Macondo While Potentially Saving Time

Decision	Was There A Less Risky Alternative Available?	Less Time Than Alternative?	Decision-maker
Not waiting for more centralizers of preferred design	Yes	Saved Time	BP on shore
Not waiting for foam stability test results and/or redesigning slurry	Yes	Saved Time	Halliburton (and perhaps BP) on shore
Not running cement evaluation log	Yes	Saved Time	BP on shore
Using spacer made from combined lost circulation materials to avoid disposal issues	Yes	Saved Time	BP on shore
Displacing mud from riser before setting surface cement plug	Yes	Unclear	BP on shore
Setting surface cement plug 3000 feet below mud line in seawater	Yes	Unclear	BP on shore (approved by MMS)
Not installing additional physical barriers during temporary abandonment procedure	Yes	Saved Time	BP on shore
Not performing further well integrity diagnostics in light of troubling and unexplained negative pressure test results	Yes	Saved Time	BP (and perhaps Transocean) on rig
Bypassing pits and conducting other simultaneous operations during displacement	Yes	Saved Time	Transocean (and perhaps BP) on rig

The CHAIRMAN. Thank you very much.

And I thank both of you. For the record, it was not me that cleared my throat that you responded to. But nevertheless, I appreciate that.

Mr. GRAHAM. The message was clear.

The CHAIRMAN. I did want both of you to finish your remarks, and I allowed that, but we do want to try to stay as closely as we can.

I just have an observation and a question that I want to ask both of you. Right from the get-go, when this event happened and I was asked to respond, I said something on the order: Number one, we need to stop the leak; number two, we need to hold BP accountable; and number three, we need to make sure that the restoration can get that part of the country back to normalcy, however you describe that.

I have been saying that right from day one. You have spent a great deal of time on it in your report. Your testimony talked about what should be done in the future, and I alluded to this in my opening statement. I would like you both to respond to it. We still don't know what caused the explosion, unless I missed something, and we don't know how or why the BOP malfunctioned, if that was the case. And I would like both of you to respond to that, and is there maybe a time in the future when you are going to answer that, or do we wait for other reports to come in before we draw conclusions? Whoever wants to go first. I would like both of you to respond to that.

Mr. GRAHAM. Well, what we know is that the event occurred, and we know a great deal about why the event occurred. We have identified in our report nine instances, nine human decisions that were made in the hours before the Macondo explosion, which we think were the precipitating cause of this immediate event.

It is true that no one at this point has had the benefit of the full forensic examination of the blowout preventer. It is at a NASA facility in New Orleans being closely examined. But what we do know is that it didn't perform as it should have. If it had been able to perform at an optimal level, it is questionable whether that would have avoided the explosion because the gas had already gotten beyond the blowout preventer at the time that it would have gone into effect.

So I believe that our report adequately, accurately, comprehensively addresses both the immediate cause and then the context in which that occurred, which was a long period in which government had done a very inadequate job of regulation, at which the industry had fallen into this culture of complacency, and where the consequences have been an enormous economic and environmental cost to the people of the United States.

Mr. REILLY. I would just add, Mr. Chairman, we know enough. We know what happened. We know that the negative pressure test, which was supposed to determine whether cementing had effectively sealed off the well; we know that inconsistent information came from the kill line and the drill pipe. And the good news was accepted that while the conflicting information was rejected in the drill pipe itself, indicating that had not been a seal, the cementing had failed. We know that. We know that as gas did rise in the drill

pipe, it was not noticed, although we have the documentation of the instrumentation, the record that should have been recognized by a professional monitoring that instrumentation to indicate that gas was coming up the riser. It was not recognized until it was too late. So we know those things. Those are a couple of examples.

A number of decisions were made by people who are not alive, and we cannot but speculate on how they came to make some of those decisions or to have missed some of the information that they did have.

And if you look at page 125 of our report, we list about nine decisions, seven of which had the corollary benefit of saving time. No doubt they were identified as more efficient ways to proceed, but there were alternatives to most of them, and they weren't chosen. So the immediate proximate cause was a series of bad decisions, very hard to understand decisions on the day of April 20th and leading up to it with respect to Halliburton's supply of cement which failed three of its own tests and nine tests that were subjected to by our Commission by Chevron's laboratory for testing cement. So we do know those things. And I am quite confident that we have established the facts here.

The CHAIRMAN. Since my time is running out, I would just make this observation. What you have alluded to, both of you, is the fact that somewhere along the line, there is human error; something wasn't read. We heard that in testimony, frankly, from the industry when they were here shortly after. They said, we don't know what happened, but we suspect that this is going to be the case. And that you have confirmed.

But we still don't know what mechanically or whatever else broke down, and I just wanted to thank you for responding to that.

Mr. Markey.

Mr. MARKEY. Thank you, Mr. Chairman, very much.

Thank you for this report. This report is a blistering, scalding indictment of the practices engaged in by the industry and by regulators that created the conditions that made this accident possible. My question to you is if your recommendations are not adopted or provisions similar to those which you recommend, do you think we run the risk of repeating that catastrophe once again in the waters of the United States?

Mr. GRAHAM. Yes. As I said, even if all of the recommendations were adopted, no one could issue an insurance policy that there would be no repetition.

But I could issue an insurance policy that the likelihood of a repetition and the consequences of the repetition will be significantly less if these recommendations are adopted.

One of the things that characterizes these recommendations is they are not from outer space. Most of them are from the North Sea, a place which has a more punishing environment than the Gulf of Mexico, yet has a dramatically different record in terms of fatalities. We believe that some of the experience there—and ironically, the same companies that are operating in the Gulf are operating under those standards in the North Sea. So it is not a mystery or a new set of standards for those companies themselves.

And as I said in my report, I am concerned that if we don't act, if we are timorous and if we have an enhanced likelihood similar

to the Macondo, that we are all going to be pointed at as to why we were unable to recognize and why we were unwilling to act in the public interest.

Mr. MARKEY. Do you agree, Mr. Reilly?

Mr. REILLY. I do agree. And I would add that this is a very dynamic industry, which has transformed itself in the last 25 years as it has moved from shallow water into deep water, which is a much more high-risk environment. It has not adapted its own risk protections, its management systems adequately to either prevent or to respond to a problem of this sort.

And I will tell you one of the things that—well, it is reassuring that BOEMRE has issued new prescriptive regulations to try to govern a lot of the activities that would take place in the future, and that gives us some encouragement. Frankly speaking, we don't consider that agency as it is now staffed, formed, trained and compensated adequate to the task that they have; and that if it is not strengthened, I suspect that we will again see an incongruity grow between the sophistication of the industry and its dynamism and the failure of inspectors even to understand some of the basic technologies to stay on top of it.

Mr. MARKEY. Let me follow up on that then because you have recommendations here that can be implemented administratively by the Obama Administration, but there are other recommendations here that really need congressional action so that we change the laws. Do you think it would be wise for us not to act legislatively to give that authority to the government so that they can change business as usual? Would we be running a risk if we did not pass legislation?

Mr. REILLY. I think you would be running a big risk. There are two crucial moves that I believe the Congress has to take. One is to reorganize the Interior Department, simply to ensure that leasing revenue concerns of the sort that animated the agency over several administrations and three MMS Directors testified to before our Commission, that those no longer infect safety and environment regulation. And the way to do that is statutorily, the way to do it on any kind of sustainable basis, by creating a walled-off regulator within the Department of the Interior with a term appointment for the Director.

And the second, the second requirement—and the first doesn't cost anything—the second requirement is to adequately fund the BOEMRE to carry out the responsibilities that it has.

Mr. MARKEY. Thank you.

Just to note here, BP had 760 OSHA fines—versus one for ExxonMobil—so we can understand that there is something fundamentally wrong here that a company like that was allowed to continue to operate.

Senator Graham, your recommendation on legislation?

Mr. GRAHAM. Well, I would agree with those two points, and then the third is the one I made relative to restoration, that only Congress can designate a portion of these fines and penalties for the specific purpose of restoration, which we think, in terms of the national interest in this region of America, the fact that many of the problems that have led to the degradation of the Gulf of Mexico

had the Federal Government at least as a partner if not the primary indicted figure.

Mr. MARKEY. And can I just say very quickly, some people say, well, it is just BP and that the other actors didn't play a role, including the government, that the other companies didn't play a role; true or not true?

Mr. GRAHAM. In the area of response, it was not just BP that was incapable. If this same thing had happened on virtually any of the rigs in the Gulf, we would have had the same response because we had the inadequate, unplanned-for capabilities that made this such an unnecessarily significant impact on the economy and the environment of the Gulf of Mexico.

Mr. MARKEY. I thank you both for your service.

The CHAIRMAN. I thank the gentleman.

Mr. Young of Alaska.

Mr. YOUNG. Thank you, Mr. Chairman. I thank the witnesses.

Mr. Chairman, I have reviewed the report, and I have also reviewed the members of the Commission. And I have statements from every one of the members of the Commission that do not support offshore drilling, including the two witnesses before us.

And that concerns me because I cannot figure out how this can be a report that was supposed to look for the cause is now trying to ask us to pass legislation when their basic goal is against offshore development. In your statement you said you were for it; you know the importance. But one gentleman said we can establish 75 years as the goal for independence. To meet that goal, we would have to reduce domestic production, not increase it.

I am just questioning the Commission and the sincerity of really seeking a solution to a needed commodity, which is oil.

Now, I personally have another question because of this Administration. From either one of you, from the technical perspective, what makes drilling in the deepwater Gulf of Mexico so different? And are these conditions typical of the other areas of the U.S. OCS? What is different between the Gulf and Alaska?

Mr. REILLY. Well, the difference between the Gulf and Alaska is the deep water that we are involved with in the Gulf, 5,000—we are going to 10,000 feet. Three rigs have been commissioned that will take——

Mr. YOUNG. That I know and I appreciate your answer. I appreciate your answer.

But as I read your report, your position on Arctic drilling with the President is, in fact, we have to step forward with caution; we have to make sure it can't be done too rapidly, et cetera, et cetera.

But it is 150 feet versus 2,000 some odd feet or, excuse me, 20,000 feet, 18,000 feet. And I am worried about this country. We are going to spend about $400 billion again to buy our oil. And this Commission—the make up of this Commission, they are all against the development of offshore drilling and onshore, by the way. Some on the Commission voted against opening ANWR; 39 billion barrels were 74 miles from the pipeline.

We are facing bankruptcy because we have not been able to develop our fossil fuels. And yet the Commission, the majority of them, in fact all of them, their intent is not to have fossil fuels. And I think that is inappropriate.

Now, last, if I can suggest one thing, Mr. Chairman, we have drilled in the Gulf about 42,000 wells, including 2,500 deepwater wells. No where do you report in your report or suggest why that was successful. We have had one big spill since Santa Barbara. Now, how do you answer that? Was there any credit given for what was done before and for those who did it? Question. Answer.

Mr. REILLY. Well, I referred to 79 losses of well control. I think many of those contributed to accidents and several contributed to fatalities. That is the record that we have for the Gulf, and it is not a pretty one.

Mr. YOUNG. How many spills? How many spills?

Mr. REILLY. I don't know how many spills were associated with those, but if you look at that list in the report, if they weren't spills, they were near misses and close calls and enough to kill people, and there were fires.

Mr. YOUNG. Just like driving down the street, slipping on the ice.

Mr. REILLY. I would like to say that again with respect to ice.

Mr. YOUNG. Like driving down the street, slipping on the ice. There is going to be a chance. There is no fail-safe way to do anything.

Mr. REILLY. No. And it can be done better. As Senator Graham said, you cannot eliminate risk; you can reduce it significantly.

I would point out to you, Mr. Young, that—first of all, when you say what we really believe—what we really believe is in this report. And it is pretty detailed, and I think we have a lot of authority and documentation behind the recommendations and findings that are in here. So I actually would suggest that instead of interpreting comments made by Commissioners perhaps in an earlier time without this mission, you look at this as a definitive record of where we really stand.

And we are for offshore oil and gas development. We think it can be done safely. And we also specifically recommend against a moratorium in Alaska in the Arctic.

Mr. YOUNG. And that means that you, in fact, want us to go forth?

Mr. REILLY. Yes, sir.

Mr. YOUNG. Will you express that in your report? It doesn't say that.

Mr. REILLY. This Commission believes that we can go forward to drill in the offshore the Chukchi and Beaufort Seas, but it recommends a series of scientific analyses of Coast Guard search-and-rescue movements, of a range of activities that will have to be supplied—either by government or the industry—to ensure over the long term that it will be done safely. But we specifically say that should not be a barrier to moving forward.

Mr. YOUNG. It does say, then, you are supporting Arctic drilling in the report?

Mr. REILLY. Yes, sir.

Mr. YOUNG. I didn't read that. And if you do so, I wish you would explain that to the President.

Mr. REILLY. You said in your remarks that we recommended it be done with caution and that is certainly true. We have a distinctive set of challenges that are being presented there.

Mr. YOUNG. That is what happens, though. We have the studies—for 40 years, we have been drilling in the Arctic, just not Prudhoe Bay. We had been drilling there when we had the PET-4, when we had the new line operation. We have been doing the drilling, and we have done the studies. We have done the work. And all of the sudden now we have that moratorium in place by someone that doesn't believe in fossil fuels.

You heard him last night on the Floor. He doesn't believe in fossil fuels. And I think it is wrong for this country. I want all forms of power, but all of the sudden, we have a Commission report I don't believe that really suggests we can do without a big long delay. But we will send the money overseas.

Mr. Chairman, my time is up.

The CHAIRMAN. Thank you very much.

Mr. Pallone from New Jersey.

Mr. PALLONE. Thank you.

Thank you, Chairman Hastings and Ranking Member Markey, for having the hearing today.

The report in front of us today is clear in my opinion that we cannot drill safely off our shores under the current system and that our coastal communities need protection from untrustworthy big oil.

Only big oil will claim that they can drill safely and look to expand drilling in the wake of our country's worst environmental disaster and the finding of their systematic failures.

Now, since the *Deepwater Horizon* disaster, the President has reversed course and, thankfully, taken drilling in the Atlantic off the table, at least for the next five years, and I commend him for that action and believe we must make that policy permanent. Only then can we be safe from the greed of the oil industry.

Also, House Democrats passed the CLEAR Act to prevent another catastrophic spill, and at that time, my Republican colleagues opposed the legislation, saying we needed to wait for this Commission's report. Now that we have it, it is time to take action to prevent big oil from wreaking havoc on our environment, and that is why I introduced the No New Drilling Act to prevent the expansion of offshore drilling, which I believe must be the policy, at least until we can be certain another *Deepwater Horizon* incident will not happen again.

I represent a district along the Jersey Shore. I live along the Jersey Shore, as well. I have all my life. And one of the things I wanted to ask the two members of the panel is that I believe very strongly that the farther you go out and the deeper you are, the more dangerous it becomes. In arguing against the need for reform, the oil and gas industry likes to make the argument that the BP spill was like an outlier, and they point to the long history of drilling in the Gulf.

But in reality, isn't it true that the vast majority of the oil and gas industry's offshore drilling in the Gulf has been in shallow water where drilling is much less complicated than in the ultra-deep water where the *Deepwater Horizon* was operating? So, basically, as we go farther out—and certainly my understanding is that the Atlantic is strictly deep water, not in shallow water—the danger is greater, and that is even one more reason why the rec-

ommendations that you put forth are crucial. I am asking either of you if you could answer that question.

Mr. GRAHAM. Well, the answer is clearly there is a relationship between the danger and risk the deeper you go. And it is also true that up until about 1990, virtually all of the drilling that had ever taken place in the Gulf of Mexico was in waters of less than 1,000 feet, which is the definition of shallow drilling, so that the circumstances have dramatically changed. And at the same time that the industry was developing a technology that can, frankly, only be analogized to the technology of the space program and its sophistication, there was an enormous burst of the offensive capability to drill in deeper areas. There was not a commensurate increase in the defensive capability to respond should there be an accident and to create the safety environment that would reduce the prospects, not to zero but to the degree possible, that there would not be accidents.

In the materials that have been distributed, there is a chart, which is called "MMS Budget and Gulf of Mexico Crude Oil Production, 1984 to 2009." It is on page 73 of our report. And you can see the degree to which the production in the Gulf of Mexico has gone from being shallow water production now not only to deep water, but the greatest increase has been in what is described as ultra-deep water, where the risks are even more significant.

Mr. PALLONE. Mr. Reilly, did you want to respond?

Mr. REILLY. No. just to reenforce what Senator Graham said, the formations are deeper in the deepwater. That is, they are well under even very often—certainly in the case of Macondo—they were down at 18,000 feet, which is 13,000 feet below the mud level. The formations are under much greater pressure, something up in the range of 30,000 pounds per square inch, which means all sorts of things in terms of the complexity of dealing with a well situation that also involves, of course, robots, which are the only way you can actually monitor and maintain and improve or repair technology down at that level.

So, for all of these reasons, it is a much more challenging enterprise. And that is why the industry in our view needs to improve its capacity, recognize that they are in a different era from the one that characterized shallow water drilling and establish the kind of safety institute we recommend.

Mr. PALLONE. Thank you, gentlemen.

The CHAIRMAN. I thank the gentleman.

Mr. Lamborn from Colorado.

Mr. LAMBORN. Thank you, Mr. Chairman.

I want to the thank both of the distinguished witnesses for being here today and giving your testimony.

You said earlier that you do not know why the blowout preventer did not work, and I am very concerned that you didn't even wait until you knew what the cause of it not working was before issuing your report.

Why didn't you wait until we knew why that blowout preventer didn't even work? Because that is a key element in this whole chain of events.

Mr. REILLY. Yes, sir. This was clear from the start, when the President created us with an executive order, he gave us a time-

table of 6 months. In our early conversation with him, we made clear to him we didn't expect the blowout preventer to be pulled out before late August, which is about I think when it was taken up, and still hasn't been forensically analyzed. So it was always understood that the blowout preventer would not be a part of our report; we would not have access to it and not be able to make any judgments about it.

But the failure of the blowout preventer to work is itself known; as to specifically why it didn't work, that remains to be seen. I think all other aspects of this spill, though, were subject to our investigatory analysis, and we were able to make the judgments that give us confidence that we know what happened.

Mr. LAMBORN. Thanks for that answer. I think you or the President should have had the patience to know why it didn't work, and your report would have been much more significant in my opinion had we had that information.

Mr. REILLY. As commissioners, we, sir, didn't have that option.

Mr. LAMBORN. Second, in a Wall Street Journal editorial from two weeks ago, it states that not a single member of your Commission was a drilling engineer or an expert in oil exploration technology or practices. Don't you think that the Commission would have been improved had you had people with that kind of expert background on your board?

Mr. GRAHAM. Frankly, I think that was a relevant question to ask in the summer of 2010. Today, we have submitted an almost 400-page report. We would like our competence to be judged on this report.

And if there are areas that you think demonstrate a lack of capacity to make the judgments that we did, we would be pleased to know what those are, and we would attempt to provide a response or an admission of our naivety.

I would say that I believe even if you took the most extreme explanation of why the blowout preventer failed to function, that doesn't trump the other nine factors that we have identified that were contributing causes to this.

So while I am curious to know what the BOP did, I don't think it would change the findings or the recommendations that we have made.

We certainly wouldn't withdraw our recommendations that the oil and gas industry should adopt, as the nuclear power industry has, some form of internal capability to assess safety.

We would not change our position that we need to have an effective, competent Federal agency that can oversee the industry.

We would not change our recommendation that that agency should be protected by independents within the Department of the Interior.

Those are our key safety recommendations, and I don't think there is any evidence that is going to come from the forensic examination that is currently going on at a NASA facility in New Orleans of the blowout preventer that would alter those recommendations.

Mr. LAMBORN. Well, I will move on to my next question here.

In its undertaking of the investigation of the *Deepwater Horizon* incident, the National Academy of Engineering and the National

Research Council announced that they would not be issuing their final report until it has been peer-reviewed, which is their standard practice for reports issued by the National Academies. Has your report been submitted for peer review to any other kind of body or experts or—

Mr. GRAHAM. It is a public document, so it is not just submitted to peers, it is submitted to the American people for their comment and evaluation.

Mr. REILLY. I would just say that it has been pretty well reviewed and pretty well received and commented on by experts in the field.

And I also want to note that we say in our formal testimony that our senior technology and science advisor on this enterprise was Richard Sears, who has 33 years of experience, senior experience with Shell Oil, and he was present through all of our deliberations on technology.

And I would also like to acknowledge publicly, we had strong cooperation from industry, from three companies in particular that spent several hours with us—Chevron, Shell, and ExxonMobil—and cooperation, obviously, from the Departments of the government, from BOEMRE and Director Bromwich, and Secretary Salazar.

So I think we had a full range of input and plenty of opportunity on the part also of the scientific agencies, NOAA, the Coast Guard, to ensure that what we say is grounded in good science and respectable technology.

And I must say we have become a little impatient, Bob and I, with the criticisms of our competence, or the credentials of our Commissioners, which maybe was OK to raise 6 months ago, but the proof is here. If there is something wrong or if there are people who have objections to the findings or think they are wrong or to the recommendations, we would be very happy to debate on that point.

But it seems to me now a little churlish to refer back to the credentials without saying in some way how they are connected to the inadequacies in the report, which nobody seems to be doing.

Mr. LAMBORN. Thank you.

The CHAIRMAN. Thank you.

Mr. Grijalva from Arizona.

Mr. GRIJALVA. Thank you, Mr. Chairman.

Gentlemen, if the current offshore policy is based on some similar assumptions, as I understand it, one was the blowout preventers actually worked. That was an assumption. The assumption was that the industry had the ability to contain spills. The assumptions were that spills offshore won't ever hit onshore. There was an assumption based that rigs are operated as safely as possible.

And I read through your report that brought into question those assumptions. So, as a result, just for both of you gentlemen, don't we have to rewrite our offshore policy based on the fact that we don't have assumptions we can make right now? Senator?

Mr. GRAHAM. Well, I think some of the assumptions are that drilling in the offshore is going to be a continuing and increasing part of America's energy supply; number two, that its acceptability to the American people will be closely aligned with its safety.

You may recall that when Three Mile Island blew, almost 25 percent of America's electricity was coming from nuclear power, and there was an expectation that that percentage was going to grow, maybe even to where France is, which is over 70 percent. But that one incident so chilled the public toward nuclear power, that we have had effectively a 30-year hiatus of any expansion. And therefore, the percentage of electricity from nuclear power is dramatically less than it was 30 years ago.

Now, whether the continued activities in the Gulf, more Macondos, could have the same effect as Three Mile Island, as a singular event had on the nuclear power industry, we can all speculate. But I think it is in everybody's interest that we conduct this industry to the highest standards.

Would anyone answer the question, why should drilling for offshore oil in the Gulf of Mexico be at a lower standard of safety and environmental protection than it is in the North Sea? If there is some explanation as a matter of public policy, why we should accept a lower standard, then I think we could have a very good debate. No one has come forward making that assertion.

Mr. GRIJALVA. The other point I think you called the liability cap arbitrary in the report. The question is, lifting the cap entirely as a means to assure that the taxpayer doesn't get stuck with any bill beyond the cap; and two, as incentive to meet the highest standards that the Senator just mentioned for drilling, any reactions to no cap at all on liability?

Mr. GRAHAM. We have recommended that the cap be lifted. We did not go beyond that. Clearly the $75 million cap, which is now 21-years old, just this year the change in the value of money as a result of inflation over 21 years would cause you to believe that 75 million was not adequate. Second, as Bill pointed out, when that cap was established, virtually all of our offshore drilling was in known, comparatively safe, low-pressure areas. And today the largest share of our drilling is in much riskier, deeper water.

Now, I am now going beyond what the Commission recommended and just saying my own feeling is that if we have liability caps, the rationale is to maintain a competitive marketplace in the Gulf of Mexico, that we don't want only the largest oil companies in the world to be able to drill, but we also don't want to have financially incapable companies causing enormous consequences.

So that would lead me to feel that the Congress might be able to fashion a policy built around liability limits in relationship to risk. It is one thing to have a liability limit for 100 feet of water than 18,000 feet of water. Today, the law applies the same standard to both of those two cases.

Mr. REILLY. I would just add if I might, Congressman, that the establishment of some kind of liability cap that both ensures a continuing capacity of independence to operate in the Gulf, that doesn't just restrict to leasing or bidding to a few majors, but also protects the public against being handed a bill for major damages caused is something that is going to take more time than we had in the 6 months and probably more involvement of the insurance industry, since I assume an insurance consortium of some sort would be necessary to address this.

I also would note that the liability cap in Canada is $35 million. I think it is 50 million pounds in Britain. And it does strike me, too, that particularly with respect to those resources, such as the Gulf and the Arctic, where other countries' activities are also involved, there might be some merit in trying to work out a uniform system of liability which applies systematically to all oil and gas development in these areas.

Mr. GRIJALVA. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Fleming from Louisiana.

Dr. FLEMING. Thank you, Mr. Chairman.

And thank you, panel members, for being here today and your service. This was, no question about it, a disaster. And like any disaster, even though we don't know the precise cause of the blowout, we do know some things happened that are typical of disasters.

Because this is a high-risk operation, much like many other things we do, travel in space, flying in airplanes, rarely is one thing the cause of the disaster. It is usually a number of different situations and occurrences and bad decisions that align themselves which probably over time have occurred, but because of some backup or redundancy, the disaster was prevented. And that can sometimes be a bad thing because what happens is we become, in your words complacent. If I make a mistake, there is a backup system that will solve that problem for me. And obviously that is something that on the industry side and on the government side we need to bear in mind going forward.

But it was a disaster to Louisiana, my home State, in two ways: One, to our ecology, no question about it; but maybe even worse and longer term in jobs. Louisiana has now lost tens of thousands of jobs. Because these rigs are so expensive, they have left our shores in some cases, and more will come, to go to Brazil and Africa and other places.

And you know what is interesting is that they are going to other parts of the world that have less standards than we do. So I think that is a real issue we need to look at.

Now, the President lifted the moratorium, and I have been researching this. I cannot find one single permit for deepwater drilling that has been issued since the lifting of the moratorium, and we don't know when they ever will.

So what I am concerned about and I would like to have your reaction to this, I see recommendations for more legislation, but I think we need to be careful about just moving the chairs on the deck. For one thing, we are asking NOAA to sign off on things, and that is a good thing. But is that going to make the permit process even slower and more difficult?

So I would love to have the reaction from both you gentlemen. Is this really going to get us where we need to be, and how is this going to affect the jobs, which are so desperately needed, and, finally, the price of gasoline and oil that is going up because of the loss in supply?

Mr. REILLY. I would say two things. I would agree with you completely to the degree that we restrict our own domestic production, we are essentially, given our demand on supply, intending to get more oil and gas from risky places, like the Niger Delta or Venezuela. That is a given. And I think we have to take an inter-

national perspective on the whole issue and also recognize that the environment in those places counts, too, and it has been very badly abused, particularly in the Niger Delta; some 2,500 accidents over the last 10 years. That is a perfectly fair point, and I think it is one that ought to underlie our approach to many of these questions.

With respect to the moratorium itself, Senator Graham and I were pretty specific early on. We did not understand it, thought that it was excessive and considered that a more selective approach that did not penalize those companies with good records, particularly after they had once been inspected, as they all were in the weeks following the Macondo disaster. Once those few infractions that were found were corrected for, it struck us that it would have been reasonable to resume drilling at that time. But that has not happened.

I would say that going forward, to the degree that we continue to under-staff, under-prepare, under-reform, and under-finance the regulatory agency, we probably are going to find that it is more reluctant to issue permits, less confident about signing a name to a permit, and less able to get us back into business.

Mr. FLEMING. Senator, do you have a response?

Mr. GRAHAM. I would just add that what Bill said at the end happens to be the position of the major petroleum companies in Great Britain, that they actually affirmatively support a strong, well-financed, competent regulator as a key part of their ability to do their business. I believe they are right, and I hope that we will come to the same conclusion as to the industry here in the United States.

Mr. FLEMING. Can I get a commitment from you gentlemen—and Mr. Reilly has already suggested that the President not only lift the official moratorium, but actually allow permits—should we do away with what we have now, which is a de facto moratorium? Would you both agree that the President should move forward and begin to allow the issuance of permits?

Mr. GRAHAM. As I understand it, there is a news story today that states the reason—or at least a primary reason for the delay in issuing permits for those rigs that have met the individual standards, rig by rig—is that the industry has not demonstrated that it has the capability to respond and contain such an event or, if it does, those standards have not yet been incorporated in the permit applications.

If that is the case, that actually, in my judgment, is a positive signal that we are now down to essentially one issue. And there also is some indication that the ability to meet that standard of adequate response and containment is near an end.

The CHAIRMAN. I thank the gentleman. Mr. Boren of Oklahoma.

Mr. BOREN. Thank you, Mr. Chairman. I want to thank the members of the Commission for being here today and for your work. Thank you, Mr. Reilly, Senator Graham. It was mentioned earlier that there was some question about the qualifications of the Commission. I want to say that I have a high regard for the members of the Commission. Senator Graham—Chairman Graham of the Intelligence Committee, you and my father were chair of the Intelligence Committee about the same time, and we have a warm

regard for you and your work. So I want to thank you for your service. I want to touch on a couple of things that were, you know, in this book that we have here before us. I think a vast majority of the recommendations—actually, a lot of the industry would say that they don't really have a problem with. You know, you are listening to someone who is a big supporter of the oil and gas industry coming from Oklahoma.

But some of the verbiage, sometimes even just the words, just to pick out of the report, I kind of have some concerns about. One was the use of the term "systemic," that there are these systemic problems in the industry. And if you look at the 30-year history, you know, over the last 30 years, the history of offshore oil and gas production, there have been some incidents but I think a major incident is very rare. And if you compare it with, you know, the airline industry or the commuter train industry or any other industry, the oil and gas industry has done quite a good job. The last few years, we have seen documentaries like "Gasland" on hydraulic fracturing. A lot of this that is out there is driven by a motion. It really isn't driven by facts or science. And so I am really concerned. The rhetoric, even the State of the Union last night, about, oh, these oil and gas companies are making all this money. Let's throw some more taxes on them. There are a lot of good quality jobs that are created in States like Oklahoma, Louisiana, all across this country, and they want to do the right thing. They want to do the right thing for the environment, as do most Americans.

I do have one question about the CLEAR Act legislation that was brought out earlier about the cap on liability. And I have a lot of independent oil and gas producers in Oklahoma that have this question. We have been talking quite a bit about this. But given such liability requirements, did your staff or the Commission ask the insurance industry if any independent operators would be able to obtain an insurance policy under such guidelines or circumstances? And the reason why I ask that question is, I am worried—and you kind of touched on this earlier with Mr. Grijalva. If we only have one or two companies, U.S. companies that do the drilling, we are going to have the Chinese be the only folks that can drill these wells. I would like to see—I am not talking about a mom and pop company.

I am talking about, you know, Devon Energy is a huge company in Oklahoma, but it is not as large as some of the big majors. These are thousands of employees. They are very well capitalized. These are types of companies that could do this drilling without any problem. Are you all worried about that? And did you talk to the insurance industry about whether or not these smaller companies could, in fact, do this?

Mr. REILLY. We are worried about it, and it is why we did not select a number with respect to an increase. We said it should be increased but we didn't say how much. And we knew that it would require insurance company consultation and advice and help and didn't, frankly, have time to get it. So we did not meet with the insurance industry on the liability cap. But for all the reasons you mention, and our own sense that it is a valued contribution that independent operators make to the economy, to the culture, to the industry in the Gulf, we did not want to make an irresponsible

choice without adequate information that might, in any way, inhibit their activities, or possibly even cause them to move to other jurisdictions where their liability cap is lower even than it is in the United States.

Mr. BOREN. Senator, do you have the same opinion?

Mr. GRAHAM. I would agree with that statement. We tried to operate within our areas of confidence. So the specific recommendations we made, we are prepared to defend them. Where an issue was outside of what we thought was our regional component, such as the role of insurance companies in determining the liability cap and how the role of insurance companies might be a means of giving some assurance that we would not be limited to just a handful of companies. We didn't feel competent to comment on that. We did feel that on its face, the $75 million liability cap across the board for activities that are as divergently risky as shallow and ultra-deep water needed to be lifted and re-examined.

We also were aware that the Congress is going to make that ultimate decision, and we did not feel that we had anything additional to add to your consideration of that.

Mr. REILLY. Mr. Boren, if I could add, I knew your dad too. I served in the EL Corporation with him for 6 years. And I know your district some. I serve on the board of an oil company who, half of which used to be based, headquartered in Bartlesville. And the senior executives there—

Mr. BOREN. ConocoPhillips?

Mr. REILLY. Yes, sir.

Mr. BOREN. OK. Great.

Mr. REILLY. —are stung by the use of the term "systemic," and yet are perfectly willing to acknowledge they didn't see this coming and weren't prepared for it, didn't think it could happen, and had a response plan which the Chairman acknowledged was embarrassing to him because it had the same characteristics as the other response plans.

So I would just say, we do not by any means intend to disparage the safety or environmental standards of some of our leading iconic oil and gas companies, whether the majors or the independents. But the facts, I think, speak for themselves with respect to this particular disaster. And they led us to report all we did.

The CHAIRMAN. Thank you, Mr. Chairman. Mr. McClintock, California.

Mr. MCCLINTOCK. Gentlemen, thank you for being here today. When the Challenger exploded, we knew only one thing for sure after the accident. We knew that the launch vehicle had failed catastrophically. The Rogers Commission was impaneled. It was filled with technical experts. It painstakingly recovered the wreckage from underneath the ocean. It reassembled that wreckage. It then determined the precise cause of the disaster, and it then recommended changes so that the space program could move forward.

The one thing we know for sure in this disaster was that the blowout preventer failed. Let me ask you quite directly, did you determine why the blowout preventer failed?

Mr. GRAHAM. The answer is "no" for the reasons that we have given.

Mr. MCCLINTOCK. Did you look?

Mr. GRAHAM. Can I finish answering the question?

Mr. MCCLINTOCK. It is a yes-or-no question. It is my time, Senator. It is limited. So please. Did you even look at the blowout preventer?

Mr. GRAHAM. No.

Mr. REILLY. Most of the time we were at work, we would have taken a robot to go down and get us there.

Mr. MCCLINTOCK. Well, let me read you The Wall Street Journal that took you apart for ideological bias, for a lack of expertise, credibility, lack of thoroughness. And this is what they said, Unable to name what definitely caused the well failure, the Commission resorts to a hodgepodge of speculation. Adding to the confusion, it acknowledges it could find no evidence that BP or its contractors consciously chose a riskier alternative. And so forth.

The Commission didn't even wait to get an autopsy of the failed blowout preventer—and again, this is coming directly from The Wall Street Journal—which is rusting on a Louisiana dock. Why should we take your report seriously if you have not even made that modicum of effort to determine the actual cause of the disaster?

Mr. GRAHAM. Well, as Mr. Reilly said to an earlier question, we had a Presidential 6-month charter. We knew early on that that charter was going to run out before the forensic examination of the—

Mr. MCCLINTOCK. Did you ask for an extension of your deadline?

Mr. GRAHAM. We did not.

Mr. MCCLINTOCK. So you just participated in a rush to judgment without even looking at the cause of the failure that created this entire disaster?

Mr. GRAHAM. Well, I would just direct your attention to page 125 of our report which lists the nine steps that we assessed that contributed and cascaded.

Mr. MCCLINTOCK. I understand that. But that would be like the Rogers Commission issuing its report without looking at any of the wreckage—

Mr. REILLY. Congress, the cementing failed. The cement job failed to contain the well free from hydrocarbons. We said that. Is that not enough?

Mr. MCCLINTOCK. Let me get to the question of ideological bias because this is also an indictment in The Wall Street Journal editorial. They said, The conclusions in your report were, "all too predictable given the political history of Commission members. Former Democratic Senator Bob Graham fought drilling off Florida. William Reilly is the former head of the anti-drilling World Wildlife Fund, and Frances Beinecke ran the Natural Resources Defense Council, which is opposed to carbon fuels. Not a single member was a drilling engineer or expert in oil exploration technology or practices." Why should we take you seriously?

Mr. REILLY. Congressman, I would just say the use of the word "predictable" is surprising to me because what was predictable in the view of The Wall Street Journal when they wrote their first critical editorial was that we would recommend against future offshore oil and gas development, which we very definitively did not.

Mr. MCCLINTOCK. You are recommending a whole new level of bureaucracy on top of an obviously already failed bureaucracy with the obvious aim of indefinitely delaying of the production of our Nation's energy reserves. What is the economic damage caused by this disaster? Do we have a figure on that yet?

Mr. REILLY. We know it is in the tens of billions.

Mr. MCCLINTOCK. I have an estimate here of a worst-case and base-case analysis of the economic damage caused by the moratorium, and it runs from $279 billion all the way up to $341 billion.

Mr. REILLY. Billion?

Mr. MCCLINTOCK. Billion, I believe.

Mr. REILLY. I haven't seen those numbers before, sir.

Mr. GRAHAM. Could we have an opportunity to evaluate those numbers?

Mr. MCCLINTOCK. Absolutely. Absolutely.

Mr. REILLY. I would only say, with respect to the bureaucracy question, I made clear in my opening statement, I think that—and certainly the report goes into detail on this—that the reorganization of the Interior Department should be cost-free. We do want to segregate the leasing, the revenue generating, and managing functions from the environment and safety regulation. That is a matter of straightforward reorganization.

Second, the degree to which we add anything is intended to provide more capability, more expertise, more professionalism in an agency that then I would fully expect, based on my own history at the Environmental Protection Agency, of facilitating more confident permitting and a better regulatory oversight of the industry. I don't think that it would work to delay. I think it would work to improve and create more efficiency in the relationship between the regulator and the industry.

The CHAIRMAN. Mr. Luján from New Mexico.

Mr. LUJN. Mr. Chairman, thank you very much. And I know this important hearing is going to outlie the recommendations to prevent another *Deepwater Horizon* disaster from happening again, which is why I think we are here. It is not to debate whether one supports or opposes offshore drilling. It is to make sure that we don't let this happen again, and that we all understand the roles that we have to play to get there.

And I want to thank the Commission for the work that they did because this was a tough job, and you have a tough set of circumstances with many critics. Many of us being those critics as well. And I hope that we truly listen closely to your recommendations and that we see what we can do to find common ground to be able to get to that point.

By the time this Committee had convened last year to hear testimony from BP executives, it had already become clear what led to the *Deepwater Horizon* explosion was the culmination of systemic failures. It was the failure of companies who knowingly refused to implement the necessary safeguards to prevent this disaster, and it was a failure of governmental policies and regulators that did not apply the proper oversight to minimize the risk of the disaster. BP has shown itself to be negligent in safety violations and environmental protections.

We should not forget what happened in 2005 with the explosion in Texas and the lives that were lost, 15 people. 200,000 gallons of crude oil and a pipeline that ruptured in northern Alaska. These are real incidents.

But what is most significant about the Commission's report is that it reveals the culture of undermining safety standards. It is not just an issue for BP, but an epidemic failure facing the entire offshore drilling industry. Quoting directly from the report, "The blowout was not the product of decisions made by a rogue industry or government officials. Rather, the root causes are systemic, and absent significant reform in both industry practices and government policies, might well recur.

The Bipartisan Commissions report only confirms that Congress must take action, do our part to prevent the disasters like this from happening again. During the 111th Congress, this Committee put in a lot of work to develop safeguards that would modernize safety and environmental protections for Federal offshore leasing programs in the CLEAR Act. Many expressed an interest to see the report before we moved forward.

We now have that report. And as we hear from witnesses of the Bipartisan Commission today, we have to ask ourselves, What are we going to do? What is our role as Congress to make sure this never happens again? Are we going to sit back and allow a failed system to continue? We cannot turn a blind eye on this issue. The Commission's report clearly outlines that Congress needs to act quickly to protect the safety of people, the welfare and livelihoods of communities, and the habitat of fragile wildlife.

Only 7 months ago, we saw the horrific images of the explosion that killed workers, the plumes of oil that devastated marine life, local seafood industries, vulnerable wetlands, and the waters of the Gulf. Over 205 million gallons of oil were spilled in the Gulf because of the *Deepwater Horizon* spill. Let us never forget the people who were impacted and the families who lost so many of their loved ones.

It is in everyone's best interest, including industry, to not let this happen again, and to truly understand the responsibility that we all have to do our part to prevent that.

The first question I have is a yes-or-no question. We also learned during the spill how woefully under-prepared the Federal Government was to estimate the actual flow rate of oil spewing from the well. In fact, the Federal response was initially entirely dependent on misleading flow rate estimates provided by BP, which had every reason to low-ball them because we knew that the liability was tied to the calculations on a per-barrel basis.

The legislation Democrats introduced today creates a permanent scientific group which includes scientists from the National Laboratories in the Department of Energy that will maintain expertise needed to estimate flow rates. Is this consistent with your recommendation?

Mr. REILLY. It is consistent. Yes, it is. We determined that one consequence of the structure of our laws is that the responsible party takes the lead in overseeing response, and we want to keep liability fixed there. But one part of it which government should have independent capability to carry out is determination of the

flow rate and the USGS Director, Marcia McNutt, has now said that will not be an issue next time.

Mr. LUJN. And one last question, Mr. Chairman, to get on the record and we can get this answered later is, the report reveals that the cause of the spill was corporate mismanagement, inadequate government regulation, and a lack of political will to ensure proper oversight of the offshore oil industry as they pushed offshore drilling into deeper waters. You describe in the report that this problem is pervasive across the entire offshore drilling industry. So my question is: What will be the consequences if reforms fail to be prioritized, including the passage of proper legislation to minimize the chances of a disaster like this from ever happening again.

And Mr. Chairman, I know we are going to run out of time. I want to be respectful of the other members. So we could ask the witnesses, Senator, to maybe send those back to us because I think that there is a very thoughtful answer that we need as a part of that. Thank you, sir. Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. I thank the gentleman. Mr. Fleischmann of Tennessee.

Mr. FLEISCHMANN. Thank you, Mr. Chairman. Gentlemen, thank you for being here today. It is a privilege. In addition to serving on this distinguished Committee, I also serve on the Small Business Committee. And my first question to you all in this group is in this regard.

Gentlemen, what would you all say to the owners of the small businesses in this region struggling to survive until operations are restored in the Gulf? These people have lost most of their revenue streams, if not all of their revenue streams. They have made extraordinary personal and professional sacrifices to retain their employees and to preserve their businesses. But they cannot hold on indefinitely. I would like you all to address that, please.

Mr. GRAHAM. Well, of course, what you just described describes a number of the industries that are dependent on the Gulf. There were thousands of fishermen who lost their ability to acquire their income and there was a degradation of the brand of Gulf seafood, a 20 percent to 30 percent drop almost overnight in the consumption of Gulf seafood which has not yet been overcome. We make some specific recommendations on that subject. The tourism industry, which depends upon people's feeling that they are going to go to a place that is clean and healthy and enjoyable.

It also suffered tremendous damage. So the consequences of an event like this have rippling effects. Mr. Reilly has described the fact that we believe that there needs to be a safe industry, that there can be a safe industry but that there needs to be an offshore oil industry in order to meet the energy requirements of the United States. And we sympathize with all the small business, whether they be fishermen, restaurant owners, or suppliers to the oil and gas industry. And we hope that we can get back in business as rapidly as possible with the safety measures that will protect all of those interests.

Mr. FLEISCHMANN. Thank you. Mr. Reilly.

Mr. REILLY. Congressman, I don't know if you have had this experience. But I ordered some oysters in New York some time in September, I think, and asked whether they were from the Gulf,

and was reassured very confidently by the waitress, no, we would not serve any seafood from the Gulf. That problem persisted through the fall. I understand it has not entirely disappeared now. People continue, the seafood processors, the fishermen to suffer because of that. I remember talking to the Governor just around Memorial Day, the Governor of Mississippi, who told me that there wasn't any oil within 60 miles of the beaches of Mississippi but there was 30 percent occupancy in what is usually the most important vacation tourism weekend of the year in Mississippi. Those stories and the Europeans canceling trips to Key West where the oil never approached are very poignant stories. The Vietnamese fishermen I think impressed me more than those of any other in my experience when I was in the Gulf. And we had hearings. Our first hearing was in New Orleans. We became very familiar with the problems you describe, and they are as serious as you say.

Mr. FLEISCHMANN. Thank you, gentlemen. I have a follow-up question. In a lot of the additional fees and proposed taxes on industry, what would the total government take-away be, including royalties, severance taxes, property taxes, income taxes, lease bonuses, and the proposed additional fees and taxes mentioned in the report?

Mr. REILLY. I don't think we have costed those numbers in total. The only thing I would say is that it is really important to keep in perspective the amount of revenues the government takes in from offshore oil and gas development, anywhere from $6 billion to $8 billion in one year up to, I think, $18 billion in 2008. It is the second largest revenue generator after the IRS, and we can afford to spend some very small proportion of that which would be in dollar numbers reasonably significant, ensuring that it is better done and that it has been done by the government.

Mr. GRAHAM. According to the chart which appears on page 73 of our report, in the year 1984, the budget of the MMS was approximately $250 million. And in the year 2009, it was something south of 200. At the same time, the industry, as the same chart displays, has moved from being a relatively well-known shallow water industry to increasingly a deepwater, high-risk industry. You would have thought that the lines of cost of effective regulation would have coincided with the increased risk. So I can't tell you exactly what the number is, but it would be hard to justify what appears to be about a $60 million to $70 million a year reduction in the capability of the regulatory agencies at the time the industry is going into more risky areas.

Mr. FLEISCHMANN. Thank you, Senator.

The CHAIRMAN. Dr. Christensen.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman. And I want to thank our panelists for being here. I too want to commend you and the broad array of contributors to this very comprehensive report. And among the many areas of concern, I too have to say that I could never understand why the U.S. permitting standards were lower than other countries and specifically lower than the U.K., if I remember correctly, where BP is actually based.

Ours should be the highest in the world. And I also want to support, before I get to my question, Senator Graham's response on the moratorium. Because according to my reports, the Department

of the Interior, since June of last year, has approved 28 permits to drill offshore in shallow water of 500 feet or less, and there are only four or five shallow water permits currently pending. On deepwater drilling, the moratorium was lifted on October 12, and gas operators have to comply with new regulations to show that they have a strategy in place to actually contain a bailout. According to the Interior Department, thus far, no one has been able to demonstrate that actually, although I know that they are working on it, and that is the holdup—not the Department, but the fact that the companies are not able to respond adequately at this time. The good news though is that according to the Department, some companies are getting close, as you said, to being able to demonstrate that ability, and I do share the majority's hope that this can happen as quickly as possible.

My first question, if I can get to it, I wanted to follow up on Mr. Boren's question. In saying that a systemic failure occurred, did you mean systemic in this case, of the three companies in their management of the *Deepwater Horizon* drilling and MMS? Or did you mean to apply it to the entire industry and say that the entire industry has been complacent? So I just want to understand what you meant by systemic?

Mr. GRAHAM. Well, we did not mean parity, that is that all companies were equally subjected to this culture of complacency. In fact, there are some companies that have a very strong record. What we meant to say was that there was evidence that the industry had not responded to the recognition that there were some outlier companies that needed to be sanctioned. You are a medical physician. If there were a physician in the U.S. Virgin Islands who was known by the other physicians to be performing at a rate that put people's lives at risk, I would assume it would be your professional responsibility to bring that to the attention of someone in authority. Well, we do not feel that the industry carried out its obligation for self-policing and, thus, in part, the recommendation for the INPO-type organization.

Second, the example of response. Response is an industry-wide obligation. We don't expect every company to have all the equipment that is necessary to respond, but we expect the industry at large to have the capacity to respond, and it was clear that not only was there not that capacity, but that there had been relatively little investment in the technology or research and development, the understanding of the environment that would have put them in a position to have produced a response.

Mr. REILLY. I will just comment on your point about the U.K. experience. We have discovered—and, of course, in our research that companies and industries get serious about reforming practices and improving them when they have their catastrophe. The U.K. had a very serious catastrophe. It cost 187 lives in 1989, Piper Alpha. Our chief counsel was intimately involved in investigating that accident. It was after that that the regulator separated revenues from regulation, just as we are proposing here. And it was after that that they developed a different mode of regulation which is known as the Safety Case where the particular risks that are likely to be entailed in a particular well situation—that is, with acknowledgement of the formation, the depth, the pressures and all the rest,

be explained by the company and the way in which the company proposes to address those risks, he made clear to the regulator. That is their system now.

Norway has a similar system and they came to it after their catastrophe. Australia today, dealing with a blowout that occurred last year, has had a commission of inquiry, and they are reforming their own practices.

Mrs. CHRISTENSEN. Are you seeing that happening now?

Mr. REILLY. We know that the industry is very seriously examining the possibility and the practical challenges to creating the safety institute of the sort we recommend. We very much look forward to having the results of those inquiries, and we very much hope that they will do something along the lines that we have recommended. We think that it is very possible that they will. We certainly know that several CEOs of major companies take it seriously.

Mrs. CHRISTENSEN. Thank you.

The CHAIRMAN. I thank the gentlelady. Mr. Coffman of Colorado.

Mr. COFFMAN. Thank you, Mr. Chairman. First of all, thank you so much for your work and what you have accomplished. I think you mentioned some things that need to be done from your perspective, some kind of international agreement so there are uniform standards. I think you talked about responsibility to a spill or an accident if it occurs, having a better definition of that. And perhaps some insurance requirements for viewing that, liability issues. And I think what I am hearing from you is that in terms of prevention—so the two aspects. One is responding and the other one is prevention.

So in terms of prevention, I guess my question to you is, did adequate regulations exist? But was it merely the enforcement of the regulations that was a problem? Because certainly we know that MMS had very significant problems. I think there was an IG report in 2008 that talks about how dysfunctional MMS was, and I think that we heard in this situation here how the inspection simply didn't occur in the manner that they were prescribed and were supposed to occur.

So sometimes we have problems I think where we actually have laws on the books, regulations on the books but they are simply not being enforced. So I think that when we look at what is now the Bureau of Ocean and Energy Management, Regulation and Enforcement that, Mr. Reilly, you know, it is reported that you yourself said that personnel working for this agency are "often badly trained."

Secretary Salazar has said that he has already considered and executed some of the suggestions that your report has highlighted. Hopefully effective training and a cultural shift at his organization were implemented as well.

Do you believe that these reforms, among the others that Secretary Salazar has said to have made, would have been sufficient to correct the missteps that were made by MMS prior to enduring the cleanup of the *Deepwater Horizon* spill? Let's just go into the prevention. I mean, if, in fact, we had a functional regulatory organization that was enforcing the existing rules, would that have been adequate to prevent the incident that occurred?

Mr. REILLY. Let me say, I think that the recommendations in the new policies for scripted regulations that the Secretary and the BOEMRE's Director Bromwich have imposed are very desirable and likely to be effective. Negative pressure tests are now prescribed. They were not before. There are a whole range of new requirements that appear to us to make sense. But the reality is that the existing personnel complement entails an inspector for every 55 rigs. In California, it is one for every six. The answers given to a series of interrogatories of questions posed by the Interior Department, and the Coast Guard in their investigations make clear that basic petrochemical technologies, oil and gas technologies, like cementing and centralizing negative pressure tests, are not really understood, are not mastered by many of the inspectors who have said, frankly, that they take industry's lead on those technologies, that they have been evolving over time.

And we simply have to provide better formation, better training, and I think better compensation for the people who are conducting that work. So even if today the regulations are sufficient to guard against the repetition of this set of problems, I worry that in a fast evolving industry in 3 to 5 years, they may be outdated. And in order to keep them up to date, I think we are going to have to bring up the game among the professionals at the agency.

Mr. COFFMAN. Senator Graham.

Mr. GRAHAM. Yes. I would agree with that. And I believe that our recommendations, such as the independence of the safety function within the Department of the Interior, are as important as the decisions that Congress made a number of years ago to make the FBI a quasi-independent agency within the Department of Justice. Just like the FBI, the safety function within the Department of the Interior is susceptible to political interference. And in fact, in the case of MMS, it was rampant interference. And we think that it is a combination of good regulations, competent capacity, adequate capacity, and then insulation from inappropriate external influences that are all part of what is necessary to get us up to world-class standards of safety in this industry.

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

The CHAIRMAN. The time of the gentleman has expired. Mr. Sarbanes of Maryland.

Mr. SARBANES. Thank you very much, Mr. Chairman. Thank you all for being here. I know it has been a long day.

I first wanted to commend you on the report. I haven't had a chance to read it from beginning to end, but I did look at a summary. And I think your recommendations based on the findings you have made are very, very helpful and will be for a lot of us going forward.

My understanding, you have gotten some criticism about whether you had everything in front of you, whether you had the blowout preventer and so forth. But as I look at the recommendations, they seem to me all to be confined to a kind that you could make with a lot of confidence without having that extra piece of information at your disposal. It doesn't strike me that anything about your recommendations will be changed in any kind of significant way based on other information that comes forward because you have really derived it from what you saw before you.

There was also a comment about your recommending layering another bureaucracy on top of a failed bureaucracy. But as I, again, read your recommendations, I think what you are doing is suggesting a reasonable set of regulatory oversight which in many ways will substitute for what has been a failed bureaucracy.

On the issue of bureaucracy, I will ask you to respond to a proposal. This is something I suggested in earlier iterations of legislation suggesting the oil spill. It was a provision that we tried to include in the CLEAR Act. And this would be a requirement that the CEO of these corporations, these companies would certify—personally certify with the potential for liability to the adequacy and safety of the response plan, for example. You talked about, and many have alluded to how these response plans that were developed really across industry. It was highlighted in BP's particular oil spill response plan but were wholly inadequate.

So I would like you to speak to whether you think we ought to give meaningful consideration, as I would like to see, to a requirement on the part of the corporate CEO to certify that these plans are, in fact, good plans and that they have done due diligence in creating those plans. And you could do more in terms of changing the culture of those companies with that one sort of piece of leverage than a whole new bureaucracy could do. So if you could speak to that, I would appreciate it.

Mr. REILLY. My own sense is that the way such certifications would occur practically is the head of offshore or North America would sign a certification. The chief financial officer might sign a certification. The chief safety and environment vice president would sign a certification. And if all of those signatures were present, then the CEO would sign. And I don't know that it would enhance the liability assignment that you would like to see.

It might, from a personal point of view, more closely involve, more intimately include a CEO in a decision that is made; but as Mr. Hayward said, he didn't know anything about the problems that characterized that well situation. He did not know that it had been a troublesome well. He hadn't been particularly involved in making decisions for it or apparently didn't even know that it was coming in late. It is a very large company. So I am not confident myself, based on my own experience with boards of directors, that that would contribute that much positively to safety, frankly.

Mr. SARBANES. Do you think he would have bothered to know more if he had been required to personally certify the safety and adequacy of these plans?

Mr. REILLY. Well, he would have probably have had to sign scores and scores of certifications without any individual personal knowledge of the degree to which the characteristics of the well situations were familiar to him. And so, I have reservations about that particular recommendation. I had a conversation with Mr. Waxman about it. I know that it was strongly supported on the part of the Committee. But from my point of view—it is not that common in other high-risk industries either to try to fix the responsibility at the very top. It is there anyway if the company encounters a $10 to $20 to $30 billion expense, obviously. And now I think everybody's attention is very focused on liability. And to my knowledge, every company has stood down to examine their own vulner-

ability, their own risk and get their practices improved. But that is my personal judgment. I actually consulted our senior technology adviser on that particular issue, and we gave it some consideration within the Commission and did not go forward with it.

Mr. SARBANES. Mr. Chairman, can I get the Senator's answer to that question?

The CHAIRMAN. If the Senator can do it in 15 seconds, which is a test.

Mr. GRAHAM. Your question was, would this be something worthy of exploring. I think the answer to that question is, yes. My colleague has done some of that exploring and has come to the conclusion that he has but I think it is an issue. And frankly, your father has given us the opportunity to move this from being a theory to reality, and that it hasn't changed the behavior of corporate executives, that under his legislation, they now are required for public companies to sign personally as to the accuracy of their financial statements. It would be interesting to do some oversight and see what effect that has been. And then you might be in a better position to evaluate the potential applicability of offshore oil drilling.

The CHAIRMAN. You didn't quite do it, Senator. But

nice try.

Mr. GRAHAM. Well, I got a little bit off.

The CHAIRMAN. Well, that is all right. You were talking to the son of a Senator. I can understand why that happened there.

Mr. Duncan from South Carolina.

Mr. DUNCAN OF SOUTH CAROLINA. Thank you, Mr. Chairman. And gentlemen, thank you for being here. I sat by this graph all afternoon and I have studied it. And I want to comment on it.

Mr. REILLY. You are the only one who can read it.

Mr. DUNCAN OF SOUTH CAROLINA. You have referenced it several times today, and you have come to some conclusions that I think are flawed and here is why. I spent some time on the MMS OCS 5-year planning subcommittee where we looked at oil and natural gas leases and came up with recommendations for the next 5-year plan on where those leases would be granted. And it struck me during the time that the only areas that we could even talk about within that committee was deepwater western Gulf of Mexico and deepwater Alaska. And nearshore—the 1,000 foot and shallower areas on that grid—were off-limits for us to even talk about for the next 5-year period.

So when you see an increase in activity in deepwater exploration and production, I think it is directly attributable to the fact that policies of the U.S. Government have pushed oil exploration and production away from the shore, away from the marshes and the rivers and other things to deep water.

So I think some of the conclusions you have come to based on that chart that your graphics were flawed. So I want to make those comments. Mr. Chairman, I hope that us on the Energy and Minerals Subcommittee or this Committee will continue to look at the policies that are in place that pushed it to deep water and continue to look at nearshore, onshore, and other resources going forward.

A couple of questions for you based on your report that are on a whole different line of thinking, so bear with me. In your report, you provide a short review of the fire-fighting efforts and response

to the disaster. And I want to commend the guys that went out there on the rescue effort with our Coast Guard and others. And this line of questioning has no bearing on their efforts. But the lack of attention to this critical part of the disaster has left many of us confused.

In the report, you state that others are going to study in issue more completely. Can you tell me first—and there are going to be three questions here—can you tell me first, in your opinion, if you believe the fire-fighting efforts were properly coordinated? That is number one. The second thing many believe that fire fighting contributed to the sinking of the rig and was there a possibility of saving the rig? And would the rig not sinking have permitted the subsea blowout that we saw? Was there a possibility to let the oil continue burning and work on shutting off the flow of oil that was contributing, that was the source of fuel for the fire? Or was the structural integrity of that rig in jeopardy anyway? So if you could answer those. And either one.

Mr. GRAHAM. Well, I said that one of the lessons learned was that we were very ill-prepared to respond, particularly in the critical first hours and days of this. And I would suggest that that included our ability to restrain fire under these circumstances. If I could, I would like to go back to your first comments. I think you have to also look at the issue of depletion. We have been heavily mining for oil and gas in shallow waters since 1938 and continue to do so today.

I believe that these charts are as much a function of the reality that most of where the oil is today—the so-called elephants of offshore oil—are not at 1,000 feet. They are more likely to be at 5,000 or 10,000 feet, and that is why that is where the industry is moving. But that might be a question that your subcommittee could examine as to what are the factors that have gone into——

Mr. DUNCAN OF SOUTH CAROLINA. We will pursue that at a later time. Let's get back to the fire-fighting efforts and what may have attributed. Because there are a lot of questions in my district and around South Carolina and across the land that I have heard. Do you think the fire-fighting efforts were coordinated? Do you think that the rig could have sat there and burned until we shut off the flow of oil underwater? And the structural integrity of the rig, was it in jeopardy? Do you have any input on that?

Mr. REILLY. The only thing I would say without wanting to characterize a lot of activities that occurred in the chaos of the fire and the response is that there were moments at various times when well control could still possibly have been established, when even the gases that were rising in the drill pipe could have been diverted over the side and perhaps not come into contact with the ignition source and not caught fire, but that once the fire began, when we looked at transcripts of reports of what it was like on that rig and how it seemed like a jet airplane or a fast-moving train had just come out of the drill pipe, I am not sure that there was a great deal that could have been done that would have averted the disaster that did occur.

It does occur to us, however, that the degree to which the response to the emergency immediately was characterized by a lot of chaos of one of the rescue boats leaving a number of people still

on the rig who then jumped into the water and did, in fact, survive, people who made that choice and then discovered those who were in the evacuation boat that they couldn't get away from the rig, as it looked like it was going to topple on them. And they discovered it was because they were tethered by a rope and no one was allowed to have a knife on the rig. So they had to look for a means of severing the rope. It didn't appear to us—and I think the documentation supports this—that there had been the kind of drills, simulations, practices that would have been appropriate and I think probably will be insisted upon in the industry in the future. And that is one more change that needs to occur that we have really learned a lesson from.

Mr. DUNCAN OF SOUTH CAROLINA. Do you think the rig would have continued burning.

The CHAIRMAN. The time of the gentleman has expired. Mr. Landry of Louisiana.

Mr. LANDRY. Thank you, Mr. Chairman. Just for the record, I did raise the Commission's credentials on my campaign to get here. Maybe they weren't raising it here in June, but I sure was in Louisiana.

Considering the industry's performance record in the Gulf of Mexico, where over 42,000 wells have been drilled in addition to 2,500 deepwater wells without any significant incidents, in my opinion, reflects a successful risk management, were these safety factors—and these are yes or no questions—were these facts the success and history of all of these wells that had been drilled out in the Gulf of Mexico, were they taken into account when you did this report?

Mr. REILLY. Yes, sir.

Mr. GRAHAM. Yes.

Mr. LANDRY. OK. Was there any economical analysis done during the course of this report in terms of the impact on not only the Gulf economy, but on the national economy as well? Was that taken into account?

Mr. GRAHAM. We know that tens of billions of dollars of damage was done to the environment and the economy primarily of the Gulf as a result of this spill.

Mr. LANDRY. So you say yes?

Mr. GRAHAM. The answer is yes.

Mr. LANDRY. The President charged his Commission to determine the cause of the disaster to improve the country's ability to respond to spills and recommend reforms that make offshore energy production safer. Prior to the accident, there existed multiple layers of environmental reviews, including multiple EISs at all of the different phases that DOI uses, NEAs, environmental impact statements and environmental assessments. These included an EIS during the development of the 5-year review, and again, prior to the lease sales. Where does the Commission receive both the authority and conclusion that the need for review warrants any additional changes as I find that no conclusion that had contributed to the accident or to the impact of the cleanup?

Mr. GRAHAM. Well, I think that the increasing emphasis on NOAA, the Coast Guard, other agencies that represent the best science in government, and our proposal to use best science from

outside the government all go to our interest in enhanced safety, including understanding what are the risks at the individual sites that are being suggested and what are the potential adverse effects on the safety of those who will be operating in that area and the environmental quality of the Gulf. So the answer to your question is yes, we took those into account as part of our overall assessment. We are aware of the fact that the industry, and particularly certain companies within the industry, have had a very strong safety record.

We are not saying that everybody was the same. But we are saying that we think that the overall record in the Gulf is stunningly below what is in the standard of the world. If our aviation industry had a record by a 3-to-5-to-1 ratio, we were killing more people in airplanes than, for instance, Great Britain was, we would be pretty upset about why this was happening. That happens to be about the case in this industry between Norway and Great Britain and the U.S. We believe it is in the spirit of America to want to be the best.

Mr. LANDRY. I am glad you brought that up, Senator.

Mr. GRAHAM. And these recommendations will move us.

Mr. LANDRY. I am also confused that you would make the suggestion of underreporting incidents in the U.S. because the numbers are low. Are you aware that the industry, as a whole, regards the European standards of reporting incidents much less reliable than the U.S. standards?

Mr. GRAHAM. I am not aware of the assessment of that by the U.S. industry. I am familiar with the fact that our fatality accident ratio is significantly different than it is in the North Sea, which raises questions as to whether we are capturing all of the accidents that, in fact, are occurring. I am unaware of any evidence that would indicate that there should be such a significant differential between the fatalities and accidents in the Gulf and in the North Sea.

Mr. LANDRY. I will be supplementing some questions to you all.

Mr. REILLY. If I could just add, we are aware that there are very different ways of categorizing incidents, accidents, fatalities, days lost and so forth, total recordables in the North Sea versus the Gulf, different jurisdictions even between the U.K. and Norway.

So some of those data need to be very closely scrutinized to determine that you are dealing with oranges and oranges and not apples and oranges.

Mr. LANDRY. On both sides you would agree, though?

Mr. REILLY. Yes, I would.

Mr. LANDRY. I want to make sure that it is not just a one-way street.

Mr. REILLY. But the less disputable number is the fatality number. It is a little harder to hide the bodies. So I think we are confident that those numbers are as we found and that they are disturbing.

The CHAIRMAN. The time of the gentleman has expired. Mr. Flores from Texas.

Mr. FLORES. Mr. Chairman, thank you for holding today's hearing. And Chairman Reilly, Chairman Graham, thank you for joining us today. I know you have put in a lot of work on your report and study and we appreciate you being here today. I have an open-

ing statement that I would like to give to the Chairman for the record. I will dispense with that for now.

[The prepared statement of Mr. Flores follows:]

Statement of The Honorable Bill Flores,
a Representative in Congress from the State of Texas

Mr. Chairman, thank you for holding today's hearing, and let me also take this opportunity to thank Chairman Reilly and Chairman Graham for appearing before us today.

It has been nine months since the Macondo Well tragedy, and we all grieve for the families who lost loved ones and for the environmental and economic impacts along the Gulf coast. We can all agree that both industry and the federal government need to examine all the facts surrounding this incident and take the appropriate steps to ensure that we continue to produce American energy with safe, environmentally sound practices. Please know that I also lost a brother in an oilfield accident, so I want the oil and gas industry to operate in a safe and responsible manner. At the same time we should make sure that we facilitate a robust oil and gas industry to fuel our economy and jobs.

For the past year and a half, the top concern that I've heard from all Americans is jobs, economic growth, and balancing the federal budget. We all know that our economic health is dependent on the energy sector, especially as we see gas prices rising to more than $3.00 per gallon. That being said, I'm afraid that the Obama Administration is taking us in the wrong direction—locking away our own energy resources and making us more dependent on foreign energy from unstable parts of the world. Even our Treasury is taking a direct hit. With production in the Gulf down due to the Obama Administration's moratorium, it is costing them at least $3.7 million each day in lost revenue.

I look forward to hearing from our witnesses today and to working with my colleagues on the committee to take what we've learned from the Macondo Well incident and ensure that we have a robust domestic energy sector that contributes to our economic recovery.

Mr. FLORES. It has been 9 months since the Macondo well accident and we all grieve for the 11 families that lost loved ones and for those that were injured and for the impact on the families along the Gulf Coast. I want you to know from a personal standpoint that I lost a brother in the oil drilling business, so I have as much interest in conducting this industry as safely as possible as anybody in this room. But that said, I want to make sure that we facilitate a robust oil and gas industry because it is integral to our economic security and our military security. And as a person who is actively involved in the offshore energy business for over 30 years, I am keenly concerned about the recommendations in the Commission's report.

I think it is interesting that you use the Three Mile Island analogy because, as you pointed out, after Three Mile Island, we have not started and completed the construction of a nuclear power plant in 30 years. It appears we are headed down the same road today with offshore drilling. We have a permit moratorium, a de facto moratorium in deep water, and we have an incredible slowdown in shallow water drilling.

Mr. FLORES. And we are already seeing that show up in higher oil prices, higher gasoline prices, and reduced economic activity along the Gulf Coast.

Here is the issue. Congress has passed legislation. You want Congress to consider legislation. The Department of the Interior has issued new regulations. Lease sales have been canceled. Other areas of potential offshore activity have been put off-limits again.

And it is all based on a report that doesn't provide a full postmortem of what happened.

And here is the key phrase that is used that causes the concern. You keep referring to systemic industrywide failure. In chapter 4 of the report dated January 6th, you have following key finding: The well blew out because a number of separate risk factors, oversights, and outright mistakes combined to overwhelm the safeguards meant to prevent just such a happening.

But most of the mistakes and oversights in Macondo can be traced back to a single overarching failure: a failure of management. Better management by BP, Halliburton, and Transocean would almost have certainly prevented the blowout by improving the ability of individuals involved to identify the risk they faced and to properly evaluate, communicate, and address them.

So how can you reconcile between what has happened in the offshore energy business today to calling a systemic failure—a systemic industrywide failure to report, which really just gets down to three companies. And we put the entire Nation's economy in peril by doing this.

Let me give you an example. What if we find out after we get the blowout preventer fully evaluated, it takes a $10 bolt that could cure the problem 99.999 percent of the time, and then this accident would essentially never happen. And that is about the ratio of accidents to wells drilled that we have in deep water. So, you know, we have gone overboard.

So why did we use those words, systemic industrywide failure? Because that is what has caused the paranoia here.

Mr. REILLY. In 1963, Congressman, it was a single weld, as I understand it, that sank the Thresher submarine. And the SUBSAFE system was developed, and we have not lost a SUBSAFE submarine since. We lost one every third year, on average, in peacetime before that.

The reason that we concluded it is systemic—and I didn't come in believing it was a systemic problem. I thought it was a single company that had blundered fatally because of the very large presence of those three companies throughout the oil and gas industry in the deepwater and in the shallow water throughout the world, BP is, I think, the largest explorer of offshore oil and gas development. Transocean is the largest rig operator. And Halliburton is the largest supplier of resource help, such as cementing.

It is no longer possible for most companies to test the cement, for example, that they are provided by Halliburton. They no longer have the research capacity. Chevron does. Maybe one or two more do. But most decided in the 1980s and 1990s to contract that out. So the cement that is provided is the cement that gets used. And the cement that was provided by the test that Halliburton itself conducted and our commission had conducted was faulty.

It is simply inconceivable to us that this was a problem so exclusive, so specially circumstantial with respect to one rig, especially since we know in Australia the cementing failed in the Montara well, just a year and a half or so ago, also.

This is something that caused us to believe—and, again, most of the people on that rig were Transocean employees, the people who were responsible for responding to the emergency, as I just de-

scribed. That is the largest rig operator and owner in the world. It operates for everybody. Everybody hires Transocean. They also are implicated in this, in significantly failing to detect gas rising in the drill pipe.

We concluded from that that all companies are at risk if they are using these two contractors, or BP, itself, is probably at risk in other places.

Now, we did hear—and we asked the Norwegian regulators, are you taking any actions against BP? The answer was somewhat surprising: "No, we are not because we do not see issues in the North Sea with respect to BP operations. And, therefore, we have taken no action to discourage their continued operation."

That posed the question to us, well, what is it about the North Sea and the Gulf that has our companies operating safely and protectively in the North Sea, subject to a different set of regulators, and not in the Gulf? And that caused us to look very closely at the degree of oversight, the quality of regulation, and the capacity of the regulators, which we also fault.

The CHAIRMAN. The time of the gentleman has expired. I wanted to let that response come because that, I know, is very important to the gentleman from Texas.

Mr. Rivera from Florida.

Mr. RIVERA. Thank you, Mr. Chairman.

Thank you, gentlemen, for being here today.

Commissioner Graham, Senator Graham, as a Floridian and, I believe, as my neighbor, are you still living in the Lakes, are you still in Miami Lakes?

Mr. GRAHAM. I am, yes.

Mr. RIVERA. West of the Palmetto?

Mr. GRAHAM. Yes.

Mr. RIVERA. Well, I am right there with you, in Doral, right down the road. So, as my distinguished constituent—as my distinguished constituent and fellow Floridian, I know we share a great concern for the economy and the environment of our State of Florida.

One of the recommendations that you make in your report addresses the need for greater international scrutiny, international standards. As a representative from south Florida, I am deeply concerned about the ongoing development off the coast of Florida, ongoing oil development off the cost of Florida, off the coast of Cuba in particular.

As you know, as we speak, there are a number of companies, including Repsol, interested in drilling in the waters off of Cuba. And I wanted to ask you, do you believe that this Cuban drilling between the coast of Florida and Cuba will be done safely? And what could the U.S. do to ensure that any lax Cuban oversight doesn't threaten Florida and the Southeastern United States?

Mr. GRAHAM. I am concerned about the safety, the relative lack of experience of the Cubans, in terms of being able to oversee this activity. The record of some of the companies that are being brought in to do this work is not comforting.

I believe that something analogous to what Mr. Reilly has said, that we feed to have a Gulf of Mexico-wide set of safety standards that would apply to any country touching the Gulf, is the best as-

surance that the United States has against inappropriate, unsafe practices in our backyard.

And I believe that there is sufficient interest, at least between the United States and Mexico, to move forward in that direction. And, as Mr. Reilly has indicated, the Mexicans have suggested, at least, that they might be the interlocutory to Cuba, to get it involved.

To me, it also underscores the importance of the United States having the highest standards. If you go into a negotiation and you are urging the other parties to take their game up a notch and you have not already done that, your persuasiveness is limited. To me, for our own protection and for our ability to raise the standards in the Gulf, we need to adopt policies such as those we have suggested.

Mr. RIVERA. Well, to that end, following through on that, do you believe that responsible domestic development in the eastern Gulf of Mexico would result in additional oil spill response capabilities being staged in Florida that could be used to respond to a potential spill off of Florida from the Cuban dictatorship's oil-drilling efforts?

Mr. GRAHAM. You say in the eastern Gulf. Do you mean in the U.S. waters or the Cuban waters?

Mr. RIVERA. No, U.S. waters.

Mr. GRAHAM. I don't know what the ultimate treaty might say, but I would be surprised if it did not make it the sovereign responsibility of each of the countries to provide that kind of capability for those wells within their own area.

And I certainly don't think the United States ought to be depending upon Mexico, providing them the containment and response capability. We ought to do that. The Mexicans ought to do it. And if the Cubans proceed with their plan, they ought to do it.

So the answer would be no.

Mr. RIVERA. Thank you.

The CHAIRMAN. The time of the gentleman has expired.

Another gentleman from Florida, Mr. Southerland.

Mr. SOUTHERLAND. Thank you very much, Mr. Chairman.

And thank you for your report. Thank you for appearing before us today.

I am from Panama City, Florida. My district is the 2nd District of Florida. I took my baby steps on the beaches of Panama City. And I love our environment. And a day with my family, with my children on Shell Island is a little piece of heaven for me.

I will tell you, my community, dear friends of mine, were deeply affected by this disaster. I just wanted to ask some brief questions.

Number one, how much responsibility, in light of this disaster, how much responsibility do you believe that the government bears after having cited 790 violations? How much responsibility do they bear?

Also, by refusing to waive the Jones Act and bringing in oil ships that had the ability to clean up that oil, OK, by oil leaders around the world that had produced those ships, how much responsibility should be beared by this government?

Mr. REILLY. We did inquire into the application of the Jones Act and the allegations that have been made, particularly by the Europeans and a couple of commissioners of the European Union, that

we were keeping out Belgian and Dutch response capability. And the response we received from the Coast Guard is that their offers of help were looked at, largely not taken into account, I guess mostly not taken into account, because they were not considered necessary at the time or useful for the particular task.

But I know that, in Mississippi, there were from France a series of skimmers, six or eight skimmers or something, that were brought in and were used. So it was possible, in other words, to get out help from other countries.

My sense, frankly is that the Coast Guard was sufficiently preoccupied with its own response, that vetting applications from other companies and countries and other technologies was probably something that in realtime they didn't have an awful lot of time to give.

Mr. GRAHAM. If I can just say, I think this goes back to a theme of today, and that is, you don't do basic research while fire is out of control. If you haven't done it before the fire, it is not likely to be very effective. So I think that things like the——

Mr. SOUTHERLAND. I understand, Senator. But when you have a neighbor that is willing to bring a boatload of hoses, you accept those hoses, and you say, you know what? My first priority is to put out the fire. OK?

And I have to tell you, I get angered when I think of the pain that we have experienced along that Gulf Coast, and I think of my dear friends who are no longer in business. It angers me. And yet today we want to talk about the responsibility of BP and how they should self-regulate their industry. When 790 violations were noted, that is incompetent. And yet, you know, we have the idea that we are going to have CEOs stand up and sign a letter of certification certifying liability. I want Secretary of the Interior and regulatory department heads to sign those same documents. OK?

The American people are tired of sending their money to Washington, D.C., and Washington be the problem. I am angered by the response of this government in light of this disaster. I am angered by the same government that failed in its response to Katrina.

And until we start looking inward and take personal responsibility for the lives we are destroying instead of assessing blame, it has to be somebody else's fault. The responsibility is here. The buck stops here.

And I am bothered that this commission—Qdecisions, there should be 10 down here. In the bottom, I wrote, "government's decision to aid and abet." Was there a less likely alternative available? Yes. Less time than alternative? Yes, they save time—decision-makers—the Federal Government—onshore.

And I am bothered, OK, that we are just going to add to the bureaucracy when the bureaucracy was the problem, in many ways.

Mr. REILLY. May I answer that question, Mr. Chairman?

The CHAIRMAN. You sure can.

Mr. REILLY. You raise an important question that we address with respect to safety and personal safety, occupational safety and health on the rigs themselves. Presently, when a rig is under sail or in motion, it is the responsibility of the Coast Guard to ensure safety.

We recommend that BOEMRE has the full responsibility on the rig for safety personnel and that it understand and have the capability to enforce that, so that there is not a division of responsibility or a confusion about whether this is a delegated responsibility from OSHA to the Coast Guard and the role of MMS in all of this, that it be amalgamated in one agency.

On the Jones Act, the key issue, in my view, is to have procedures in place ahead of time so that the extensive permitting reviews and approvals by the State Department are not necessary once the catastrophe may have occurred.

Mr. GRAHAM. And that was what I was going to say, is that you need to anticipate. And I would suggest that this Committee could make a significant contribution in doing some serious thinking about what are the questions, what are the resources, what are the potential impediments when we have the next disaster. It won't be exactly like this one, but we will have more disasters. And how can we, by anticipating, take actions that will avoid the hoses not being delivered.

Mr. SOUTHERLAND. Yeah.

The CHAIRMAN. The time of the gentleman has expired.

The gentleman from Pennsylvania, Mr. Thompson.

Mr. THOMPSON. Thank you, Mr. Chairman.

Gentlemen, thank you for your testimony.

Someone had offered an airline analogy earlier. And as I have looked at and read through and tried to synthesize this commission's recommendations, if I applied the Commission's recommendations to the airline industry, essentially, with one airplane crash, we would shut down all airplanes and, frankly, all airports.

I apologize for being late. I was in a workforce hearing, and I had an opportunity to question Governor McDonnell from Virginia. And, specifically, my questions were about the impact of the Administration's response and shutting down offshore as a result of this.

Here are some of the statistics. And I will be quick with this, and then I have my questions. He indicated that, you know, this industry would create more than 1,900 new jobs just in Virginia, increase the State's gross domestic product by $365 million annually, and generate approximately $19.48 billion in Federal, State, and local revenues.

Senator Graham, Secretary Reilly, page 2 of your testimony states, quote, "But most of the mistakes and oversights of Macondo can be traced back to a single overarching failure—a failure of management by BP, Halliburton, and Transocean," end quote.

And under the key facts, you also stated that the investigation team identified several human errors, engineering mistakes, and management failures.

You know, based on those statements, a logical person would conclude that it wasn't the lack of adequate science and engineering but the proper application of science and engineering by those on the rig that resulted in the *Deepwater Horizon* Macondo tragedy.

Basically yes or no, do you agree with that conclusion?

Mr. GRAHAM. Well, I think part of the responsibility of effective management is to understand the risk and take steps to mitigate the risk. The fact is that there was no effective plan in place or capability to implement a plan before this accident occurred.

Mr. THOMPSON. So it sounds that you agree, it was management.

Mr. GRAHAM. I think that is a failure of management to do effective risk analysis and take steps to mitigate the risk.

Mr. THOMPSON. Great. Thank you.

Secretary, any thoughts?

Mr. REILLY. I would support that. Yes, sir.

Mr. THOMPSON. OK. Thank you.

On page 7 of your testimony, you state, under the headline of "Reforming Industry Safety Practices," quote, "Government oversight must be accompanied by the oil and gas industry's internal reinvention, sweeping reforms that accomplish no less than a fundamental transformation of its safety culture," end quote.

Internal reinventions, sweeping reforms, and fundamental transformation, you know, frankly, of an entire industry is what the implications are of the result of these recommendations, frankly are words of alarm and cast a very wide net. I assume they are based on a thorough review of the hundreds of companies involved in U.S. energy production and not just three companies, despite how large they are, that were mentioned in the report.

Did the Commission conduct such a review?

Mr. REILLY. We conducted a review of the incident itself, of accident data——

Mr. THOMPSON. So your review——

Mr. REILLY.—through the industry.

Mr. THOMPSON. I think if you answer my question, your review was of three companies out of perhaps thousands.

Mr. REILLY. Well, it is of 79 losses of well control in the last, whatever, 20 years or so, affecting a very large number of companies operating in the Gulf.

Mr. THOMPSON. No, I understand. So the review—frankly, there are 3,500—the number I looked at—3,500 rigs in offshore production and thousands of companies engaged in production, but the conclusion was really based on looking at three companies?

Mr. REILLY. Well, the inferences drawn for the likelihood of entailed risk with those three companies largely rest upon what we learned from the experience of those three companies. But we had significant data about many other companies and their experiences that caused us to use the term "systemic."

Mr. THOMPSON. And I appreciate, you know, that you are taking that inference from there, but, essentially, the inference is drawn from three companies but, frankly, casting a pretty wide net with your recommendations, impacting thousands of companies.

Mr. GRAHAM. But if I could add to that, you made the allusion to, and I had suggested, if the United States had a four-fatalities-to-one ratio in airline accidents versus, let's say, Norway or the United Kingdom, I believe the American public would be outraged. That is the situation between the North Sea and the Gulf of Mexico. And I don't think that one company——

Mr. THOMPSON. If I can reclaim my time, because I know I am going to get gaveled out here—I am new on the Committee.

I think the American people would also be pretty irate—they would be saddened with the loss of one life in an airplane accident, no doubt about it, and they would be concerned with that airplane crash. But they would also be irate if the Federal Government essentially shut down the entire airplane industry, as opposed to really focusing on drilling down, no pun intended, and systematically determining the root cause of that airplane crash.

And I, obviously, am out of time.

Mr. REILLY. Congressman, neither Senator Graham nor I nor our commission are here to defend the moratorium, not for a minute.

Mr. THOMPSON. Very good.

The CHAIRMAN. The time of the gentleman has expired.

That completes the first round, but several Members have expressed an interest to follow up on their first questions.

And, Senator Graham, while I didn't ask you, I asked Mr. Reilly, and he says, "I have all the time in the world." So he is going to have to answer to you if that is—you know, however you want to work that.

Let me start—Mr. Grijalva had a follow-up, so let me recognize Mr. Grijalva for 5 minutes.

Mr. GRIJALVA. Thank you very much.

And let me, at the outset, thank the gentlemen for your presence here and for a compelling report.

The only question, I think—page 142 to 143 in your report, you deal with the issue of the Jones Act that came up, that it was not, indeed, an impediment to getting foreign assistance or outside assistance to come to the aid of that spill. Also, there are comments there, after the Governor insisted on those berms, that they probably created more problems than they solved.

But the question, I think, has to deal with the word that some of my good friends found offensive, and that is the issue of "systemic." We have here—and I think your report is compelling because it deals with the role of government and the lack of oversight on the part of the Federal Government as a contributing factor to the laxness that we found. And it deals very directly with systemic issues that occur within the management and the operation of the industry.

I think the report is compelling insofar as something needs to be done. And if we want to raise the standard of oil production offshore, where it is safe, both for life and for the environment, then this report needs to be responded to.

The recommendations that you made for legislative action are sound. I don't agree with all of your recommendations, nor do I assume every Member agrees with everything in there. It is a sound framework. There are principles in there that we must deal with. I want to thank you for that, for the time that you took and for, I would assume, the seriousness in which we are going to take this report.

So thank you for your time, and thank you for the report. As I said, compelling, necessary, and timely.

Thank you.

Mr. REILLY. Thank you, sir.

Mr. GRAHAM. Thank you.

The CHAIRMAN. OK. I thank the gentleman.

Let me go to Mr. Landry of Louisiana.

Mr. Landry?

Mr. LANDRY. Thank you, Mr. Chairman.

I am having trouble understanding how you all can come to the conclusion that there are these systemic failures by using those three companies and claiming that because those three companies do such a large percentage of the work in the Gulf of Mexico, that every time they go on a job they are using the same protocols in engineering for the different customers that they are doing business with.

That simply is not true. There are different well designs that are in place by different oil and gas companies. Some of those well designs, I might add, have been around since the inception of deepwater drilling.

And so I don't understand how you came to this decision of a systemic failure. Why not look at those oil and gas companies who have drilled successfully, without incident, looking at the well design and saying, this type of well design seems to be the safest? In my opinion, it certainly would save the taxpayers a lot of bureaucracy if you all took a look at those different designs.

Did you all take a look at the different well designs? And did you take in mind that they did not—that when those contractors work for different oil and gas companies, they don't follow the same protocols and engineering specs?

Mr. REILLY. We did look at the design of this particular well, and at least two companies made clear to us that they would not have chosen the design that BP did for that formation in that place.

Mr. LANDRY. But, Mr. Reilly—and I apologize for cutting you off, but you told me earlier that you all took into account the 2,500 wells that were drilled in deep water. You told me you took into account their history and their success. But yet, now you are telling me you only took into account the well design on BP, on BP's Macondo well.

Mr. REILLY. Well, the conclusion that the well design that was used by BP at Macondo was not an appropriate one or is one that created more risks than were necessary in the eyes of at least two companies is based upon a judgment about alternative well designs of the sort that you suggest.

Mr. LANDRY. Well, I am trying to clarify your answer. I mean, did you look at the other well designs and take into account that, when you issued your report telling us that there is a systemic failure in the industry and that we have to create these additional levels of bureaucracy, costing the taxpayers hundreds of millions of dollars, when you made that recommendation, did you or did you not look at the history of the other deepwater wells, the 2,500 or so, that have been drilled in the Gulf of Mexico when you took into account issuing this report?

Mr. REILLY. Yes. Yes, sir, we did.

And let me say, from the point of view of someone who considers 1 in 2,500 not so impressive, frankly, if it is going to cost $40 billion or $50 billion to the economy of the area and to the company involved, I think we are drawing a different conclusion from the success rate.

I regulated at the Environmental Protection Agency, with respect to a number of issues, one in a million, which was the maximum acceptable impact or fatality, mortality, premature death associated with a certain kind of decision, a pesticide decision, for example. So 1 in 2,500 doesn't impress me as a very positive record, frankly.

Mr. LANDRY. Well, I certainly would like you to look in the eyes of the people who are losing their jobs down in Louisiana, who have built this industry, who have basically been drilling since 1947 off of that coast, and tell them that. I can tell you, from living down there, that safety is number one. It has been for a very, very long time.

Mr. REILLY. Congressman, the decision to deny them their jobs and to shut down every rig in the deepwater area, every exploration rig, is one that I think is highly contentious, excessive, and hard to justify. And I have made that clear, as has Senator Graham, from the outset.

We would have approached this in a more selective fashion so as not to penalize those companies that had not been specifically implicated in the disaster after some short period of review and inspection which did, in fact, take place, and they were cleared.

So we are not here to defend the denial of jobs or against the resumption of activity in the Gulf. Very much we want to see it resume, but we want to see it resume safely and effectively.

Mr. LANDRY. And may I put your name in as a recommendation to take Ms. Browner's place then?

Mr. GRAHAM. Congressman, I have to take some exception to the statement that you made about that we are recommending hundreds of millions of dollars of additional regulation. Yes, we are recommending that there be an adequate, competent, politically insulated safety function within the U.S. Department of the Interior. I don't think those are radical suggestions.

Number two, we are recommending that the industry, as other high-risk industries have done, assume more responsibility for their own evaluation of safety. That is no cost to the U.S. Government and, I think, is a very prudent suggestion to the industry and one which will contribute to the industry's long-term viability.

So I would just—if you see something in our report that you think is hundreds of billions of dollars, or millions of dollars, of additional expense and an excessive addition to bureaucracy, I would like to be directed toward that, because that was not our intention.

The CHAIRMAN. The time of the gentleman has expired.

Mr. Flores?

Mr. FLORES. Thank you, Mr. Chairman.

With the backdrop that I introduced earlier today, and that is that we have lease sales that have been canceled, offshore areas that have been taken off the availability list to be drilled on in the future, higher gas prices, lower domestic oil production, lost jobs, a hurt economy, with that—and a lot of that is because this report is being relied upon to continue moratoria, either de facto or regulatory or however they want to be described. And it goes back to this "systemic, industrywide failures" comment.

Co-Chairman William Reilly stated, in your January 6th release, on chapter 4's release, "My observation of the oil industry indicates

that there are several companies with exemplary safety and environmental records. So a key question posed from the outset of this tragedy is, do we have a single company"—that being BP—"that blundered with fatal consequences, or a more pervasive problem of a complacent industry? Given the documented failings of both Transocean and Halliburton, both of which served the offshore industry in virtually every ocean, I reluctantly conclude that we have a systemwide problem." That is your quote.

Now, Mr. Reilly, based on what I see of the internal inconsistency and the weight which this report is being given and the energy future of this country, I would respectfully ask the Commission if they will amend the report to remove the words "systemwide industry failure." Will you do that?

Mr. GRAHAM. Congressman, how would you defend the presence of walrus protection and polar bears in a response plan? Or how would you defend Mr. Hayward's telling me there is no subsea containment capability? Or the inadequacy of the response technology and the failure to invest in it over the last 20 years after we experienced the disaster in Prince William Sound? I think these speak for themselves.

And the response plans were not confined to the three companies. All the majors that we looked at had literally the same response plans and the same concern for walruses and the dead expert and all the other things we know. And several CEOs have said they found it embarrassing and were humiliated by it. And that had a lot to do with their decision to create the Marine Well Containment Corporation, which is a very significant and positive step on the part of the industry.

So I don't think that you can infer anything other than, "Well, it sure looked like complacency." And when people say, "We never thought it could happen"—and I include myself in that—we were complacent. I think the government was, the industry was, I was.

Mr. FLORES. Well, again, the application for permits that are filed are based on pretty much cookie-cutter requirements that the MMS—or what was formally called MMS used to issue.

Mr. REILLY. And I don't exempt them from the criticism.

Mr. FLORES. OK. And so, maybe there was a regulatory failure——

Mr. REILLY. Uh-huh.

Mr. FLORES.—as part of it. I think we all agree that there was. And we all agree that BP had an integral part to play in this failure.

But, unfortunately, what has been condemned here is the entire industry, as well as the energy security of this country, going forward. And I think it goes back to those words, "industrywide, systemic failure."

And I just—I would respectfully disagree with you. I don't think that we have that type of a failure. And I would like to state for the record, I think those words ought to be struck from the report.

Mr. REILLY. Well, let me just say that our report is 11 days old, and the degree to which there has been a delay in issuing permits or a de facto moratorium that has been referred to, I don't think has anything to do with this report. And we certainly don't expect or didn't intend that we would contribute to that.

We, in fact, were assuming that a number of these recommendations could be implemented coterminously with the resumption of activity on the part of the companies that weren't in any way involved in the Macondo disaster.

Mr. FLORES. Thank you.

I yield back.

Mr. MCCLINTOCK. [presiding.] The gentleman yields back.

Congressman Thompson?

Mr. THOMPSON. Thank you, Chairman.

Just one additional question. On page 6 of your testimony, under the heading "Environmental Review," you state that the Commission recommends, quote, "a more robust and more formal interagency consultation process in which NOAA, in particular, is provided a heightened role, but ultimate decision-making authority is retained by the Department of the Interior," end quote.

And my question—and I wanted to get your rationale behind it. Obviously, you know, the role of NOAA was of great concern to the Commission. My question actually is, shouldn't the Departments of Energy and Commerce have an equal, if not greater, voice in NOAA in the formulation of rules and regulations that certainly have a great influence on our domestic energy production?

Mr. GRAHAM. Well, just let me clarify. NOAA is part of the Department of Commerce. So, I assume, through NOAA——

Mr. THOMPSON. Commerce was involved. How about Energy?

Mr. GRAHAM. Yeah, Department of Commerce would be involved.

What we were focusing on there, I mentioned it in my opening statement. A key fact to understand is that the relationship of the U.S. Government to the offshore oil industry is not just as a regulator. It is not like the relationship of the Department of Transportation to the bus industry of America. It is also the relationship of the owner of the property. All of that property out there in the Gulf of Mexico, beyond the State limits, belongs to the people of the United States of America.

We have made a decision that we will lease portions of that to oil companies under certain conditions to evaluate and, if found, extract oil and gas. We have the same interests that, if you owned a small shopping center, you don't want to have a tenant in your center who is trashing it and is going to make it impossible for other tenants to have a profitable enterprise.

So I think we need to put ourselves in the position of, what should we be doing to assure that our children and grandchildren will have a Gulf of Mexico that is of a quality that we would be proud to hand over to them as our inheritance.

I think these recommendations, and particularly the recommendations of bringing the best science—and we think the Department of Commerce and NOAA represents the best science in this area—to bear, in terms of what should be the conditions of our proposed tenant to lease our property, is not an imprudent thing to do.

Mr. THOMPSON. OK.

Well, one of the—as I came to Congress 2 years ago, one of the things that just appalled me—and, you know, this is over different administrations, different parties—is the absolute lack of a national energy plan in this country. And when we are talking about

the Outer Continental Shelf and offshore resources or onshore resources, you know, frankly, the Energy Department was formed for that very purpose, to achieve energy independence, I guess, in the 1980s when it happened. It has failed miserably. But I think one of the proper steps, obviously, would be involved in this type of a process.

Mr. GRAHAM. I am completely in agreement with that. In fact, it was my position, and I think this is reflected in the report, that you can't answer the question, "What is the future of the offshore industry?" without answering the larger question, "What is our energy policy in the United States?"

I was telling Bill, and he had already seen it, that in yesterday's newspapers there were some articles about the fact that the RAND Corporation had raised questions about whether the U.S. military could convert to a less fossil-dependent Navy, Air Force, Army. And they raised serious doubts about whether that could be done, which, to me, just underscores the importance of this industry for our fundamental national security.

Mr. THOMPSON. Great. Well, thank you.

Thank you, gentlemen, for your testimony. I have additional questions, but we will forward those along. Thanks.

Mr. MCCLINTOCK. Thank you.

Mr. Grijalva?

Mr. GRIJALVA. Thank you.

And this, gentlemen, I swear, are the last questions. We all need to be outside, enjoying the blizzard that is happening.

Mr. MCCLINTOCK. Why not stay here? There is no place else to go.

Mr. GRIJALVA. Gentlemen, both of you have said that the resumption and full production of offshore drilling, in terms of energy production, is something that you want to see and that could be occurring as we make the other kinds of adjustments that we have to make to make this industry safer and our role as a government stronger.

And one of the key recommendations that the Commission made is that the Federal oil and gas regulators that have been underfunded—I think they are getting less now than they did 20 years ago—that we create a dedicated funding stream for oil and gas fees to fund this, so it is well-trained, professional, a level of—an insulation of independence.

And yet, as we are talking about this and the critical need to deal with the production issue that has come up consistently here by my colleagues, we are also talking about reductions to 2006 levels, to 2008 levels, based on the resolutions that we are dealing with on the Floor.

So, at some point, this full production restoration idea and concept that you support as commissioners, with the backdrop of not ever meeting the Commission report in terms of providing a robust oversight regulatory function for government that is independent, how do you reconcile that one opinion with the lack of resources on the other end?

Any comment would be fine.

Mr. GRAHAM. Well, it is our recommendation that, like is the case with most other industries, industries who don't have this ad-

ditional characteristic of being our tenants, we expect the airline industry, the telecommunications industry, across the board virtually, to pay for their own regulation. They are self-funded regulation. We did not see any compelling reason why that should not be true of this industry. So that would be our basic recommendation.

That would take action by the Congress if, for instance, there were—as there is now for the oil liability fund—a fee attached to each barrel of oil. I believe that is for both imported as well as domestically produced, which goes into that fund. Maybe we need to have a supplemental stream to go into a fund for the regulation of the industry so that we can assure to the industry that we will have a competent, sustained ability to assure safety and——

Mr. GRIJALVA. Well, Senator, on my question, if I may, you see a linkage and not an either/or proposition?

I21Mr. GRAHAM. I mean, either/or——

Mr. GRIJALVA. Either you have the regulatory capacity and the resources to deal with the demand for full production, and if that linkage doesn't occur, is it an either/or proposition?

Mr. GRAHAM. No, my——

Mr. GRIJALVA. Can you have one without the other?

Mr. GRAHAM. Well, the answer is, I don't think it is in the interest of the American people not to have adequate standards, again, in part, because we have just seen what the consequences are to a lot of very innocent people, and we have seen what the consequences are to an important piece of real estate that belongs to all of the people of America.

Mr. GRIJALVA. Yeah, I think the question is, reducing Interior's levels to 2006-2008 that directly impact your recommendation, in terms of building up the resource capacity and the overall capacity of regulators and oversight, that, I think, does not help the safety demands for offshore drilling that is also a part of the recommendations.

Mr. REILLY. We are quite clear that the quality of regulation has been insufficient; that an industry which did not used to be a high-risk industry, as it has proceeded so heavily into deep water, has become that. The industry, itself, needs to take the steps that are suggested by this catastrophe, but so does government.

Other governments have done so after their own catastrophes. We have mentioned the United Kingdom and Norway, which responded to very severe accidents that they had by separating the revenue-generating function from the regulatory function and significantly improving the quality of their regulator.

Senator Graham mentioned that, in the United Kingdom, the oil and gas industry lobbies for more appropriations for the regulator, because they recognize that quality in the regulator—as did Mr. Tillerson, the Chairman of ExxonMobil, in his testimony before us, and Mr. Odum, the President of Shell USA. Both of them mentioned the quality of regulation as essential to the quality of industrial activity.

That is all we are really suggesting. So, to try to save money at BOEMRE, at this point, having seen that budget go down 20 percent over the last 20 years as the oil and gas production in the Gulf went up 300 percent, is really penny-wise and pound-foolish.

Mr. GRIJALVA. Thank you, sir.

The CHAIRMAN. [Presiding.] The time of the gentleman has expired.

Mr. McClintock of California?

Mr. MCCLINTOCK. Thank you, Mr. Chairman.

First, I would like to ask unanimous consent to insert into the record the Wood-MacKenzie report commissioned by the American Petroleum Institute, entitled, "The Impact of Gulf of Mexico-Deepwater Permit Delays on U.S. Oil and Natural Gas Production, Investment, and Government Revenue," dated December 2010, which I cited earlier. And I have souvenir copies for our lucky panelists.

The CHAIRMAN. Without objection, so ordered.

Mr. MCCLINTOCK. Thank you.

[NOTE: The report entitled, "The Impact of Gulf of Mexico-Deepwater Permit Delays on U.S. Oil and Natural Gas Production, Investment, and Government Revenue" has been retained in the Committee's official files.]

Mr. MCCLINTOCK. I would also like to ask unanimous consent to include the Wall Street Journal editorial which I referenced.

The CHAIRMAN. Without objection, so ordered.

[The Wall Street Journal editorial follows:]

Gulf Political Spill

Wall Street Journal

Editorial dated January 13, 2011

President Obama's drilling commission released its 398-page report on the causes of the Gulf oil spill this week, and talk about a lost opportunity. After six months of hearings and interviews, the commission still doesn't know what caused the accident but does think it knows enough to condemn all and sundry.

The disaster, we are told, was primarily the result of "overarching failure of management"[1] by BP, Transocean and Halliburton—which is hardly news to anyone who's been paying attention. Yet the commission didn't stop with the companies that managed the Macondo well, going on to blame the highly unusual blowout on a "system-wide problem" of failed regulation and a complacent industry that requires "significant reform."

These sweeping conclusions are remarkable from a commission that admits to knowing so little. The report cites several questionable decisions made by Macondo drillers as the "immediate causes" of the blowout, only to acknowledge it can't say which, if any, were the cause:

- "It is not clear whether the decision to use a long string well design contributed directly to the blowout."[2]
- "The evidence to date does not unequivocally establish whether the failure to use 15 additional centralizers was a direct cause of the blowout."[3]
- "Whether ... 'unconverted' float valves contributed to the eventual blowout, has not yet been, and may never be, established with certainty."[4]

Unable to name what definitely caused the well failure, the commission resorts to a hodgepodge of speculations. Adding to the confusion, it acknowledges it could find no evidence that BP or its contractors "consciously chose a riskier alternative because it would cost the company less money." The commission didn't even wait to get an autopsy of the failed blowout preventer, which is rusting on a Louisiana dock.

The report's one firm conclusion boils down to this: In the hours preceding the explosion, crew members missed "critical signs" that something was wrong. "The crew could have prevented the blowout—or at least significantly reduced its impact—if they had reacted in a timely and appropriate manner."[5] This is called human error, in this case with tragic consequences to those who erred.

---

[1] Page 90 of the full Obama Spill Commission Report
[2] Page 115
[3] Page 115
[4] Page 116
[5] Page 120

Yet it's hardly evidence that the entire drilling industry is an accident waiting to happen, as the commission insists. Its section "The Root Causes: Failures in Industry and Government"[6] uses questionable decisions made by the Macondo players to suggest, with no evidence, that such behavior is the industry norm.

The report fails to reconcile this indictment with the industry's prior safety record, or with the fact that many countries have modeled their drilling technology and practices on those of the Gulf. For a better account of how unusual the Macondo practices were, we recommend the June 11, 2010 letter to the editor in this newspaper from Terry Barr, the president of Samson Oil and Gas.

The commission nonetheless offers an array of recommendations, most of which would severely restrict oil and gas drilling. Despite President Obama's promises that the new Bureau of Ocean Management (formerly the Minerals and Management Service) is now a shipshape regulator, the commission recommends that Congress create another agency to supervise drilling. Now, there's a new idea—another layer of bureaucracy to supervise the bureaucracy that failed.

The report also advocates toughening the National Environmental Policy Act to make it harder for companies to obtain drilling leases. Another section doubts it is possible ever to drill safely in Alaska or the Arctic—a hardy perennial of the anti-oil lobby.

This was all too predictable given the political history of commission members. Former Democratic Senator Bob Graham fought drilling off Florida, William Reilly is the former head of the antidrilling World Wildlife Fund, and Frances Beinecke ran the Natural Resources Defense Council, which is opposed to carbon fuels. Not a single member was a drilling engineer or expert in oil exploration technology or practices.

Compare this to the Rogers Commission, which investigated the Challenger space shuttle disaster of 1986. Led by former Secretary of State William P. Rogers, that group included theoretical and solar physicists, engineers and aeronautics specialists. The commission located the exact cause of the disaster (failed O-rings) and prescribed precise safety changes. The preface of the Rogers report states that the only way to deal with such a failure is to investigate, correct and "continue the program with renewed confidence and determination."

The unbalanced, tendentious nature of the commission report vindicates those who suspected from the start that this was all a political exercise. The White House has been pounded on the left for agreeing to ease drilling restrictions before the spill, and now it is looking for support to walk that back. Though the Administration officially lifted its Gulf drilling moratorium and issued new safety rules two months ago, it has refused to permit a single new well.

U.S. gasoline prices are now above $3 a gallon, and the decline in Gulf drilling will not help supply. Forecasters predict domestic production will fall at least 13% this year due in part to the Gulf lockdown. Meanwhile, last week the British Parliament rejected a drilling moratorium in U.K. waters on grounds it would cause "expertise to migrate," decrease "security of supply" and harm the British economy.

The BP spill was a tragedy that should be diagnosed with a goal of preventing a repeat, not in order to all but shut down an industry that is vital to U.S. energy supplies and the livelihood of millions on the Gulf Coast.

Mr. MCCLINTOCK. Mr. Chairman, if I were to summarize what we have learned today, it is this: We faced an engineering issue. A blowout preventer failed, and it failed catastrophically. It caused enormous environmental and economic devastation.

Before this commission was empaneled, we did not know why that blowout preventer failed. After the Commission concluded its work and issued this report, we still don't know why that blowout preventer failed. We don't know why it failed because the Commission never even bothered to look at the blowout preventer, which, according to the Wall Street Journal, is rusting on a dock in Louisiana.

We have never had a blowout failure like this one. Until we find out why it failed, it could happen again. It could happen at any

[6] Page 122

time. And the Commission has not advanced our understanding of how to prevent it one bit.

The contrast between this commission's work and the Rogers Commission after the Challenger disaster is staggering. If the Rogers Commission had operated in the same manner, we would still have no idea what caused the Challenger to explode or how to prevent it in the future.

We have before us a report offering bureaucratic prescriptions to an engineering problem, authored by bureaucrats, rather than an engineering prescription authored by engineers.

I don't know exactly how the Committee would advance the issue from here. I certainly seek the Chairman's guidance. But I would recommend that we take whatever action is necessary to empanel a panel of engineering experts to go down to that dock in Louisiana, retrieve that blowout preventer, tear it apart piece by piece, find out what caused it to fail, and do so before it happens again.

Mr. REILLY. Would the gentleman yield? I would just respond to that, if I might.

Sir, I think that you can draw an analogy between the blowout preventer and a seatbelt in an automobile accident. It is obviously important to the survival of someone that the seatbelt wasn't fastened, but it doesn't really explain why the accident occurred.

We explained why the accident occurred. We fingered and identified, I think, all of the major contributors, the decisions, and their technological consequences, their engineering consequences that led to the disaster.

Examining the blowout preventer is not going to cause those other facts that we uncovered to go away. They are there. They are distressing. They do have implications for policy, and we tried to draw them.

The CHAIRMAN. Well, I want to thank both of your witnesses for being here today. I know you had a long day. You started at 10 o'clock in the Senate. And I very, very much appreciate your willingness to stay here so some of our Members could have another explanation or a clarification of what is going on.

I know that there will be some other questions that Members, probably on both sides, would like to ask you. And if you would agree to respond in writing to those questions, we would very much appreciate that.

Mr. REILLY. We will do that, Mr. Chairman. We have a staff I think for another 5 weeks, 4 weeks.

The CHAIRMAN. OK, great.

Mr. REILLY. And we will use them to the very end, to the extent they allow that.

I would just like to say, we very much appreciate the attentiveness, the interest of this Committee, the thoroughness of the kinds of questions that we received, and understand the seriousness of different kinds of concerns about our report and about the conclusions that we drew.

We hope it is helpful to the deliberations of the Committee and that the relatively modest proposals we have made are looked at seriously and perhaps implemented. As I mentioned, I think they are modest in terms of cost and bureaucracy disruption.

The CHAIRMAN. Well, I thank you for that.

And let me just mention and, again, reiterate what I said at the start of this, at the start of when the BP well broke, that we had to find out what went wrong. We will continue to do that. And, as I mentioned in my opening statement, there are two more reports out. We will look at what they have to say and draw, hopefully, some conclusions from that.

But I also will reiterate what I also said in my opening response. What we do here will send a very, very strong signal into what I think is very, very critical long term. And long term is the energy security of our country. You alluded to that. So the balance we have to make is make sure that we continue to have a robust industry, especially in a down economy.

So, with that, I want to thank all of the Members again for being here, and especially for the two of you to stay for this long time.

And, with that, if there is no further business, the hearing stands adjourned.

[Whereupon, at 5:16 p.m., the Committee was adjourned.]

[Additional material submitted for the record follows:]

[The prepared statement of Mr. Holt follows:]

Statement of The Honorable Rush D. Holt,
a Representative in Congress from the State of New Jersey

Thank you Chairman Hastings and Ranking Member Markey for holding this hearing today on the final report of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. I look forward to hearing from the distinguished co-chairs of the Commission; Senator Graham and Mr. Reilly on the findings of the Report.

Although the oil has stopped gushing into the Gulf, the crisis is far from over. The Report to the President from the Commission made one point all too clear. The BP Deepwater Horizon Spill is not an isolated incident. As long as we continue to drill for gas and oil off our shores it is not a question of if, but when the next oil spill is going to happen.

Our existing regulatory system is inefficient, plagued with loop-holes for big oil companies, and all too often lets polluters off the hook while exposing taxpayers to economic harm.

One of the issues that I am pleased that the Commission addressed in the Report is that of liability limits for oil and gas companies as the result of an oil spill. Since the spill began I have been concerned about the fisherman, the hotel owner, the tourism operator and those whose livelihoods depend on the Gulf. Under the Oil Pollution Act (OPA) of 1990, oil companies are required to cover the full costs of "removal." However the law set a $75 million cap for economic and natural resources damages.

Many of us breathed a sigh of relief when BP established a $20 billion escrow account to compensate individuals and businesses for the damages inflicted by the spill. So far they have paid over $2.5 billion in economic damages from the spill, demonstrating that the current $75 million liability cap remains a laughable amount.

When the next spill occurs—and it's a matter of when, not if—there is no guarantee that the next oil company can or will cover all damages. We shouldn't wait for that spill to occur to make the necessary legal changes to ensure that companies like BP pay for every last cent of the mess they made.

This is why today I, along with 17 of our colleagues, introduced the Big Oil Bailout Prevention Act which would eliminate the liability cap for economic and natural resources damages.

The report reinforces the need for this legislation, finding that the current liability cap "limits liability well below levels that might actually be incurred" and that the "cap distorts the incentives of industry participants to adopt cost-effective safety precautions."

The liability cap is just one of the issues that need to be addressed by Congress in the wake of this report. The Commission's Report states that without Congressional action, we cannot ensure that the Department of Interior will have the tools

necessary to protect America's coastal communities economic and environmental interests, or guarantee the safety of our nation's oil and gas rigs for workers. I am proud to be a cosponsor of legislation introduced by Ranking Member Markey today that would implement all of the much needed reforms cited in the Report. I look forward to hearing from our distinguished speakers today and to work with my colleagues to implement these much needed reforms.

[The prepared statement of Mr. Landry follows:]

Statement of The Honorable Jeffrey M. Landry,
a Representative in Congress from the State of Louisiana

Thank you, Chairman Hastings, for calling this hearing and for starting this Congress off on the right foot with responsible and meaningful oversight. I can think of no better way to start a new tradition of oversight than reviewing the BP Deepwater Horizon Oil Spill Commission Report.

Many thanks to the Chairman for also giving me time to express the views of many of my constituents who have not had an opportunity to make known their grievances with the recommendations of the Commission.

I would also like to thank Senator Bob Graham and the Honorable William Reilly for coming before this committee to answer, what I believe will be tough but fair and very important questions.

Let me state that the tragic accident of April 20, 2010 cannot be ignored nor minimized. This disaster killed eleven workers and generated one of the largest oil spills in United States history. Many Louisianans were affected by the explosion on the Gulf and the subsequent waves of oil that blanketed our coastline.

While this accident cannot be ignored, it can also not be employed as justification for debasing the entire offshore drilling industry.

My first priority is always the safety and economic well-being of my constituents in Coastal Louisiana. After analyzing and evaluating the Commission's broad range of recommendations, I have some concerns that I would like for our witnesses to address today.

First, I would like to express my concerns with the Commission's recommendation of continued overlapping of new and existing regulatory agencies within the Department of Interior. I believe that more agencies at the Department of Interior and at the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) will ultimately create more red tape without improving human or environmental safety.

Moreover, the proposed regulations will delay offshore oil production and will prolong Louisiana's high unemployment rate. Thus, the Commission's recommendations are diametrically opposed to the Administration's own stated goals of reducing unemployment and lessening our dependence on foreign oil.

Furthermore, I am disappointed that the Commission does not address the economic and labor impacts of actually implementing all the Commission's recommendations.

A scant eight days ago, President Obama signed an Executive Order stating that government regulations should "take into account benefits and costs" and "further economic growth, innovation, competitiveness and job creation." Again, the Commission's report runs directly counter to the Administration's own stated goals.

Specifically, I am frustrated that the Commission failed to address the economic factors of the President's offshore drilling moratorium—including the number of lost jobs, wages and oil revenue to the United States Treasury. The moratorium has already reduced United States oil production and has cost numerous Louisiana jobs. I believe these facts needed to be fully addressed in the report.

Finally, I believe we need to make sure that effective, efficient reforms are made to improve safety while still allowing drilling to be conducted in the Gulf of Mexico. Rest assured, I will continue to work with my fellow like-minded colleagues on the Natural Resources Committee to create and keep jobs in the offshore energy sector.

[The prepared statement of Mr. Wittman follows:]

Statement of The Honorable Robert J. Wittman,
a Representative in Congress from the State of Virginia

Chairman Hastings, thank you for holding this important oversight hearing. Senator Graham and Administrator Reilly thank you for your presence here today and

for your efforts leading the President's National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling.

The fire, sinking and loss of the 11 crewmembers of the Deepwater Horizon drilling rig was a true tragedy. The Gulf region is still recovering from the economic and ecological impact of the oil spill.

We must make every effort to ensure that federal agencies are effectively structured to regulate offshore drilling, while protecting the environment and meeting our nation's energy demands.

Since the oil spill significant steps have already been taken to improve safety standards for the oil and gas industry. Structural reforms at the Department of Interior by Secretary Ken Salazar have fundamentally altered the regulatory body responsible for offshore drilling. These new regulations and structure address many of the key government oversight failures that led to the Gulf oil spill. Additionally, the oil and gas industry has taken steps to develop advanced technology that would lessen the likelihood of similar catastrophic blowouts. These and other steps have already made the offshore industry safer.

It is appropriate to carefully review and ensure that offshore energy production is appropriately regulated and conducted in a safe and environmentally sensitive manner. However, it is also critical that we promote responsible American made energy, including oil, natural gas, nuclear, coal, and renewable energy. Unfortunately, the Commission's report on balance includes proposals that would ultimately restrict domestic energy production with little measurable increases in safety. Of particular concern is the Commission's implicit support for the Administration's ongoing moratorium on energy development in the Atlantic Ocean.

Virginia has the opportunity to develop offshore energy in an environmentally friendly manner and lead the nation in improving our energy security and creating thousands of jobs. The economy of Virginia will benefit tremendously from the demand for goods and services created by offshore development.

Promoting offshore oil and gas development is one tool in an "all of the above" energy strategy that is necessary to meet our nation's growing needs. In addition to oil and gas, Virginia has the potential to develop offshore windmills and other types of renewable energy. All of these forms of energy are necessary to meet the challenges of the 21st Century.

I look forward to continuing to move Virginia towards energy independence, offshore energy development and job creation.

[The response to questions submitted for the record by Mr. Reilly and Senator Graham follows:]

Response to questions submitted for the record by the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

Chairman Doc Hastings (WA-R)—Questions

Question: Acknowledging that the U.S. will have less domestic production from the OCS in the foreseeable future; does the Commission have any recommendations as to where Congress should promote domestic oil and gas development to offset those losses?

Response: The Commission does not foresee that any of its recommendations will lead to less domestic production from the OCS in the foreseeable future. The Commission instead concluded that the Macondo well blowout was fully preventable and that deepwater drilling in the Gulf can be done safely in the future with appropriate safeguards, all of which are readily achievable. The only threat to domestic production from the OCS would be the failure of industry and government to take those necessary steps to restore safe drilling to the Gulf.

Question: The Commission dealt primarily with offshore production, would the Commission encourage greater onshore oil and gas production from federal lands where an oil spill would be less complex to clean up and mitigate?

Response: The Commission did not consider the comparative safety of onshore and offshore drilling because the President's charge to the Commission was limited to the viability of offshore drilling, especially in deep waters. Because, moreover, the Commission concluded that deep water drilling in the Gulf can be done safely and those deep waters are where significant oil and gas resources exists, the Commission never had occasion to determine whether onshore production was needed as a substitute for offshore drilling.

Question: According to press reports, after the Commission released some of its findings, companies came forward with information that rebutted specific statements in the Commission's report.

Since the Commission doesn't appear to have incorporated the new information provided after the press leak in the final report, how will that new information be utilized and made available to the public?

Response: The Commission has received no information from companies since the release of the Commission's final report that has refuted any of the Commission's findings and conclusions concerning the causes of the Macondo well blowout and the resulting *Deepwater Horizon* rig explosion. Chapter 4 of the Commission's final report summarized those findings and conclusions. As promised by that report, moreover, the Commission's Chief Counsel has since released a detailed and full account of those same findings and conclusions in a 350 page technical report. That Chief Counsel's Report describes in exhaustive detail all the engineering and management mistakes made by the three companies that resulted in the well blowout and rig explosion.

The Chief Counsel, the Commission's Chief Scientist, and the Chief Counsel's investigation team met repeatedly with representatives of the three companies principally involved in the blowout—BP, Halliburton, and Transocean—and other oil and gas companies. Indeed, for much of the investigation, those companies were all extremely cooperative and provided invaluable information. The Chief Counsel asked BP, Halliburton, and Transocean to review his draft final report to the Commission prior to its publication to give them the opportunity to correct misstatements and provide additional information. The Chief Counsel took that same precaution in late October 2010, immediately prior to holding a public hearing in which he detailed for the Commission his preliminary findings and conclusions. Each of the three companies was provided a preview of that presentation, again, in order to allow them to correct misstatements and provide additional information.

In short, the Commission's Chief Counsel gave the companies extraordinary opportunities to comment on the Chief Counsel's findings and conclusions prior to their release because the Chief Counsel was determined to provide the Commission and the American public with the most comprehensive and accurate accounting of the causes of the Gulf oil spill disaster. The Commission's investigation has never been aimed at determining legal responsibility or allocating blame for the blowout. The companies involved may nevertheless believe that the Chief Counsel's and Commission's findings could be relevant to the outcome of other proceedings. It is therefore understandable that they would advocate factual positions that would, if accepted, minimize their potential liability.

Question: Did any controversial findings require corroboration?

Response: The Commission does not view its findings as controversial or in any manner as unsupported. The Commission's exhaustive investigation identified precisely the mistakes made that caused the well blowout and rig explosion. Both the Commission's final report and the Chief Counsel's report to the Commission provide detailed corroboration for each of the Commission's findings and conclusions regarding the causes of the blowout and explosion. The Commission's final report provides that description and corroboration in a more summary fashion as part of the Commission's overall report, and the Chief Counsel's report to the Commission sets it forth in greater detail, in over 350 pages of text, figures, and footnotes. That accounting properly identifies areas where there is unavoidable uncertainty. Any remaining uncertainty, however, has no bearing on the strength of the Commission's ultimate recommendations for changes in government and industry practices, which are more than amply supported by what the Commission concluded with certainty.

Question: What record of proof was considered sufficient to support a particular finding?

Response: The Commission did not assume the role of a judge or jury, applying a strict legal standard of proof, such as the "preponderance of evidence test" applied in civil liability lawsuits or the "beyond reasonable doubt" standard applied in criminal prosecutions. The President's Executive Order to the Commission expressly instructed the Commission not to apply formal legal standards that might intrude upon potential civil litigation or criminal prosecution. For that reason, the Commission instead applied a standard of reasonable certainty, meaning whether the evidence allowed the Commission to conclude with reasonable certainty what had happened and whether the action taken was either an engineering mistake or failure in management.

Question: How did Commission staff resolve conflicts between witness accounts?

Response: As a practical matter, by the time the Commission staff had completed its investigation, there were very few witness accounts of facts that differed in ways that affected the Commission's ultimate findings and conclusions regarding the causes of the well blowout. The Commission's investigation instead found striking common ground regarding the basic facts and the Commission consulted its own Chief Scientist and a team of expert engineers and scientists, many of whom work with industry, to evaluate those facts in identifying the mistakes made by the three companies.

When the Chief Counsel discovered an important factual or analytical dispute that was central to the Commission's investigation, he took the steps to resolve the dispute. For instance, after BP called into question the stability of the Halliburton cement slurry, and Halliburton refuted those claims, the Chief Counsel obtained from Halliburton the cement recipe used at Macondo as well as materials for testing the recipe. The Chief Counsel then obtained the services of Chevron, one of the world's leading experts on cement, to test the stability of that formula. Those tests revealed that Halliburton's cement, based on that formula, was in fact unstable. This was a major fact finding achieved by the Commission.

Finally, to the extent that the Commission concluded that the facts were uncertain, the Commission expressly acknowledged that uncertainty and explained to what extent, if any, that uncertainty affected the Commission's finding and conclusions. Such candor was consistent with the Commission's charge: to provide the American people with a full and comprehensive accounting of the blowout. Such an accounting invariably includes acknowledgement of remaining uncertainties.

Question: What standards did the staff apply to determine whether a particular statement was credible or not? For example, was hearsay considered reliable?

Response: The Commission staff considered the full context of any statement in determining its reliability, including but not limited to the credibility of the person making the statement, his or her relative expertise, and corroborating documentary evidence. As a general matter, the Commission sought to rely primarily on statements of facts offered by those with firsthand knowledge of factual assertions being made. And, for that same reason, hearsay as a general matter was discounted. In some instances, however, the Commission staff had no choice but to rely on hearsay, for example, to investigate the statements and actions of several men who died on the rig. In such circumstances, hearsay is the only available evidence. When such hearsay was the basis of the Commission's findings, the Commission sought, as fact finders traditionally do in such circumstances, corroboration of those statements by more than one source. In addition, the Commission always made clear in its report the full basis of its factual finding so others could weigh it accordingly.

As described in response to an earlier question, however, as a practical matter, factual disputes were not a major problem for the Commission staff investigation. The Commission's factual investigation resulted in a factual accounting regarding the drilling of the Macondo well and the response and containment efforts about which there is very little meaningful dispute about what happened.

On occasion, there were disputes regarding the engineering or scientific significance of certain facts and data. In some instances, representatives of the companies principally involved disputed the importance of certain data or undisputed facts. In cases of analytic disputes, the Chief Counsel's staff consulted an extensive array of industry and academic experts before reaching conclusions, and noted in the Chief Counsel's report any meaningful differences between our findings and those of others.

Question: How did the staff conduct its deliberations?

Response: There were no formal deliberations by staff. Staff met frequently and informally to discuss facts, analyses, and written work products. In addition, they prepared draft written work products, which were reviewed by staff team leaders and ultimately by the Executive Director and/or Chief Counsel prior to submission to all the Commissioners. The Commissioners, by contrast, did deliberate and, as required by the Federal Advisory Committee Act, Commissioner deliberations took place in public.

Question: Who was present?

Response: There were no formal meetings in which staff deliberated. Of course, there were informal conversations between staff on a consistent basis over the course of their research and investigation.

Question: Were they confidential?

Response: There were no staff deliberations. Internal staff discussions that occurred regularly on an informal basis during staff research and investigation were not open to the public. As discussed above, staff frequently invited technical experts from the companies involved in the blowout to discuss and explain facts and data.

Question: If they were not confidential, will you make the deliberations public?

Response: Because there were no formal staff deliberations, there is no information to be made public. There are no minutes or written account of the myriad informal conversations that staff had with each other during staff research and investigation. The work product that resulted from staff research and investigation were draft staff working papers, draft staff findings and recommendations, and draft staff chapters, all of which were submitted to the Commissioners. Draft staff working papers submitted to Commissioners were published on the Commission website. Draft staff findings and recommendations were presented to the Commissioners at a hearing open to the public at a December deliberative meeting. And, finally both the Commission's final report, which was based on the Commission's written work and the final staff working papers have all been released to the public, as has the Chief Counsel's Report to the Commission.

Question: Some individuals have raised concerns about the investigative techniques practiced by the staff working on the Commission's report. In order to better understand the reasons behind the investigative techniques employed by the staff, please answer the following questions:

Why did the staff conduct "group interviews," that is, interview more than one person at a time, thus allowing the perspective of one person to influence that of another?

Response: The Commission staff conducted interviews both on an individual basis and on a group basis. Both types of interviews can be effective in fact finding. At the November hearing, the Chief Counsel engaged in some group interviews because that was an effective means of resolving and highlighting for the Commissioners and the American public significant differences in viewpoints expressed by witnesses. Staff also conducted several group interviews with teams of technical experts (as opposed to fact witnesses) to facilitate a robust discussion of technical issues.

Question: Why did the staff announce preliminary findings publicly, thus allowing witnesses and subjects of the investigation to adjust their rendition of events prior to the final findings being published?

Response: The purpose of announcing preliminary findings when the Commission staff did so was to ensure the accuracy of the staff's final proposed findings for submission to the Commissioners. Such a procedure allowed, and the Commission staff encouraged, anyone with information relevant to the preliminary findings to submit that information prior to the issuance of any final staff proposed findings. Like any fact finder, the staff can discount the persuasiveness as appropriate of efforts by witnesses and subject to investigation to adjust their rendition of facts in light of those preliminary staff findings.

Question: Why did the Chief Counsel paraphrase and summarize testimony during the Commission's public hearings instead of quoting witness statements as a means of ensuring an accurate record?

Response: The transcript of the hearing already provided a verbatim record of what witnesses said. The purpose of the Chief Counsel's paraphrasing and summarizing was to provide the full Commission with the benefit of the Chief Counsel's considered judgment concerning what had been learned from the two days of testimony the Commissioners had heard. The Commission has publicly posted all transcripts of witness testimony on its website for public review.

Question: The Commission's recommendations state that pollution prevention standards should be developed in consultation with international regulatory peers. Are you familiar with the joint work of the International Oil Spill Conference? Is that an adequate international working group?

Response: The Commission is aware of the International Oil Spill Conference and Commission staff had occasion in their research to review some of the papers and abstracts presented at every International Oil Spill Conference from 1969 to 2008. The Commission has taken no view on whether that particular organization would be sufficient for the development of the necessary standards.

Question: The Commission has made it clear that all of industry has the same "safety culture" that was practiced on board the Deepwater Horizon and that the failure of the "safety culture" as evidenced by the explosion and subsequent oil spill are systemic and overarching.

How many drilling contractors operate in the Gulf and what percentage of those operators did the Commission interview and which of these operators safety records and cultures did the Commission analyze?

Response: The question is based on an incorrect premise. The Commission made no such statement regarding the safety culture of the offshore oil and gas industry. The Commission's final report instead makes clear that many companies have exemplary safety records. And the Commission further expressly praised those companies not only in the Commission's final report but in public hearings held this past November.

The basis for the Commission's conclusion that the offshore drilling industry suffered from a "systemic" problem was very different, as the Commission's report makes clear. That conclusion was based on the nature of the mistakes that the Commission found were the cause of the Macondo well blowout and rig explosion as well as the identity of those making the mistakes. The Commission did not discover one or two isolated mistakes but a pattern of repeated mistakes in well drilling operations that revealed a fundamental failure of risk management and safe drilling practices. In addition, those making the mistakes were not just three insignificant companies. They included the largest operator of deepwater drills in the Gulf (BP); the largest supplier of cement for all deepwater wells, not just to BP but to all operations in the Gulf (Halliburton); and the largest operator of deepwater drilling rigs in the Gulf that services not just BP but all major operators (Transocean). In addition, the Commission staff investigation revealed that BP was not the only company that had failed to plan for a possible deepwater well blowout;BP did not maintain resources adequate to contain and respond to such a blowout, as promised by the oil spill response plans BP had submitted to the government. None of the other oil companies was prepared for such a blowout, notwithstanding their formal and repeated claims to the government that they were prepared. Indeed, all of their oil spill response plans were riddled with inaccuracies and false promises. It was on this firm basis that the Commission concluded that the offshore industry as a whole suffered from a culture of complacency that had assumed away, rather than effectively planned for a possible deepwater well blowout.

Question: The report includes a "loss of well control graph" showing 79 accidents in the Gulf of Mexico between 1996 and 2009.

How many wells were drilled during that time period?

Response: According to the Bureau of Ocean Energy Management, Regulation and Enforcement, operators drilled 13, 359 wells in the Gulf between January 1, 1996 and December 31, 2009.

Question: What does the Commission believe constitutes a safe industrial record?

Response: A loss of well control does not, by itself, indicate that an operator was engaging in unsafe drilling practices. Some risk is inevitable in offshore drilling, especially in deep water. The purpose of the chart in the report describing the 79 incidents of loss of well control is not to suggest that each of those incidents demonstrates unsafe drilling practices. It is instead simply to document the inherent risks of offshore drilling and the reason why it is so essential that industry always be on guard to ensure that such incidents do not result in the kind of major disaster that occurred with the Macondo well blowout.

Question: Does the Commission believe it is possible to eliminate human error from the disaster equation?

Response: No, it does not. Safe drilling practices, however, require anticipating the potential for such human error and building in safeguards both to minimize its occurrence and its consequences. The human error that caused the Macondo well blowout was entirely preventable and was not the result of unavoidable human error.

Question: Since taking office one of Secretary Salazar's primary efforts has been to ensure that oil and gas companies "use or lose" their leases. This effort has included changes in rental payments, reducing the length of leases, and greater regulatory attention to the speed of the development of leases. You have highlighted in your report that many of the steps taken by BP in the development of this well were done to save time.

Considering the Department's pressure to speed development, does the Commission believe that BP felt obligated to use these time saving measures to meet the Department's demands?

Response: The Commission has insufficient information upon which to form a belief concerning BP's motivations for saving time and whether they might have been related to Department of the Interior policies.

Question: Does the Commission believe that we should consider extending the length of leases to allow companies and regulators additional time to conduct environmental and safety studies?

Response: The Commission did not consider that issue and neither a decision to extend or a decision not to extend the length of leases would, accordingly, be inconsistent with the Commission's recommendations.

Question: UCSD Economics Professor James Hamilton has written that "nine out of ten of the U.S. recessions since World War II were preceded by a spike up in oil prices." In fact, he has recently written that it was high oil prices that caused a significant decline in personal spending and new car purchases that contributed to our current recession.

Did the Commission look at the impact of reduced domestic oil and gas production on gasoline prices, the GDP, or the Nation's balance of trade?

If high gasoline prices and oil price spikes are known to do significant harm to the U.S. economy, should the U.S. ensure that adequate domestic production is available to prevent significant price spikes and declines?

Did the Commission conduct an analysis on the economic impacts of higher gasoline prices and declining domestic production on the lower income brackets of the U.S. population?

Response: The Commission did not undertake a detailed analysis of the relationship of the nation's economy to oil and gas prices because such an inquiry was outside the Commission's charge, as described by the President's Executive Order creating the Commission. Consistent with that Executive Order, the Commission identified the root causes of the oil spill and made recommendations concerning how to prevent future spills and mitigate their consequences.

Question: Did the Commission at any time receive direction on policies to consider or recommendations that should be made from:

a. Ms. Carol Browner, Special Assistant to the President?
b. Mr. Steve Black, Counselor to the Secretary of the Department of the Interior?
c. The Honorable Ken Salazar, Secretary of the Department of the Interior?
d. Mr. Michael Bromwich, Director, Bureau of Ocean Energy Management
e. The Honorable Steven Chu, Secretary Department of Energy?
f. Would the Commission please provide any directions or instructions from these individuals that were provided to the Commission to the Committee? (These requests include emails, letters, phone logs, and other communications)

Response: The only direction or instruction that the Commission received from anyone outside the Commission itself concerning the proper scope of the policies and recommendations for the Commission's consideration was contained in the President's Executive Order establishing the Commission. That Executive Order defined the scope, purpose, structure, and timetable for the Commission's work. The Commission neither received nor entertained any other instructions or directions concerning what the Commission should consider or recommend. No one, including any of the listed individuals, purported to direct or instruct the Commission on policies or recommendations or otherwise to exercise supervisory or managerial authority over the substantive nature of the Commission's work. Any such assertion, moreover, of supervisory or managerial authority would have been antithetical to the independence of the Commission's investigation and recommendations and for that

reason rejected by the Commission. Because the Commission received no "instructions" or "directions" of this kind, the Commission has no related documents to provide.

Congressman and Ranking Member Edward J. Markey (MA–D)—Questions

Question: During the hearing, it was asserted that the Commission should not have issued its final report until it knew definitively why the blowout preventer (BOP) failed to function as it should have. How can you say you did a thorough review of the accident and determined the causes if you weren't able to inspect the BOP?

Response: The Commission could do so for the straightforward reason, explained in the Commission's Final Report and further elaborated upon in the Chief Counsel's Report to the Commission, that even if the blowout preventer did fail, that failure did not cause the explosion that killed 11 men on April 20th. As the Commission report and Chief Counsel's Report explain, the rig crew realized too late what was happening and thus activated the BOP too late to have prevented an explosion. By the time the crew tried to activate the BOP, gas had already flowed above the BOP and was rocketing up the riser. That gas is what ignited on April 20th.

By contrast, as the Commission report and Chief Counsel' Report further explain, if the crew had heeded warning signs earlier in the day, they could easily have prevented the explosion from happening. These included misinterpreting the negative pressure test used to check the integrity of the cement job. In the hour or so before the explosion, there were several other odd and unexpected pressure readings that the crew should have realized were signs of a problem, but unfortunately did not. If they had properly recognized these signs, they could easily have closed in the well.

To be sure, any blowout preventer failure may *potentially* have played a part in the severity of the oil spill, but the disaster as a whole was due to a rather staggering series of errors by the three companies, all of which our investigation has documented. These errors can be addressed through better regulation, better training for workers, and a strong commitment to safety by both the companies and the regulators. Examples of key mistakes by BP, Halliburton, and Transocean as identified by the Commission's investigation include:

- Failure to get a good cement job
- Failure to understand that the negative pressure test indicated that the cement was instable
- Problems with BP's temporary abandonment procedures, in particular, its decision to displace mud from the riser before setting additional barriers to back up the cement at the bottom of the well. This left the faulty cement at the bottom of the well as the only physical barrier that could prevent the flow of hydrocarbons into the well
- Failure to understand that a kick was occurring, even though there were several odd and unexpected pressure readings in the hour or so leading up to the explosion that the crew should have realized signaled a problem
- Failure to respond appropriately once mud and gas began spewing onto the rig floor. The crew should have diverted the gas overboard instead of diverting it through the mud-gas separator. While it is not entirely clear this would have prevented the explosion, it could have at least limited its impact.

For these reasons, the blowout preventer analysis, while important, will not change the Commission's conclusions that a failure of management led to numerous risky and unnecessary decisions made by the companies involved, each of which led to the occurrence of the blowout. The blowout preventer can, like a seatbelt, reduce the amount of harm that is caused, but in the circumstances of the Macondo well, even a properly functioning blowout preventer was not a root cause of the accident and its immediate tragic consequences for those on the rig on the night of April 20th. The BOP's relationship to an oil or gas well is the same as the relationship of an airbag to a car—it is not intended as a means to prevent an accident, but to mitigate its effects.

Question: Can you briefly list all the errors or other problems encountered in the weeks, days and hours leading up to the blowout at the Deepwater Horizon well that caused the accident to occur in the first place?

Response: A brief and necessarily under inclusive list of errors and other problems follows. Chapter 4 of the Commission's overall report provides a summary of the engineering, process, and management decisions that led to the blowout. The Chief Counsel's report explains these mistakes and others in greater detail.

1. BP and the rig crew experienced difficulties drilling the well. When combined with earlier design decisions, these problems required them to plan a "finesse" cement job.
2. The cement slurry that BP and Halliburton used was very likely unstable.
3. BP and Halliburton did not adequately test the cement or review test results prior to pumping the cement.
4. BP's temporary abandonment procedures called for the crew to unnecessarily underbalance the well and stress the cement without first installing additional static barriers.
5. BP provided inadequately detailed procedures to the crew for temporary abandonment and negative testing, and provided them late, causing confusion.
6. BP's well site leaders, in consultation with the Transocean rig crew, misinterpreted data from the negative pressure test.
7. The rig crew and mudloggers missed several signs of the "kick" that became the blowout in the last hour before the blowout occurred.
8. Once the blowout began, the rig crew did not immediately divert mud flow overboard and instead attempted to route flow through the mud-gas separator.

Question: Can you also describe any delays, errors or other problems associated with efforts to activate the BOP once it became clear that this was necessary (please only describe any problems that are separate and apart from BOP malfunctions)? Could any of these have impacted the likelihood of using the BOP to stop the explosion(s) on the Deepwater Horizon even if it had properly functioned?

Response: The Chief Counsel concluded that the crew first activated an annular preventer in the BOP at best only moments before drilling mud erupted onto the rig floor. By this time, gaseous and liquid hydrocarbons had already passed the BOP rams and were in the riser. Once those materials were in the riser, there was nothing the crew could have done to prevent them from flowing to the surface. As gaseous hydrocarbons flowed up through the mile of riser pipe, they expanded, further increasing the speed and force of the blowout as they rose. Accordingly, the Chief Counsel concluded that even if the BOP had functioned flawlessly, the explosion would have occurred and eleven men would have died. Put another way, the main problem associated with activating the BOP was timeliness—the rig crew recognized signs of a kick too late to use the BOP to prevent a blowout and an explosion.

Question: The Commission report concluded that safety problems in the oil and gas drilling sector are "systemic" in nature and not just associated with one company or group of companies.

Could you please provide me with some specific justifications for this conclusion?

Response: The Commissioner's conclusion concerning the systemic nature of the problem was based on the nature of the mistakes that the Commission found were the cause of the Macondo well blowout and rig explosion as well as the identity of those making the mistakes. The Commission did not discover one or two isolated mistakes but a pattern of repeated mistakes in well drilling operations that revealed a fundamental failure of risk management and safe drilling practices. They included the largest operator of deepwater drills in the Gulf (BP); the largest supplier of cement for all deepwater wells, not just to BP but to all operations in the Gulf (Halliburton); and the largest operator of deepwater drilling rigs in the Gulf that services not just BP but all major operators (Transocean). In addition, the Commission staff investigation revealed that BP was not the only company that had failed to plan for a possible deepwater well blowout. BP did not maintain resources adequate to contain and respond to such a blowout, as promised by the oil spill response plans BP had submitted to the government. None of the other oil companies was prepared for such a blowout, notwithstanding their formal and repeated claims to the government that they were prepared. Indeed, all of their oil spill response plans were riddled with inaccuracies and false promises. It was on this firm basis that the Commission concluded that the offshore industry as a whole suffered from a culture of complacency that had assumed away, rather than effectively planned for a possible deepwater well blowout. Finally, the Commission concluded that the nature of the problem was of such a nature that a "systemic" solution was needed to ensure achievement by industry of safety in offshore drilling operations.

Question: Did your meetings with foreign regulators or other entities that are familiar with safety or safety culture in other countries highlight differences between the safety of offshore drilling operations in the United States compared with other countries? If so, can you describe the key elements of what you were told that informed your views?

Response: Two key factors in particular influenced the Commission's views. The first was that the same operators that were drilling in U.S. waters were operating more safely in their drilling operations offshore of other nations. They were successfully complying with pro-active risk management approaches in other nations. The costs were not exorbitant and better safety was apparently being achieved elsewhere. Second, the Commission learned that other nations had prescriptive technical standards for drilling safety not reflected in U.S standards. The Commission saw no excuse for U.S. standards not to be at least as demanding as what other nations applied and what the same companies were already doing in those other nations to achieve regulatory compliance.

Question: In arguing against the need for reform, the oil and gas industry and some Members of the Committee have asserted that the BP Deepwater Horizon disaster was an outlier and point to the long history of drilling offshore in the Gulf of Mexico.

Does the industry's record of drilling tens of thousands of wells offshore in the Gulf of Mexico mean that this was an isolated incident? Why or why not?

Response: The offshore drilling industry certainly deserves praise for the lack of any major well blowout in the Gulf of Mexico in U.S waters during the past several decades of exploration and production there. As the Macondo well blowout demonstrates, however, one cannot rely on a past record of safety when, as has occurred offshore in recent years, the industry is moving to wells located in ever deeper waters where the potential for recovery of increased volumes of oil and gas is accompanied by significant increases in associated risk.

Question: What differences exist between drilling or responding to a blowout in shallow water verses in ultra-deep water where the Deepwater Horizon was operating? Please detail any added technical challenges and difficulties presented by deepwater drilling.

Response: Added water depth itself creates complications and risk because of the lower temperatures and higher pressures exerted on wellhead equipment and BOPs at those greater depths. For example:

- In deeper water, rigs need to be larger with greater lifting capacity to manage heavy tubular (casing, riser, drill pipe).
- Deeper water requires a longer riser pipe, which makes it more difficult to manage mud pressures and also makes it more dangerous when gas enters the riser.
- Hydrates are also a more common problem in deepwater due to the seabed pressure-temperature relationships. This poses challenges in development and production, but also in well control.
- Deepwater oil and gas reservoirs can have exceptionally high porosity and permeability. These characteristics promote productivity but also make well control more difficult and means that "kicks" (influx of oil and gas into the well bore) can be significant
- In deepwater, the margins between pore pressure and fracture gradient are typically less than in shallow water. This leads to greater risks of taking a "kick" not just during drilling, but also during topping (pulling out of the hole).
- Because the water is so deep, gas expansion of any kick is mostly in the riser and therefore above the BOP. This means that drillers must be attuned to subtle signs of an influx and shut in the well before hydrocarbons enter the riser. In shallow water, the expansion is mostly below the BOP.
- Added water depth also increases the complexity of efforts to stop a blowout that is already in progress. For instance, BOP stacks are often on the surface in shallow wells, which means that repairs can be done above water. By contrast, BOPs in deep water wells can be a mile or more below the surface, meaning that all work must be done by Remote Operated Vehicles (ROVs). On the other hand, rigs and equipment can station themselves directly over a deepwater blowout, which has operational advantages, and cannot as readily do so in shallow waters because of the presence of hydrocarbons at the surface.

- Deepwater wells tend to contain significantly larger volumes of oil and gas and consequently can be more productive, which also means that spills resulting from deepwater blowouts may potentially be larger. Good shallow wells produce at rates of a few thousand barrels of oil a day. By contrast, deepwater wells commonly produce more than 10,000 barrels per day.

For much of the nation's history offshore drilling occurred exclusively in shallower waters, where the risks were generally lower. During the last two decades, however, offshore drilling has increasingly occurred in ever-deeper water, beginning with "deep waters" (approximately 1,000–5000 feet) and now even "ultra-deep waters" (more than 5,000 feet), where the amount of oil and gas can be greater still. The Deepwater Horizon was operating at depths of approximately 4,992 feet of water.

Chapter 2 of the Chief Counsel's report addresses these issues in greater detail.

Question: On January 26th, I, along with several other House Members, introduced legislation, H.R. 501, to implement the recommendations of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. The legislation we introduced contains provisions designed to be consistent with the recommendations of the Commission. For each of the following provisions, please describe whether the legislation appears to be generally consistent with the recommendations the Commission has made to improve the safety of offshore drilling:

a. Our legislation would reorganize the regulatory structure of the Department of the Interior to separate the offshore leasing, revenue collection, and environmental and safety review and enforcement functions. The legislation would also make the head of the safety agency a fixed-term appointee.

b. The legislation would create a dedicated funding stream from oil and gas fees to fund the agencies responsible for regulating and overseeing the industry.

c. The legislation would require the federal government to use sound science to properly estimate the potential worst-case spill scenarios and then requires industry's oil spill response plans to incorporate those worst-case scenarios into a realistic analysis of what could happen in the event of a catastrophic blowout.

d. The legislation would establish a permanent scientific group to ensure that the government develops and maintains the extensive expertise needed to estimate the flow rate of oil from a spill.

e. The legislation would dedicate 80 percent of the Clean Water Act fines and penalties to Gulf Coast restoration.

f. The legislation would ensure that the National Oceanic and Atmospheric Administration (NOAA) has a formal consultative role in the decision making process for where and how new drilling can occur so that the best possible science can be incorporated into the decision-making process. The Department of the Interior would have to respond in writing if it chose not to accept NOAA's recommendations.

g. The legislation would create a dedicated funding stream from oil and gas fees to fund oil spill response research and development.

h. The legislation would increase the per incident payout from the oil spill liability trust fund.

i. The legislation would require strong new standards for blowout preventers, cementing and well-design.

j. The legislation would require extensive study on the potential effects of dispersants on the marine environment.

k. The legislation would protect whistleblowers from being retaliated against for reporting violations of oil and gas drilling safety laws and regulations.

Response: All of the above legislative proposals, if enacted, would be consistent with the Commission's final report and recommendations.

Question: One of the Commission's findings is that federal oil and gas regulators have historically been underfunded and the Commission recommends creating a dedicated funding stream from increased oil and gas fees to fund the agencies responsible for overseeing and regulating the industry.

However, some have indicated a desire to reduce federal non-security spending levels across the board. In your opinion, would reducing rather than increasing funding for federal oil and gas regulators help or hurt our ability to ensure that offshore oil and gas drilling operations are safe?

Response: The Commission believes that increasing funding for oil and gas regulators is essential to ensuring drilling safety and is necessary to get the oil and gas industry fully back in operation in the Gulf as expeditiously as possible.

Question: The Commission's recommendations note that historically most applications of the Natural Resource Damage Assessment process have focused on coastal restoration, as opposed to restoration in water column or on the sea floor. Would focusing primarily on coastal restoration be appropriate in this case? What suggestions do you offer for how to address the damage offshore, which the Commission notes is "unprecedented and unknown"?

Response: The Commission recommends that restoration not be limited to coastal restoration but also encompass the full marine environment damaged by the Gulf spill, including the water column. To address this need, the Commission recommends, among other things, longer term study of those non-coastal adverse impacts and broader efforts at implementing the Gulf Hypoxia Action Plan, utilizing marine spatial planning, and providing for marine protected areas to conserve marine biodiversity and to enhance the resilience of fish stocks.

Question: What are some of the challenges that would be associated with responding to an oil spill offshore in the Arctic, especially at certain times of the year when sea ice is present? Would effectively responding to a spill in the Arctic present greater challenges than responding to a spill in the Gulf of Mexico?

Response: As described in Chapter 10 of the Commission's final report, three of the greatest challenges presented by the Arctic in particular include: (1) the current lack of significant Coast Guard resources in the Arctic or readily deployable there; (2) the presence of ice during significant parts of the year, which would complicate significantly and potentially delay effective containment and oil spill response efforts; and (3) the absence of daylight during significant parts of the year, which would hinder both containment and oil spill response efforts. In at those three respects, the challenges would be greater in the Arctic than in the Gulf. As described in Chapter 10, in some respects there are fewer challenges. For instance, many of the areas now under consideration for exploration and production in the Arctic are located in shallow rather than deep or ultra deep waters as in the Gulf.

Question: During the hearing, questions were raised regarding the expertise of the Commission members and its staff. Could you please describe a) the expertise and experience possessed by those responsible for conducting the Commission's technical work and writing those aspects of its report and b) the range of experts consulted by the Commission or its staff as it sought to develop its findings and recommendations?

Response: The Commission established a team of staff to investigate the root causes of the Macondo well blowout with enormous technical and legal expertise. That team was led by the Commission's Chief Counsel, Fred Bartlit, and by the Commission's Chief Scientist, Richard Sears. Bartlit is not only one of the nation's most highly regarded trial lawyers, with deep professional roots with industry and a degree in civil engineering from West Point, but he led for industry the investigation of the Piper Alpha rig explosion in 1988, in which 167 people died in the North Sea. Bartlit is widely credited by industry and government alike for the rigor and fairness of that investigation, which successfully identified the root causes of the explosion. Richard Sears is a petroleum engineer with over three decades of experience with the oil and gas industry, having recently retired from Shell Oil. Bartlit and Sears put together not only an in-house team within the Commission staff, but also worked closely with experts in the oil and gas industry itself, who were enormously cooperative in assisting the Commission's work. The Commission's investigative team consulted with industry and academic experts on virtually every aspect of deepwater well drilling and fully vetted the investigation's findings with those same experts. The best proof of the depth, scope, rigor, balance, and fairness of that staff

work is the recently-released Chief Counsel Report to the Commission, which describes in exhaustive detail in 350 pages the engineering and management mistakes made that caused the well blowout and rig explosion.

Congressman Dale Kildee (MI–D)—Questions

Question: Your comments today and the findings of your report highlight the vital importance of the Gulf Coast ecosystem. Can you briefly tell us, in terms of natural, economic, and other resources, why this area and its fragile ecology are so significant to the region and to the nation at large?

Response: Chapter 6 of the Commission's final report best describes the significance of the Gulf to the Gulf economy and environment, as well as to the nation as a whole. In addition to the oil and gas industry, the Gulf hosts the nation's largest seafood industry as well as an enormously important and vital tourism and recreation industry. As witnessed last summer, both those critical economies were devastated by the spill and it is still unclear, almost eleven months later, the extent to which they will have recovered this coming summer. Those who live along the coast were especially hard struck, including many vulnerable communities, not only in their livelihoods but in terms of their mental and physical heath, by the spill. More than 650 miles of Gulf coastal habitats—salt marsh, mudflat, mangroves, and sand beaches—were oiled. Tidal mudflats are especially sensitive to oil pollution and the Louisiana delta and the estuarine bays of Mississippi and Alabama have large expanses of tidal mudflats, and support dense populations of species. Salt marsh and mangroves are likewise both highly productive and sensitive habitats highly vulnerable to oil pollution.

Question: What would you say to the average American who sees the prices at the gas pump going up each week and may be reluctant for the government to apply additional regulations to gas and oil drilling companies?

Response: None of the Commission's recommendations should have a significant impact on the price of gasoline. The primary factor in the price of gasoline is the price of crude oil, which is set by the global market. U.S. crude oil production currently accounts for roughly 10% of total global production, and it is unlikely that small changes in U.S. crude oil production could affect global prices. More importantly, our recommendations are aimed at moving us forward to allow for the full recovery of offshore operations in the Gulf. Improved drilling safety could impose some upfront costs on oil and gas companies, but these costs are small compared to the cost to industry of another major blowout.

Question: Your report calls for the dedication of a significant portion of Clean Water Act penalties for restoration of the Gulf Coast's threatened ecosystem. Can you tell us more about the relationship between resiliency of the Gulf Coast ecosystem and your proposed use of these incident-specific spill-related funds?

Response: The Gulf is presently especially vulnerable to oil spills because of the elimination of natural barriers, loss of land, destruction of wetlands, and high concentrations of nutrients otherwise threatening the viability of marine life within the Gulf. As a result of these accumulating threats to the Gulf ecosystem, the harm caused by a catastrophic oil spill can be much greater because, combined with existing harm, the Gulf may lack the strength needed for recovery. It is for this reason, that mitigation of the harm of future spills warrants not just eliminating the incremental harm caused by the Macondo well blowout, but building back the strength of the Gulf ecosystem so as to be able to withstand future spills.

Question: Given that your report sites that "since 2001, the Gulf of Mexico workforce—35,000 people, working on 90 big drilling rigs and 3,500 production platforms—has suffered 1,550 injuries, 60 deaths, and 948 fires and explosions." Do you believe that the oil and gas industry is capable of regulating itself without additional government oversight?

Response: We think that safe drilling operations will require both effective government and industry oversight. Neither can do it alone. That is why the Commission recommends the creation of an independent safety authority within the Department of the Interior. And that is why the Commission further recommends that industry establish its own independent, self-policing entity to oversee offshore drilling operations, akin to what the nuclear power industry did in 1979 in the immediate aftermath of the Three Mile Island Accident when industry established the Institute of Nuclear Power Operations.

Question: Some experts have suggested that the Commission has drawn overly broad conclusions about the oil and gas industry's commitment to safety, based on the decisions on a single rig. How would you respond to this criticism?

Response: The Commissioner's conclusion concerning the systemic nature of the problem was based on the nature of the mistakes that the Commission found were the cause of the Macondo well blowout and rig explosion and the identify of those making those mistakes. The Commission did not discover one or two isolated mistakes but a pattern of repeated mistakes in well drilling operations that revealed a fundamental failure of risk management and safe drilling practices. In addition, those making the mistakes were not just three insignificant companies. They included the largest operator of deepwater drills in the Gulf (BP); the largest supplier of cement for all deepwater wells, not just to BP but to all operations in the Gulf (Halliburton); and the largest operator of deepwater drilling rigs in the Gulf that services not just BP but all major operators (Transocean). In addition, the Commission staff investigation revealed that BP was not the only company that had failed to plan for a possible deepwater well blowout; BP did not maintain resources adequate to contain and respond to such a blowout, as promised by the oil spill response plans BP had submitted to the government. None of the other oil companies was prepared for such a blowout, notwithstanding their formal and repeated claims to the government that they were prepared. Indeed, all of their oil spill response plans were riddled with inaccuracies and false promises. It was on this firm basis that the Commission concluded that the offshore industry as a whole suffered from a culture of complacency that had assumed away, rather than effectively planned for a possible deepwater well blowout. Finally, the Commission concluded that the nature of the problem was of such a nature that a "systemic" solution was needed to ensure achievement by industry of safety in offshore drilling operations.

Question: I appreciate the fiscal logic of your recommendation that Clean Water Act penalty dollars be returned to revive the natural and economic resources of the Gulf Coast's wetlands. Can you summarize for us the reasons why that kind of funding is needed here, and what you expect it to accomplish?

Response: As described in Chapter 7 of the Commission's Final Report, many have studied the current problems affecting the Gulf's ecosystem and the central role it plays in the nation's economy and there is no lack of understanding concerning the kind of steps now needed to address those problems. The problem has not been lack of understanding but lack of sufficient resources to commit to the necessary measures. The estimated costs of such a restoration effort, however, roughly mirror estimates of the amount of monies potentially recoverable in Clean Water Act penalties from those private companies responsible for the Gulf oil spill. Those penalties, accordingly, provide an extraordinary opportunity for the Gulf and the nation to undertake restorative measures of enormous value to the Gulf, the nation, and current and future generations of Americans.

Question: In last night's SOTU address, the President talked about the need for investments in critical infrastructure for America's long-term economic health. Would your proposal to invest Clean Water Act penalties in Gulf Coast restoration offer this kind of necessary economic security?

Response: Yes, it would. The Gulf's ecosystem supports some of the nation's most important economies.

Question: Recognizing the importance of the Gulf Coast ecosystem, many of us are hopeful that the Natural Resource Damages Assessment process will result in an aggressive response to some of the worst effects of the spill. How would your proposal for Clean Water penalties go beyond this NRDA response?

Response: It would go beyond because the NRDA is more limited in its ability to extend beyond the immediate effects of the spill itself and address the longer term and broader need to restore the overall health of the Gulf's ecosystem, which has been threatened by many activities in recent decades, including the Gulf's ability to withstand future oil spills.

Congresswoman Betty Sutton (OH–D)—Questions

Question #1 (Questions on Culture of Worker Safety):

1. **In your report you suggested that the oil and gas industry should work to establish a "Safety Institute" similar to organizations in other high risk industries like the nuclear industry. By your rec-**

ommendation, this would be an industry sponsored entity aimed at improving safety and operation standards in the offshore drilling industry.

2. **At the same time, you hint at the lack of a "safety culture" in this industry. You make some great recommendations, but there is a concern that industry will be slow to self-regulate and change long standing practices.**
3. **Have you found the industry receptive in any way to your suggestions for forming a safety group?**
4. **What obstacles exist to creating a culture of safety in the oil and gas industry?**
5. **What are some of the concerns you've encountered or what might be done to encourage the establishment of a safety culture?**

Response: The Commission has been encouraged in many private conversations with leading industry officials that they are receptive and ready to create such an industry self-policing entity and that many recognize its value and importance. The greatest obstacle right now, however, is that there still seem to be significant voices in industry that have not reached that conclusion and seem open instead to seeing if the current demands for safer drilling will naturally subside without industry taking significant steps to reform drilling practices. The Commission's related concern is that there appears to be a tendency within the oil and gas industry, promoted by the American Petroleum Institute, to be reflexively opposed to enhanced oversight measures and a willingness to defer to "average" business practices rather than to demand "best" drilling practices. It is not yet clear to the Commission that those industry leaders who made clear that they share the Commission's view of the existing problem and the need for industry reform will be successful in moving the industry as a whole.

Question #2 (Conflicts within Agencies Dealing with Drilling):

1. **In your report you hit on one of the major issues leading up to the oil spill, the conflicting mission of the Minerals Management Service. The report suggested the creation of an independent agency to oversee aspects of offshore drilling.**
2. **Secretary Salazar recently announced two new independent agencies to carry on functions once assigned to MMS, one agency to deal with leasing and one agency to deal with safety issues.**
3. **But even under these two new agencies the Bureau of Safety will still operate under the same assistant secretary who oversees leasing duties.**
4. **How do these agencies line up with your recommendations?**

Response: Much of what the Secretary is doing is fully consistent with the Commission's recommendations. The Commission does, however, believe that more is needed, including not having the two new agencies operating under the same Assistant Secretary. In addition, the Commission recommends a series of other steps to enhance the independence of a new safety authority within Interior, including having the head of that authority possess special engineering credentials and experience and be appointed to a fixed term.

5. **What consequences do you foresee with the way Interior has moved forward in forming these new agencies?**

Response: The risk of not making the new agency as autonomous as the Commission recommends is that the new agency, especially after there is less political attention paid over time to the risks of well blowouts, will, as in the past, place greater weight on revenue collection to the detriment of ensuring safe drilling operations.

Congressman Jeff Landry (LA–R)—Questions

Question: Do you propose these recommendations from the report for both deep and shallow water drilling operations?

Response: The Commission's recommendations are not limited to deepwater drilling. As a practical matter, however, the challenges and associated risks of drilling are greater for deep water than they are for shallower water, so the practical impact of the recommendations are commensurately great for operations in deep water.

Question: Can you discuss what the economic impacts are on the nation as a whole in light of your recommendations in the report and the Obama Administration's response to permitting post-spill? Specifically, can you discuss what the International Energy Agency meant by it's anticipation of the U.S. needing an additional 300,000 barrels per day of imports by 2015 based on the ongoing permitorium and Interior Department actions?

What about the U.S.'s own Energy Information Administration's announcement that production in the Gulf would be down 220,000 barrels per day in 2011 and 400,000 barrels per day by 2012 due to the permitorium. Can you please discuss those numbers, including what they mean for the Gulf economy, the U.S. economy, and our national security?

Response: The Commission is aware of the Energy Information Administration and International Energy Agency analyses of the adverse impact of the moratorium and permitting delays in the Gulf of Mexico on U.S oil production. Indeed, precisely because the Commission was aware of the significant associated costs of such delays on the nation's energy supply and the national economy, the Commission made a series of recommendations for the purpose of reducing permitting delays. Most important, the Commission concluded that a significant cause of current and potential future delays was a lack of sufficient funding for the government agency, the Bureau of Ocean Energy Management, Regulation and Enforcement (the successor to the Minerals Management Service). Absent the necessary resources, BOEMRE cannot process permit applications as expeditiously as possible while ensuring drilling safety and the impact on the nation's energy resources and economy may well be even worse than projected by these two forecasts.

In particular, the Commission found that Congress had persistently and increasingly underfunded the Minerals Management Service to meet the challenges of the expanded activity in the Gulf. As offshore activity dramatically increased during the 1990s, the Minerals Management Service had increasingly-stretched budget resources available and its ability to maintain the capacity necessary for safety management and permitting suffered. The Commission, accordingly, identified the need for new hiring authority to compete with other employers for technical expertise as well as the budget certainty to enable the agency to make the hiring and training commitments necessary to accommodate the industry's permitting needs. Neither of these has yet been provided. Until Congress provides those resources, the absence of necessary government oversight will likely be the greatest source of continuing permit delays.

Question: Other countries have determined that there was no need to shut down offshore production. In fact, African and South American countries are actively pursuing long-term contracts for rigs to move out of the Gulf. Including rigs from energy companies from the likes of Murphy Oil, BP, Anadarko and Statioil. How come the commission report did not discuss the loss of rigs in the Gulf and economic impacts long-term?

Response: The Commission report did not discuss the loss of rigs and the economic impacts long term because the Commission concluded that deepwater drilling could be done safely and economically in the Gulf and sought to propose recommendations that would allow such drilling to occur in a safe and expedited manner. The Commission, accordingly, did not foresee a reason to assume that there would be a long term loss of rigs in the Gulf.

Question: Due to a 2008 Bureau of Labor Statistics Report on Work Place injuries 89 percent of working Americans work in industries with higher injury rates than oil and gas extraction. So please explain why only commercial banking, insurance carriers and certified public accountants fare better and why child day-care services were twice as high as oil and gas extraction?

This BLS report goes on to state that a total of 120 fatal work injuries occurred in the oil and gas extraction industry in 2008. The three most frequent fatal events in 2008 were transportation incidents (41 percent), contact with objects and equipment (25 percent), and fires and explosions (15 percent). The number of fatal work injuries associated with fires and explosions over the past five years ranged from 10 fatalities in 2007 to 21 fatalities in 2006. In 2008, there were 18 fatalities. Why would the extraction portion of the industry be labeled by the Commission "a systematic breakdown of safety and engineering practices" when in 2008 41% of fatal work injuries happened in the Transportation sector of the industry?

Do you or don't you agree that without any further regulations the Offshore Oil and Gas industry is safer today then it was prior to the accident?

Response: In the immediate aftermath of an accident, it is reasonable to assume that the offshore industry has on its own initiative taken some measures to enhance safety by learning from the specific mistakes made at the Macondo well and on the Deepwater Horizon rig. The Commission's recommendations, however, seek to promote safety far more by identifying the root causes, and thereby not just prevent a repetition of the precise, same mistakes, and to create an institutional structure for safety oversight within both government and industry that will endure over the longer term, long after memories of the BP Deepwater Horizon Gulf Spill begin inevitably to dim.

Question: The President charged this commission to determine the causes of the disaster, to improve the country's ability to respond to spills, and recommend reforms that make offshore energy production safer. Prior to the accident, there existed multiple layers of environmental reviews, including multiple EIS and EA's. These included EIS's during the development of the 5 year review and again prior to the lease sale. Where does the Commission receive both the authority and the conclusion that the NEPA review warrants any additional changes, as I find no conclusion that it contributed to the accident or to the impact of the clean up?

Response: Under the Executive Order that established the Oil Spill Commission, the President specifically tasked the Commission with suggesting improvements to Federal laws and regulations applicable to offshore drilling that would prevent future spills *and* mitigate their impact. Investigating the Department of the Interior and the Mineral Management Service's application of NEPA for offshore oil and gas development was an important part of this review because such NEPA review is designed to ensure, among other things, that agency decision-making considers potential adverse environmental consequences, including those resulting from oil spills conducted on federal properties and supervised by federal agencies.

Congressman Jeff Denham (CA–R)—Questions

Question: The report recommends that there needs to be the creation of a new government bureaucracy. How is it that the functions of this new agency can't be performed by the current massive [over sized] federal structure?

1. **Why can't the need for planning, coordination, execution, and clean up after a disaster fall under the jurisdiction of the Federal Emergency Management Agency (FEMA)?**
2. **With better and more efficient government action couldn't the damages from an emergency be lessened?**
3. **Isn't it necessary to reduce the bureaucratic red tape that prevents an overseeing agency, such as FEMA, from being allowed to take the lead role and manage the necessary actions following an incident?**
4. **Wouldn't having one agency allowed to take the lead and coordinate eliminate the communication breakdown and resolve a need for an expansion of expensive and inefficient government?**

Response: The Commission does not recommend the creation of a new federal bureaucracy to plan, coordinate, or execute the response to an offshore oil spill. Rather, the Commission recommends maintaining the existing command structure, in which the Coast Guard takes the lead role in responding to an offshore spill of oil or other hazardous substances. The National Contingency Plan properly assigns this lead role to the Coast Guard because of its expertise in the offshore and marine environment. Reassigning that role to FEMA would ignore the Coast Guard's decades of experience in oil spill response and planning, and would require a significant and inefficient expansion of FEMA to duplicate functions and expertise that already exist within the federal government (indeed, within the same cabinet department).

The Commission agrees that "better and more efficient government action" could lessen the damage caused by a major oil spill. As set forth in the Commission's report, the response to the Deepwater Horizon disaster revealed a series of deficiencies in government planning and execution. Accordingly, the Commission recommends a series of steps that the federal government could take, consistent with the existing command structure, to better address the demands created by a spill of national significance.

○