

BP PIPELINE FAILURE

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

SECOND SESSION

TO

RECEIVE TESTIMONY RELATING TO THE EFFECTS OF THE BP PIPELINE
FAILURE IN THE PRUDHOE BAY OIL FIELD ON U.S. OIL SUPPLY AND
TO EXAMINE WHAT STEPS MAY BE TAKEN TO PREVENT A RECUR-
RENCE OF SUCH AN EVENT

SEPTEMBER 12, 2006



Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

32-146 PDF

WASHINGTON : 2007

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) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

COMMITTEE ON ENERGY AND NATURAL RESOURCES

PETE V. DOMENICI, *New Mexico, Chairman*

LARRY E. CRAIG, Idaho	JEFF BINGAMAN, New Mexico
CRAIG THOMAS, Wyoming	DANIEL K. AKAKA, Hawaii
LAMAR ALEXANDER, Tennessee	BYRON L. DORGAN, North Dakota
LISA MURKOWSKI, Alaska	RON WYDEN, Oregon
RICHARD M. BURR, North Carolina,	TIM JOHNSON, South Dakota
MEL MARTINEZ, Florida	MARY L. LANDRIEU, Louisiana
JAMES M. TALENT, Missouri	DIANNE FEINSTEIN, California
CONRAD BURNS, Montana	MARIA CANTWELL, Washington
GEORGE ALLEN, Virginia	KEN SALAZAR, Colorado
GORDON SMITH, Oregon	ROBERT MENENDEZ, New Jersey
JIM BUNNING, Kentucky	

FRANK MACCHIAROLA, *Staff Director*
JUDITH K. PENSABENE, *Chief Counsel*
BOB SIMON, *Democratic Staff Director*
SAM FOWLER, *Democratic Chief Counsel*
DICK BOUTS, *Professional Staff Member*
DEBORAH ESTES, *Democratic Counsel*

CONTENTS

STATEMENTS

	Page
Akaka, Hon. Daniel K., U.S. Senator from Hawaii	4
Barrett, Thomas, Vice Admiral (Retired), U.S. Coast Guard, Administrator, Pipeline and Hazardous Materials Safety Administration, Department of Transportation	6
Bingaman, Hon. Jeff, U.S. Senator from New Mexico	3
Bunning, Hon. Jim, U.S. Senator from Kentucky	62
Davies, Peter, Vice President and Chief Economist, BP, P.L.C., London, UK ...	16
Devens, John S., Ph.D., Executive Director, Prince William Sound Regional Citizens Advisory Council, Anchorage, AK	78
Domenici, Hon. Pete V., U.S. Senator from New Mexico	1
Dorgan, Hon. Byron L., U.S. Senator from North Dakota	4
Gruenspecht, Howard, Ph.D., Deputy Administrator, Energy Information Ad- ministration, Department of Energy	11
Hostler, Kevin, President and CEO, Alyeska Pipeline Service Company, An- chorage, AK	26
Landrieu, Hon. Mary L., U.S. Senator from Louisiana	64
Malone, Robert, President and Chairman, BP America, Inc., Houston, TX	16
Marshall, Steve, President, BP Exploration (Alaska), Anchorage, AK	16
Murkowski, Hon. Lisa, U.S. Senator from Alaska	55
Talent, Hon. James M., U.S. Senator from Missouri	5
Thomas, Hon. Craig, U.S. Senator from Wyoming	5
Van Tuyn, Peter, Partner, Besseney & Van Tuyn, Inc., Anchorage, AK	29

APPENDIX

Responses to additional questions	83
---	----

BP PIPELINE FAILURE

SEPTEMBER 12, 2006

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

The committee met, pursuant to notice, at 9:37 a.m., in room SD-106, Dirksen Senate Office Building, Hon. Pete V. Domenici, chairman, presiding.

OPENING STATEMENT OF HON. PETE V. DOMENICI, U.S. SENATOR FROM NEW MEXICO

The CHAIRMAN. The hearing will please come to order. Can you hear me in the back of the room? Yes, OK.

Before we begin the opening statements, in accordance with rule 11 of the committee's rules, I'll ask all the witnesses to please rise to be sworn in, in connection with the testimony that they're going to be giving today. I'll ask each of you to please reply individually to the following, beginning with Admiral Barrett, and I will start by asking you to raise your right hand.

Do you solemnly swear that the testimony you are about to give to the Senate Committee on Energy and Natural Resources shall be the truth, the whole truth, and nothing but the truth? Admiral Barrett?

Admiral BARRETT. I do.

The CHAIRMAN. Mr. Gruenspecht? Is that how you say your name?

Mr. GRUENSPECHT. That's fine.

The CHAIRMAN. I didn't hear your response.

Mr. GRUENSPECHT. Yes.

The CHAIRMAN. Mr. Malone?

Mr. MALONE. Yes, sir.

The CHAIRMAN. Mr. Marshall?

Mr. MARSHALL. Yes, sir.

The CHAIRMAN. Mr. Davies?

Mr. DAVIES. I do.

The CHAIRMAN. Mr. Hostler?

Mr. HOSTLER. I do.

The CHAIRMAN. Mr. Van Tuyn?

Mr. VAN TUYN. I do.

The CHAIRMAN. Thank you all. Please sit down. We will now proceed with opening statements.

Good morning, everyone. Five weeks ago, BP, British Petroleum, announced a suspension of production in the Prudhoe oil field as a result of a pipeline failure in Alaska. Initially, reports estimated

that this shutdown could mean the loss of as much as 400,000 barrels of oil per day, about 8 percent of the total U.S. oil production and 2.8 percent of U.S. supply. As Americans prepared to take to the roads at the height of the holiday driving season, as the tensions in Lebanon drive up fears of a larger Middle East unrest, and as militant attacks and kidnappings have continued to depress oil production and exportation from Nigeria, the news of disruption in our domestic supply of oil came at a most inopportune time. Everyone understands that unfortunate situation.

The effects of this news were felt immediately in the boardrooms and breakfast tables around the country and at trading desks in New York and hearing rooms in Washington. On the day of the announcement, U.S. crude oil futures increased sharply, by \$2.13, to \$76.89 a barrel on the NYMEX. Analysts and energy policymakers took to the airways announcing the potential for the very worst and Americans demanded answers to the following questions, very simple ones: First, how could this happen? Second, what did this mean for the price that they would now pay at the pump?

Five weeks later, we do not have a sufficient answer to the first question. I trust that this committee will gain some adequate insight into this over the course of the morning and, if not, into the afternoon. For the record, I find this incident inexcusable. I'm not in the oil business, but this much I know: The cost of running the appropriate standard maintenance on energy infrastructure is greatly outweighed by the cost that this incident has brought to bear in real dollars, in goodwill, and in business brand name. This is a black eye on BP and the American people and the committee demands answers today.

The second question may be refined since many of our initial fears from 5 weeks ago were thankfully not realized. Perhaps that question is better phrased today as: What could happen to prices at the pump if we had lost all the oil that was initially anticipated for an extended time period?

Finally, a third question faces this committee: What can we do and what can be done and what is at present being done to ensure that we do not face this problem again?

By way of background, it is important to note that this severe pipeline corrosion and resulting oil spill was discovered only because of inspections ordered by Federal regulators following a March 2006 spill of approximately 5,000 barrels of oil from other pipelines operated by British Petroleum. The March and August spills were allegedly the result of years of failure by British Petroleum to conduct the most basic of corrosion inspections—techniques, I should say, the most basic of corrosion inspection techniques.

I find this very distressing and I am sure it is distressing to you, Mr. Robert Malone, as you sit before us thinking about it, versus your company's way of doing business in the past and what you are known for.

This time we were fortunate. The environmental damage was relatively minimal and no persons were injured as a result of these spills, and actual production from Alaska never dropped below 510,000 barrels. But that is still well under the 800,000 barrels to

which U.S. markets are accustomed. As of today, production has returned to approximately 650,000 barrels per day.

The correlation that we all feared between prices at the pump and BP's action thankfully did not materialize. Nevertheless, this state of affairs was a wake-up call to the fact that improper maintenance of our domestic facilities could be just as serious a threat to our economy as a foreign country's turning off the spigot or a gulf hurricane shutting down producing wells.

It's one thing for this country to be adversely affected by events over which it has little or no control. It is quite another to have adverse consequences that could have been prevented inflicted on it by companies like BP. That is simply egregious, no doubt about it.

At our hearing today we are primarily addressing four issues: One, we need to learn more about what happened on BP's pipelines and the effects that this type of disruption could have on supply and price. Second, we need to gain assurances that our Alaska North Slope oil delivery system will remain secure and reliable. Third, we need to know when full production will resume. And fourth, we need to know what actions are being taken to ensure that this does not happen again.

I look forward to the witnesses' testimony. We have a large number of witnesses and we want to have time for members' questions, so I encourage members to open with remarks that are as brief as possible. Your full statements will of course be included in the record.

With that, I will turn now to Senator Bingaman for his opening remarks and whatever he sees fit to do. Senator Bingaman.

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

Senator BINGAMAN. Thank you very much, Mr. Chairman. Thanks for scheduling the hearing. Obviously it's a subject that this committee needs to be vitally involved in and to understand better, to understand what did occur that caused the interruption or reduction in supply from Prudhoe Bay, but also understand, as you point out, what actions Congress can take and what actions the private sector can take to prevent the recurrence of such an event.

I think we're all clear that this committee does not have jurisdiction over the issue of pipeline safety, but we do have jurisdiction over infrastructure reliability. Frankly, it's hard to sort those two out and separate them. I think clearly we have a great interest in understanding and dealing with this issue.

As you point out, the poor maintenance and inadequate inspections that evidently were present there in Prudhoe Bay are a very real concern to all of us. The U.S. lost something like, as I understand it, 4 percent of its supply for a period of time, an indeterminate period of time. I hope we can get a good explanation from BP as to how this incident could have happened and what steps they have taken, and are taking, to prevent it in the future.

I also hope that Admiral Barrett and Mr. Van Tuyn and other witnesses can give us a full picture of the Federal and State regulatory regime that applies on the North Slope and, in particular,

why these pipelines were exempt from Federal regulation and what oversight did State regulators perform on this infrastructure.

Finally, I just point out that this does raise questions that need to be addressed also as to the adequacy of the infrastructure that we are constructing and maintaining on the North Slope for additional developments. One particular development that I have joined with many others in writing to Secretary Kempthorne about is this planned leasing with regard to this 200,000 acres near Teshekpuk Lake. This is an area that some of us have had concerns about. And understanding the adequacy of the infrastructure, the confidence that we have with regard to not having spills in that area would be very important as well.

Thank you again for having the hearing.

The CHAIRMAN. Yes, sir, Senator.

[The prepared statements of Senators Akaka, Dorgan, Talent, and Thomas follow:]

PREPARED STATEMENT OF HON. DANIEL K. AKAKA, U.S. SENATOR FROM HAWAII

I would like to begin today by thanking Chairman Domenici and Ranking Member Bingaman for calling this timely and important hearing regarding the impact of BP's pipeline failure in the Prudhoe Bay oil field in Alaska. As the largest oil field in the United States with daily production of approximately 400,000 barrels of oil per day, Prudhoe Bay is critical to this nation's ability to successfully meet its energy needs.

I am angered that BP failed to conduct the standard tests for pipeline corrosion. It is my understanding that these corrosion problems could have been mitigated by thorough and regular inspection and maintenance of the pipes. I am also bothered by allegations that BP executives failed to respond to concerns raised by its employees regarding pipeline safety and other environmental issues prior to the March 2006 oil spill.

We, as government leaders, need to take a close look at the ways in which the energy infrastructure is regulated and ask ourselves if new requirements are necessary to ensure its overall reliability. Hopefully, this hearing will be a first step in the process of discovering what is currently being done and what more needs to be done to prevent future pipeline failures. While I believe that domestic oil production is an important part of a larger national strategy to ensure energy security and independence, it must be done taking precautions necessary to minimize harm to the environment.

I look forward to hearing your testimony.

PREPARED STATEMENT OF HON. BYRON L. DORGAN, U.S. SENATOR
FROM NORTH DAKOTA

Mr. Chairman, thank you for holding this hearing today. I believe it is important to figure out what happened and how we can ensure that it does not happen again.

BP is a big oil company and it recorded second quarter profits this year of \$7.27B, which was 30 percent higher than second quarter profits in 2005. According to one news source, these profits represented \$2.5M an hour.

I say that because this was not a small company that cut corners because of economics. This is a large company that cut corners because . . . well, I can't give you that answer. Maybe the witnesses will be able to tell us.

I don't believe it does anyone any good to come here and only testify about how they will ensure this does not happen again. This should have never happened in the first place and I believe the witnesses have an obligation and responsibility to tell the Committee and others what led to this systematic failure.

After this incident, while I was in North Dakota, I asked some oil and gas people how do you not pig a line for 15 years? Everyone I asked had the same look—mostly a scratch of the head and a response that they were asking themselves the same question.

Well, we are all scratching our heads up here and wondering how do you, as a major oil company, not do basic and essential things to check the integrity of your infrastructure? Whether, under current law, you are required to or not, it seems

that ensuring the integrity of the infrastructure for your product is the most fundamental and basic thing that you can do.

And the sad part is this—your company is not the real ones that suffered here. After the announcement to shut down the pipeline came out, the price of oil increased over \$2.00 a barrel. So while on the one hand you had a loss, the other hand showed a win.

I guess that is just the nature of the game when you have 5 oil companies in the U.S. that have such a substantial share of the oil market.

Again Mr. Chairman, I thank you for holding this hearing and look forward to knowing why BP did not consistently test and maintain its infrastructure. I am also looking forward to knowing when they knew there was a problem and what corrective measures they, and the industry, are putting in place to ensure this does not happen again.

PREPARED STATEMENT OF HON. JIM TALENT, U.S. SENATOR FROM MISSOURI

Mr. Chairman. Thank you for holding this important and timely hearing. I requested this hearing in August and I'm glad that we have this opportunity to examine the shutdown, both the events leading up to the announcement and the impacts on supply and price.

Last month, I was extremely concerned over BP's announcement to suspend production at its Prudhoe Bay oilfield due to a spill and corrosion of BP's pipelines. This pipeline supplies as much as 400,000 barrels of oil per day, which is 8 percent of U.S. oil production and 2.6 percent of U.S. supply, including imports.

Missourians, myself included, have been extremely frustrated with the current high price of both oil and gasoline. It seems to me that this shutdown could have been prevented and consumers could have been spared the slight increase in prices following the announcement. As you know, August is always high time for family vacations and I am concerned about the high cost of gasoline on families in Missouri and across the country.

Additionally, our economy relies on affordable and reliable energy supplies. Every time the cost of oil and gasoline increases, it puts pressure on the American economy. BP and other oil companies should take every possible measure to ensure that these shutdowns are avoided.

Mr. Chairman, as you know, I strongly support efforts to expand domestic production of oil and natural gas. However, I also expect the private sector to sharply step up its investment in its own critical infrastructure. Earlier this year, BP announced that its second quarter earnings rose 30 percent to a record \$7.32 billion.

Yet at the same time, they did not make the needed investments into critical infrastructure. Extensive corrosion to a pipeline of such importance to our economy is unacceptable and could easily been avoided if BP had taken even minimal steps to maintain the pipeline.

I understand that the Department of Transportation is drafting proposed legislation to regulate low stress hazardous liquid lines—like the BP line in question. I look forward to reviewing that legislation; it is clear that we can not rely on industry to self regulate. They were given the opportunity, and failed miserably.

PREPARED STATEMENT OF HON. CRAIG THOMAS, U.S. SENATOR FROM WYOMING

Good morning. I'd like to thank the Chairman for convening this important hearing and I appreciate the witnesses appearing before us today.

What has happened on the North Slope of Alaska is bad, there is no question about it. British Petroleum is a successful company with huge profits. They have failed to re-invest that money into safety and maintenance, however. This pipeline failure comes on the heels of several black eyes and tragic events for the company. There were 15 workers killed last year in an accident at a BP refinery in Texas. Traders from this company have pleaded guilty to cornering the propane market and manipulating prices during the 2004 winter; the same time of year when Americans need cheap energy most. We all know what BP has done recently. I want to know what's going to be done to fix it, I want to know what you're doing to ensure that these things don't happen again, and I want to be sure that these things will not happen in my state.

My support for energy development in Wyoming is based on trust. Your industry is a part of the community, economy and social fabric of Wyoming. When I'm told that you're doing the right thing, I have trusted you. Your companies behavior in the last year makes me question that trust.

I'll make one other point. Congress will soon consider the reauthorization of pipeline safety legislation. That legislation is outside the purview of this Committee. I do hope that our conversations today can help inform that debate, however. We must not over-reach in our effort to craft pipeline safety legislation. The situation in Prudhoe Bay is unique. The pipelines there are low-pressure but they're 3 feet in diameter. Most of these low-pressure pipelines are smaller, and they're connected to marginal wells.

Prudhoe Bay provides 8% of domestic supply, but marginal wells provide nearly twice that amount. The economics of these wells is tenuous. If we go too far in regulating the pipelines connected to them, those marginal wells become uneconomic. Producers will shut them in and we'll have two Prudhoe Bay disasters on our hands. We need to make sure that does not happen.

Again, I thank the Chairman for holding this hearing and I look forward to hearing from the witnesses.

The CHAIRMAN. With that, Senators, you understand we're going to proceed to the witnesses and then back to us, so that we can include in our opening remarks our approach to questions. Unless Senators want to change that approach, I will proceed on that basis, and time of arrival will be the time in which you're called upon. That means, from what I have seen here, that the chairman, Bingaman, Thomas, Wyden, Murkowski, Feinstein, Bunning is the order of arrival and calling on each other.

Now we're going to proceed. You've all been sworn in and we're going to start with Admiral Thomas Barrett.

STATEMENT OF VICE ADMIRAL THOMAS BARRETT, U.S. COAST GUARD [RETIRED], ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

Admiral BARRETT. Chairman Domenici, Ranking Member Bingaman, members of the committee, thank you for the opportunity to discuss the actions of the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation to oversee safe operations of BP exploration pipelines at Prudhoe Bay and steps that can be taken to prevent recurrence of such pipeline failures. Our mission is achieving and maintaining safe, environmentally sound and reliable operation of the Nation's pipeline transportation system. In practice, this requires understanding conditions of pipelines and ensuring operators take actions to prevent and address unsafe conditions. Pipelines that are safe provide reliable transportation service.

Following BP's March 2 crude oil spill from a low-stress line at Prudhoe Bay, we used our statutory authority to assert jurisdiction over the failed line and other BP unregulated, low-stress transit lines at Prudhoe Bay. We subsequently issued a series of orders to the operator to perform long overdue inspections and maintenance and implement measures for safe restoration of operations. We ordered BP to run cleaning pigs to remove solids from the lines and perform in-line inspections to understand the condition of the lines from the inside out. We directed an extensive ultrasound testing and enhanced corrosion management plan, external surveillance using infrastructure detectors to detect leaks, and development of plans to manage solids in ways that prevent risk to the Trans-Alaska Pipeline. As a result of the pigging we ordered, BP discovered the wall loss and leaks on a line segment in the eastern operating area on August 6 and subsequently shut down that line.

We also put an inspection team on the Trans-Alaska Pipeline System and updated our evaluations of the integrity and reliability of other regulated transmission lines on the North Slope to minimize risks from any additional impacts of the BP pipeline failures.

We have been on the job overseeing and directing these actions since March. Along with my western regional director, Mr. Chris Hoidal, and my chief safety officer, Stacey Gerard, I visited Anchorage and Prudhoe Bay in July to meet with my field inspectors, BP and Alyeska executives, State officials, and the Joint Pipeline Office to assess conditions and actions firsthand. Acting Transportation Secretary Maria Cino visited in August and I went back on August 31 to reassess progress and compliance with our orders.

We do not understand why BP did not more aggressively address corrosion problems that led to these leaks much earlier. We have found most pipeline operators demonstrate a higher standard of care than this, regardless of whether or not they are federally regulated.

The CHAIRMAN. Regardless of what?

Admiral BARRETT. Regardless of whether they are federally regulated or not. Most operators, whether they're under our regulations or not, exercise more care than we've seen here.

We presently are addressing two separate immediate issues with BP's major Prudhoe Bay transfer lines: first, the conditions under which the western area transfer line can continue to operate; and second, safe restoration of production on the shut-down eastern line. Each line, as you noted, carries about 200,000 barrels of crude oil a day, or a total of 400,000 barrels for both lines.

On the western line, we've required continuous ultrasonic testing and directed an enhanced corrosion management plan and external surveillance. We continue to monitor these results on a daily basis. On the eastern line, our focus is restoring the line so that it can be pigged, as a precursor to allowing it to return to full service. Flow must be restored to allow the pigging. We will allow this limited restart when we are assured it can be done safely, and restoration of normal production flow will be dependent on the pigging results.

We are working with BP to prepare for a possibility that the eastern line may not be in good condition. If pigging reveals serious problems with the remaining segments of the eastern line, we understand BP is developing options to bypass segments of the line and reroute production to other existing transmission lines until the lines can be replaced.

As unfortunate as these incidents are, they are not a bellwether for the health of the majority of the energy pipeline infrastructure. As a result of integrity management programs we have required since the early 2000 series, over 57,000 defects system-wide, which could have grown to failure and possibly caused energy disruptions, have been found and fixed. The overall safety record of the U.S. industry is getting progressively better.

On August 31 the administration proposed new safety requirements for rural low-stress pipelines, including the BP lines at Prudhoe Bay. The proposal was under development since 2004, well in advance of these spills, and will protect unusually sensitive environmental locations. Lines of this type in populated areas and

impacting navigable waters are already regulated. As this is a proposal, we are seeking public input, including the scope of coverage and requirements proposed.

The Secretary of Transportation also submitted to Congress the administration's legislative proposal to reauthorize the 2002 Pipeline Safety Improvement Act. This proposal would strengthen State programs to prevent external damage to gas distribution lines, a serious life safety risk and the only area where accidents are trending upward. The proposal also includes a provision that would enhance both safety and energy supply by implementing a risk-based approach for retesting intervals on natural gas pipelines rather than a mandatory 7-year interval regardless of risk. A recent GAO report endorsed the system risk-based approach.

The natural gas transmission industry warned that supply shortages could occur, depending on gas demand, if operators are required to shut down one-seventh of their systems for assessments in the same years in which they are conducting mandatory baseline testing.

Mr. Chairman, I want to assure you and members of the committee that the administration, the Acting Secretary, and the dedicated men and women of PHMSA share your strong commitment to improving the safety, reliability, and public confidence in our pipeline transportation system. Like you, we understand the importance of our safety mission to our citizens and the energy security and continued economic growth of our Nation.

With your permission, I'll submit my written statement for the record and be pleased to answer any questions that you may have. [The prepared statement of Admiral Barrett follows:]

PREPARED STATEMENT OF VICE ADMIRAL THOMAS J. BARRETT, USCG (RETIRED),
ADMINISTRATOR, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION,
DEPARTMENT OF TRANSPORTATION

Chairman Domenici, Ranking Member Bingaman, members of the Committee: Thank you for the opportunity to discuss recent actions of the Pipeline and Hazardous Material Safety Administration to oversee safe and reliable operations of BP Exploration (BPXA) pipelines at Prudhoe Bay, Alaska, and steps that can be taken to prevent recurrence of such pipeline failures.

Our agency mission is achieving and maintaining safe, environmentally sound, and reliable operation of the nation's pipeline transportation system. In practice, this requires understanding the condition of pipelines and ensuring that operators take actions to prevent and address any unsafe conditions. As you know the first responsibility for safe and reliable operation rests with the pipeline operator.

Since the spill of approximately x,000 barrels of crude oil from a BPXA-operated low stress line at Prudhoe Bay on March 2, PHMSA has been on the job aggressively to ensure safe and reliable operations. Because the BPXA line where the spill occurred was a low stress line, operating at less than 20 percent of its maximum strength, it had not been federally regulated. In mid-March, using our statutory authority, we asserted federal jurisdiction over the failed line and other BPXA unregulated low stress lines at Prudhoe Bay, a total of 22 miles of transit pipeline. We subsequently issued a series of orders to the operator to perform long overdue inspections and maintenance on its low stress lines and implement measures for the safe restoration of operations. These included measures to understand the conditions of the lines and take all necessary measures to assure safety and reliability. In addition, PHMSA recently proposed regulations for these types of pipelines, which have been under development since 2004.

We ordered BPXA to run cleaning pigs to remove solids from the lines and perform in line inspections (smart pigging) to understand the condition of the lines from the inside out. We directed extensive ultra sound testing and an enhanced corrosion management plan. We directed external surveillance using infra-red detectors to detect leaks and the development of plans to manage solids in a way that pre-

vented risks to the Trans-Alaska pipeline. It was as a result of pigging we ordered that BPXA discovered the wall loss and leaks on a line segment in the Eastern Operating Area that led to the production shutdown on August 6th.

Our personnel have been on the job tirelessly since March overseeing and directing these actions. We brought on additional technical resources from Oak Ridge National Laboratories. Along with my western region director, Mr. Chris Hoidal and my chief safety officer, Ms Stacey Gerard I visited Anchorage and Prudhoe Bay in early July to assess the situation first hand and meet with my field inspectors, BP and Alyeska executives, state officials and the Joint Pipeline Office. The Acting Secretary of Transportation, Maria Cino visited in August and I went back on August 31st to reassess progress and compliance with our orders.

While this was progressing we put an inspection team on the Trans-Alaska Pipeline System and updated our evaluation of the integrity and reliability of all the regulated transmission lines on the North Slope to minimize the risks to transportation from any additional impacts of the BP pipeline failures.

We do not understand why BPXA did not more aggressively address the corrosion problems that led to these leaks much earlier. Given the multiple risk factors for corrosion in the Prudhoe Bay environment and the low velocities on these lines, it is mystifying that BPXA did not run cleaning pigs regularly on these transit lines. We have found most pipeline operators demonstrate a higher standard of care than this, regardless of whether they are federally regulated or not.

While the operator's management of the lines in the years leading up to the March incident is a disappointment, BPXA is finally making progress in addressing our concerns and we are actively working with them to safely increase pipeline throughput back to previous levels. Our first concern was whether we could allow the Western area transfer line, which carries about 190,000 barrels of daily throughput to continue to operate. To do so, we required continuous ultrasonic testing. This requirement will continue until BPXA complies with our order to internally inspect the line with a smart pig. Further, we directed ultrasonic testing in all elevation changes and low spots to identify any other potential failure locations, and this testing is almost complete. We are allowing this line to continue to operate based on BPXA completion of about 25 percent of exterior, ultrasonic testing. We continue to monitor these results on a daily basis. Operator records show that BPXA inspected this line with a smart pigged in 1998. The line has twice the flow velocity of the Eastern Operating Area, making it less susceptible to corrosion.

Our other primary focus has been on getting the Eastern operating line ready for pigging as a precursor to allowing it to return to full service. The line had been carrying about 200,000 barrels of daily throughput. To pig this line, flow must be restored to allow the pig to travel the line. We recognize the importance of these pipelines to the Nation's oil supply and are working to help ensure that action is taken expeditiously, but at the same time we must be assured that even a temporary, limited restart can be operated safely, before it can proceed. We have asked BPXA to provide a credible corrosion hypothesis, validated by testing, so that we know they understand the potential corrosion on the line and can manage corrosion going forward. We will require a risk mitigation plan for pigging and restart, and a dry run of the restart, pigging and bypass operation needed to carry the solids to a safe storage tank to permanent handling. Finally, we have required additional personnel and equipment for rapid response in case of a spill. These requirements are additional to those identified in our Corrective Action Order and Amendments. Once pigged, BPXA must identify and remediate any defects prior to full production. This line could then operate until it is replaced entirely in 2007.

We are also working with BP to prepare for the possibility that the Eastern line may not be in good condition and may not be able to be restarted. If smart pigging reveals serious problems with remaining segments of the Eastern line, BPXA is developing an option to bypass large segments of the Eastern transit line and re-route product to existing transmission lines. "Jumper" lines to accomplish this will also require our approval.

The BPXA transit lines failures are not indicative of the state of the rest of the U.S. energy infrastructure. Based on our observations, other major companies are investing more consistently in the integrity of their pipeline systems and generally have much greater system reliability as a result. Integrity management procedures, required by our oversight regulations, require regular assessment and repair of identified risks. As a result of integrity management programs we have required, over 57,000 defects system wide, which could have grown to failure and possibly caused energy disruptions, have been found and fixed, at the earliest possible stage. The overall safety record of the U.S. pipeline industry is good and getting progressively better. The liquid pipeline industry is nearing completion of their baseline testing programs. We are seeing a steady decline in the number of pipeline incidents

that cause serious harm to people or the environment. Pipelines that are safe also provide reliable transportation service.

Comparing the five year periods before and after integrity management programs were implemented on hazardous liquid pipelines, spill frequency dropped 18 percent and volumes spilled dropped 35 percent.

On August 31st the Administration proposed robust new safety requirements for rural low stress pipelines including the BP lines at Prudhoe Bay. The proposal has been in development since 2004, well in advance of these spills. The proposal would protect unusually sensitive environmental locations in rural areas, covering about 22% of lines of this type nationwide. Most of the lines the proposed rule addresses are far smaller than the BP Prudhoe Bay low stress lines, but still provide critical transportation of energy products. Low stress lines in populated areas and near navigable waterways are already overseen by PHMSA. As this is a proposal we are seeking public and stakeholder input, including comments addressing the scope of coverage and the requirements included.

As you may know, the pipeline safety program is due for reauthorization and the Committees with oversight have been actively considering a range of provisions this spring and summer to build on the success of the 2002 Pipeline Safety Improvement Act. Of greatest interest to most stakeholders are provisions designed to address the leading cause of serious pipeline accidents, construction-related damage. The Administration's proposal would address this problem by authorizing civil enforcement authority of one call notification laws and financial incentives for states to improve damage prevention programs.

The Administration's proposal also includes a provision to use a risk-based approach for the management of natural gas transmission lines, which should minimize energy supply interruptions. The current statute requires operators of natural gas transmission lines to perform baseline integrity tests of their pipelines over a ten-year period and retest those lines every seven years regardless of the line's condition and risk profile. Repairs following testing may require shutdown of the gas transmission lines. The Administration has proposed removing this provision and replacing it with a risk based approach to determine appropriate retest intervals. This will improve risk management and safety. Just recently, the General Accountability Office (GAO) issued a report supporting repeal of seven-year retest requirements.

Like the GAO, we believe that safety testing should be performed as often as necessary to detect problems and prevent accidents, not on a fixed, one-size-fits-all schedule. This is not simply a question of operating costs. Because these tests can be performed only when the line is shut down, testing necessarily will have direct impacts on natural gas supply. A risk-based approach, implemented through rule-making, will have less of an impact on gas flow and, at the same time, not sacrifice safety.

The Administration's proposal also would prevent supply shortages that could result from overlapping testing requirements in the last three years of the ten-year baseline testing. The natural gas transmission industry has warned that supply shortages could occur, depending on gas demand, if operators are required to shut down one-seventh of their systems for mandatory retesting in the same years in which they are conducting mandatory baseline testing on other lines. We want to bring this issue to your attention.

Mr. Chairman, I want to assure you and members of the Committee that the Administration, the Acting Secretary, and the dedicated men and women of PHMSA, whose work at Prudhoe Bay by the way I am enormously proud of, share your strong commitment to improving the safety, reliability, and public confidence in our pipeline transportation system.

Like you, we understand the importance of our mission to the citizens, communities and the energy security and continued economic growth of America. Thank you.

The CHAIRMAN. Thank you very much, Admiral. Your written statement will be made a part of the record as if read and we will ask you questions as we see fit in due course.

What is the committee's pleasure? I assume that we should now go to the next witness, as we had planned.

All right, the next witness will proceed. Would you introduce yourself to the committee and tell us what you do and then proceed to give your testimony.

STATEMENT OF HOWARD GRUENSPECHT, DEPUTY ADMINISTRATOR, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY

Mr. GRUENSPECHT. Yes, my name is Howard Gruenspecht and I'm the Deputy Administrator of the Energy Information Administration. Thank you, Mr. Chairman, and members of the committee. I appreciate the opportunity to appear before you today to discuss the role of Alaska North Slope oil in U.S. energy markets. EIA is the independent statistical and analytical agency in the Department of Energy. We do not promote, formulate, or take positions on policy issues and our views should not be construed as representing those of the Department or the administration.

In 2005, Alaskan crude oil represented about 17 percent of total U.S. crude oil production and about 6 percent of all crude oil processed in the United States. While still an important part of U.S. supply, Alaskan oil production, of which Prudhoe Bay is the most important source, has declined from its 1988 peak of just over 2 million barrels a day to 864,000 barrels per day in 2005.

On August 6—the reason we're here—BP Exploration Alaska, which operates the Prudhoe Bay field, announced that it would suspend its production pending acquisition of further information on the integrity of the transit pipelines that carry produced oil to the Trans-Alaska Pipeline System. It was subsequently determined that only part of production would need to be taken offline for an extended period. According to the State of Alaska, Prudhoe Bay production for the month of August averaged 189,000 barrels per day, about half its August 2005 level.

West coast refineries have been the primary market for Alaskan crude oil since the inception of North Slope production. However, as production in Alaska has declined since 1988, the share of crude input to West Coast refineries that is supplied by Alaskan oil has fallen, as shown by figure 2 in my written testimony. In 2005, oil refineries in California and Washington received 32 percent of their total crude oil input from Alaska, while imports provided 38 percent. A decade earlier, in 1996, refineries in these two States received an average of 1.16 million barrels a day of crude from Alaska, accounting for half of their total crude supply, while imports provided only 13 percent.

Although the loss of any crude supply has a ripple effect throughout the world oil market, as supplies are shifted to fill gaps affecting a specific region, the current disposition of Alaskan oil suggests that West Coast refineries would be most immediately impacted by a cutback in the flow of oil from Alaska. However, as discussed in my written testimony, the cushion provided by relatively high crude oil inventories in advance of the recent production loss and the modest size of the reduction in flow that's actually occurred here precluded any major problems to date. EIA weekly refinery data through the week ending September 1 do not show any detectable impact on crude runs along the West Coast since the production cutbacks began.

The response to an extended disruption in supply from Alaska would likely involve some increase in crude oil imports, especially since West Coast refineries are among the world's most sophisticated, with the capability to process different types of crude oil

from many sources. Current major import sources for the West Coast are Saudi Arabia, Ecuador, Iraq, and Canada. Figure 3 in my written testimony provides additional detail.

Timing considerations might favor an initial surge in imports from nearby suppliers, such as Ecuador, Canada, and Colombia, with more distant make-up volumes arriving later as a result of companies taking precautions to cover their supply needs. Complete import data are not yet available for August, but there is some preliminary evidence of increased imports.

I was asked to consider the possible impacts of a hypothetical supply disruption involving more or even all of Alaska's crude oil supply. This is really very difficult to assess in general terms because the extent of those impacts would depend on many factors, such as the level of West Coast crude and product stocks, world surplus capacity, seasonal factors, and the perceived duration of the hypothetical disruption.

Looking just at the global upstream balance in the world oil market, EIA estimates that current excess production capacity worldwide is only about 1 million to 1.5 million barrels per day, with all of this residing in Saudi Arabia. The loss of over 800,000 barrels per day—that would be the complete Alaska supply—for an extended period, given the current low level of surplus capacity, could trigger a noticeable rise in the world oil price.

To conclude my testimony, I'd like to briefly summarize our latest short-term outlook for petroleum markets, which we are releasing this morning. While August, as we all know, began with a price surge, prices for both crude oil and gasoline have been falling steadily over the last 5 weeks. The average retail price of regular motor gasoline fell from \$3.04 a gallon on August 7 to \$2.62 per gallon yesterday, and we expect it to continue falling, with the monthly average of about \$2.55 per gallon in January of next year, before rising again into next summer.

Total motor gasoline stocks, which during the month of August in the last 5 years fell by an average of 10 million barrels, fell by only 2 million barrels this August. This modest decline in stocks, the expected seasonal drop in gasoline demand, and the changeover from summer to winter gasoline—the winter gasoline being less expensive to produce—are all contributing to lower gasoline prices. At the present time the spread in price between a barrel of conventional gasoline and a barrel of WTI crude oil has shrunk to between \$1 and \$2 per barrel. That's welcome news for consumers, but it's a gap that's unlikely to remain that small for a long period.

In terms of distillate stocks, they were almost 10 million barrels above the previous 5-year average at the end of August, but diesel fuel prices have not fallen as much as gasoline prices. Global demand for distillate fuels, particularly in Europe and Asia, is keeping this market tight. While diesel fuel prices are expected to decline over the next few months, prices are projected to increase again as winter demand for heating fuel grows.

Mr. Chairman and members of the committee, this completes my testimony. I'd be happy to answer any questions that you might have.

[The prepared statement of Mr. Gruenspecht follows:]

PREPARED STATEMENT OF HOWARD GRUENSPECHT, DEPUTY ADMINISTRATOR, ENERGY INFORMATION ADMINISTRATION, DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Committee: I appreciate the opportunity to appear before you today. The Energy Information Administration (EIA) is the independent statistical and analytical agency within the Department of Energy. We are charged with providing objective, timely, and relevant data, analysis, and projections for the use of the Congress, the Administration, and the public. While we do not take positions on policy issues, our work can assist energy policymakers in their energy policy deliberations. Because we have an element of statutory independence with respect to our activities, our views are strictly those of EIA and should not be construed as representing those of the Department of Energy or the Administration.

My testimony today focuses on the role of Alaska North Slope oil in U.S. energy markets. The recent reduction in crude oil production from Alaska's Prudhoe Bay Field due to concerns over pipeline integrity and the reductions in Gulf of Mexico production as a result of Hurricanes Ivan, Katrina, and Rita in 2004 and 2005 provide reminders that domestic supplies of crude oil, not just foreign supplies, are subject to unexpected interruptions.

ALASKAN CRUDE OIL

In 2005, Alaskan crude oil represented about 17 percent of total U.S. crude production and about 6 percent of all crude oil processed in the United States. While still an important part of U.S. supply, Alaskan oil production has declined from its 1988 peak of just over 2 million barrels per day to 864 thousand barrels per day in 2005, with all but 20 thousand barrels per day produced on the North Slope. The Prudhoe Bay Field, which has provided the bulk of North Slope production, averaged about 370 thousand barrels per day in 2005, down from a peak of almost 1.6 million barrels per day in 1988.

The Trans-Alaska Pipeline System (TAPS) conveys North Slope production 800 miles south to the ice-free port at Valdez, on the Prince William Sound. (Figure 1*) TAPS is owned and operated by a consortium called the Alyeska Pipeline Service Company, the current shareholders of which are BP, ConocoPhillips, ExxonMobil, Koch, and Unocal, with ownership shares of 46.93, 28.29, 20.34, 3.08 and 1.36 percent respectively. While TAPS shipped as much as 2.1 million barrels per day at peak flow in 1988, the average 2006 flow has been about 780 thousand barrels per day. Alyeska has stated that the pipeline can operate at rates as low as 400 thousand barrels per day.

On August 6, BP Exploration Alaska, Inc., which operates the Prudhoe Bay Field on behalf of itself and the other interest owners, announced that it would have to cut production from the field, pending acquisition of further information on the integrity of the transit pipelines that carry the produced oil to TAPS. (BP has a 26.3 percent ownership interest in the Prudhoe Bay Field, and its share of production in the field represented about one-third of BP's total Alaskan production in 2005.) Initially, concerns were raised that Prudhoe Bay production might be stopped altogether, but it was soon determined that only a part of production would have to be taken offline for an extended period. According to the State of Alaska, Prudhoe Bay production for the month of August averaged 189 thousand barrels per day, which is about half of its August 2005 level.

MARKETS FOR ALASKAN CRUDE AND POTENTIAL DISRUPTION IMPACTS

West Coast refineries in California and Washington have been the primary market for Alaskan crude since the inception of North Slope production. Before 1995, when the prohibition on the export of Alaskan crude was lifted by Congress, any Alaskan crude that was not used in Alaska, Hawaii, or the U.S. West Coast was shipped to other U.S. markets, mainly the U.S. Gulf Coast. Following the lifting of the export ban, the West Coast remained by far the dominant market for Alaskan crude, although some Alaska oil was exported through April 2000. Since 2000, with the exception of a single export shipment made in 2004, all Alaska crude not consumed within the state has been shipped to U.S. refiners on the West Coast and in Hawaii.

As production in Alaska has declined, the share of crude input to West Coast refineries that is supplied by Alaska oil has also fallen (Figure 2). In 2005, oil refineries in California and Washington received an average of 748 thousand barrels per day from Alaska, 32 percent of their total crude oil receipts of 2.368 million barrels per day. Other domestic production, primarily from California, provided 30 percent

*All figures have been retained in committee files.

of crude receipts, and imports provided 38 percent. This reflects a substantial reduction in the role of Alaska crude compared to 1996, when refineries in these two states received an average of 1.164 million barrels per day of crude from Alaska, accounting for 50 percent of their total crude supply. A decade ago, imports provided only 13 percent of crude supply to California and Washington refineries.

Given the current disposition of Alaskan oil, West Coast refineries are the most immediately impacted by a cutback in the flow of oil from Alaska, although loss of any crude supply has a ripple effect throughout the world market as supplies are shifted to fill gaps affecting a specific region. However, the cushion provided by relatively high crude oil inventories in advance of the recent production loss and the modest size of the reduction in flows has kept the present Alaskan supply shortfall from creating any major problems. Since the cutbacks of Alaskan crude oil production began in early August, we have not seen any significant impact on crude runs in California or Washington refineries.

West Coast (Petroleum Administration for Defense District V (PADD V)) crude oil inventories were at the high end of the typical range at the beginning of the month before the announcement, and would be expected to drop by 2.4 million barrels during August. In actuality, they fell 3.8 million barrels between July 28 and August 18, but remained within the typical range for that time of year. Because Alaskan crude oil produced prior to August would still have been arriving on the West Coast during part of this time, it is not clear that the inventory reduction was associated with the August Alaskan production reduction. From August 18 through September 1, West Coast inventories have increased slightly to a level in the middle of the typical range.

The response to an extended disruption in supply from Alaska will likely involve some increase in crude oil imports. One factor that would tend to mitigate the impacts of a disruption in supply from Alaska on West Coast petroleum product markets is that West Coast refineries are among the world's most sophisticated, in part due to the very stringent clean fuel requirements in the California market. These refineries have the capability to process different types of crude oil from many sources, providing them with more flexibility than so-called simple refineries, which require a relatively narrow range of crude oil types in order to produce their preferred product mix.

Current major import sources for California and Washington refineries are Saudi Arabia, Ecuador, Iraq, and Canada. (Figure 3) While increased imports could ultimately flow from a variety of sources, timing considerations might favor an initial surge in imports from nearby suppliers, such as Ecuador, Canada, and Colombia, with more distant makeup volumes arriving later as a result of companies taking precautions to cover their supply needs. Complete import data are not yet available for August, but there is some preliminary evidence of increased imports.

Although EIA has been asked to provide some insights into the possible impacts of a hypothetical disruption affecting more, or even all, of Alaska's crude oil supply, it is very difficult to generalize, because the extent of any impacts would depend on myriad factors, such as the level of PADD V crude and product stocks, world surplus capacity, seasonal factors, and the perceived duration of the hypothetical disruption. Looking just at the global upstream balance, EIA estimates the current excess production capacity worldwide is only about 1.0 to 1.5 million barrels per day, with all of this residing in Saudi Arabia. At the current low level of worldwide surplus production capacity, the loss of around 800 thousand barrels per day of supply from Alaska for an extended period could trigger a noticeable rise in the world oil price. Initial responses by West Coast refiners would likely include both some draw-down of crude oil stocks and efforts to increase crude imports, as described above.

SHORT-TERM ENERGY OUTLOOK

To conclude my testimony, I would like to summarize the short-term outlook for petroleum markets, which we released today as part of our September *Short-Term Energy Outlook* (STEO).

While August began with a surge in petroleum prices, prices for both crude oil and gasoline have been falling steadily over the last five weeks. The U.S. average retail price of regular motor gasoline fell from \$3.04 per gallon on August 7, 2006, to \$2.73 per gallon on September 4, 2006, and prices are expected to fall to an average of \$2.55 per gallon in January 2007 before rising again into next summer. In 2006 and 2007, we expect the West Texas Intermediate (WTI) crude oil spot price to average around \$70 per barrel and we expect retail regular gasoline prices to average about \$2.66 per gallon in both 2006 and 2007.

Projected world petroleum consumption growth is 1.2 million barrels per day in 2006 and 1.7 million barrels per day in 2007, notwithstanding recent price levels.

However, EIA has reduced expected oil demand for 2006 and 2007 downwards for the second consecutive monthly STEO in response to slower demand growth in the Organization for Economic Cooperation and Development (OECD) countries.

Surplus world crude oil production capacity is expected to increase slightly in 2007, but will remain low enough that existing and potential supply problems in Alaska, Iran, Iraq, Nigeria, and Venezuela may continue to raise concern. Because of these factors, as well as the continued tight supply-demand balance, EIA expects little relief from current pricing patterns.

First-half 2006 production data show non-OPEC production growth of around 0.3 million barrels per day compared to the same period last year, and annual growth for 2006 will likely total around 0.6 million barrels per day, reflecting both new projects and the recovery from hurricane impacts that affected production during the last four months of 2005. Non-OPEC production is projected to increase by 1.4 million barrels per day in 2007, with new projects in the Caspian Region, Africa, and Brazil expected to add more than 0.9 million barrels per day of new production.

OECD inventories began the second quarter 2006 at the upper end of their past 5-year range for this time of year. However, when measured on the basis of how many days of demand the current supply could meet, OECD inventories were only in the middle of their observed 5-year range. By the end of 2007, EIA projects days of supply of OECD inventories to finish at the bottom of their 5-year range for that time of year, which is expected to make the market even tighter.

Average domestic crude oil production is expected to decrease by 23 thousand barrels per day, or 0.4 percent in 2006, to a level slightly under 5.1 million barrels per day. For 2007, a 7.6 percent increase is expected, resulting in an average production rate of about 5.5 million barrels per day for the year.

Total U.S. petroleum consumption is projected to be unchanged in 2006 compared with 2005. In 2007, total consumption is expected to increase by 2.0 percent. While motor gasoline consumption exhibited almost no growth in 2005, it is projected to grow 1.0 percent in 2006 and 1.2 percent in 2007, reflecting anticipated continued U.S. economic growth. Distillate (diesel fuel and heating oil) consumption, having increased 1.3 percent in 2005, is projected to increase 1.8 percent in 2006 and 2.2 percent in 2007.

Total U.S. primary motor gasoline stocks at the end of August were 8 million barrels above the previous 5-year average. Total motor gasoline stocks, which fell by an average of 10 million barrels in August in the last 5-year period, fell by only 2 million barrels this August. The moderate decline in stocks, the expected seasonal decline in gasoline demand, and the changeover from summer-grade to winter-grade gasoline this month—which is less expensive to produce—all combined to lower gasoline prices in August. Although distillate stocks were 10 million barrels above the previous 5-year average at the end of August, diesel fuel prices have not fallen as much as gasoline prices have. Global demand for distillate fuels, particularly in Europe and Asia, are expected to keep this market tight. While diesel fuel prices are expected to decline over the next few months, heating oil prices are projected to increase as winter demand for this heating fuel grows.

Mr. Chairman and members of the Committee, this completes my testimony. I would be happy to answer any questions that you might have.

The CHAIRMAN. Before we go to the next witness, I just wanted to ask, for the record, would you give us, if you recall it, the highest price per barrel for oil in the past 6 months and the low?

Mr. GRUENSPECHT. I think around \$77, \$78 a barrel for West Texas Intermediate was the peak. Now we're I think at \$65 and a little bit. And this is the low point in recent history, although far above, obviously, prices that we were used to for quite a long time.

The CHAIRMAN. Yes, but that's a big drop.

Mr. GRUENSPECHT. That's a big drop.

The CHAIRMAN. What percent?

Mr. GRUENSPECHT. Well, let's say 15, 16 percent is about right. And gasoline has dropped over 40 cents a gallon in the past 5 weeks.

The CHAIRMAN. Your record reflected it, but let's emphasize it here. It appears that the OPEC cartel has fed that situation by increasing production, not decreasing it; right?

Mr. GRUENSPECHT. My understanding of the OPEC statements is that they have no plans to cut back production.

The CHAIRMAN. All right, very well. Thank you.

Now we're going to go to the BP side of the ledger here, Mr. Robert Malone, president and chairman of BP America. He is accompanied by two people. We're going to have their presence noted. Mr. Steve Marshall is the president of BP Exploration (Alaska) Inc., Anchorage, AK; is that correct?

Mr. MARSHALL. That's correct, yes.

The CHAIRMAN. And you have with you, Mr. Malone, and your vice president and chief economist, Mr. Peter Davies—or is it “Dae-Vees”?

Mr. DAVIES. It's “Dae-viss,” yes indeed, sir.

The CHAIRMAN. Thank you.

Now, you have asked me, if there's an economic question that we ask and you need an answer, if you can ask your economist, and I agreed to that. And if you want to in some way question Mr. Steve Marshall, who has more longevity in some of these areas and would know an answer, rather than leave it open and vague, we will agree to that too at this point.

So would you now proceed to give us your background with the company and your record statement, please.

STATEMENT OF ROBERT A. MALONE, PRESIDENT AND CHAIRMAN, BP AMERICA, INC., HOUSTON, TX; ACCOMPANIED BY STEVE MARSHALL, PRESIDENT, BP EXPLORATION (ALASKA) INC., ANCHORAGE, AK; AND PETER DAVIES, VICE PRESIDENT AND CHIEF ECONOMIST, BP, P.L.C., LONDON, UK

Mr. MALONE. Thank you. Mr. Chairman and members of the committee, good morning. My name is Bob Malone and I'm the chairman and president of BP America.

BP America's recent operating failures are unacceptable. They have fallen short of what you and the American people expect from BP and they have fallen short of what we expect of ourselves. We know we will be measured by what we do, not what we say, and we are in action to fix the problems, and in doing so, regain the trust of you and the American people.

On August 6 I received word of severe corrosion in one of our eastern operating area transit lines in Alaska. The decision was made to shut down these transit lines to avert any possibility of an oil spill and to protect the environment. We fully recognize this decision was not without consequences, but it was the right thing to do.

We immediately initiated extensive testing of the transit lines on the western side of the field, assured ourselves that they were fit for continued service, and thus retained the production of about 200,000 barrels a day. Many were concerned about the impact on crude supply and gasoline prices. BP brought in cargoes of crude oil from around the world, some 3.5 million barrels. Other suppliers did the same. There have been no crude shortages and both crude oil and gasoline prices have steadily declined since the incident. BP continues to acquire stocks to replace the production that remains shut down.

BP is committed to fully restoring production as soon as we are confident that it can be done in a safe and environmentally responsible way. Continued inspections of the eastern operating area lines have shown little corrosion. We plan to submit a request to DOT to resume operations very soon.

Across BP, we have taken a number of actions to ensure that our businesses are run in a manner that meets our expectations and yours. Many of these were announced by John Browne on July 1 and they included my appointment. I'd like to highlight the following.

I've retained three of the foremost experts in the world on corrosion and infrastructure management to evaluate and make recommendations for improving the corrosion management program in Alaska. We will apply these learnings to the rest of our pipeline operations in America and around the world. We have added an additional \$1 billion to the \$6 billion already earmarked to upgrade all aspects of safety at our U.S. refineries and for integrity management in Alaska. Over \$550 million, and that's net to us, will be spent on integrity management improvements in Alaska over the next 2 years.

We have initiated a review of our U.S. trading business by independent external auditors. They will examine the design of the trading organization, delegations of authority, standards and guidelines, resources, and the effectiveness of our controls and our compliance.

I've appointed former U.S. district judge Stanley Sporkin as an independent ombudsman reporting directly to me and I've asked him to conduct a review of all worker allegations that have been raised on the North Slope since 2000. I've established an operational advisory board that's composed of 15 business leaders in BP America to advise me on safety, operational integrity, and compliance. I'm in the process of recruiting an external advisory board to assist and advise me in monitoring BP's U.S. businesses, with particular focus again on safety, operational integrity, compliance, and ethics. I'm also building an internal team of experts that will work in the area of process safety, personnel safety, integrity, and compliance and ethics.

I continue to meet with employees to reinforce our expectations to them to ensure that BP's operations are safe, that they have the right and the responsibility to shut down any process they feel is unsafe or lacks appropriate integrity, and to raise any concern on any issue.

I am personally committed to rebuilding the public's confidence in BP America. I have the full support of our chief executive, John Browne, our executive leadership, and the entire BP Group, and I have been given all the authority necessary to accomplish this task. Bringing our operations to the level of excellence that you expect and we will demand is going to take time, and I would offer to this committee that I'd be happy to come back and report on our progress in 6 months and regularly thereafter.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Malone follows:]

PREPARED STATEMENT OF ROBERT A. MALONE, CHAIRMAN AND PRESIDENT,
BP AMERICA INC.

My name is Bob Malone and I am Chairman and President of BP America Inc. BP America is the U.S. holding company for all subsidiary companies operating in the United States. BP America, through its subsidiaries employs more than 36,000 people and produces 666,000 barrels of crude oil and 2.7 billion cubic feet of natural gas per day. We operate five refineries that process nearly 1.5 million barrels a day of crude oil, and a system of pipelines and terminals throughout the United States that supply over 70 million gallons per day of gasoline and distillate fuels to customers in 35 states.

BP Exploration Alaska (BPXA) is the operator of the largest oil field in North America—Prudhoe Bay on Alaska’s North Slope. Our charge is to operate this field in a safe, efficient and environmentally responsible way for the benefit of the State of Alaska, our business partners, our customers, our employees and our shareholders. The public’s faith in BP has been tested recently by corrosion discovered in the pipeline oil transit system that conveys processed crude oil from the North Slope gathering centers to Alaska’s Trans Alaska Pipeline System (TAPS).

BP has fallen short of the high standards we hold for ourselves, and the expectations that others have for us. I commit that BP America will work closely with the State of Alaska, our employees, our regulators and Congress to take the necessary steps to restore your confidence in BP.

I will outline what I know of the operational incident at Prudhoe Bay and discuss several other operational challenges BP has experienced over the last 18 months and address many of the questions members of the Committee, regulators and others have raised. Most importantly, I will outline the steps that BP has taken or is committed to undertaking to address these challenges and enhance the public’s confidence in our company.

PRUDHOE BAY

The Prudhoe Bay field is located 650 miles north of Anchorage and 400 miles north of Fairbanks. It is 1200 miles from the North Pole and 250 miles north of the Arctic Circle. Pump Station 1, the beginning of the Trans Alaska Pipeline System (TAPS), is located within the perimeter of the Prudhoe Bay field. For additional detail on Prudhoe Bay operations please refer to Exhibit 1 in the appendix.*

Prior to 2000 the Prudhoe Bay field comprised the East Operating Area, operated by Atlantic Richfield Company (ARCO), and the West Operating Area, operated by BPXA. Upon acquisition of ARCO by BP, BPXA became the sole operator of Greater Prudhoe Bay. Although BPXA operates the field, a total of nine companies have a so-called “working interest” in the field leases. The costs and production are shared amongst the working interest owners, according to their ownership.

In March of 2006, BPXA discovered a leak along the GC-21 line in the Western Operating Area (Exhibit 2). This is a 34” line that carries processed sales quality crude oil to a central gathering center for ultimate delivery into TAPS at pump station 1. The leak was approximately 5,000 barrels, the largest spill ever on the Alaskan North Slope. Shortly thereafter, the U.S. Department of Transportation (DOT) issued a Corrective Action Order (CAO) to BPXA ordering it to perform “smart pig” in-line inspection (ILI) tests along with other inspection methods along both the Western and Eastern Oil Transit Lines (OTLs). There were a number of complex technical issues to resolve before the tests could be conducted, including developing a solution for managing the solids generated during the pigging operation.

BPXA began pigging operations along the Lisburne OTL in June. ILI testing of the Lisburne OTL showed good results and affirmed our confidence that the lines were fit for service. BPXA began pigging operations along the Eastern OTL in early July. Analyses of these “smart pig” inspections were received on Friday, August 4 and indicated 16 significant anomalies at 12 different locations along the upstream segment of the Eastern OTL. BPXA began immediate physical and ultrasonic testing of these anomalies and verified the presence of additional corrosion. BPXA’s inspections also revealed insulation staining along a segment of the Eastern OTL. With the knowledge of these results, BPXA immediately shut down production at Flow Station 2 as a precautionary measure and BPXA technicians subsequently discovered a small leak after close visual inspection along the FS-2 to FS-1 pipeline segment.

The smart pig results along the Eastern OTL were unexpected. Because the exact cause of the corrosion mechanism was unknown, BPXA was concerned over the con-

*All exhibits have been retained in committee files.

dition of the Western OTL. Thus, BPXA took the prudent step on the morning of August 6 of announcing our intent to systematically shut-down both sides of the Prudhoe Bay field until existing inspection data could be further assessed and verified with follow up inspections.

Some have questioned whether BPXA made a rash decision to shut down the field over a small leak. To me, the decision to shut-down was a reaffirmation of BP's values and was the responsible thing to do. We took this step to prevent a potential release from occurring.

BP CORROSION PREVENTION PROGRAM FOR THE NORTH SLOPE

Corrosion is the natural degradation of a material, like steel pipe, that results from a reaction with its environment. While corrosion cannot be eliminated, it can be effectively managed through a combination of monitoring and mitigation treatments. The goal of corrosion mitigation programs is to control corrosion rates to acceptable levels.

Corrosion rates are not static, however, and they can increase or decrease depending on fluid properties or changes in conditions that affect the efficacy of corrosion inhibitors. For that reason, locations that are prone to corrosion damage, or where damage has been identified, are inspected as often as every three to six months.

BPXA uses pigging, ultrasonic testing (UT), visual inspections, corrosion inhibitors and other techniques as appropriate for each individual oil field's characteristics. We employ a risk-based management program whereby resources and activities are concentrated in areas where corrosion is expected to occur. Exhibits 3 and 4 describe the operations of a gathering center in producing, separating and pumping oil and show a graphical representation of a producing field.

BPXA's program was designed to control corrosion, extending the useful life of valuable North Slope infrastructure. The 2006 annual budget for BPXA's corrosion monitoring and mitigation program is \$74 million, an increase of 15 percent from 2005, and 80% from 2001. As Exhibit 5 demonstrates, corrosion management "spend" has increased significantly over the last 5 years despite the reduction in Prudhoe Bay oil production volumes.

INHIBITION

A key element of the program is widespread continuous chemical corrosion inhibitor injection. In short, the best way to address corrosion is to prevent it from happening in the first place. Our commitment to effectively managing corrosion on the North Slope is reflected in our corrosion inhibitor injection rates. Exhibit 6 is a diagram of the inhibitor concentrations and the corresponding corrosion rates achieved as measured by corrosion coupons.

We continuously monitor the effectiveness of the inhibition programs with corrosion coupons and electrical resistance (ER) probes. The ER probes take readings every 4 hours of the corrosion potential of the fluids and allow us to make adjustments to corrosion inhibitor injection rates on a weekly basis. Exhibit 7 is a typical configuration of a corrosion coupon and ER probe.

MONITORING AND INSPECTIONS

BPXA's North Slope pipeline monitoring and inspection program incorporates combinations of ultrasonic, radiographic, magnetic flux, guided wave and electromagnetic inspection techniques. Ultrasonic and radiographic testing are used as an indicator to trigger further action and is sound for pipelines that are accessible above-ground.

BPXA's overall annual inspection program includes inspections at about 100,000 locations on pipelines in Prudhoe Bay. Of these inspections, approximately 60,000 are for internal corrosion inspection and approximately 40,000 are for external corrosion inspection.

BPXA runs approximately 370 maintenance pigs per year on the North Slope. In addition, we utilize coupon monitoring, smart pigging, leak detection systems and surveillance by personnel to provide integrity assurance and maintain safe operations (See Exhibit 8 for detail regarding pigging operations).

Lines are pigged in Prudhoe Bay either because of mechanical issues or because corrosion monitoring suggests it. The frequency of pigging is specific to each pipeline and varies significantly across the North Slope and the industry. For example, the Northstar oil pipeline is pigged every two weeks to prevent paraffin buildup.

Another technology is ultrasonic testing (UT) which involves the use of a high frequency sound wave to produce a precise measurement of the thickness of a material. Our UT inspections are not simply one reading at one location on the pipe. Rather, they are an inspection of the full circumference of the pipe over a one foot length.

So when we count one UT inspection, it is really hundreds of individual readings over a one foot length of pipe. The technology is a proven diagnostic tool routinely used for corrosion monitoring.

We also use corrosion coupons (see Exhibit 7) throughout our operations in order to obtain additional information about any corrosive conditions that might exist in our systems that escaped other inhibition and monitoring programs. The majority of our coupons are read on a three to four month basis.

Important components of pipeline inspections also include regular visual inspections and the use of Forward Looking Infrared (FLIR) devices. FLIR technology is used to spot heat signatures of crude oil and is especially useful during winter months.

MITIGATION OF CORROSION

In the design of pipelines, many corrosion mitigation methods are considered. The selection of material from which to manufacture pipe, such as corrosion resistant alloys like stainless steel, is one consideration. Another option is the use of various coatings and linings that provide pipelines protection against corrosive agents.

Technology used to protect metal structures from corrosion includes cathodic protection, a technique that is usually used in buried pipelines and takes advantage of electrochemical properties to reduce a metal structure's corrosion potential.

Mitigation also involves the application of corrosion inhibitors and biocides in conjunction with preventative maintenance such as pigging and physical repair of external damage.

External corrosion is mitigated by removal of the source for the water, drying, cleaning and buffing of the damage area and application of new insulation and/or coatings. If external corrosion limits the integrity of the pipeline, then repair techniques are used such as sleeves, clock springs, clamps and or composite wraps.

IF THE PROGRAM WAS COMPREHENSIVE, WHAT HAPPENED?

The recent leaks were on the oil transit lines, which are the last pipelines before the sales quality processed crude oil flows into TAPS. By this point, the major corrosion battles have already been fought. General corrosion and pitting in the OTLs were monitored by corrosion coupons on a quarterly basis, and consistently showed very low corrosive conditions, always below the BP targeted wall thickness loss of less than .002 inches per year. Exhibit 9 shows coupon results in the OTLs. Similarly, UT monitoring results have consistently revealed corrosion to be under control.

The first indication of a growth in corrosion came from our corrosion monitoring program in the facilities upstream of the WOA OTLs. An increase in facility corrosion upstream of the WOA OTLs, detected during the 2005 UT inspection cycle, while not alarming, caused BPXA to perform additional UT inspections of the OTLs. The results of these inspections led us to schedule another ILI of the WOA OTL for mid-2006. The March release occurred before that pig run was conducted.

Based on the available test data, no evidence of general corrosion (i.e. wall loss throughout the pipe) along the OTLs has been found. Instead, the OTLs have widely spaced, mostly isolated dime-sized pits about 5 to 10 feet apart. The corrosion is more serious on the upstream segments of these lines, which have the lowest flow velocities.

Why wasn't the pitting corrosion detected by BP's monitoring program? While BP had an active inspection program for these lines, the isolated pits were too widely spaced to be detected by that program. For example, there was an inspection site adjacent to the point where a leak occurred. The inspection did not detect any corrosion—just a few feet away from a pit.

We initially believed that the corrosion along the WOA had developed due to certain operational changes in the WOA, and that the EOA was not similarly affected. However, these conclusions were premature and made before the latest inspections were completed. The inspection of the EOA OTL revealed that the pattern of corrosion damage is similar in both the EOA and WOA, although the precise corrosion mechanism remains under study.

COFFMAN REPORT

Mention has been made recently of the annual reports that have been submitted by Coffman Engineers, which reviewed BPXA's inspection and maintenance program on behalf of the State of Alaska. Drafts of these reports suggested several deficiencies in BPXA's program. The implication is that if these deficiencies had been addressed, then the recent pipeline incidents would have been prevented.

Previous Coffman reports have noted there were isolated pockets of accelerated corrosion in BPXA's North Slope infrastructure. Notably, Coffman also stated those problem areas were discovered during the regular course of inspection. When discussing internal corrosion on oil lines, the Coffman reports focus attention on the "production system" of well lines and flow lines, the "three-phase" lines that carry a mix of oil, water and gas. These are the lines where corrosion is more of a known threat than in the transit lines that carry "processed oil". Coffman did not specifically discuss the oil transit lines in any of its reports.

Thus, while there were areas in Coffman's reports recommending additional inspection and maintenance activities, on balance they offered support for the efficacy of BPXA's corrosion management program.

Excerpts from recent Coffman reports are shown below:

- The 2003 report states: "From a global perspective of oil and gas production, Greater Prudhoe Bay (GPB) and related facilities have an aggressively managed corrosion control program. This suggests an adequate long-term commitment to preserving facilities for future production and sensitivity to environmental consequences."
- The 2004 report credits BP with transparency and candor, and for maintaining a corrosion program in which there is no "acceptable" risk. It said BP's program "is effective and exceeds common industry practice," and that "Corrosion in most of the pipeline system has been reduced to a negligible level."

PATH FORWARD

BPXA's incident analysis is underway, but we have already taken steps to characterize the problem and assess the integrity of all the OTL lines. This information has been submitted to the Office of Pipeline Safety (OPS), whose staff is currently reviewing it. We also have outside experts who are reviewing the data and who will provide independent opinions about its adequacy.

We have been working in cooperation with OPS and the State of Alaska to ensure the safety and integrity of these systems. We pledge to continue working in cooperation with DOT and other interested stakeholders to ensure that these lines, and all our pipeline operations on the North Slope, are operated to a high standard of operational excellence.

Now we must focus our attention on the future—and what we will do to mitigate the risk of future leaks occurring in these oil transit lines. We have committed to undertake seven key actions:

1. Run an in-line inspection tool in each of the Prudhoe Bay Oil Transit Lines that are returned to service.
2. Confirm through testing the exact corrosion mechanism that caused this problem and modify our mitigation programs accordingly.
3. Implement maintenance pigging in all Oil Transit Lines.
4. Include all BP operated Oil Transit Lines on the North Slope into DOT's Pipeline Integrity Management Program. This will cover all 122 miles of BP Oil Transit Lines in Alaska, not just those in the Prudhoe Bay field.
5. Replace 16 miles of WOA / EOA oil transit lines with smaller diameter lines to increase their flow velocity and help prevent this problem in the future. The estimated cost of this is in excess of \$150 million.
6. Change the BPXA organizational structure has been changed with the addition of a Technical Director to provide independent assurance of our integrity management efforts.
7. Increase spending on Prudhoe Bay major maintenance will increase to \$195 million in 2007, a nearly four fold increase from 2004 spending levels. This increase is in addition to the investment in replacement pipe.

In addition to these physical changes we remain committed to work collaboratively and proactively with the DOT and State regulators.

BUSINESS RESUMPTION PLAN

Western Operating Area

BPXA has conducted more than 4,876 UT tests of the Western Operating Area OTLs subsequent to the August 6th announcement. These subsequent inspection results have not indicated any wall thickness loss greater than 39%. In addition, BPXA has begun a surveillance effort that includes daily over-flights using infrared cameras, as well as the use of hand-held infrared cameras on the ground. The cameras can detect small leaks by sensing changes in pipeline surface temperatures. Two vehicles with spill response equipment and carrying observers with infra-red

leak detection equipment are patrolling the line 24 hours a day. They will be teamed with pipeline walkers who will visually inspect the line 10 times a day.

Production had been reduced by 90,000 barrels/day due to a maintenance turnaround and a compressor malfunction in GC-2. Replacement of the compressor was completed on Sunday, August 27 and production in the WOA has been restored to approximately 220,000 barrels/day.

Eastern Operating Area

Work continues on removal of insulation from pipe; line inspections and testing are underway. We are averaging 200 to 300 inspections per day. About 160 workers are dedicated to this inspection effort.

We are currently focusing inspections on the 34" segment that runs from FS-1 to Skid 50 (see Exhibit 2). If the inspection results show that the line has integrity, we will request permission to re-start that line from the DOT. We are currently working through a process with DOT to make that request once we can provide assurance that the line can be safely re-started and pigged. We expect to make that request this week. Restart will allow us to quickly conduct both maintenance and smart pigging of these lines, in line with the DOT CAO.

This will allow resumption of partial production from Flow stations 1 and 3. After re-start, these line segments will need to be inspected with a smart pig to meet requirements imposed by the DOT. If inspection results indicate that these EOA OTLs are not fit for service, then by-pass options will be completed as soon as practicable.

Regarding the leak along the FS-2 transit line, the estimated 23 barrels of oil spilled has been cleaned up. The line currently holds about 13,000 barrels of crude. Metal sleeves have been installed on those sections of the transit line with severe corrosion. BPXA has submitted a plan to the U.S. Department of Transportation for de-oiling this segment of line.

Concurrent with our inspection activities and in case these activities indicate that the lines are not fit for service, by-pass options are being pursued to restore as much production as possible in an environmentally safe manner. The focus is largely on the EOA and includes new options to divert production from each of the existing Flow Stations to Skid 50 (see Exhibit 2).

- The production from FS-2 is being engineered to route to the Endicott production line through new piping.
- The production from FS-1 is being engineered to route to the Endicott production line through new piping.
- The production from FS-3 is being engineered to route through Drill Site 15 and then to a jumper into the Lisburne OTL.

Work on these options is expected to be completed by the end of October.

All of this work is taking place as BPXA prepares for ultimate replacement of the 16 miles of WOA/EOA oil transit lines. Sixteen miles of pipe has been ordered from U.S. mills and is expected on the slope during the fourth quarter. We are hopeful that work can be completed during the winter construction season.

At this point, we do not have a schedule for restoring all or a portion of EOA production and can't speculate on how long it's going to take.

While many of the circumstances surrounding the incidents at Prudhoe Bay are known there is much more that needs to be done to fully understand the corrosion mechanism we experienced. These results will be known in due course and will be shared in a fully transparent way. In the meantime, BPXA is committed to restoring full production to the EOA as soon as we are confident it can be done in a safe and environmentally responsible way.

New Pipeline Safety Regulations

Historically, certain pipelines that operate at low stress were exempt from U.S. DOT oversight. This exemption applied to onshore pipelines such as oil transit lines on the Alaskan North Slope.

However, since the March 2, 2006 spill from BP's Western OTL (a low-stress system); DOT has accelerated its on-going rulemaking activity and recently proposed a rule to revise the low-stress exemption. Upon completion of its rulemaking process, it is likely that any low-stress pipeline that is in an "unusually sensitive area" as defined by DOT rules will become a regulated pipeline under DOT jurisdiction. The proposed rulemaking would encompass all of the OTL's on the North Slope. These proposed regulatory changes are strongly supported by BP.

Employee Concerns

As soon as I was named head of BP America in July 2006, I took a tour of as many of our facilities as I could reasonably visit—to find out what our people were saying. I visited plants and offices across America from Alaska to Texas with many

stops in between. I can tell you that the solution to many issues that BP America faces rests right at home—with those who are our BP employees.

I made it clear that they had three obligations—

- Workers must feel that operations are safe and the integrity of our infrastructure is sound at our facilities
- If they don't feel safe or if process integrity is in question—they have the authority to shut operations down
- Workers must feel comfortable raising concerns

I know that BP has processes in place to address employee concerns. People can raise concerns through line management, they can raise concerns through our safety committees, and they can call in to a world wide anonymous hot line. Alaska has had its own hotline for worker concerns. We believe, in fact, that most of the concerns have been raised through one or more of these systems. The problem has not been in workers raising concerns—sometimes it's been our responsiveness.

In recognizing that the current situation may not provide complete assurance—I have created a new position of ombudsman, reporting directly to me. Former U.S. District Court Judge Stanley Sporkin has agreed to fill this role and provide an independent team to assess and to bring to resolution any safety-related operational concerns raised to his office. I expect Judge Sporkin will call them as he sees them. This is critical, as workers are going to speak out. We encourage it.

I have also asked Judge Sporkin to initiate a full review of all the worker allegations that have been raised on the North Slope since the acquisition of ARCO in 2000. I want to determine if the problems have been addressed and rectified to BP's standard, with appropriate feedback to the worker.

BP America is committed to finding out about and acting on operational and other issues. This is why we have created the new ombudsman role to help facilitate this information gathering and exchange.

Supply/Price and Consumer Impacts

Upon the August 6, 2006 announcement that BPXA intended to shut down the Prudhoe Bay field, concerns were expressed about the impact this decision would have on crude supplies and gasoline prices to the West Coast. Early estimates that the entire production from Prudhoe Bay of approximately 400,000 barrels/day would be shut-in proved wrong. Extensive ultrasonic testing of the western oil transit lines provided BPXA with sufficient data to determine that production in the Western Operating Area could continue in a safe and environmentally responsible manner.

The loss of crude shipments to the Trans Alaska Pipeline was thus limited to roughly 200,000 barrels per day.

In light of this supply gap, many policymakers voiced concerns that West Coast refiners would be unable to find alternative sources of crude to keep their refineries operating and the gasoline market supplied. At the time of the incident, West Coast inventory levels for both crude and products were seasonally high, near record levels in some cases.

On news of the curtailment in production, BP and others in the Industry made moves to source incremental barrels from alternative sources including West Africa (WAF), the Middle East and South America (see Exhibit 10). BP's activity was focused largely on meeting the crude oil and refined product demands of our refineries and customers. To this end, BP has secured an incremental 3.5 million barrels of crude oil for delivery to the West Coast in September and October.

The company has also agreed to take steps that will ensure the continued flow of oil to both Flint Hills Resources and Petro Star refineries in Alaska which depend on North Slope oil for their operations.

How have these incremental supplies impacted the price structure of the West Coast markets? As shown in Exhibits 11 and 12 the market reaction was relatively benign over the period due to the availability of alternative crude and product supplies. The few impacts that have been seen in the product markets were largely the result of local refinery issues rather than disruption in Alaska crude deliveries (Exhibit 13). Nevertheless, in the two weeks after the incident both crude and product prices were lower than the levels of August 6.

A few people have alleged that BP engineered the shutdown of Prudhoe Bay as a way to manipulate prices. I am here to assure you that nothing could be further from the truth. BPXA took the extraordinary step to shut down production because we saw unexpectedly severe corrosion that couldn't be explained and which caused us to question the condition of other transit lines serving the oil field. We were simply not willing to risk worker safety or the potential for a further oil spill. Further, BP has gone to great lengths to not only guarantee supplies to Alaska refiners but also secure incremental crude for delivery to the West Coast.

BP's commitment to ensuring product supply to the market and its customers is not a new phenomenon. Immediately following Hurricanes Katrina and Rita, BP also took extraordinary steps to ensure product supplies to the United States. Some of these activities are listed below:

- Importing more than 29.5 million barrels of gasoline, diesel and jet fuel for delivery into markets in the Northeast, Florida and Gulf Coast through October of 2005.
- Transporting additional supplies to Florida, where this fuel can then be used in supply-short areas typically served by the Colonial Pipeline.
- Reversing the pipeline on the Texas City marine dock to accept vessel shipments and deliver product into Colonial pipeline.
- Extending supplies by utilizing the adjustments in environmental regulations (RVP and sulfur) that will help increase the overall supply of gasoline and aid distribution flexibility. This brought millions of extra barrels into the Midwest, Northeast and Southeast markets.
- Reaching an agreement with DoE to draw, on an exchange basis, up to 2 million barrels of sweet crude from the Strategic Petroleum Reserve for use in its Midwestern refineries. BP has drawn down 200,000 barrels of this loan amount. Additionally in an SPR auction held the week of September 12, we bid for and won 2.7 million barrels of sweet crude.
- Obtaining a Jones Act Waiver to enable a foreign flag vessel to shuttle crude oil from a platform to onshore facilities. This action enables an additional 50k BOPD and 200 MSCF of gas per day to be delivered to our U.S. system.

BP America will continue to play an active role in securing the crude and product supplies necessary to meet our refinery and customer demands. The market has shown great resiliency in its ability to quickly respond to supply disruptions and thus minimize impacts to the consumer. BP America is confident that market dynamics will successfully meet West Coast needs until full production is restored in Prudhoe Bay.

Other Matters

Over the last 18 months, BP America has also experienced a major tragedy, followed by a string of other incidents that cause some to question our U.S. operations. I have been brought in to help address these and other issues. I would like to briefly comment on the incidents and explain our plan moving forward.

In Texas City, a March 2005 explosion at one of our facilities was the greatest tragedy ever experienced by the BP family. The harm it caused and the lessons learned from it will never be forgotten. In the aftermath of this tragedy we made and continue to make significant changes in our approach to process safety and in the way we operate and monitor operations at Texas City and our other U.S. refining facilities. We are committed to attaining the highest levels of safety, reliability and environmental performance.

BP has publicly accepted responsibility for the March 23rd explosion and for the management system failures and employee mistakes which contributed to or caused it. Immediately following the incident, BP Products North America (BPPNA), the subsidiary that owns the U.S. refining assets, promised to fully investigate the explosion, make public the findings of its investigation and take action to prevent a recurrence. The company also promised its full cooperation to government agencies investigating the incident and said it would assist workers and families harmed by the company's mistakes.

BP has fully cooperated with the U.S. Chemical Safety and Hazard Investigation Board (CSB), the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality regarding their investigations of the Texas City explosion.

On the recommendation of the CSB, BP has voluntarily appointed an independent panel to assess and make recommendations for improvement of process safety management and safety culture at the company's five U.S. refineries. Former U.S. Secretary of State James A. Baker, III is chairman of the panel. The panel has visited each of BPPNA's five U.S. refineries in Texas City, TX; Carson, CA and Whiting, IN, Oregon (Toledo), OH and Cherry Point, WA. BPPNA looks forward to receiving the Panel's final report and improvement recommendations later this year.

BP has put a new management team in place at Texas City, simplified the organization, improved communication, clarified roles and responsibilities and taken steps to update and verify compliance with procedures.

BP expects to invest an estimated additional \$1 billion to improve and maintain the Texas City site over the next five years.

BP operations and maintenance personnel have reviewed and updated operating and maintenance procedures and received training on process safety management, hazard recognition, process control, process trouble shooting and control of work. Site employees have completed over 300,000 man hours of operational and process safety related training since March 23, 2005.

The company has set aside \$1.2 billion to compensate victims of the explosion and has worked to resolve claims arising from the incident without the need for lengthy litigation.

Settlements have been achieved with nearly all family members of every worker who died. The company has also agreed to compensation with more than 500 injured workers.

The Thunder Horse platform is the largest semi-submersible oil production platform in the world, at 130,000 tons displacement, and is designed to process 250,000 barrels of oil and 200 million cubic feet of natural gas per day. The Thunder Horse field is located in 6000 ft. of water and involves extremely challenging high pressure and high temperature hydrocarbon reservoirs. Much of the technology being utilized on the project is industry-first involving new metallurgy, new engineering designs and 'serial number one' equipment. Thunder Horse is operated by BP, with a 75 percent working interest. ExxonMobil owns the remaining 25 percent interest.

In April 2005, the platform was towed to its location in Mississippi Canyon Block 778 in the deepwater Gulf of Mexico, 150 miles southeast of New Orleans.

Upon the approach of Hurricane Dennis in July 2005, all personnel evacuated the Thunder Horse platform in conformance with standard BP safety procedures. Following passage of the storm, the Coast Guard Marine Safety Unit Morgan City was notified that the Thunder Horse platform was listing.

A BP investigation was begun to determine the cause of the stability imbalance that saw the Thunder Horse platform list to port at an estimated 20 degrees. The U.S. Coast Guard and the Department of the Interior's Minerals Management Service also opened a joint investigation to determine the cause of the listing and their investigation is continuing. BP is cooperating fully with this investigation.

On August 1, 2006, the Thunder Horse platform completed major repairs and was declared ready for the introduction of hydrocarbons. This massive undertaking was completed on schedule and safely, with zero days away from work cases.

Some of BP's U.S. Trading operations have come under scrutiny by federal regulators. BP is cooperating with the Commodity Futures Trading Commission and the Department of Justice in their investigations by providing responsive documents, data and witness testimony.

BP has initiated a review by independent external auditors of the compliance systems in its U.S. trading business. The auditors will examine the design of the trading organization, delegations of authority, standards and guidelines, resources and the effectiveness of control and compliance. The results of the review will be shared with relevant U.S. regulatory authorities and the auditors' recommendations will be acted upon by BP.

Some policymakers and regulators have begun to question whether these operational problems at BP are symptoms of a systemic problem. Clearly, BP has had its share of issues from which we've taken important learnings. I believe BP is, overall, a well-managed company with a solid long-term record. We recognize that there has been a series of troubling problems that are unacceptable to us and contrary to our values. We want to understand why they have occurred and do whatever it takes to set them right.

I don't believe in bad luck. We need to understand these issues and then translate the lessons we learn across all of our operations.

CONCLUSION

For many, the shine has come off of BP over the last year as we have stumbled operationally. Some have questioned our environmental credentials while others have accused BP of profiteering at the expense of employee safety. BP holds itself to a higher standard and consequently expects the scrutiny that comes when we fall. Part of my job as Chairman and President of BP America is to ensure that the standards we have set are met. My commitment is to make it happen.

In response to the specific challenges that we have faced in the U.S., BP has announced several specific actions that it will be taking. These include:

- U.S. refining—a major increase in expenditure on refining maintenance, turn-arounds, inspections and staff training and the upgrade of our process safety management system.
- Alaska—major additional investment in pipeline integrity.

- Trading—a detailed review by independent external auditors of the compliance system in the U.S. trading business.
- Organization—the creation of a new outside advisory board to assist and advise BP America Inc.

As this critical work unfolds, BP won't lose sight of the opportunities to create a different kind of company. We will continue to invest in emerging technologies like hydrogen, wind, solar and biofuels. Because it is only in doing so that BP can aspire to be an energy company for the 21st century. We will also continue our work on important policy issues of the day such as climate change and offer our expertise and ideas as options are formulated.

I was sent to the U.S. by our Group CEO, John Browne, with some advice and a set of principles that will guide me and our work in the U.S. He says the real measure of a great company is not the absence of challenges but how they are dealt with.

I commit to members of Congress that I have been given the authority, the resources and the people to assure you that BP America will overcome and ultimately be strengthened by this challenge.

The CHAIRMAN. Thank you very much.

We will now go to our next witness. Would you please introduce yourself once again and tell us what you do and explain what the name of the pipeline service company means with reference to this operation up there, please.

**STATEMENT OF KEVIN HOSTLER, PRESIDENT AND CEO,
ALYESKA PIPELINE SERVICE COMPANY**

Mr. HOSTLER. Yes, sir. Mr. Chairman, distinguished members, I am Kevin Hostler. I am president and CEO of Alyeska Pipeline Service Company. I represent the 1,600 employees and contractors who operate and maintain the Trans-Alaska Pipeline System, the delivery system from the North Slope to Valdez. Today I am prepared to discuss corrosion control on TAPS, the thoroughness of our integrity management program, and the impact of reduced throughput on our operation.

We have a team of high-quality people who operate and maintain the Trans-Alaska Pipeline System, a system that has delivered 15 billion barrels of crude oil to the American people. We understand the critical importance of the safe, reliable operation of TAPS to the State of Alaska and to the Nation. I am confident our employees are capable of dealing with the challenges before us and will bring to our attention any issue or concern that impacts the integrity of TAPS.

Mr. Chairman, I am happy to answer any questions the committee may have about the Trans-Alaska Pipeline System. I have submitted written testimony and I thank the committee for this opportunity today.

[The prepared statement of Mr. Hostler follows:]

PREPARED STATEMENT OF KEVIN HOSTLER, PRESIDENT & CEO,
ALYESKA PIPELINE SERVICE COMPANY

My name is Kevin Hostler and I am the President & CEO of Alyeska Pipeline Service Company. I represent the 1600 people who operate and maintain the Trans Alaska Pipeline System—or TAPS. Our company was founded in 1970 to design, construct, and operate TAPS to safely and efficiently move oil from the North Slope of Alaska through the Valdez Marine Terminal 800 miles to the south. Alyeska Pipeline Service Company is owned by five pipeline companies: BP Pipelines (Alaska) Inc., ConocoPhillips Transportation Alaska, Inc., ExxonMobil Pipeline Company, Koch Alaska Pipeline Company, and Unocal Pipeline Company.

I know that many have questions about the security of the supply of oil through Alaska to the rest of the United States. We understand the importance of this en-

ergy asset. It is the economic pipeline for Alaska and a critical transportation link for the nation. We have an integrity management program that gives us assurance that our system integrity is sound. I am here to provide you with the assurance that the integrity of our system is intact and to share the confidence I have in our employees in maintaining this asset.

TAPS was originally designed to move two million barrels of oil per day. Prior to the events on the North Slope in August, we were operating at 800,000 barrels per day and as we entered September our daily throughput has averaged about 625,000 barrels per day. As a result of the announcement of possible shutdown at Prudhoe Bay on August 6th, we did investigate the impacts of lower throughputs to TAPS and how we would manage them to maintain operations. I will discuss our short and long term approach to managing throughput fluctuations.

CORROSION CONTROL AND INTEGRITY MANAGEMENT ON TAPS

Since the March 2006 Prudhoe Bay spill—and continuing through the August spill and production shutdown, we evaluated many aspects of our system to ensure ourselves and our stakeholders that our approach to corrosion control was appropriately rigorous. Alyeska's operations and engineering personnel reviewed the corrosion control program and have been implementing the following steps to ensure that accelerated corrosion is not adversely impacting TAPS:

- We have rescheduled our 2007 inline investigation tool (smart pig) run and are running it this year. These tools provide a comprehensive insight into the integrity of the line and indicate any anomalies. Alyeska normally runs a smart pig every three years. Our last run was in 2004. The pig run for this year is nearly complete and I have requested an expedited review of this data. TAPS has run 60 instrumentation pigs since the start up of operations in 1977. This pig run will be our 61st.
- We completed a thorough investigation of the piping at Pump Station 1. As the entry point into the TAPS mainline this was where we believed we may see accelerated corrosion if it was present in TAPS. While the work is ongoing, reports to date indicate no accelerated corrosion in the station piping. We have also reviewed piping at other pump stations and the Valdez Marine Terminal.
- We increased corrosion inhibitor injection throughout the system by 25%. It is added to our pump station and Valdez Marine Terminal piping.
- We are conducting an integrity investigation of the inlet line from Prudhoe Bay to Pump Station 1.

Corrosion control is a key component of our Integrity Management Program. Alyeska's Integrity Management Program meets the expectations of the U.S. Department of Transportation Office of Pipeline Safety regulations and is subject to periodic review by the DOT. The DOT has reviewed or audited Alyeska's execution of the program in 2002, 2003, 2005 and will do so again this October. Additionally, the Grant and Lease Right of Way agreements require Alyeska to have a comprehensive corrosion control program which is monitored by the Joint Pipeline Office.

Alyeska's Integrity Management Program has the following objectives:

- Prevent leaks to protect public safety and the environment
- Comply with State and Federal regulations
- Manage risks—assess, prevent, or mitigate
- Preserve our assets thus providing reliable oil transportation
- Provide stakeholder assurance

Security remains the biggest risk to TAPS. We work closely with Federal and State Agencies to ensure the safety and security of our pipeline. Mechanical Damage, environmental impacts and corrosion are other risks.

Our integrity management program is focused on preventing any accidental release to the environment. Should we encounter a pipeline discharge however, we have also worked diligently to be prepared to respond to an incident. We have an approved oil discharge prevention and contingency plan (C-Plan) that guides our response efforts. The plan is reviewed and approved by four regulatory agencies: the Environmental Protection Agency; the Alaska Department of Environmental Conservation; the U.S. Department of Transportation; and the Bureau of Land Management.

We also have contingency repair plan through which we maintain a large inventory of contingency repair equipment and materials that includes a wide range of replacement piping, stopples, and leak clamps. We exercise our personnel and equipment on a regular basis. It remains our goal through our Integrity Management pro-

gram to avoid an oil discharge. However, I want the committee to know that we are prepared for an incident and can respond in a timely manner.

OPERATING TAPS AT REDUCED THROUGHPUT

We are confident we can operate normally down to 500,000 barrels per day. We will face challenges as throughput drops below this rate. Among the more significant challenges we are currently evaluating are:

- Managing issues associated with cooler temperatures of the oil, particularly in the winter, and the potential for water and paraffin (i.e., wax) drop out from the oil;
- Managing the efficiency of the biological treatment process of our ballast water plant because of lower ballast water flows due to reduced tanker traffic to the Valdez Marine Terminal; and
- Managing the potential for increased vibration due to slack line conditions at the three mountain passes the pipeline must cross;

Alyeska technical experts are evaluating all of these issues to determine the full extent of the potential impacts upon TAPS. They are establishing appropriate mitigating plans for my management team to consider.

It is worth noting that our \$500 million dollar pipeline upgrade project will introduce significantly more flexibility into our ability to manage through a situation like the one we are facing today. It is designed to allow us to more efficiently handle throughputs as low as 300,000 barrels per day and higher than one million barrels per day, with the flexibility to operate at even higher throughputs. We can increase throughput by adding more pumping power to the pump stations.

In conclusion, I wish to restate that we have a comprehensive integrity management system and have considered the corrosion information from the Prudhoe Bay spill into that system. I recognize that we have challenges in front of us due to the Prudhoe Bay shutdown. We are looking at all of the potential impacts this will have on our system and will develop responsible plans to mitigate these impacts. I also know that I have some of the best technical resources available for this situation. Our decisions will be based upon the safe operation of TAPS and with no adverse impacts to the integrity of TAPS. Our daily goal is the safe and environmentally responsible management of the system.

I thank you for this opportunity to discuss Alyeska and TAPS operations and welcome any questions you may have about our operations.

The CHAIRMAN. Would one of you go to these maps and tell us what they show us? Mr. Malone, who would be the one to do that? Would you do that, Mr. Marshall? Start on this right-hand side and pull these out and show the Senators what it is we're talking about.

Mr. HOSTLER. Would you like me to hold this up?

The CHAIRMAN. Can we all see or not from there? We'll have the map interpreted for us.

Mr. MARSHALL. This is a picture of the supply to the West Coast of the United States, showing crude oil—

The CHAIRMAN. Everybody has a packet that has that with them, in front of them.

OK, would you please proceed.

Mr. MARSHALL. This shot is a representation of BP's view of Alaska production over the next 50 years. It shows the history starting in 1977 of production on this scale, running out this way. The red line there is the introduction of major gas sales for Alaska gas pipeline, which really opens up the potential for another 50 years of oil production from Alaska.

The two charts here, one shows the March spill. This shows the approximately 1.9 acres of tundra that was affected by the March spill. This has since been cleaned up and we expect no lasting damage to the environment from this particular case.

The CHAIRMAN. The spill there was 1.9 acres?

Mr. MARSHALL. That's correct, yes.

The CHAIRMAN. All right.

Mr. MARSHALL. This is the leak from the Flow Station 2 line from August 6. It was about 23 barrels and that has all been cleaned up also.

The CHAIRMAN. All right, thank you.

Mr. MARSHALL. Would you like me to go to these as well?

The CHAIRMAN. Yes, please.

Mr. MARSHALL. This is a detailed chart showing the Prudhoe Bay field and the distribution pipelines, approximately 1,500 miles of pipeline systems across here. And in red is shown the transit lines, which are the subject of discussion here today.

Finally, this is a chart showing the major producing facilities, the separation facilities here. These are the pipelines. The two blue lines represent the lines that experienced failures, and these are the lines here which remain in operation or we're bringing back into service as soon as we possibly can. The dotted red lines here show the bypasses that we are currently working on, that we hope to complete by the end of October and return Prudhoe Bay to full production no later than that point.

The CHAIRMAN. All right, then. Now we will proceed with the final witness. Peter, would you please proceed with your testimony. Tell us who you are, why you're here, and give us your testimony.

STATEMENT OF PETER VAN TUYN, PARTNER, BESSENEY & VAN TUYN, INC., ANCHORAGE, AK

Mr. VAN TUYN. Chairman Domenici, Ranking Member Bingaman, members of the committee, thank you for inviting me to testify. My name is Peter Van Tuyn. I'm an environmental lawyer from Anchorage, AK, and for the last 15 years I've worked with the conservation community, Alaska Native tribes, and others on energy issues in Alaska.

My oral comments will focus on the steps that we can take to prevent oil spills and energy supply disruptions. As I begin, I would like to note that the Gwich'in Steering Committee joins the Alaska-based and national conservation groups in supporting my testimony.

The troubles at Prudhoe Bay are just the most recent example of what is wrong in the oilfields. Warning flags have been flying high above the North Slope for many years, there to see for anyone who is looking. Problems first arose, and have been compounded over the years, because those with the power to heed the warnings symbolized by those flags, the oil industry and State and Federal land managers and regulators, simply refused to look.

By way of example, the State of Alaska has no full-time prevention engineer on the North Slope. By way of another example, in 1988, the States had asked the Federal Department of Transportation to regulate just those lines that failed at Prudhoe Bay.

BP's spilled oil and oilfield shutdown were far from accidents. Just as we learned from the Exxon Valdez oil spill that a series of events over a long period of time led to that tragedy, so too did a long pattern of neglect, complacency, and outright ignorance lead to the events at Prudhoe Bay. To ensure that this sad history does not repeat itself, we must use all the human faculties at our disposal.

The first challenge before us requires plenty of muscle, for we must find the strength to honestly and openly change the course of how the oil industry is run. While we know that no oil production activity can be rendered completely safe and pollution-free, we must move mountains in order to minimize the chance that oil spills and supply disruptions occur in the future.

The second challenge before us requires heart, for it is in our hearts that we must find the courage finally to stand tall and put action to our belief that America is the greatest country on Earth. We must have the heart to protect our special and environmentally sensitive public lands from the industrialization and pollution that inevitably flow from oil activities. Rather than demonstrating weakness, such a bold act, done with bipartisan support, would signal to the world that we, in America, will not sacrifice our public lands' soul as we struggle with our addiction to oil.

The final challenge before us requires vision, for we must use our eyes to navigate a path to the future. Our vision can guide us on the path, guide us to the path on which our quality of life remains high as we transition to new renewable sources of energy. We must do this now—right now—just to help us avoid obstacles like the recent events at Prudhoe Bay, though it can do that as well, but also because we still have the ability to focus far down the road. The longer we wait, the more immediate crises will wrest our attention away from the challenging but necessary journey ahead.

With that preface, let us now put our muscles to work. Congress should authorize an independent audit of maintenance and operation practices of oil facilities in Alaska and ensure that its findings are followed up with action. Congress should create a citizens oversight group modeled after the post-Exxon Valdez Prince William Sound Regional Citizens Advisory Council. This group would use dedicated oil industry funds to serve as an independent watchdog over North Slope and TAPS operations.

Congress should direct PHMSA, either through legislation or persuasion, to improve Federal pipeline regulation to ensure that pipelines like those at Prudhoe Bay are actively regulated by the United States.

Let us also put our hearts to work by declaring off-limits to oil activities special or especially sensitive public lands and waters in the Arctic. For example, Congress should protect in perpetuity the coastal plain of the Arctic National Wildlife Refuge. We should preserve this last intact ecosystem in America's Arctic for its own sake, for the sake of the Gwich'in people who rely upon its resources as the very basis for their lives, and for the sake of future generations to whom we should leave at least one Arctic environment much the same as we found it.

Let us leave well enough alone in the National Petroleum Reserve. The spill at Prudhoe Bay, which we have been told time and again is one of the least environmentally impacting oilfields in the entire world, sinks Interior's baseline assumption that locating oil facilities in sensitive areas like the Teshekpuk Lake region is an environmentally sound course of action. Eleven million acres of the NPRA have been offered for lease in recent years and 2.8 million acres are successfully leased. Congress should heed the lesson of

Prudhoe Bay, the voices of scientists, local residents, and the general public, and take this area off the leasing block.

Finally, let us use our vision to chart a path on which we can harness clean, renewable, and home-grown energy sources like properly-sited wind and solar arrays and farm-based biofuels. Let's reduce our dependence on oil by setting specific and meaningful targets for that reduction using improved gas mileage, better transportation choices, and more efficient homes, buildings, and appliances. Let's invest significant money and provide valuable long-term tax credits for the research, development, and implementation of energy-saving and renewable energy technologies.

It is through actions such as these that we can best overcome the challenge that Prudhoe Bay has presented to our environment and our way of life.

Thank you for the opportunity to testify. I will ask that my written comments be submitted for the record.

[The prepared statement of Mr. Van Tuyn follows:]

PREPARED STATEMENT OF PETER VAN TUYN, PARTNER, BESSENEY & VAN TUYN, L.L.C., ON BEHALF OF ALASKA WILDERNESS LEAGUE, ALASKA COALITION, ALASKA FORUM FOR ENVIRONMENTAL RESPONSIBILITY, NATIONAL AUDUBON SOCIETY, NATURAL RESOURCES DEFENSE COUNCIL, NORTHERN ALASKA ENVIRONMENTAL CENTER, REPUBLICANS FOR ENVIRONMENTAL PROTECTION, SIERRA CLUB, THE WILDERNESS SOCIETY, U.S. PUBLIC INTEREST RESEARCH GROUP

INTRODUCTION

Chairman Domenici, Ranking Member Bingaman, Members of the Senate Energy and Natural Resources Committee, thank you for inviting me to testify on the effects of the BP pipeline failures in the Prudhoe Bay Oil Field and what steps may be taken to prevent a recurrence of such events.

Unfortunately, warning flags have been flying above Prudhoe Bay and Alaska's North Slope for many years, heralding the possibility that an event like the BP pipeline failure and field shutdown could occur. The facts demonstrate that BP has had significant management and operation failures which BP must fix before its oil fields can have true operational integrity. The facts also demonstrate that the type of failures that haunt BP could be experienced by other North Slope operators as well, both because of deficiencies in their management and operation systems and because there has been, in essence, a programmatic failure of state and federal governments to effectively plan for and regulate against impacts from oil and gas-related industrial activities.

Understanding why the oil industry, and state and federal regulators, did not, and regularly do not, heed the warning flags is important to understanding what can be done to prevent a recurrence of such events. In my testimony I explore those warnings, and make recommendations to: minimize the likelihood that a major oil field spill and closure would recur; to protect special and especially sensitive areas such as the Arctic National Wildlife Refuge and the Teshekpuk Lake region of the National Petroleum Reserve—Alaska; and to limit the impact of such events on energy supplies, should it recur.

I provide this testimony as an attorney with nearly 15 years of experience working on energy issues, including those related to oil and gas, in Alaska.¹ During this period, I have counseled and represented numerous Alaska-based and national conservation organizations, Native tribes and villages, and other entities on energy issues. I have litigated numerous lawsuits against oil company and federal and state agency concerning energy production activities in Alaska. I have reviewed, counseled and represented clients on innumerable state and federal administrative proposals to authorize and regulate energy activities in Alaska. I am also familiar with federal and state proposed and enacted legislation concerning energy issues in Alas-

¹Mr. Van Tuyn would like to thank the following people for their assistance in preparing this testimony: Lois Epstein, Richard Fineberg, Mike Frank, Dan Lawn, Pamela A. Miller, Chris Rose, Stan Stephens, Stan Senner, Mike Steeves, Justin Tatham, Deborah Williams and others too sensitive or numerous to name. Any mistakes or omissions are, of course, the sole responsibility of the author.

ka and elsewhere, and have counseled clients on the intent and legal effect of such legislation.

RECOMMENDATIONS

Although it is impossible to totally eliminate the risks of major spills taking place from the oil fields, the *first category* of recommendations provided here includes proposals aimed at minimizing the likelihood that a significant polluting and supply disruption event would recur on Alaska's North Slope. These include:

- Authorizing, performing, and implementing the recommendations of an independent audit of maintenance and operation practices of oil facilities in Alaska;
- Creation of a Citizen's Oversight Group, modeled after the post Exxon Valdez Oil Spill Prince William Sound Regional Citizen's Advisory Council, that uses dedicated funds to serve as an independent watchdog over North Slope and TAPS operations;
- Improved Federal pipeline regulation;

The *second category* of recommendations includes a call to place off-limits to oil activities particularly special or sensitive Arctic environments. BP's Prudhoe Bay spill exposes the fallacy that oil drilling and a pristine environment can co-exist, and Congress should heed this reality by:

- Closing in perpetuity the Coastal Plain of the Arctic National Wildlife Refuge to oil and gas leasing, exploration, development, production or transportation-related activities and permanently designating it as Wilderness;
- Placing off-limits to oil and gas activities particularly sensitive places such as the Teshekpuk Lake region in the Northeast Planning Area of the National Petroleum Reserve—Alaska (NPRA or the "Reserve").

The *final category* of recommendations is a request that Congress begin the important and inevitable process of:

- Harnessing clean, renewable, and homegrown, energy sources like properly-sited wind, solar and farm-based bio-fuels;
- Reducing our dependence on oil by setting specific and meaningful targets for that reduction, using improved gas mileage, better transportation choices, and more efficient homes, buildings and appliances;
- Investing significant money and providing valuable tax credits over a substantial period of time for the research, development and implementation of energy-saving and renewable energy technologies.

"PAST IS PROLOGUE"

In March 2003 the National Research Council of the National Academy of Sciences released a congressionally-requested report on the cumulative impact of oil development on Alaska's North Slope.² The National Research Council found that there had been little assessment of the cumulative impact of such activities, and that information about cumulative impacts is "critical to support informed, long-term decision-making about resource management."³

Just five days ago, a federal district court judge released a preliminary ruling indicating that he is likely to halt a federal lease sale in the sensitive Teshekpuk Lake region of the Northeast area of the Reserve because the U.S. Department of the Interior had "failed to fully consider the cumulative effects of the proposed development" ⁴ The court stated that the Interior Department had represented to it in a previous case concerning an oil and gas lease sale in the Northwest portion of the Reserve that Interior would analyze the cumulative impacts of simultaneous oil development in both of the Reserve planning areas as part of its decision to lease the Teshekpuk Lake region in Northeast portion of the Reserve.⁵ When Interior yet again put off the analysis—this time saying it would do so when development actually occurs—the court, at least preliminarily, concluded that Interior had violated the law.

Consequently, despite the "critical" importance of information about cumulative impacts to informed agency decision-making,⁶ specific and formal agency promises to do so were broken.

²National Research Council, *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope*, National Academies Press (2003) (NRC Report).

³NRC Report at 1.

⁴National Audubon Society vs. Kempthorne, Memorandum Decision (Preliminary) at 15, September 6, 2006, No. 1:05-cv-00008-JKS (D. Ak.) (Audubon Memorandum Decision).

⁵Audubon Memorandum Decision at 14.

⁶NRC Report at 1.

BP's failures at Prudhoe Bay are perfectly analogous to this situation. As this quote from 2001 demonstrates, BP has long promised that Prudhoe Bay is safe and in good shape:

We believe Prudhoe Bay is safe and that *BP has always had as its number one priority* the safety of our employees and contractors and *the integrity of the North Slope system*.⁷

BP's March 2006 oil spill—the largest in North Slope oil field history—and its early August announcement that it was going to shut down the largest oil field in the United States due to pipeline integrity problems demonstrate the hollow nature of this promise.

Avid drilling advocate Senator Ted Stevens also bemoaned the broken promises:

I am disturbed not only by the fact that over the years, when I've taken members of Congress up there—particularly senators and people from the administration—we've been briefed that this is the safest area in the world, and how it's been maintained, and how they've got special procedures to check for corrosion and erosion and any sludge inside the pipeline.

As a matter of fact, it just wasn't done
They sold us the fact their processes would perform. And they didn't.⁸

This section of the testimony reviews the broken promises of safe, responsible, informed and vigilant oversight of the industrial activities of Alaska's oil patch. As the example at the beginning of this section portends, this promise is broken not just by BP, but by others involved in the oil patch; other oil companies and governments alike. This history is recounted here because understanding it is critical to crafting and implementing any plan to remedy the problems; unless Congress takes the time—right now—to fully analyze and remedy the problems that led to the Prudhoe Bay debacle, we will be destined to repeat history, and in the process further risk worker safety, the environment, and a portion of our nation's energy supply.

BP has a long history of inadequate management and operations

That BP has been a troubled actor in the oil fields has been apparent for some time. For example, in the late 1990's, BP pled guilty to felony illegal waste disposal charges. Despite laws prohibiting injecting below the tundra anything classified as hazardous, a BP contractor had for years been doing just that with barrels of hazardous foreign substances, such as glycol and paint thinners. When a worker questioned this practice in 1995, BP characterized the re-injection as two isolated incidents. But in reality, the illegal disposal was ongoing for years and took place under the cover of darkness. After an extended investigation, BP, its drilling contractor Doyon Drilling, and three workers paid \$1.55 million in criminal fines and were placed on criminal probation for five years. BP paid an additional \$6.5 million in civil penalties, while BP and Doyon Drilling agreed to spend an additional \$17 million to improve their environmental compliance programs.⁹

In 2001, after North Slope workers complained that budget cuts forced them to work with worn-out and dangerous equipment, BP insisted that its North Slope operations were safer than ever.¹⁰ In early 2002, Bill Burkett, a veteran BP Prudhoe Bay worker, warned, "if they continue to cut corners the way they do now I fear a catastrophic event is imminent."¹¹ His warning proved prophetic. In August of that year, an explosion and fire at a Prudhoe Bay well house put a veteran worker in the hospital with serious burns. BP immediately claimed that well inspections prior to the blast had been properly conducted. Later admitting that this claim was false, BP again promised to improve its field monitoring and safety programs. Four

⁷ Statement of Bob Malone, then-regional president of BP U.S., as reported in The Wall Street Journal. Jim Carlton, Oil and Ice, In Alaskan Wilderness, Questions About Bush's 'Friendlier Technology', The Wall Street Journal (April 13, 2001) (emphasis added).

⁸ Richard Mauer, BP Failure "shocked" Stevens, Anchorage Daily News (August 18, 2006).

⁹ See Eric Nelson, Poisoning the Well: Whistleblower Disclosures of Illegal Hazardous Waste Disposal on Alaska's North Slope, The Alaska Forum for Environmental Responsibility, January 1997. (<http://www.alaskaforum.org/reports.html>). BP's "isolated incidents" claim was made by Richard C. Campbell (President, BP Exploration [Alaska], Inc.), "URGENT—Response to Alaska Forum Release" (e-mail communique to all BP employees), Jan. 29, 1997. See U.S. Dept. of Justice, Press Release "North Slope Driller Admits Illegal Disposal of Hazardous Waste; \$3 Million Plea Agreement Announced" (April 30, 1998) (detailing fines and penalties); see also Maureen Clark, Associated Press, "BP to pay \$22 million for dumping on slope," Fairbanks Daily News-Miner (Sept. 24, 1999).

¹⁰ See Kim Clark, "Danger in the oil patch: Workers say BP is violating probation," U.S. News & World Report, Aug. 6, 2001, p. 21.

¹¹ Jonathan Rugman, Oilfield Revelations, Channel 4 News, Anchorage, AK, March 11, 2002.

months later, a welder repairing a high-pressure line at Prudhoe Bay was tragically killed when a plug blew out of the line.¹²

Another BP worker told Congress in 2002 of this telling experience on the North Slope:

[l]ast year . . . Senator [Frank] Murkowski came to Prudhoe with [Interior Secretary] Gail Norton and publicly dared anyone to find oil or contamination in the well house that they were standing in. Before his arrival, we put fresh gravel in the well house, and cleaned the well and manifold buildings on the pad. All the good Senator needed to do was, scrape off the 4 inches of clean gravel with his shoe and he would have found some evidence.¹³

With that larger context, independent analyst Richard Fineberg provides this compelling summary of BP's corrosion-related history:

For years, BP workers had risked their jobs to send word to the company's top executives that, due to cost-cutting pressures, the nation's largest oil field was in danger of a catastrophic event that could injure or kill workers, harm Alaska's environment and cut off a major portion of the West Coast oil supply and state revenues. These warnings frequently mentioned BP's problems with corrosion

- In 1999, the dangers of corrosion on non-regulated pipelines were so significant that BP entered into an agreement with the Alaska Department of Environmental Conservation (ADEC) to develop a work plan, hold semiannual work sessions with ADEC and file an annual progress report with the agency
- In January 2001, corrosion problems again were among the items listed by concerned BP North Slope technicians relayed to BP Chairman Lord John Browne by Charles Hamel of Alexandria, Virginia, who frequently serves as a conduit for the health, safety and environmental concerns of beleaguered North Slope workers. According to that letter, "(w)e are way behind on our corrosion inspection and repair."⁵
- In March 2002, BP North Slope worker and health and safety officer Bill Burkett listed his numerous efforts to contact monitoring agencies about his concerns—including corrosion—in a letter to . . . Democratic Senators Joseph Lieberman and Bob Graham. Burkett, then due to retire shortly, also gave a lengthy broadcast interview in which he discussed his numerous concerns.
- In a 2004 letter, Hamel wrote to BP board environmental safety subcommittee chair Walter Massey to warn of "cost cutting, causing serious corrosion damage" that contributed to worker fears of "a catastrophic event."
- On January 20, 2005, Hamel sent a letter to Senator [Ted] Stevens discussing BP's [] other safety problems on the North Slope. That letter concluded with the warning that "money saving 'Russian Roulette' risks taken are jeopardizing the vital North Slope crude deliveries to the lower 48."¹⁴

As reported in the media, throughout this time, "BP ha[d] issued rosy annual reports to the Alaska Department of Environmental Conservation about how its corrosion monitoring on the North Slope is getting better all the time."¹⁵ And, as it turned out, at least the first such report, if not the later ones, was doctored to make it appear that BP's corrosion control program, including its refusal to run maintenance or smart pigs down the lines to clean and assess the integrity of the line (respectively), was more substantial and comprehensive than was actually the case:

¹²The Alaska Oil and Gas Conservation Commission eventually fined BP \$1.3 million for safety violations in this incident, then added another \$100,000 penalty for failures to execute the new procedures. See: Sheila McNulty, "Well testing is cold comfort for Alaskan staff," *Financial Times*, Aug 27, 2002 and "BP admits test lapse at Alaskan well," *Financial Times*, Sept. 11, 2002; and Wesley Loy, "BP to pay \$ 1.4 mm for safety violation cases," *Anchorage Daily News*, Jan. 8, 2005; Ben Spiess, "Welder struck by plug, killed—Prudhoe Bay: Victim, 2 others were working on water pipeline," *Anchorage Daily News*, December 22, 2002.

¹³Robert Brian, Instrument Technician for BP Exploration (Alaska) Statement before Senators Lieberman and Graham, March 11, 2002; see also Tony Hopfinger, Second BP Vet Blows the Whistle, *Anchorage Daily News*, March 13, 2002 at A1 (Robert Brian stating that "Working for BP is like working for a drunk driver [who] insists on driving you home.")

¹⁴See Richard Fineberg, "Shocking?" Evidence Mounts from Alaska and Elsewhere that BP's Inadequate North Slope Performance Should Have Been No Surprise to Public Officials or Monitors (September 3, 2006) www.finebergresearch.com (footnotes omitted).

¹⁵Dermot Cole, For six years, BP reported progress on corrosion inspections, *Fairbanks Daily News Miner* (August 11, 2006).

[T]he original version . . . said BP's corrosion-monitoring program "makes it difficult to develop a qualitative understanding of the basis for their corrosion strategy." That reference was replaced by this: "BP has demonstrated a clear commitment to corrosion control."¹⁶

And then, in March of 2006, BP caused the largest oil spill in North Slope oil field history, during which one of its pipelines at Prudhoe Bay corroded and spilled over 200,000–260,000 gallons of crude oil onto the tundra.¹⁷ Fast forward to early August, after BP had received orders from the federal Department of Transportation, Pipeline And Hazardous Materials Safety Administration (PHMSA) to conduct pig tests on its Prudhoe lines, BP "discovered" that its pipeline system at Prudhoe Bay was at serious risk of failure due to corrosion, and literally shut down significant portions of the largest oil field in North America.¹⁸

And even with that, and all the attention it brought on (including the scheduling of this hearing), BP's risk-taking continued:

As the week [of August 10] has progressed, BP has shifted its stance and now says it may be able to keep the western half of the field open, a move that would send a reassuring signal to global energy markets and Californian drivers alike. But, company officials here acknowledge that if it decides to keep pumping, it would do so without using the smart pig tests, a move that critics say leaves the company vulnerable to more problems in the western field.¹⁹

Other Oil Companies Are Also Risk Takers

Although BP's North Slope problems have made headlines recently, BP is by no means the sole actor in Alaska's oil patch whose substandard performance has raised serious health and safety issues while jeopardizing a major portion of the west Coast's oil supply. To learn and address the lessons from the BP failures, it is therefore necessary to consider the patterned behavior of other oil and gas companies and partnerships operating in Alaska.

As an initial matter, BP operates some of the oil fields on behalf of ExxonMobil, ConocoPhillips and other more minor company leaseholders. Just because these companies are "absentee landlords" does not absolve them of their legal obligation to ensure that their oil fields are being managed with management and operational integrity; they too are responsible for the problems at Prudhoe Bay.

Industry-wide problems were revealed in a series of detailed reports by the conservation community in the late 1980's (Oil in the Arctic), early 1990's (Tracking Arctic Oil) and late 1990's (Under the Influence: Oil and the Industrialization of America's Arctic).²⁰ And of course the *Exxon Valdez* oil spill in 1989 revealed to the nation and the world that promises to respond to and clean up oil on Alaska's coasts were empty. Indeed, oil from that tragedy still soils beaches in Prince William

¹⁶Jim Carlton, U.S. Officials Are Investigating Changes Made to Report on BP, Wall Street Journal (August 24, 2006); see also Dow Jones Newswires, BP Sought Lenient Assessment of Alaska Oil Ops (August 24, 2006) ("BP complained that the Coffman assessment was "biased and unduly negative" and should be rewritten. In January 2002, Coffman released a toned-down report, which included only one of the original criticisms . . ."); Matthew Dalton And John M. Biers, Consultant Warned BP Of Pipe-Network Corrosion, Wall Street Journal at A-3 (August 24, 2006) (BP "pipeline system vulnerable to localized corrosion, with large blind spots where problems would be difficult to detect."). The original Coffman documents, as well as an analysis of them prepared by former BP worker Glenn Plumlee, are available at <http://www.pogo.org/p/environment/AlaskanPipeline.html>.

¹⁷See http://www.dec.state.ak.us/spar/perp/response/sum_fy06/060302301/060302301_index.htm (State of Alaska information on spill); <http://www.finebergresearch.com/pdf/Report060315Rev.pdf> (independent analyst's report on March spill); http://www.alaskaforum.org/news_stories.html (media regarding the spill).

¹⁸See <http://www.nytimes.com/aponline/business/AP-Oil-Field-Shut-down.html?hp&ex=1155009600&en=4ca2929e3a060a67&ei=5094&partner=homepage>; <http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7020594>.

¹⁹John Biers, BP Pumping West Prudhoe Bay Would Be Without 'Pig' Test, Dow Jones Newswires (August 14, 2006); see also Jessica Resnick-Ault, Wall Street Journal, BP to Keep Some Prudhoe Oil Flowing (August 12, 2006) ("Over the last five days we have doubled spot inspections over a key five-mile segment of the oil transit pipeline serving the western side of the field." BP America President Bob Malone said in a press release. "The results have been encouraging and have increased our confidence in the operational integrity of this pipeline. With greatly enhanced surveillance and response capability, I am confident we can continue to safely operate the line.")

²⁰See Oil in the Arctic, Trustees for Alaska, NRDC, NWF (1988); Tracking Arctic Oil, Trustees for Alaska et al. (1991), <http://www.trustees.org/Supporting%20Documents/Tracking%20Arctic%20Oil.pdf>; Oil and the Industrialization of America's Arctic, Trustees for Alaska (1998), <http://www.trustees.org/Supporting%20Documents/Under%20the%20Influence.pdf>.

Sound; so much so that the state and federal governments are pursuing more money from Exxon to continue the clean up. And 17 years after the spill, Exxon still refuses to pay the civil judgment for the lives and livelihoods it soiled.

In August 2004, EPA imposed a \$485,000 civil penalty on ConocoPhillips for Clean Water Act violations at its drilling platforms in Cook Inlet, Alaska. There had been 470 violations of the rig's National Pollution Discharge Elimination System Permit over a five-year period, and six unauthorized discharges of pollutants. Earlier that year the Alaska Department of Environmental Conservation imposed an \$80,000 civil penalty on ConocoPhillips for Clean Air Act violations at the supposedly "hallmark" Alpine oil field. High carbon monoxide emissions from turbines at the Central Processing Facility used to re-inject natural gas exceeded the air quality permit over a year-long period.²¹

This followed a history of Clean Air Act violations at Alpine even prior to production. During development drilling in 1999, DEC fined ConocoPhillips a total of \$24,000 for penalties and damages (\$19,500 suspended) in three cases of permit violations for excess emissions sources from the drilling mud plant, and other drilling operations.²² The Alpine oil field began producing in 2000.²³ By January 2001, ADEC found that the secondary power turbines were not operating as permitted and produced high emissions of Nitrogen Oxides (NO_x) for which ConocoPhillips was fined \$16,875 in damages (\$11,875 suspended).²⁴

Further, the Environmental Protection Agency is conducting what is apparently still an on-going criminal investigation into intentional dumping of drilling wastes contaminated with hazardous material from an ice pad into the Beaufort Sea by Pioneer Natural Resources Company. Supervisors ordered that thousands of gallons of toxic drilling mud at the Oooguruk exploratory well be dumped into the sensitive coastal waters near Prudhoe Bay to save costs of proper disposal in March 2003, according to workers.²⁵

Pursuant to its master plan for oil spill response, Alyeska Pipeline Services Company, the operator of the 800-mile Trans-Alaska Pipeline System (TAPS) between the North Slope and Valdez, is legally required to maintain a variety of spill response equipment that is readily available for rapid response to any emergency.²⁶ One of the listed items is a bullet hole clamp. But when a miscreant shot a hole in the pipeline with a high-powered rifle in October 2001, it was revealed that the existing bullet hole clamp could not be used. Alyeska tardily set about inventing a new bullet hole clamp. As a result, a thick stream of crude oil poured into the nearby trees for 36 hours, destroying nearly 2½ acres of trees.²⁷

Early in 2005, two veteran maintenance engineers left Alyeska after 30 years of service. Prior to their separate departures, both warned that the management was failing to address environmental concerns. Later in the year, the company's chief operating officer was removed from his position nine days after he presented the TAPS owners with a list of 101 serious risks on TAPS.²⁸

State and Federal Failures

Alaska and the federal government have also made and broken promises, and undertaken risky behavior, both in the planning and regulatory arenas. This section provides examples of these failures, and demonstrates that there has been a pro-

²¹ See Recent Oil Company Fines and Penalties in the North Slope Oilfields, and cites therein. http://www.northern.org/artman/uploads/oil_company_fines_and_penalties8-9-06.pdf#search=%22ConocoPhillips%20Clean%20Air%20Act%20%2480%2C000%22.

²² DEC Compliance Order by Consent No. 99-267-50-1332 to ARCO Alaska Inc. (Nov. 7, 1999); DEC Compliance Order by Consent No. 99-267-50-1372 to ARCO Alaska Inc. (Nov. 22, 1999); DEC Compliance Order by Consent No. 99-370-50-1381 to ARCO Alaska Inc. (for Doyon Drilling Units) (Dec. 20, 1999).

²³ Alaska Department of Natural Resources, Alaska Oil and Gas Report at pages 3-35 (December 2004), www.dog.dnr.stat.ak.us.

²⁴ DEC Compliance Order by Consent (COBC) No. 00-586-50-1712 to Phillips (Jan. 10, 2001).

²⁵ Jim Carlton, EPA Pursues Report that oil crew dumped polluted mud in Alaska, *Wall Street Journal* (October 19, 2005).

²⁶ The major owners of Alyeska are BP (46%), ConocoPhillips (28%) and ExxonMobil (20%).
²⁷ Alaska Department of Environmental Conservation, et al., *Joint After-Action Report for the TAPS Bullet Hole Response* (October 2001), Feb. 8, 2002, <http://www.state.ak.us/dec/dspar/perp/home.htm>. For the TAPS oil spill contingency plan reference to the bullet hole clamp, see Trans Alaska Pipeline System, Pipeline Oil Discharge Prevention and Contingency Plan—General Provisions, Dec. 31, 2003 (Ed. 4, Rev. 1), pp. 1-375-376. (The version of the TAPS C-plan approved three months after the Oct. 4, 2001 spill [Rev. 0, Dec. 31, 2001] contains identical language at pp. 179-180.)

²⁸ See Richard A. Fineberg, "Documents Reveal Trans-Alaska Pipeline In Trouble; Monitors Punt" (November 2, 2005), <http://www.finebergresearch.com/archives/spilling.html>; and Jim Carlton, "Alaskan Pipeline Faces Safety Risk, Executive Warned," *Wall Street Journal* (September 17, 2005).

grammatic failure to make informed agency decisions and follow through with stringent regulations.

The TAPS right-of-way renewal provides an example applicable to both the state and federal governments. Despite numerous examples of other performance failures on TAPS, in late 2002 and early 2003 state and federal authorities renewed Alyeska's right-of-way agreements, issued 30 years earlier, without taking steps to address the numerous problems on TAPS expressed by concerned citizens, environmental and other public interest groups.²⁹

State of Alaska

In past decades, Alaska had stringent planning requirements. These came from two primary sources. First, Alaska law required that any decision to commit state lands to oil and gas activities would only go forward if it was in the "best interest" of the State, as determined after a thorough analysis of the costs and benefits of going forward. Second, the Alaska Coastal Management Program (ACMP) contained stringent environmental and community protection standards, developed by local communities as well as state agencies, and was applicable to development activities in Alaska's ample coastal communities.

A series of lawsuits successfully challenged Alaska's "best interest" finding and ACMP compliance in Alaska decisions to proceed with, among other things, oil and gas lease sales in the Arctic.³⁰ In response, the Alaska legislature amended the statutory "best interest" requirements to get rid of the requirement that full costs of a leasing proposal be examined before a lease sale is actually held.³¹ Furthermore, Governor Frank Murkowski directed the final evisceration of the ACMP.³²

In another controversial move, Governor Murkowski abolished the habitat division of the State of Alaska Department of Fish and Game, which was responsible for implementing the waterway-based environmental protections contained in Title 16 of Alaska's laws. He transferred what responsibilities were left to implement Title 16 to the Alaska Department of Natural Resources, the resource development agency that sits at the top of the state's administrative hierarchy.³³

On the regulatory front, the State of Alaska cannot claim that it was not forewarned about the high level of corrosion risk present in the North Slope oil fields, especially Prudhoe Bay. The state DEC was the recipient of the above-described original Coffman Report.³⁴ Rather than heed its warnings and compel BP to implement a more thorough corrosion monitoring program, including the routine use of maintenance and smart pigs, DEC set aside the concerns raised by its well-respected lead oil spill prevention engineer, whose position it was that changes should only occur where factual inaccuracies are proven,³⁵ and allowed the report to be altered.

Well before the Coffman report controversy, however, the state was on notice that the corrosion monitoring and leak detection systems on the North Slope were unnecessarily risky. Administrative comments to DEC from Trustees for Alaska on the Prudhoe Bay spill plan (C-Plan) from 2002 are particularly telling given BP's September 7, 2006 testimony in the House Subcommittee on Investigations and Oversight that costs are not a factor in field maintenance at Prudhoe Bay:

In BPA's case, ADEC has confirmed, and BPXA has acknowledged that the crude oil transmission lines do not comply with the leak detection standards for pipelines. See 18 AAC 75.055(a)(1); 18 AAC 75.425(e)(4)(A)(iv). Leak detection standards have been in place since

²⁹ State renewal of its right-of-way lease agreement was formally issued on Nov. 26, 2002; the federal grant was renewed six weeks later. For information concerning the performance failures on the TAPS right-of-way renewal, see Richard A. Fineberg, "Background Report: TAPS Lease Renewal—Opportunity Lost" (August 2004), <http://www.finebergresearch.com/tapsenviro.html>.

³⁰ See e.g., *Trustees for Alaska v. State of Alaska*, Dept. of Nat. Resources, 865 P.2d 745 (Alaska 1993) (holding that DNR's best interest finding regarding oil and gas leasing near Demarcation Point was inadequate because it failed to address the risks of transporting oil from the sale area to market and it failed to consider impacts on the Porcupine caribou herd and on the subsistence users of the herd); *Trustees for Alaska v. State of Alaska*, Dept. of Nat. Resources, 851 P.2d 1340 (Alaska 1993) (holding that DNR's consistency determination regarding the sale of oil and gas leases in Camden Bay violated the ACMP by, among other things, inadequately addressing geophysical hazards).

³¹ Compare AS 35.05.035 as it existed in 1990 with AS 35.05.035 as it exists today.

³² Governor Issues 'Streamlining' Executive Orders, Anchorage Daily News, B2 (Feb. 13, 2003).

³³ Murkowski issues habitat division order, Fairbanks Daily News-Miner (February 12, 2003).

³⁴ See *infra* footnotes 16-17 and accompanying text.

³⁵ This situation was exposed at the House Energy and Commerce Committee, Investigations and Oversight Subcommittee, Hearing on BP's Pipeline Spills at Prudhoe Bay: What Went Wrong? (September 7, 2006).

1992—ADEC should not allow any further delay in installing, testing and ensuring that BPXA’s transmission lines meet regulatory standards. Further AS 46.04.030(e) requires that the applicant use the best available technology *at the time the plan was renewed*. The technology exists (for example, the use of turbine meters in conjunction with other technology was determined to be best available technology at facilities like Lisburne), **yet BPXA has failed to implement such technology at Prudhoe Bay because of the cost of additional meters (estimated at around \$10 million)**. Yet cost is not necessarily an excuse to fail to implement best available technology—especially in the largest oil field in Alaska.³⁶

BP’s position on that spill plan, which DEC ultimately accepted, appears to directly rebut last week’s BP testimony.

Finally, with respect to low stress pipelines such as those that failed or were in danger of failing during 2006 at Prudhoe Bay,³⁷ DEC regulates BP’s faulty pipelines under its “crude oil transmission pipeline” requirements.³⁸ Current DEC requirements do not deal specifically with corrosion; however DEC’s general oil pollution prevention authority³⁹ would have allowed inspectors to require pipeline operators to take steps to prevent corrosion-related oil discharges. That of course never happened.⁴⁰

DEC remarkably takes the position that its primary oil spill-related “obligation is to ensure that an operator takes specific measures to be prepared to effectively respond to spills from the operation once a permit to drill has been issued.”⁴¹ Moreover, its recent regulatory revision process was designed to “improve clarity”⁴² although in reality it mirrored an oil industry wish list.⁴³

And even the oil spill response focus of the proposed regulations was a step back from the existing regulations. As the North Slope Borough stated in its comments on the proposed regulations, “none of the proposed regulatory changes will lead to measurable improvements in oil spill response capability for the North Slope, a number of these proposals will weaken the oil spill prevention and response systems currently in place.”⁴⁴

Some experienced oil field workers have speculated as to the causes for the lax state oversight of the oil industry. As former BP worker Bill Burkett explained “[a]ny attempts by the State to increase environmental protection would be met with threats from the industry to take their business elsewhere. So when critics

³⁶Letter from Trustees for Alaska to DEC re BP Exploration (Alaska) (BPXA) Greater Prudhoe Bay Unit, Oil Discharge Prevention and Contingency Plan, ADEC Plan Number 014-CP-5079 at page 7 (February 18, 2002), <http://www.trustees.org/Supporting%20Documents/C-Plan/Greater%20Prudhoe%20Bay%20C-Plan%202002%20Comments.pdf> (italics emphasis in original, bold emphasis added).

³⁷*Low-stress pipeline* means a hazardous liquid pipeline that is operated in its entirety at a stress level of 20 percent or less of the specified minimum yield strength of the line pipe.” (49 CFR 195.2)

³⁸8 AAC 75.055.

³⁹For example, 18 AAC 75.005, Responsibility states: The owner or operator of an oil tank vessel, oil barge, pipeline, oil terminal, railroad tank car, exploration facility, or production facility subject to the requirements of AS 46.04.030 or AS 46.04.055 (j) is responsible for meeting the applicable requirements of this chapter and for preventing the discharge of oil into waters or onto land of the state (emphasis added).

⁴⁰A former DEC air pollution expert identifies problems with the air pollution regulatory regime on the North Slope: “The state, with the acquiescence of the federal Environmental Protection Agency, has significantly aggravated air pollution by piecemeal permitting of small parts of each facility. This is a problem since air pollution is regulated by assigning limits to an entire facility. By substituting multiple sub-units for a single facility, the allowable emissions have been increased many times over.”—Letter from Bill McClarence to Anchorage Daily News, (published September 9, 2006).

⁴¹DEC, Oil Discharge Prevention & Contingency Plan, Regulation Revisions, Public Noticed September 8, 2003—October 13, 2003, Response To Comments at 5 (May 14, 2004).

⁴²See *id.* at 1.

⁴³See Alaska Oil and Gas Association (AOGA), “AOGA Briefing Paper on Improving the Contingency Plan Process,” submitted to ADEC on October 15, 2002. Meanwhile, the North Slope Borough, which had been asking for new, tougher regulation for years, complained to DEC that “only one of its proposed regulatory changes was even considered by DEC.” Comment Letter from North Slope Borough Planning Department to DEC at 4 (July 3, 2003).

⁴⁴Comment Letter from North Slope Borough Planning Department to DEC at 2 (July 3, 2003). DEC is also abdicating its responsibility to review spill planning for offshore well blow-outs. See A Fair Warning: Diminished State Oversight Of Oil Spill Contingency Plans at pages 3-9 (February 2006), <http://www.trustees.org/Supporting%20Documents/C-Plan/A%20Fair%20Warning%20C-Plan%20FINAL%202006.pdf>.

raised any safety or environmental concerns through the State Agencies charged with oversight, they went nowhere.”⁴⁵

This dynamic is also recognized by independent energy industry analysts:

[T]he sources of BP’s apparent neglect of its pipelines may stem less from the company’s own culture than from the regulatory vacuum surrounding feeder pipelines. Although feeder lines are subject to state regulations, it would be delusive to expect Alaska, an oil state heavily dependent on oil and gas investments, to effectively fill the federal regulatory gap when it is struggling to attract billions of dollars in gas pipeline investments from the very companies it is supposed to regulate. If indeed the root cause of BP’s problems is regulatory rather than company-specific, pipeline problems might exist undetected at other Alaskan facilities that have not been subject to the scrutiny brought on BP by its recent safety record.⁴⁶

While the BP debacle should serve as a wake up call to Alaska to overhaul its planning and regulatory programs, statements by Alaska’s leaders do not bode well for such change. Governor Murkowski recently led a tour of reporters to the North Slope. At Prudhoe Bay, he intoned “Let me welcome you to the best oil field in the world,” and then touted the quality of the field’s operation.⁴⁷

Federal Government

The Teshekpuk Lake discussion presented as the introduction to this section demonstrates that federal land management and planning efforts also suffer from broken promises and risky behavior. In fact, the “promise” of BLM’s decision to lease the Teshekpuk Lake region goes beyond an analysis of cumulative impacts because it allows pipelines to crisscross even those areas it deigns too sensitive for direct drilling on the assumption that pipelines are benign elements of the industrial infrastructure.⁴⁸ Yet it is the risk posed by the inevitable spills⁴⁹ and intensive human activity (e.g., the need to monitor pipelines by aircraft) such as that seen at Prudhoe Bay that the scientists and local residents tell us will so gravely threaten that region’s remarkable natural resources.⁵⁰ Consequently, while other examples exist, the Teshekpuk Lake situation is sufficiently timely and on point to act as the sole illustration of this point.

Turning to the regulatory world, BP’s pipeline problems on the North Slope amply demonstrate that investing in pipeline safety pays off in environmental and eco-

⁴⁵ William B. Burkett, Statement before Chairman J. Lieberman and B. Graham, March 4, 2002.

⁴⁶ Antoine Halff, Veronique Lashinski, Beyond Prudhoe, FIMTA Energy Research (August 7, 2006).

⁴⁷ Wesley Loy, Governor visits the Slope, Anchorage Daily News (August 11, 2006).

⁴⁸ See Map, Potential Teshekpuk Lake Development Allowed under BLM ROD (January 2006), Alaska Center for the Environment, Conservation GIS (map created May 5, 2006) (attached); see also NPRA NE FEIS at 4-17 (January 2005) (“[N]umerous technological advancements have been made during the decades of operations on the North Slope that have allowed current development activities to proceed at a lower cost and with less environmental impact than previous operations.”)

⁴⁹ Even staunch drilling proponents such as Representative Don Young admit that “[t]he fact of the matter is that sometimes leaks will occur.” Congressman Don Young, Press Release, House Transportation Committee Hearing on Pipeline Safety (March 16, 2006). The facts of North Slope oil development, where spills of oil and other hazardous substances are on the rise and average well over one a day, support his statement. See Facts, North Slope Oil Development, <http://www.northern.org/artman/uploads/northslopefactsspills3-29-05.pdf>, and cites therein; see also <http://www.wilderness.org/Library/Documents/upload/Facts-OilSpillsAndFines.pdf#search=%22national%20research%20council%20north%20slope%20oil%22> (same).

⁵⁰ See e.g., Letter by Terry Crawforth, Chairman, Pacific Flyway Council to Interior Secretary Gale Norton at page 1 (August 2005) (BLM’s approach “would allow facilities and infrastructure for oil and gas production to impinge on sensitive molting geese . . . [a]nd minimizes the value of contiguous undisturbed habitat that is the essence of why molting geese have established a strong tradition of molting in [this] region”); Letter from Kenneth Able et al. (including about 200 ornithologists, wildlife biologists and environmental scientists) to BLM’s NE NPR-A Amendment Planning Team at page 2 (August 23, 2004) (“Molting geese will run at the sight of a distant person, and disturbance by aircraft overhead—to which brant apparently do not habituate—is a major problem”); see also Audubon Alaska, Wildlife and Oil Development at Teshekpuk Lake, <http://www.audubon.org/chapter/ak/ak/images/Teshekpuk—low.pdf> (providing information on the environment of the Teshekpuk Lake region, the threat posed to it by oil development, and the opinions of scientific experts; see also Letter from North Slope Borough to Interior Secretary Kempthorne (August 31, 2006) (expressing continued objection to the scheduled September 27, 2006 oil and gas lease sale for the Northeast Planning Area of the Reserve based on the incompatibility of industrial development with the critical subsistence resources and harvests of that region).

conomic benefits,⁵¹ though we are also failing to heed this fact. DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) has jurisdiction over BP's pipelines, however BP's so-called "transit" pipelines currently are exempt from federal regulation. This means that other pipelines like BP's have no federal corrosion prevention requirements or federal inspectors checking on operations. Based on information PHMSA presented at the September 7 House Investigations and Oversight Subcommittee hearing, there were a very large number, i.e., over 180, locations of significant wall thinning from corrosion on BP's Eastern Operating Area pipeline. If this pipeline were regulated, these locations of wall thinning would require repairs under 49 CFR 195.452(h)(4)(iii).

Yet the history of attempts to place federal regulations on low stress pipelines is not a pretty one. The following timeline shows actions the federal government has taken and not taken to address the low-pressure pipeline exemption:

- 1969: All low-pressure pipelines exempted from regulation.
- 1988: National Association of Pipeline Safety Representatives (state pipeline regulators) sends the U.S. DOT a resolution asking that the low-pressure exemption be eliminated.⁵²
- 1990: U.S. DOT asks for comments on "whether and to what extent" to remove the low-pressure exemption from its regulations.⁵³
- 1992: Congress passes the Pipeline Safety Act of 1992 (Pub. L. 102-508) and directs U.S. DOT not to exempt pipelines from its regulations "only because the facility operates at low internal stress."⁵⁴
- 1992: Volpe National Transportation Systems Center issues a report for U.S. DOT⁵⁵ estimating that there are 20,000 miles of onshore rural gathering lines and 22,000 miles of unregulated low-pressure transmission pipelines. The Volpe study also estimated that 38% of the 22,000 miles (nearly 7,000 miles) were near a populated area or a navigable waterway (leaving 15,000 miles of low-pressure transmission pipelines unregulated.)⁵⁶
- 1993: Notice of Proposed Rulemaking applying pipeline standards to low-pressure transmission pipelines that traverse a populated area or a navigable waterway. U.S. DOT deferred a decision on regulation of low-pressure lines in environmentally sensitive areas awaiting its development of a definition of environmentally sensitive areas.⁵⁷
- 1994: Final rule applying pipeline standards to low-pressure transmission pipelines located in non-rural areas and areas currently used for commercial navigation.⁵⁸
- 2006: American Petroleum Institute and the Association of Oil Pipe Lines submit a proposal in June to PHMSA identifying which low-pressure pipelines should be regulated.⁵⁹
- 2006: U.S. House of Representatives Committee on Transportation and Infrastructure marks-up H.R. 5782 in July, closely tracking industry's proposal identifying which low-pressure pipelines should be regulated. U.S. House of Representatives Energy and Commerce Committee holds a July hearing on a Dis-

⁵¹For example, among the economic costs of the BP situation was the fact that the state of Alaska lost \$6.4 million in royalties and taxes for each day the oil field was shut-down. Matt Volz, Murkowski institutes hiring freeze after shutdown, Anchorage Daily News (August 9, 2006).

⁵²Resolution 1988-1-P1, 20 Percent SMYS, sent to U.S. DOT on August 4, 1988.

⁵³See 55 Federal Register 45822 (October 31, 1990).

⁵⁴See 49 USC 60102(k).

⁵⁵*Economic Evaluation of Regulating Certain Hazardous Liquid Pipeline Operating at 20% or Less of Specified Minimum Yield Strength*, Deanna Mirsky of EG&G/Dynatrend and The Hazardous Materials Transportation Special Projects Office, Volpe National Transportation Special Projects Office, July 21, 1992.

⁵⁶In its Notice of Proposed Rulemaking (NPR) published in the Federal Register on September 6, 2006, however, PHMSA used industry data—which includes irrelevant offshore gathering line information and gathering lines too small to be regulated—to estimate that only 5,000 miles of low-pressure transmission pipeline currently are unregulated. In section 6.1.1 of the Regulatory Evaluation for this NPR (U.S. Department of Transportation Docket Number *RSPA-2003-15864-36*), PHMSA says it used the Association of Oil Pipe Lines' "Pipeline 101" estimate of 35,000 miles of gathering line mileage which includes onshore and offshore gathering lines and gathering lines as small as 2" in diameter. Section 6.1.2 of the Regulatory Evaluation describes how PHMSA subtracted these 35,000 miles from the approximately 40,000 miles of unregulated pipelines and concluded that there are only 5,000 miles of unregulated, low-stress transmission pipelines (i.e., disregarding the fact that the 35,000 mile figure contains significant offshore and small diameter gathering line mileage).

⁵⁷See 58 Federal Register 12213 (March 3, 1993).

⁵⁸See 59 Federal Register 35465 (July 12, 1994).

⁵⁹U.S. Department of Transportation Docket Number *RSPA-2003-15864-22*.

cussion Draft for the reauthorized pipeline safety law which does not include details on which low-pressure pipelines should be regulated.

- 2006: Notice of Proposed Rulemaking applies *limited* pipeline standards to low-pressure transmission pipelines and gathering lines within $\frac{1}{4}$ mile of “unusually sensitive areas,” which represent only 17% of the unregulated gathering and transmission pipeline universe according to the NOPR and 14% of the unregulated transmission pipeline universe.⁶⁰ Using the figure of 15,000 unregulated miles developed by the Volpe Center, however, less than 5% (684 miles of 15,000 miles) of the low-stress transmission pipeline universe would be regulated under the NOPR.

Today, 18 years after state pipeline regulators asked U.S. DOT to remove the exemption covering low-pressure pipelines entirely, PHMSA last week proposed to regulate an incremental sliver of the unregulated low-stress transmission pipeline universe. This means that many, many miles of low-stress transmission pipelines remain unregulated and susceptible to BP-like problems with their corresponding, adverse environmental and economic consequences—on the North Slope this may be the vast majority of the 1,600 miles of pipelines existing in the North Slope oil fields. And PHMSA will never even know about most such problems because unregulated pipelines need not report their releases to U.S. DOT—out of sight, out of mind.

The oil industry itself has always enjoyed special treatment in the form of exemptions from environmental regulations that apply to the exact same pollution originating from different industrial sources. Oil industry-specific exemptions exist under the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-To-Know Act, and the Clean Water Act, among other laws.⁶¹ The very existence of these exemptions belies any assertion that oil industry activities are held to the highest possible environmental standards.

THE UNITED STATES CAN CONTROL ITS DESTINY

There is no question that BP needs to clean up its internal management mess. The origin of the culture of intimidation and harassment within BP must be found and rooted out—including divorcing the performance of good faith but potentially costly system integrity functions from whatever bonuses and stock options are granted to critical BP employees. Indeed, it would seem prudent that the timely and complete performance of these functions be a condition of continued employment for such workers.

That said, the United States must stop relying on industry to take the lead in doing what is best for this nation. Government can and should take the lead in ensuring the short and long-term viability and integrity of our energy production and delivery systems. This should be done to minimize risk to workers, who put their lives at risk in the energy field, as well as to safeguard the environment. It should also be done to minimize interruption of our nation’s energy supply.

A good start to doing so would include implementation of the following recommendations.

Ensuring the Integrity of Alaska Oil Facilities

A series of actions could begin the arduous but necessary task of ensuring the integrity of Alaska’s critical oil and gas industry infrastructure including an independent audit of the management and operations of such infrastructure, the creation of a citizen’s oversight group to watchdog the industry and government regulators, and the inclusion of low stress pipelines in federal regulation. Each of these recommendations is discussed, in turn, below.

Congress should commission an independent, functional audit of Alaska North Slope production facilities and cross-country delivery systems to Valdez

To ascertain and address the root causes of the circumstances that have recently come to light, Congress should authorize and fund an independent panel to conduct a functional audit of the North Slope delivery system and TAPS.⁶² In order to ensure the operational integrity of this system, the personnel conducting this investigation must have intimate, “boots-on-the-ground” knowledge of Alaska’s production

⁶⁰ See 71 Federal Register 52515 (September 6, 2006).

⁶¹ See Testimony of Peter Van Tuyn, House Resources Committee, Hearing on H.R. 39, text accompanying endnotes 37 to 43 (March 12, 2003), <http://resourcescommittee.house.gov/archives/108/testimony/petervantuyn.htm>.

⁶² After the 1989 Exxon Valdez oil spill, Congress authorized—but never funded—an audit of North Slope transportation systems. (See: Oil Spill Pollution Act of 1990, Sec. 8103. Presidential Task Force.)

and transportation system, similar to the expertise and independence exhibited by participants in the State of Alaska's 1991 *Exxon Valdez* Oil Spill Commission. The audit, which must include a follow-up to ensure positive results, should be conducted over a two-year period, and along the following lines:

An initial report, to be completed in nine months, should examine both the management structures and systems used in Alaska, including government oversight, as well as physical hardware. In this regard, the first task (taking, perhaps, three months) should be to determine whether the North Slope production and delivery system, and its operators, provide a reasonable margin of safety in all aspects of its operations by:

- Detecting problems critical to safe operations in a timely manner;
- Providing timely response to critical problems, thereby minimizing risk to workers, risk to the environment and interruption of a critical component of this nation's energy supply; and
- Demonstrating the capability to learn from experience and adapt to changing conditions.

Based on these findings, the panel should assess root causes and recommend institutional changes to address the identified problems. The initial audit final report should be tendered to Congress within nine months.

As we have seen, an audit without follow-through is not likely to result in correction of problems identified in that audit review. Therefore, nine months after completion of the initial audit, the panel should reconvene to review (1) the status of the management system and hardware problems identified in the initial report; (2) actions taken to address the institutional problems identified in the initial report; and (3) new developments the panel may elect to address. The follow-up report should be tendered to Congress six months later, or two years after the initial audit commences.

Congress should establish a Citizens' Oversight Group for the North Slope oil facilities and TAPS

Shortly after the Exxon Valdez oil spill, Congress established two citizen oversight groups in Alaska—one for Prince William Sound and the other for Cook Inlet.⁶³ However, no similar group was established for the northern two-thirds of TAPS, or for the production complex at Prudhoe Bay. At this time Congress should establish a Citizens' Oversight Group, with dedicated funding from the North Slope production and transportation operations that covers the entirety of this vital domestic transportation system. Its function would be to ensure, through independent citizen and community involvement, that the important North Slope and TAPS energy systems are maintained and operated in a manner that safeguards system integrity, the workers and the natural resources of Alaska, and ensures the integrity of continued oil production and shipment.

The structure for the group would best be developed in consultation with the individuals and local communities of the affected regions. To assure its independence from industry, the new citizens' oversight groups must, at a minimum, be:

- Funded at a guaranteed annual level; and
- Made up of individuals appointed (but not employed) by local governments, federally recognized tribes, indigenous groups, environmental groups and other concerned citizens. (Industry and agency regulatory agency personnel could participate actively but in an *ex-officio* capacity.)

The creation of a group for the North Slope and all aspects of TAPS not covered by the current regional citizens advisory councils would help combat systemic operational and oversight problems such as those that we are experiencing today. The group would oversee a staff whose expertise provides regulators, the industry and the general public with a truly independent evaluation of the efforts and accomplishments of the North Slope and TAPS oil facility operations. The funding for the group could come from external trust or escrow accounts set up to ensure the future dismantling and removal of facilities and rehabilitation of the land on which these oil facilities rest; thus ensuring that another promise of the oil patch is fully met.

The owners of the TAPS have collected funds for the future dismantling, removal and restoration (DR&R) of TAPS from shippers through pipeline tariffs. That money, collected on an accelerated basis, is currently passed through to the parent companies of the TAPS Owners. A 2004 analysis suggested that if TAPS operates through 2034 at historical inflation and industry earnings rates, the industry's retention of the pre-collected funds will generate income of approximately \$50 billion

⁶³Oil Spill Pollution Act of 1990, Sec. 5002(d).

after dismantling costs and all taxes are paid. Moreover, the TAPS owners have collected sufficient funds to cover dismantling expenses in 2034, even if inflation averages an historically unprecedented 10% between now and that time.⁶⁴ To provide funds to ensure the safe and environmentally sound operation of TAPS and promote the integrity of continued North Slope development, the TAPS Owners should be required to (a) place funds necessary for TAPS dismantling in an escrow account and (b) contribute a portion of the excess income that they will earn from past DR&R collections to a fund that would generate a minimum of \$3 million per year to help finance the North Slope and TAPS oversight group.

The TAPS DR&R provisions apply only to the 800-mile TAPS right-of-way. On the North Slope, six North Slope common carrier “feeder” pipelines that carry oil between separate leases also generate DR&R funds. These pipelines are much shorter than the 800-mile TAPS and their DR&R collections are much smaller. The producing fields themselves operate under different leasing terms from the pipeline right-of-way leases. The field leases typically contain a requirement to restore the land to original condition or to the conditions acceptable to the designated agency official but do not specify a funding mechanism.⁶⁵ Information on how North Slope field operators charge users and account for this long-term liability is not readily available.⁶⁶ Congress should investigate this issue and establish laws, as necessary, to ensure that funds for future North Slope field dismantling will be available as needed, but will not be over-collected, and that some portion of the interest on this money can be directed to the oversight group as well.

Congress should mandate regulation of low stress pipelines

Although this committee does not have in initial jurisdiction over pipeline operations, this subject is a critical to ensuring the safety of the nation’s energy supply. For this reason, the 2006 PHMSA proposed rulemaking on low stress pipelines warrants comment here. The proposed rules follow national attention to BP’s North Slope problems. Moreover, in developing its 2006 pipeline regulation rulemaking, PHMSA ignored technical and other information provided to it by public interest organizations and instead moved forward with industry’s proposal substantially intact. This reactive, pro-industry posture must change to one where federal regulation is proactive in preventing problems before they happen.

The rulemaking proposal includes a patchwork of requirements taken from 49 CFR 195 with no credible evidence that the new application of these requirements will reduce releases significantly. For example, the proposed standards would reduce six pages in the Code of Federal Regulations on pipeline integrity management (49 CFR 195.452) to one unenforceable paragraph stating that pipeline operators “may” choose to use smart pigs (or the equivalent).⁶⁷ Additionally, the proposed standards for regulated gathering lines do not include any type of integrity management whatsoever.

Moreover, the “buffer zone” methodology—covering pipelines in unusually sensitive areas plus one-quarter mile—proposed by industry and now by PHMSA should be rejected. Based on their dubious performance record, all low-pressure pipelines deserve federal regulation and those that may affect “High Consequence Areas” (as defined in 49 CFR 195.450) should meet federal integrity management requirements (49 CFR 195.452).

Further, in an unprecedented action, PHMSA’s proposal allows regulated low-pressure transmission pipelines to meet much weaker standards than other transmission pipelines. These pipelines should be regulated to the higher standards applicable to other transmission lines, including the low-pressure transmission pipelines that U.S. DOT regulated in 1994 (non-rural pipelines and pipelines near commercially navigable waterways).

⁶⁴ See Richard A. Fineberg, *Trans-Alaska Pipeline System Dismantling, Removal and Restoration (DR&R): Background Report and Recommendations*, Prince William Sound Regional Citizens’ Advisory Council, 2004, Appendix Tables 6-8.

⁶⁵ Summarized from documents submitted by the Alaska Departments of Environmental Conservation, Law and Natural Resources and the Alaska Oil and Gas Conservation Commission to a joint hearing of the Alaska State House of Representatives and Senate Resources Committees, Aug. 18, 2006; and by Vice Adm. Thomas G. Barrett, Administrator, Pipeline And Hazardous Materials Safety Administration, to the U.S. House Subcommittee on Oversight and Investigations, U.S. House of Representatives Committee on Energy and Commerce (September 7, 2006).

⁶⁶ In its 2003 report on cumulative environmental effects of Alaska North Slope oil and gas activities, the National Research Council noted that, “there has been no comprehensive estimate of the costs of dismantlement and removal of infrastructure and subsequent restoration and rehabilitation (DRR) of affected North Slope areas.” NRC Report at 150.

⁶⁷ See 71 Federal Register 52519 (September 6, 2006), proposed section 195.12(b)(10).

Finally, it should be noted that the costs for compliance with a more comprehensive regulatory scheme would not be large, particularly in comparison to the high costs to society when pipelines fail. PHMSA predicts that its proposal will cost operators only \$17 million,⁶⁸ a relatively small amount given the likely higher costs when pipelines like BP's fail, and a ridiculously low cost when compared to the tens of billions of dollars routinely brought in as profits by oil companies in recent years.

Protecting Special Places

The North Slope of Alaska is our nation's only arctic ecosystem. A balanced approach would give wilderness protection to the coastal plain of the Arctic National Wildlife Refuge and permanent protection for the most biologically and culturally important areas of NPR-A and the Arctic Ocean, while maximizing oil and gas potential in the central arctic around Prudhoe Bay and elsewhere in the NPR-A.

The BP Prudhoe Bay debacle is but the latest example of the prudence of this approach. The industrial complex necessary to produce oil from Alaska's North Slope includes Prudhoe Bay as well 26 other producing oil fields. These oil fields are spread across over 1,000 square miles of Alaska's North Slope—which is equal to the size of Rhode Island. There are nearly 5,000 wells, over 500 miles of roads, over 1,800 miles of pipelines on the North Slope, plus the 800 mile-long Trans-Alaska Pipeline, dozens of gravel mines, and multiple refineries, airports, power plants and other industrial infrastructure.⁶⁹

Oil and gas drilling is a complicated endeavor and even regulations designed with the best of intentions will not prevent pollution. The legal and permitted aspects of the oil industry on Alaska's North Slope allow for simply massive amounts of air pollution.⁷⁰ Spills of oil and other hazardous substances on Alaska's North Slope average well over one a day, and are increasing in frequency. As noted above, even Alaska's congressional representative Don Young, an ardent drilling advocate if ever there was one, recently stated, "[t]he fact of the matter is that sometimes leaks will occur."⁷¹ The facts are impossible to escape; oil and gas activities are inherently dirty, and fully industrialize the areas in which they occur.

There isn't a single federal or state agency evaluating questions about which special landscapes and sensitive habitats on the Arctic coast should be placed off limits to development. That the integrity of the Arctic National Wildlife Refuge is continually under attack to be opened to incompatible oil and gas development shows how far the scales are already tipped away from conservation on the North Slope. It seems that the governments are only interested in what can be opened and how fast it can be done.

Indeed, given the present pace and scope of leasing and proposed oil development, it is quite possible that the entire Arctic coast, on-and offshore, will be crisscrossed with the infrastructure of industrial oil development in our life times. This would be a real loss for the future generations who would never know a wild Arctic. It would also be a loss for science, as the National Research Council recommended establishing protected areas—free of the influence of the oil industry—to serve as scientific controls for the evaluation of the effects of oil and gas activity and climate change.⁷²

The Arctic National Wildlife Refuge

Created by President Dwight Eisenhower in 1960 to protect wilderness and wildlife and expanded when President Jimmy Carter signed the 1980 Alaska National Interest Lands Conservation Act (ANILCA), America's Arctic National Wildlife Refuge has been one of the greatest conservation legacies of both Republican and Democratic administrations. The Arctic Refuge was established to conserve fish and

⁶⁸ See 71 Federal Register 52515 (September 6, 2006).

⁶⁹ See Facts, North Slope Oil Development, <http://www.northern.org/artman/uploads/northslopefactsspills3-29-05.pdf>, and cites therein; see also <http://www.wilderness.org/Library/Documents/upload/Facts-OilSpillsAndFines.pdf#search=%22national%20research%20council%20north%20slope%20oil%22> (same).

⁷⁰ See Facts, North Slope Oil Development, <http://www.northern.org/artman/uploads/northslopefactsspills3-29-05.pdf>, and cites therein; see also <http://www.wilderness.org/Library/Documents/upload/Facts-OilSpillsAndFines.pdf#search=%22national%20research%20council%20north%20slope%20oil%22> (same). This huge industrial complex emits air pollution in such a large volume that it can be detected hundreds of miles away. The air pollution includes massive amounts of greenhouse gases, as well as smog and acid rain-producing Nitrogen Oxide in amounts twice that of the D.C. metropolitan area. See *id.*

⁷¹ See *infra* note 49, citing Congressman Don Young, Press Release, House Transportation Committee Hearing on Pipeline Safety (March 16, 2006).

⁷² See NRC Report at 151.

wildlife populations and habitats in their natural diversity; fulfill the international treaty obligations of the U.S. with respect to fish and wildlife and their habitats, such as migratory waterfowl agreements and the Canada-U.S. Porcupine River caribou herd agreement; provide the opportunity for local residents to continue their subsistence way of life; and to protect water quality and quantity.

The U.S. Fish and Wildlife Service, which manages the Arctic National Wildlife Refuge, today calls it “the only conservation system unit that protects, in an undisturbed condition, a complete spectrum of the arctic ecosystems in North America.” Such a broad spectrum of diverse habitats occurring within a single protected unit is unparalleled in North America; no other conservation area in the entire circumpolar north hosts such abundant and diverse wildlife. Blanketed with snow for much of the year, the Coastal Plain explodes with life during the brief spring and summer months, earning the nickname of “America’s Serengeti.”

- The Porcupine River herd of 129,000 caribou gathers annually on the Coastal Plain to bear and nurse their young;
- Polar Bears rely on the Coastal Plain of the Arctic Refuge as their most important on-land denning habitat on American soil;
- Grizzly bears, wolves, wolverines, foxes, golden eagles, and snowy owls gather here to hunt and den.
- In the fall, the Coastal Plain of the Arctic Refuge supports up to 300,000 snow geese which detour to feed from their nesting grounds in Canada.
- Millions of other birds use the Arctic Refuge to nest and as a critical staging area before journeying on to every state in the country, and many countries in the world.

And the Arctic Refuge supports more than just wildlife. For a thousand generations, the Gwich’in people of Northeast Alaska and Northwest Canada have depended upon the Porcupine (River) caribou herd to sustain their culture. The herd is central to their way of life, providing food, clothing, and a critical link to their traditional ways. To the Gwich’in people, the Coastal Plain is sacred ground.⁷³

The inevitable industrialization of the Arctic Refuge that would occur were Congress to open it to oil and gas activities is simply not compatible with these values of the Refuge. Congress should rebuff any attempts to drill the Refuge, and permanently protect it through legislation designating the Coastal Plain of the Refuge as designated Wilderness.

Sensitive Areas Within the NPRA

The National Petroleum Reserve-Alaska is the largest single unit of public lands in the Nation. It harbors rich and important wildlife and wildlands and a cultural heritage that sustains Inupiaq communities. The conservation community recognizes that there will be additional oil and gas leasing and development in this area. That said, a balanced approach for development in the NPRA requires permanent protection of its special places and values and development must adhere to strict environmental standards, including those related to operations, cleanup and restoration.

In recent years, the Interior Department has offered 11 million acres of the NPRA for oil and gas leasing, and 2.8 million acres are currently under active leases. Of this, 1.3 million acres is in the Northeast Planning Area of the Reserve, 87% of which was open to such leasing in 1998.

Absent congressional action, a final court injunction, or an administrative retraction, the Interior Department is now scheduled to offer 100 % of this area to leasing, most at a September 27 lease sale. This would include the sensitive region around Teshekpuk Lake, which harbors extremely important waterfowl and caribou habitat. Even James Watt did not go this far, as he protected the area north and east of Teshekpuk Lake because of its critical, international importance to molting geese.

And Interior’s decision is based on an extremely faulty foundation. First, as described above, Interior once again deferred a full analysis of the impacts of its decision on the environment, leading a federal judge to preliminarily rule that Interior violated the law and that the lease sale should not go forward.⁷⁴ Further, an underlying premise of Interior’s decision to open 100% of this area of the Reserve to oil leasing was that pipelines are low impact and thus their presence in goose molting habitat (areas where geese go to replenish their flight feathers, and are thus very

⁷³For more background on the Arctic Refuge, see <http://www.alaskawild.org/campaigns—arctic.html#coastal%20plain>; <http://www.wilderness.org/OurIssues/Arctic/>; <http://www.savearcticrefuge.org/learnmore.html>; <http://www.savebiogems.org/arctic/>; <http://www.sierraclub.org/arctic/>.

⁷⁴See infra notes 3-5 and accompanying text.

sensitive to disturbance of any kind because they cannot fly away) would not cause any harm. As the experts tell us (and these are the pre-eminent bird biologists in the country) the kind of disturbance caused by such intensive human presence in the pipeline areas could have population-level impacts on these waterfowl.⁷⁵

The decision to lease 100% of the Northeast Planning Area ignores the voices of leading scientists, sportsmen from across the nation, and the Alaska Native people who depend on the wildlife and subsistence resources of the region. As Mayor Edward S. Itta of the North Slope Borough stated in a recent letter to Interior Secretary Kempthorne:

We understand the pressures in today's world to expand the lands and waters available for oil and gas leasing, exploration, and development. We must all recognize as well, however, that preservation of the special and sensitive surface values of some discreet areas is simply incompatible with industrial development. The risks posed to such areas by industrialization outweigh the benefits.

Expressing similar concerns, and well before the full extent of the troubles at Prudhoe Bay were known, a bipartisan coalition of senators wrote to Interior Secretary with a request to put on hold oil and gas leasing in the sensitive areas around Teshekpuk Lake.

The BP Prudhoe Bay debacle thus provides but the latest in a long line of reasons why leasing this region of the NPR-A is a bad idea. Congress should therefore put a stop to it.

Diversifying Our Energy Sources

No amount of domestic drilling will bridge the gap between the oil we use and the oil we might have under our soil, or lower gasoline prices. The inescapable fact is that the United States consumes 25 percent of the world's daily oil production, but we sit atop just three percent of the world's oil supply.

To ensure a reliable source of energy for the United States, therefore, we simply must diversify our sources of energy. Expert analyses demonstrate that an immediate and long term commitment to alternative energy can yield significant energy dividends in short order. Doing so would also have an insulating effect on our energy supply, limiting the impact on supply and prices caused by troubles in the oil fields. Further, these investments in alternative energy would also help address global warming, providing yet another benefit to mankind. Finally, having a growing percentage of our energy portfolio in renewable energy resources means stabilizing electric rates for consumers. In the world wide energy environment in which we currently exist, continued reliance on fossil fuels means higher and higher energy costs for these consumers.

Therefore, developing alternative energy makes sense at every layer of the energy debate. The recommendations provided here are just examples of what can be done to promote alternative energy; Congress should consider all of them and work with due haste to pass an alternative energy policy.

First, when considering developing alternative energies as a recommendation in response to BP's Prudhoe Bay debacle, perhaps it is most appropriate to use Alaska itself as an example of the possibilities afforded by investing in alternative energy. Alaska has some of the best renewable energy resources in the world, and has just begun to develop them. In our relatively small urban grid connected areas Alaska has several opportunities for large-scale wind development including the Fire Island proposal (located off of Anchorage in Cook Inlet) which could generate between 50-100 MW for Anchorage, thus generating 10 to 20% of Anchorage's peak load requirements.

The utility in the Fairbanks area is also pursuing wind projects and has an internal goal of producing 20% of its power from renewables by 2014. At least one large geothermal resource (50-100 MW) is located near the urban grid near Mt. Spurr, a volcano within sight of Anchorage. Alaskans have gone to Iceland to see how that

⁷⁵ See e.g., Letter by Terry Crawforth, Chairman, Pacific Flyway Council to Interior Secretary Gale Norton at page 1 (August 2005) (BLM's approach "would allow facilities and infrastructure for oil and gas production to impinge on sensitive molting geese . . . [a]nd minimizes the value of contiguous undisturbed habitat that is the essence of why molting geese have established a strong tradition of molting in [this] region"); Letter from Kenneth Able et al. (including about 200 ornithologists, wildlife biologists and environmental scientists) to BLM's NE NPR-A Amendment Planning Team at page 2 (August 23, 2004) ("Molting geese will run at the sight of a distant person, and disturbance by aircraft overhead—to which brant apparently do not habituate—is a major problem"); Audubon Alaska, Wildlife and Oil Development at Teshekpuk Lake, http://www.audubon.org/chapter/ak/ak/images/Teshekpuk_low.pdf (summarizing expert opinions on development in the Teshekpuk Lake region).

small country has become a world leader in geothermal power, and just last month the small community of Chena Hot Springs commissioned the first geothermal power plant in Alaska using cutting edge technology; it produces electricity with the lowest temperature geothermal water in the world (165 F).

In over 200 remote, mostly Alaska Native, communities around the state the high price of oil means that the diesel those communities rely on to generate electricity is making basic even the basics unaffordable. Villagers already pay on average 4-5 times what urban Alaskan pay for power. A \$200 or \$300 monthly electric bill in the winter means those communities are just trying to survive, let alone prosper. Yet, there are an estimated 60-70 villages that could utilize small wind turbines to displace diesel and stabilize electric rates. Six villages already have wind-diesel hybrid systems and other villages are waiting line for systems.⁷⁶

As a start to developing these resources, enterprising Alaskans prepared an alternative energy atlas of the state. (Attached). This atlas was based on a similarly amazing alternative energy atlas of the Western United States, which was created by a number of non-governmental organizations, using private foundation funding. The Western U.S. Atlas is an 80-page full color presentation of renewable energy sources such as wind, solar, geothermal and biomass power, and it is available online, thus making for an easy to use reference for developers, landowners, and policy-makers.⁷⁷ The United States government should support the development of such atlases across the country.

At the same time, no longer can we sit back and just study the potential for alternative energy. So while developing a full Alternative Energy Atlas of the United States is an important step, we must also take action. As an initial matter, a common, and common sense, element to the vision for alternative energy is that the U.S. Congress pass a law that provides a long-term alternative energy production tax credit to help fuel our transition away from fossil fuels. Beyond that, the following proposals outline specific action.

The National Association of State Public Interest Research Groups endorses the following set of policies:

- Reduce our dependence on oil and target a savings of one-third of the oil we use today by 2025 (7 million barrels per day) through improved gas mileage, better transportation choices and clean fuels;
- Harness clean, renewable homegrown energy sources like properly-sited wind, solar and alternative fuels for at least a quarter of all energy needs by 2025.
- Save energy with high-performance homes, buildings and appliances so that by 2025 we use 10 percent less energy than we do today.
- Invest in the New Energy for America Initiative, which would commit \$30 billion over the next ten years to research and development funding for energy-saving and renewable technologies so we can accomplish the goals mentioned above.⁷⁸

The Sierra Club emphasizes that we could save over 3 million barrels of oil each day if all of the vehicles in the U.S. averaged 40 miles per gallon,⁷⁹ which is far more than the 400,000 barrels provided by Prudhoe Bay. The Sierra Club proposes changes to our current energy policy that are quick, clean, cheap and safe:

Quicker—Increasing energy efficiency technology and fuel efficiency will decrease our energy use and help relieve summer shortages immediately. In addition, wind turbines can be installed in six months and new, combined-cycle natural gas plants can begin saving energy and reducing pollution from old, dirty and inefficient plants by next year.

Cleaner—By choosing energy options such as solar, wind and energy-efficient technologies, we can protect our clean air, clean water and climate.

Cheaper—Not only do we save energy by using more efficient appliances and technologies, such as compact fluorescent lightbulbs, but we save billions of dollars, too. Raising fuel economy standards for cars, SUVs and other light trucks will save consumers \$45 billion a year at the gas pump.

⁷⁶ Alaska summary above taken from email from Chris Rose, executive director, Renewable Energy Alaska Project (REAP), September 8, 2006 (on file with the author).

⁷⁷ See <http://www.energyatlas.org/>. The Hewlett Foundation and The Energy Foundation sponsored the Atlas, and the following organizations joined together to create it: the Land and Water Fund of the Rockies, Northwest Sustainable Energy for Economic Development, Green Info Network and Integral GIS.

⁷⁸ See <http://newenergyfuture.com/newenergy.asp?id2=18565>; see also Rising to the Challenge: Six Steps to Cut Global Warming Pollution in the United States, <http://uspirg.org/uspig.asp?id2=26147>.

⁷⁹ http://www.sierraclub.org/globalwarming/biggest_single_step/.

Safer—An energy plan that provides a strong balance of efficiency, renewable energy and cleaner natural gas production is safer for our public health and environment.⁸⁰

As a final example, the Natural Resources Defense Council has proposed a “responsible Energy Plan for the United States which includes the following elements and reasoning:

- A commitment to save at least 2.5 million barrels of oil per day in 2015 and 10 million barrels per day by 2025. Technologies exist today that can achieve these savings. We can put American manufacturers to work building the most energy-efficient cars and trucks, and we can put American farmers to work growing crops for new biofuels. We can save American consumers money by increasing the efficiency of our cars and trucks and strengthening smart growth policies. All of these steps will reduce dangerous air pollution, including emissions that cause global warming. Congress should set these savings in motion by enacting a national requirement to reduce our oil use by 2.5 million barrels per day.
- The fastest, cleanest, and cheapest way for America to address its growing energy demand is through energy efficiency-getting more and better service using less energy. Thanks to readily available technology for improving heating and cooling systems in buildings and increasing the efficiency of everyday appliances, America can make dramatic cuts in energy use without sacrificing comfort or profitability. Indeed, the economic benefits of investing in efficiency measures typically outweigh costs by a ratio of 2 to 1. To tap this underutilized energy resource, NRDC is calling on Congress to extend the performance-based energy tax incentives adopted in the Energy Policy Act of 2005.
- Clean energy such as wind, solar, and biomass provides electricity without damaging the environment or releasing dangerous air pollution. In order to ensure that all Americans can take advantage of these clean resources, NRDC endorses a federal renewable portfolio standard to require electricity providers to include a minimum level of clean energy resources in the electricity mix they deliver to their customers. We also recommend extending the renewable-energy production tax credit to keep renewables on their continued march to cost-competitiveness.⁸¹

The United States Senate has before it right now a bill, introduced by Senator Jeffords, to combat global warming, which deserves support in its own right and as a way to strengthen our energy future.⁸² This bill deserves your vote, and a quick passage.

CONCLUSION

In his book *Collapse: How Societies Choose to Fail or Succeed*,⁸³ Pulitzer Prize-winning author Jared Diamond assesses the choices we face today in the context of the fate of previous civilizations. He traces how the ancient Mayans flourished for over 600 years until deforestation and the erosion that followed destroyed their agriculture. In contrast, he examined how other societies, such as the Icelanders of the 15th century, saw the threat posed to their natural resources by overgrazing and, in a practice that continues to this day, placed a cap on the number of sheep in their herds so that they could sustainably interact with their environment.

If anything, we face even more dire choices today, as not only is our civilization here in the United States at risk, but so is our entire world. We can choose to ignore the health, safety, and environmental warning flags flying over our country and continue a myopic reliance on oil and gas to fuel our society. Or we can begin an aggressive transition to alternative, renewable, forms of energy; energy that will allow us to interact with our world in a more sustainable manner. And do so in a way that protects the special places and values that have helped define the United States as a great civilization.

All of this is not to say that we should ignore the most immediate lessons taught by the Prudhoe Bay debacle. As we bridge to these alternative energy sources we must also struggle against the great influence that the oil and gas giants have over our society, and ensure that government acts in its proper role as steward of our environment and protector of the existing energy supply infrastructure.

⁸⁰ http://www.sierraclub.org/globalwarming/bush_plan/factsheet.asp.

⁸¹ <http://www.nrdc.org/air/enemy/rep/execsum.asp>.

⁸² See <http://jeffords.senate.gov/jeffords/press/06/07/072006climatebill.html>.

⁸³ Viking Penguin (2005).

We can meet the short-term challenges by implementing the first category of recommendations relayed above. By protecting, and respecting, special and especially sensitive places like the Arctic Refuge and the area near Teshekpuk Lake, and by pursuing alternative energy sources, the United States can also start meeting the long-term challenges faced by our society, and do so in a manner that will allow future generations to inherit much of that which makes the United States of America the greatest country on Earth; our vision and our environment.

The CHAIRMAN. They will be made a part of the record as if read. Now, Senators, we are going to proceed. I'm going to ask a couple of questions and then we'll go to Senator Bingaman, Senator Thomas, Senator Wyden, and so on.

Let me start. Admiral Barrett, we have always been told that oil and gas operations on the North Slope of Alaska are the cleanest and most environmentally friendly in the world. I visited many of these sites personally and was very impressed. But what I am hearing today is very troubling.

Your agency looks at pipeline systems across the country. How would you describe the condition of the oil delivery system today? In terms of the severity of oil spills, where do these recent spills rank? When compared to other U.S. spills, are they within the top 10, top 50, or just how do you rank them?

Admiral BARRETT. Mr. Chairman, I think the recent spills you've seen from the BP lines we're talking about are an anomaly in the sense that the lines were unregulated and we have not seen—I believe there's only one other spill of comparable size, in Arthur Kill, from lines of this type, historically. So this, with respect to low-stress lines, would certainly be one of the largest.

We typically do not see incidents like this across the United States with lines of this type. They typically have a relatively good safety record. For the most part, these low-stress lines are much smaller in size than the BP lines we're talking about here and are much shorter segments as well.

The CHAIRMAN. The BP transit lines that failed at Prudhoe Bay were not regulated by DOT. How many other lines are without regulation?

Admiral BARRETT. These particular low-stress lines—we do regulate extensively on other lines on the North Slope, higher stress lines. We oversee about 400 miles of what we call carrier lines, if you will, up on the North Slope. We have a regular and extensive inspection program on them. So these particular lines we're talking about, nationwide we've proposed to bring under regulation, most recently with our rulemaking proposal, about 600 miles of lines of this type on a national basis.

The CHAIRMAN. Why were lines like this not regulated? Would you tell us very clearly, so the public understands, why they were not covered by any law.

Admiral BARRETT. Mr. Chairman, we applied our highest priority to lines that posed a risk to life safety, typically high-stress oil and gas lines in populated areas. And we've implemented a very aggressive program over the last 5 to 10 years to bring those lines that threaten people who live in their communities with life-threatening problems through integrity management programs.

So, frankly, our highest priority was life safety. These lines, lines of this type, historically have had a generally good record with respect to spills or other problems. And we were moving since 2004

to bring lines of this type under regulation. We've implemented over 50 mandates from Congress coming out of legislation, going back particularly to the 2002 pipeline safety reauthorization, with our highest priority being on lines that pose the greatest life safety risk. These are some of the last pieces of the puzzle, if you will, that we were getting on top of.

The CHAIRMAN. How would you describe the condition of the TAPS lines? Can the country depend on a 30-year-old pipeline to continue to reliably deliver oil?

Admiral BARRETT. Mr. Chairman, you know, with a line that's well designed, constructed, and maintained, it can continue in service almost indefinitely as long as attention is paid to keeping the line from corrosion or external damage problems. As I noted, we inspect the Trans-Alaska Pipeline regularly and have done so over the years. While we have issues with it from time to time, we took another look at it just this past spring following the BP failures and we have no immediate concern with the operation of that line.

The CHAIRMAN. Let me see if I've got it straight, from your standpoint. Why did this happen and who's to blame for it?

Admiral BARRETT. I think it happened because BP fundamentally didn't understand the conditions of their lines, these low-stress lines on the North Slope, and didn't maintain them properly. I think the operator is quite simply accountable for what happened. And we do not see conditions like this replicated in other lines on the North Slope or typically on other lines in the national pipeline transportation system.

The CHAIRMAN. So it was up to them to do a better job of maintaining the lines even within the system, as you've described it, which gave them an awful lot of autonomy and independence in terms of how they did it. And they did it insufficiently for sure with reference to the maintenance here; is that correct?

Admiral BARRETT. That's essentially correct, sir.

The CHAIRMAN. All right.

Senator BINGAMAN.

Senator BINGAMAN. Thank you very much.

Mr. Malone, let me ask you this. My understanding is that this line which is the subject of the concern here and that has caused the shutdown was not inspected for a period of 15 years. Is that an accurate understanding?

Mr. MALONE. Senator, if you will allow me, with the committee's approval, I don't want to use the excuse that I'm just here for the last 2 months, but there are pieces of this history that—Mr. Marshall, who has joined me here today, who was on the scene, can answer those questions.

Senator BINGAMAN. Maybe you could give us a short version, Mr. Marshall. I only have a few minutes here and I don't want a long explanation. But my understanding is there was no pig run through the line for inspection purposes for a period of 15 years, is that accurate?

Mr. MARSHALL. The eastern line, Senator, was last pigged in the early 1990's, and the smart pig that was run by the previous operator there, Arco, was unsuccessful in obtaining good data. The western lines that BP has operated since 1977 were pigged and smart pigged in 1990 and 1998. When BP took over the eastern

side of the field in 2000 and 2001, we instituted a program of ultrasonic testing and compared the results of that to what we had seen on the western lines.

On the western lines, from the pigging there were very little solids in 1998. The line was fit for service and we saw pretty much identical results from there, and on that basis we proceeded. It was only in 2005 that our testing program on the west started to show increases in corrosion. As a result of that, we increased the testing frequency and commissioned a smart pig run for 2006.

Senator BINGAMAN. But the eastern line was not really tested with a pig since 1990—the early 1990's; is that accurate?

Mr. MARSHALL. Maintenance pigged in 1990 and 1991, I believe.

Senator BINGAMAN. I guess I would then ask, Admiral Barrett, do you have any way of monitoring that kind of thing? I mean, there's about a 15-year period there when nobody was doing any pig inspection of this line. As I understand it, you had no jurisdiction, you had not asserted jurisdiction, this was not on your radar screen. I mean, isn't this something that there should have been some kind of procedure in place to ensure that this not occur?

Admiral BARRETT. Senator, thank you. On regulated lines we do require regular cleaning of the lines, which did not take place here. We do require regular inspections. But this issue was certainly on our radar screen.

Senator BINGAMAN. And by "regular," how often are you talking about?

Admiral BARRETT. It depends on the condition of the line, but cleaning pigs typically would be run from every several weeks to every several months. I believe Alyeska runs them about every 2 weeks. Then the sensor pigs—the in-line inspection pigs, if you will—would be run every several years. Typically, our regs would require no less than about 5 years.

But if I could, sir, this was on our radar. We've been working to bring lines like this under oversight since 2004, and obviously we've accelerated those efforts recently.

Senator BINGAMAN. My understanding is this new regulation that you have now put out or your proposed rule came out a couple of weeks ago. It would still leave an estimated 78 percent of the mileage unregulated, without even corrosion prevention requirements imposed in that 78 percent. Is that an accurate description of your new proposed rule?

Admiral BARRETT. The proposed rule would address lines that run through what we've defined as unusually sensitive areas, and those are lines that transit—and I would first set aside the lines that transit populated areas or could impact navigable waters. They are regulated, so we're talking about lines in rural areas only here.

But of those lines, we would regulate any line that would transit near a threatened or endangered species, or that threatened, for example, the community water supply. And you're correct, we do not have accurate maps, so we're using estimates, but we think we would bring, with that unusually sensitive definition, about 25 percent of the lines into play.

Our past practice has been, and would be in this case too, that once the regulation is in place to get out and rigorously inspect and

assess lines that would be within or without that definition. In the past, when we've done so, we've typically found that more lines fall within the scope of what we're proposing, and we'll see what happens here, sir.

Senator BINGAMAN. My time has expired, Mr. Chairman. Thank you.

Admiral BARRETT. Thank you, sir.

The CHAIRMAN. Senator Thomas.

Senator THOMAS. Thank you.

Mr. Marshall, your company is the operator of the Prudhoe Bay Oil Field and owns 26 percent of the shares. Exxon, Conoco, Chevron, and others control the remaining shares. It's my understanding the majors must agree on how much to spend on maintenance and how those dollars are spent. How does this decision work then among the various companies?

Mr. MARSHALL. Senator, thank you for the question.

Senator THOMAS. Do you have the final say as the operator?

Mr. MARSHALL. Absolutely. BP, as operator, will make the decision to safely operate within, and recommend budgets every year for submission to the co-owners, based on what we believe to be the required amount of work for maintenance and capital spending.

Senator THOMAS. Much of the feeling is that there were not enough maintenance dollars spent and that's the reason for the problem.

Mr. MARSHALL. Since 2001, when I arrived, the level of spending has increased at Prudhoe Bay from \$434 million to \$787 million. Our corrosion program has increased by 80 percent over that period. Our major repair spending will increase fourfold from what we spent in 2004 to what we plan to spend in 2007, consistent with the chart to my left, which shows that the—

Senator THOMAS. What could you have done then to have avoided this issue? The corrosion, in the pictures we see, it is pretty apparent that there were things wrong there, and you didn't use pigs, apparently, so how do you maintain those pipelines without using pigs?

Mr. MARSHALL. We actually use over 350 pigs a year across the North Slope. We employ pigging regularly.

Senator THOMAS. In this pipeline?

Mr. MARSHALL. Not in this pipeline.

Senator THOMAS. No. Well, this is the one we're talking about.

Mr. MARSHALL. We have based our program, a very comprehensive program of corrosion management, on the areas which we believe to have the highest probability of corrosion. We inject over two million gallons of corrosion inhibitor a year at the wellhead to protect the entire system of flow lines, gathering lines, the major facilities, and indeed these transit lines.

We use ultrasonic testing. We use a number of techniques. But clearly, in retrospect, looking back, these lines should have had maintenance pigs.

Senator THOMAS. The pigs you were using had to be turned back in to the company because they weren't working properly, isn't that true?

Mr. MARSHALL. I'm sorry, I missed the question.

Senator THOMAS. I said, the pigs you were using were subsequently recalled by the manufacturer.

Mr. MARSHALL. I believe you're referring to the smart pig that was run by Arco on the eastern line in 1991 and 1992. The data that came back from that smart pig run was not good and I believe the pig was ultimately—the technology was actually taken off the market.

Senator THOMAS. OK.

Admiral Barrett, how long had DOT had the authority to issue the rule that came out on August 31?

Admiral BARRETT. It's in our organic statute, sir. So we've had the basic authority to regulate on these lines for in excess of 10 years, I believe, and, in fact, have been moving to do so, as I had indicated.

Senator THOMAS. But you did not do so until August 31?

Admiral BARRETT. That's correct, sir. Our highest priority in terms of rulemaking was high-stress oil and gas lines that pose life safety risks in populated areas. And we moved extensively on those lines and those risks.

Senator THOMAS. And you did not consider this to be one of those lines?

Admiral BARRETT. The record of problems on these lines is of a much lower risk and to my knowledge there have been no life safety issues associated with failures on any low-stress lines.

Senator THOMAS. Your proposed rule does not mandate the use of smart pigs to check for deterioration. It allows operators to rely on unsound—ultrasound testing, as it did in Prudhoe Bay. Do you think that's the best option for ensuring the viability?

Admiral BARRETT. Sir, the proposal would require extensive corrosion management programs and also assessments using, about every 5 years, a smart pig or an alternative. On any pipeline, any large pipeline system, there are segments of the lines where you cannot run a smart pig because of the design of the line. You can have bends or elevation changes, you can have telescoping segments, so you cannot get in a smart pig; and we allow alternative inspection methods, which can be hydrostatic—

Senator THOMAS. Which apparently haven't worked.

Admiral BARRETT. No, sir, in many cases they do work quite well.

Senator THOMAS. Why didn't this one work?

Admiral BARRETT. On this line there was simply no maintenance pigging done for many years and there was no alternative inspection equivalent to a smart pig. That is where I was going.

Senator THOMAS. I see, OK. Thank you.

The CHAIRMAN. Thank you very much, Senator.

Now we'll proceed to Senator Wyden.

Senator WYDEN. Thank you, Mr. Chairman.

Mr. Marshall, I find your statement that you and BP officials didn't know about serious corrosion problems at the pipeline until March 2 to just be preposterous, and I want to be clear why I've come to that conclusion. In 2004, for example, the company transferred its top pipeline inspector, Mr. Willums, because there was an outside inquiry that found that he had intimidated BP corrosion workers who raised safety concerns. So BP knew enough to trans-

fer Mr. Willums because he had dismissed these concerns about corrosion, and I can't understand why that alone wouldn't set off a serious set of warning bells at the company that people should have been following up on these concerns.

If you send somebody to a new position because he's retaliated and you know the concern that was raised there, why wouldn't that alone have told you about the corrosion problem?

Mr. MARSHALL. Senator, thank you for the question. If I could, corrosion exists in every—just about every oilfield, and we know it's a problem. The question is how effectively do we manage it, and BP has a very comprehensive program to do just that, as I described earlier. Clearly, in this case, looking back, it was not adequate enough.

The allegations that you raise concerning Mr. Willums were first raised in 2003. Any time we receive allegations, I am determined that we will investigate, and in this case we did both times. In 2003 we brought in—

Senator WYDEN. But how can you say that you didn't know about serious corrosion concerns just on the basis of that alone? These workers aren't bringing up trivial kind of matters. They're putting their careers at risk. It was sufficiently serious that you had an outside inquiry. Then you transferred Mr. Willums. How can that alone have failed to set off the warning bells there at BP about corrosion?

Mr. MARSHALL. Senator, we've investigated the specific allegations that were raised in connection with Mr. Willums. At no time did any of those allegations point to corrosion in these particular lines. There were corrosion issues raised generally. Where we've been able to look at specifics, we have investigated those and taken action. But at no time, through the allegations raised here or indeed through any of the other reviews that we've had done of our corrosion program—

Senator WYDEN. The workers were just raising trivial matters with respect to corrosion?

Mr. MARSHALL. Please, I don't want to leave that impression with anybody.

Senator WYDEN. Because you have said, and you said it last week again, that you didn't know anything about serious corrosion until March 2. The Wall Street Journal has documented reports going back to 2002. You have an outside enquiry to look at one of your top officials, and it seems to me, that alone should have signaled that there was reason to follow up.

Mr. MARSHALL. Senator, we certainly know that corrosion exists in the oil field. We believe the systems—the data we were getting on these lines first indicated corrosion with the testing we did in the second half of 2005. Looking back at the GC-2 line, the OT-21 line, that was the first real indication we had of increasing corrosion from ultrasonic testing. That was very evident. And before we could actually run the smart pig on that line, we unfortunately had the spill.

Senator WYDEN. Mr. Malone, the company has an unfortunate and documented history of engaging in anti-competitive practices that harm consumers. For example, just recently the Commodities Futures Trading Commission has issued a formal complaint alleg-

ing BP illegally manipulated the propane market. A few years ago, internal emails showed up from BP trading managers who talked about the benefits of shorting the West Coast market to leverage up prices there.

Again, these aren't made up. These come from BP internal documents, documents that show that your company was interested in ripping off the people that Senator Feinstein and I represent. So, given what the CFTC has found recently, given the history that I have pointed to with respect to internal BP documents, what do you plan to do in terms of instituting changes to stop this kind of anti-consumer conduct in the days ahead?

Mr. MALONE. Senator, the events you're talking about with propane is 2003, 2004. We had traders, and we have the tapes, and it's very clear that they violated our policies, they violated our code of conduct. And disciplinary action was taken. They were terminated, three of them.

Since that time, Senator, we have instituted a number of guidelines internally, but we recently announced that we're doing an external audit looking at all of our procedures, our policies, going forward to assure that we're operating within the highest standards for trading activity. And that's been initiated and is ongoing now.

Senator WYDEN. I also saw allegations with respect to BP manipulating crude and gasoline markets. Can you comment on that? In other words, we've got the West Coast getting fleeced ever since the middle 1990's. We've got the consumer—the Commodities Futures Trading Commission already filing a complaint. Now there are new reports with respect to the manipulation of crude and gasoline markets. What is your reaction to those new reports?

Mr. MALONE. Senator, in 2002 and again in 2003 for gasoline and crude oil, the CFTC has initiated an investigation. We've been cooperating fully with the CFTC in that, in their documents, producing documents, and in their investigation. We plan to continue to do that. But it is an investigation at this time.

Senator WYDEN. My time has expired, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator.

Now we'll proceed to this side. The next Senator is Senator Murkowski.

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

Senator MURKOWSKI. Thank you, Mr. Chairman.

I have to tell you, gentlemen, this is a painful hearing for me as an Alaskan, to be at this point where we are talking about corrosion that has allowed for a spill on the North Slope of the State of Alaska. And I'm sure that you have heard from other Alaskans who are disappointed, frustrated, angry, because for years we've been told by the industry and we have stood alongside and we have said that the operations on Alaska's North Slope are the gold standard. That's what we've been told, that's what we believe, and that's what we want to continue to believe.

But that faith has been shattered by what we are seeing up north now, and to listen to this testimony, to listen to the testimony that was before the House last week, and to understand the extent of what we are dealing with is a blow to Alaskans, it's a

blow to Americans, and I would certainly hope it's a blow to British Petroleum and its operations.

[The prepared statement of Senator Murkowski follows:]

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

Mr. Chairman, thank you for holding this hearing.

As an Alaskan, this hearing and particularly the reasons for it being held, are particularly painful.

Alaskans are generally proud that our Prudhoe Bay oil field has provided this nation with more than 15 billion barrels of oil over the past 29 years. Until this year, there had never been a major release of oil on land in the three decades of operation of the Greater Prudhoe Bay oil field.

When this committee a couple years ago inspected the field, we were given iron-clad assurances by state and federal officials, plus the field operators, that Prudhoe Bay was the best run oil field in America and the most stringently regulated. We all saw the "diapers" placed under every vehicle to prevent oil drips from reaching the tundra. We all saw the precautions taken to protect the outside of pipes and to prevent leaks. We saw the maintenance operations and care taken in exploration to prevent environmental damage. We asked about and were given assurances about the size and adequacy of increasing maintenance budgets to care for aging pipes and equipment in a land of harsh climate conditions. What we could not see was the condition of the inside of the miles and miles of pipelines crisscrossing the oil fields.

In the face of complaints over the years about the potential for pipe corrosion, we all depended on the assurances of the field operators: BP since 2000 for all of the main field, and other companies for the surrounding satellite fields, and of federal and state regulators. Alaskans are distressed and disappointed by what we have learned since March.

On March 2 our faith was somewhat shaken when BP discovered the dime-sized pit that turned into a hole in a transit line on the far west side of the field that had allowed nearly 5,000 barrels of oil to leak under the snow from an underground pipe segment under a caribou crossing. It was a leak that escaped detection by the 34-inch pipeline's leak detection system, for a number of days. We thought for months that the leak was an isolated problem caused in a low-spot in the low-pressure pipeline, perhaps because the line was the first to be used to develop "heavy" oil in the region—the line thus carrying more water and perhaps more bacteria that can generate acids which can eat into pipe walls.

Then came Aug. 4 when detailed tests, ordered after the March spill, found similar significant pitting—corrosion—in a similar transit line on the far east side of the field. But this time the corrosion wasn't just in low spots, but spread occasionally throughout the bottom of the line's pipe. BP, after finding 16 spots of corrosion including one actual hole that leaked about 27 barrels of oil, showed proper caution for the environment and proposed to shut in all 400,000 barrels of production from the original Prudhoe oil field until the cause of the corrosion could be pinpointed. After a crash effort of ultra-sound testing, the west field pipe was found healthy enough so it was allowed to remain open, the nation being deprived of about 200,000 barrels of east field production a day.

That, coming at a time of concern about Iranian oil supplies and concerns about gulf hurricanes (none of which has yet materialized) drove oil prices back to near all-time highs. We know from briefings, inspections, hearings and prepared testimony that:

- BP is trying to get most of that production back up this fall after more ultrasound testing confirms the integrity of other east field lines and/ or through the use of by-pass lines to move oil around any corroded pipe segments.
- That the Prudhoe Bay field owners have ordered pipe to replace all 16 miles of the east and west transit lines—at a cost of more than \$150 million—new smaller diameter pipe, which will force higher oil velocities, hopefully preventing water from settling into the bottom of the pipes and stopping similar bacteria-caused corrosion in the future.
- We know that the new pipe will hopefully be installed this winter.
- We know that all the existing spill sites have been cleaned up causing no lasting damage to the environment.
- And we know that the fingerpointing, investigations and soul-searching about what went wrong, whether regulations were broken, whether information was withheld and warning signs and whistleblowers ignored will continue for months longer than the actual equipment problems at the nation's largest oil field.

What I'm still cloudy about, is why this really happened, what its true impacts were, and what we can do to make sure it doesn't happen ever again, not in Alaska, and not in any American oil field? The latter points are the subject of this hearing.

It appears the answer to the first question, as it frequently is, is the leaks were caused by complacency. We now know that a "smart" pig examination of the inside of the west line had last been conducted by BP in 1998. On the eastern side of the field, the last "smart" pig inspection, which is a good way to look for corrosion inside the entire length of pipes, had not occurred since ARCO did it in 1992 or 1991 or perhaps 1990—the date is slightly unclear from recollections and statements. And it turns out that test was so plagued by bad data, and the fact that the test found that so many flakes of calcium had to be scraped off the inside of the pipe walls that it clogged the Alyeska pipeline pumps, that industry was in no hurry to repeat the use of either maintenance or smart pigging devices in the transit lines. Instead industry turned to ultra sound testing, the more accurate way to find corrosion inside pipes (provided you spot test in the exact spot where corrosion is starting to form). Industry also used "coupons"—test strips—that should show corrosion, and increasingly relied on chemical corrosion inhibitors to protect the pipes.

In hindsight it is clear that corrosion inhibitors work best when lines are pigged—cleaned out—first to remove sludge and calcium deposits that can prevent corrosion inhibitors—chemicals that kill bacteria and coat the inside of pipe walls—from reaching the pipe walls to protect the metal. But since the chemical tests and coupons indicated there should not have been corrosion forming in the transit lines, and because corrosion almost never happens in oil field pipelines that carry market-ready oil—oil where all the water and corrosive carbon dioxide have already been removed—apparently no one at BP thought to question whether the corrosion inhibitors were actually reaching the inside of pipe walls and killing bacteria hiding under the sludge.

At the very least, complacency in not running the pigs—relatively inexpensive test devices—and complacency by regulators—believing assurances that the pipes had to be in good shape since corrosion should not be forming or delay in imposing new regulations that might have forced the pig runs—led to the corrosion not being discovered until leaks developed. And complacency in not putting in more redundancy in piping systems, led to the nation, so far, needing to import million of barrels of additional oil to make up for Prudhoe's late summer production shut-ins. I hope the testimony will talk about how vulnerable this nation's energy security is when domestic production is so constrained.

Since the Department of Transportation's Pipeline and Hazardous Materials Safety Administration has stepped up, since the March 2nd leak, and already imposed tight testing and inspection requirements that should allow safe oil production at Prudhoe Bay, this hearing in my view should be about identifying the root causes of the complacency, both among North Slope oil companies, and also among government regulators. And Congress and the executive branch likely also are not blameless.

Following a major pipeline explosion in Washington we did pass the 2002 Pipeline Safety Act reauthorization. That act gave DOT more authority to require improvements in pipelines. The agency had been working on improving regulations and inspections since 1992, but the agency started first to focus on high-pressure pipelines, lines with greater risks of leaks and accidents and those in urban areas and near particularly unusually sensitive areas (USA's) where leaking oil would cause the most environmental damage. So it was only in late August of this year that DOT's PHMSA unveiled the regulations that would require BP to pig test all low pressure lines on the Slope and perhaps others in Alaska—there being another 67 miles of such pipeline in the Cook Inlet field alone.

I am curious whether the delay in increasing inspection efforts for low pressure lines like these transit lines at Prudhoe was because we, Congress, or the Administration through actions by OMB, had not given the agency enough funding, or whether new regulations covering them, recently issued, arrived only because there was so many more higher priority regulations to issue.

I am certainly prepared to introduce legislation—it's already drafted—to mandate that oil companies use regular maintenance and smart pig runs to look for corrosion. But since the Pipeline Safety Administration has already issued regulations that make such legislation somewhat duplicative, I would like to see if the legislation would do anything more than show meaningless movement. Does the government need any more authority from us to mandate better pipeline inspections, changes that could well be added to the Pipeline Safety Act already up for reauthorization? Are we locking the barn horse after the horses have run out, if we pass such mandatory inspection requirements?

I'm interested in getting a better handle on how oil fields across the country deal with pipe corrosion. If the corrosion in the transit oil lines at the Prudhoe Bay field is the result of lowering oil production levels, that reduced the amount of oil in pipes, cutting the velocity that the oil moved through lines and thus allowing water to settle out, helping corrode pipes, most all oil fields in the U.S. are in decline and facing lower oil flows. Why haven't we had similar leaks elsewhere? Have we had similar problems, but we just don't know it because of faulty statistic gathering—or lax reporting requirements?

In the prepared testimony for this hearing and one held last week on the House side, I notice indications that this type of corrosion is not found in other fields in America. Is that because other producers tend to use more pigs to better clean sludge out of their pipelines or could something related to unique Alaska conditions have been the cause for the accelerated internal corrosion? I think BP needs to say more clearly why it did not feel the need to run maintenance pigs more frequently than one eight years ago, on the west side of the field and none in 14 years on the east. It has been six years since BP took over operation of the east side of Prudhoe from the former ARCO. Certainly that is enough time for the company to have installed new maintenance requirements?

Over the weekend, there were news reports that indicated BP was quite slow in filling a corrosion strategy specialist position. Why was that?

Was there an effort by companies to specifically reduce or at least not increase maintenance spending sufficiently in the past at times of lower oil prices, cutting corners on corrosion prevention programs, either at BP or from any of the other eight oil companies that own part of the Prudhoe Bay leases and have a clear say in the spending approved for oil field maintenance? I know BP today will show a chart that shows a marked increase in maintenance and corrosion spending at Prudhoe Bay in 2005 and 2006. What I'm interested in, is why spending on maintenance and corrosion was nearly flat in 2001, 2002, 2003 and 2004 at about \$175 million a year for maintenance and between \$35 and \$50 million for corrosion? Was that spending level truly adequate to cover the size and complexity of the field and to cover both internal and external corrosion given Alaska's climate?

In hindsight it appears inexcusable for there not to have been more of an investigation of the health of the low-pressure pipes in more places than the monitoring in fixed locations of corrosion allowed by nearly sole reliance on spot ultrasound not continuous or automatic ultrasound testing.

And finally if piping was not adequately inspected, is there any other facet of maintenance complacency that could also impact oil production in the future at Prudhoe Bay or any of the other satellite fields in northern Alaska?

Really, it is not surprising that pipelines after nearly 30 years of use would suffer corrosion in Alaska's harsh climate. The companies have routinely replaced miles of pipe in Alaska, as a standard cost of doing business. Alyeska has already replaced 8.5 miles of the main Trans-Alaska oil pipeline due to external corrosion. Another thing surprising about the recent leaks in the Prudhoe Bay field is what they reveal about the redundancy of the infrastructure in the nation's largest and perhaps most important oil field, and what they reveal about maintenance practices and the decision making process that shapes those practices, and the real regulatory oversight that infrastructure is facing.

The run up in prices in early to mid August show how important all domestic oil production is to the financial health of America's economy. When prices in August neared \$80 a barrel because of fear that the entire original Prudhoe Bay field would have to be shut in, Americans were paying hundreds of millions of dollars more for fuel a day than what they had been paying under more normal market conditions. That is money our economy can't afford, not counting the national security and energy security considerations.

Alaskans are proud to say that Prudhoe Bay is the best run oil field in America. I just want to make sure we are doing everything humanly possible to make that boast, truly be reality. This is where I'll be focusing my questions today. Thank you.

Senator MURKOWSKI. We're talking today about the corrosion, but my question to you, Mr. Malone, Mr. Marshall, is: What else are we learning as a result of this level of oversight now by the Federal DOT? What else are we learning that we should be concerned about? Right now it's corrosion, but are there other operational issues that we should be alerted to? Are there other maintenance issues, redundancy concerns, that are now on your radar screen that we need to know about?

Mr. MALONE. Thank you, Senator. As we look forward, we are conducting a review as we speak and, as I mentioned in my oral statement, looking back on employee concerns that have been raised to see if we can see any issue that we may have missed. We're also conducting an integrity audit. We've had some of my integrity people up there working with Mr. Marshall's people this week, looking across the North Slope to determine if there's more that we need to do.

Senator, just on the corrosion issue, I want to highlight this panel that we have that will be working very transparently to look at a go-forward program on all of our Alaska pipelines, and that information is going to be transferred, not just across all of the operators in Alaska of the other systems, but also across all of BP.

Senator MURKOWSKI. So have you hired that corrosion engineer or that person to replace the position that Mr. Willums had?

Mr. MALONE. Let me yield to Mr. Marshall.

Mr. MARSHALL. Senator, yes, we have. That position, Mr. Willums' position, was actually filled immediately after he departed Alaska in January 2005.

Senator MURKOWSKI. Can you clarify that, because I thought that that position had remained unfilled for 14, 15 months.

Mr. MARSHALL. No, no, that's incorrect. The corrosion engineering position that Mr. Willums had had previously was not filled until July 2005, by Mr. Bill Hedges. Bill was nominated for the position in early 2005, but could not be released from his obligations in Trinidad. What he did do, though, was come to Alaska on a number of occasions to get up to speed and actually participated in the Department of Environmental Conservation review of our program in the second quarter of 2005. So he was very active and was able to get up to speed as quickly as he could upon his arrival in 2005.

Senator MURKOWSKI. Then in terms of other issues that we need to be looking to—and I don't mean to get off the corrosion issue because that's why we are here today, but are there other maintenance issues at play now up on Alaska's North Slope that BP, as the operator, is concerned about, that we should be concerned about?

Mr. MARSHALL. Senator, if I could, we take very seriously—and I share the regret that this incident has happened on my watch. I represent a group of 1,500 dedicated Alaskans who work for BP and thousands of contractors who support us in every aspect of our operation. I can only reflect their disappointment that this has happened. We are determined to do everything and anything we can to reestablish confidence and trust, working with regulators, not only to adopt but to help pioneer what it takes, bring in the technologies we need to bear on these lines.

BP has already committed to replace 16 miles of transit lines with lower, small-sized lines to promote higher velocities. We are accelerating our renewal program of pipelines and infrastructure to support a 50-year future. We're increasing investment on those systems every year. We're increasing the amount of expense spending we make on maintenance, on major repairs, on well refurbishment, on flow line repairs. We are determined to do everything we can to reset that gold standard not only for BP, but for Alaska.

Senator MURKOWSKI. I'll have further questions, Mr. Chairman. Thank you.

The CHAIRMAN. Thank you very much, Senator.

Now we're going to proceed to Senator Feinstein on the Democrats' side. Would you proceed, Senator.

Senator FEINSTEIN. Thank you very much, Mr. Chairman.

Mr. Malone, you were good enough to come in yesterday and talk with me, and you explained that you are a new president and chairman of BP America. And I appreciate that, but you're not unfamiliar with the company. You have been an officer of the company.

Yesterday we discussed the reason for the replacement of the 16 miles of pipe, which is substantial corrosion, almost to the point where parts of the pipe have been run through. We heard that presented just now by Mr. Marshall: "Oh, we're doing a good thing; we're going to replace it with smaller pipe for higher velocity." The fact is, the reason you're replacing it is because of negligent maintenance that has substantially corroded that pipeline; is that not true?

Mr. MALONE. Senator, thank you. The answer is we don't know all the conditions of those lines with ultrasonic pigging, but we do know—

Senator FEINSTEIN. I'm talking about the 16 miles of line that you told me yesterday you're replacing because of corrosion and other problems brought about by the lack of maintenance.

Mr. MALONE. We are replacing all of those in-field lines, transit lines. It's 16 miles. And we are doing that because of questions around indeterminate—which is what caused the shutdown. We weren't sure—with our data that we were using, we weren't sure that we could know that the rest of these lines were in good condition, so we made the commitment to put in 16 miles of new line.

Senator FEINSTEIN. You're not answering my question, Mr. Malone.

Mr. MALONE. Senator, I don't have the data that I think you want me to have right now, because I haven't had the opportunity to do my investigation.

Senator FEINSTEIN. All right, fair enough.

Let me give you another one. Mr. Miller told my staff that you knew, BP knew, there were problems on the line in 1998. And just a few moments ago we heard that nobody knew there were problems on the line. Which is it?

Mr. MALONE. Senator, my knowledge—in 1998, I was running the Trans-Alaska Pipeline and I was not involved in BP's operations.

Senator FEINSTEIN. OK. Well, let me just say this and then I want to ask questions in another line. I have always respected BP. I worked with them when I was mayor. We fast-tracked a building in which BP leased space in San Francisco. I met John Browne. I've always respected him. I thought finally there's going to be an oil company that has a sense of conscience and is going to be green and wants to work on global warming, et cetera.

I must tell you, I no longer believe that, and it's been a very big disillusionment. I agree with Senator Wyden, I think it's inexcusable to have an email exchange in which your trading managers

discuss the benefits of shorting the West Coast market to leverage up prices. And I think that it is inexcusable to come here today and not admit before the American public, "Yes, we made a mistake, the line was not adequately maintained, but, Senators, we're going to change that, and I'm a new manager and I'm going to go in there and do that."

So let me just express my profound dismay. If it were my State, I can assure you I wouldn't be as graceful as Senator Murkowski has been today.

Let me ask the Department of Transportation a question. It's my understanding that there are approximately 5,000 miles of low-pressure pipeline that's unregulated; is that correct, sir?

Admiral BARRETT. That's essentially correct, Senator.

Senator FEINSTEIN. OK. So how can the Department say that other companies are acting more appropriately to maintain their pipelines when the only reason we know about BP's maintenance is because of the spill in March?

Admiral BARRETT. Senator, in conjunction with the rulemaking that we've been working on for the past 2 years to bring lines like this under regulation, we have had a number of public hearings, we've had information surveys in the industry to assess, for example, the cost impact of these regulations. And our sense is that most of these lines are much smaller than BP's. They're shorter segments, but most of them are operated with more attention to corrosion, with more attention to cleaning, and, frankly, better maintained than what we've seen up on the North Slope with BP.

Senator FEINSTEIN. Well, do you believe BP has been negligent in maintaining this line?

Mr. MALONE. What we've seen with BP is they did not keep these lines up to the same standard of care we see elsewhere on the North Slope and typically elsewhere in the industry.

Senator FEINSTEIN. Thank you.

Just one last comment. Senator Wyden indicated some of the trading problems, and you know the company has settled ten violations. They did go back to 2001 and 2002. You know that in June the CFTC filed a civil complaint against you. You know that on September 6 a class action lawsuit was filed against BP accusing the company of manipulating crude oil prices. And you know the Department of Justice is investigating BP on charges of manipulating the crude oil and gasoline markets.

As a West Coaster, those of us on the West Coast, Mr. Malone, we're not going to put up with this and I just want you to know it. It has got front—in our attention span, it is way up there as a high priority. You know, once fooled, shame on us; twice fooled, it's a different story. And I really hope that you are going to exercise the kind of leadership that's necessary, because I think this company is deeply troubled today.

If you'd like to respond, I would be happy to have you do it.

Mr. MALONE. Senator, I have two comments I'd like to make. I understand, and I said it up front, that this is unacceptable to us and that we are going to prove to you and the American public that we will get this right. Senator, I have all the authority to do this. I have the personal commitment to do this, and I am happy to come back and talk to you about this as I make progress.

Second, Senator, I understand your questioning of our green credentials, but I would like an opportunity that we—continuing to move down that agenda, around renewable energy, around alternative fuels, around biofuels, we will continue to do that, because it's a core of our beliefs and our values.

Senator FEINSTEIN. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Feinstein.

I might say, Mr. Malone, we all look at the questions that were propounded to you by the Senator from California and we all look at the answers that you have given, and the expectations have been forthcoming to us based on those questions and those answers. And we won't go through each one again, but you have told me also in my office just what you have said here today: You have all the authority and all the resources at your disposal and there's no excuse; right? No excuses. It's all doing things right and paying for it. Whether you have in the past or not, you're going to have to start paying for it now.

With that, I want to move to a distinguished Senator who has been waiting a long time. And he usually doesn't like what he is hearing and I would assume he feels the same way today as he has on a couple other situations. Senator Bunning.

**STATEMENT OF HON. JIM BUNNING, U.S. SENATOR
FROM KENTUCKY**

Senator BUNNING. Thank you, Mr. Chairman. I also would like unanimous consent to put my opening statement in the record.

The CHAIRMAN. It will be made a part of the record as if read. [The prepared statement of Senator Bunning follows:]

PREPARED STATEMENT OF HON. JIM BUNNING, U.S. SENATOR FROM KENTUCKY

Thank you, Mr. Chairman.

I believe many of us will agree that this pipeline spill and the discovery of such extensive corrosion demonstrate a failure on the part of BP to properly maintain its pipeline system. This failure is so appalling because it could have been prevented if BP had reacted to any of the warning signs in the past decade.

I believe the pressure to drive up profits has played an unfortunate role in this accident. As early as 1999, letters from employees and inspections by the Alaska Department of Environmental Conservation and Federal Department of Transportation have indicated serious corrosion problems in the Prudhoe Bay pipelines. Amid record profits, the maintenance habits of BP at this oil field have been half-hearted at best. I hope that we can learn more about how these problems were allowed to go unresolved and what additional safety legislation may be needed from Congress.

While BP must accept responsibility, there are other lessons to be learned. There are industry-wide deficiencies in the perceived maintenance needs of some pipelines. It seems we are only now coming to terms with the corrosion that may occur in low-stress or smaller pipelines. The Government must also bear some responsibility for failing to ensure the safety of these unregulated pipelines. I am pleased that the Department of Transportation's Pipeline and Hazardous Materials Safety Administration now has regulations in place for many low-stress pipelines.

I am disappointed there is the need for a hearing like this one, but I hope that discussing BP's deficient maintenance of the Prudhoe Bay pipelines will prevent future spills and ensure that domestic production has a reliable pipeline network to reach the marketplace.

Thank you, Mr. Chairman.

Senator BUNNING. Mr. Malone and Mr. Marshall, it has been suggested that BP has put profits ahead of safety of its pipeline network. Since 2000 your company has made more than \$70 bil-

lion. I'm repeating that so that the people can hear that—\$70 billion in profits. I am aware of all the money the oil industry reinvests. But you only have 26 percent of the Prudhoe Bay, yet you are the controller of Prudhoe Bay. That doesn't count all the other profits of the oil industry, Exxon Mobil and all the other companies that are partners with you in the Prudhoe Bay investment. But most of the money is directed to discovering new products. Do you believe that your investment has lagged in maintenance at Prudhoe Bay, and why wasn't more done? Why wasn't it?

Mr. MALONE. Senator, if I can—

Senator BUNNING. I've heard a lot of explanations, but none register.

Mr. MARSHALL. Senator, if I can, the budgets for Prudhoe Bay have increased—

Senator BUNNING. I've heard that, from \$400 million to \$700-plus million.

Mr. MARSHALL. That's correct.

Senator BUNNING. That's chicken feed when you're looking at \$70 billion in profits.

Mr. MARSHALL. We have a program which we are determined to focus on the areas we need to focus on, whether it's corrosion, whether it's well refurbishment, whether it's pipeline replacement. We're in action doing that. We have been doing that.

Senator BUNNING. You obviously have not been doing that or we wouldn't have a spill, we wouldn't—I was on Prudhoe Bay's North Slope—I was on Alaska's North Slope with Senator Murkowski, and we went through some of your facilities and you bragged—was it 3 years ago, 4 years ago?

Senator MURKOWSKI. Two years ago.

Senator BUNNING. Two years ago. And you bragged to us how good you were doing. Now, don't tell me that you didn't have an inkling of the fact that your pipelines might be corroding. The people you bought them from, they might not have done a good job. The west side is a little different than the east side, but you bought the east side from another operator. You obviously could have gone and done more with the inspections of those pipelines.

Mr. MARSHALL. Clearly, looking back, we could.

Senator BUNNING. Hindsight's 20-20, sir.

Mr. MARSHALL. We're determined that when we bring in the new lines we will implement a full program of maintenance pigging, smart pigging, and any other technology we can to make sure this doesn't happen again.

Senator BUNNING. Well, we hope so, because if it does happen again you may have to shut it all down.

Mr. MARSHALL. I understand.

Mr. MALONE. Senator, may I—

Senator BUNNING. No, I'm going to continue on, because I am very short on time.

Mr. Malone, there has been some speculation, as the Senators from Oregon and California have talked about, that Prudhoe Bay was actually shut down—this was engineered by BP and it was shut down was to maximize profits. Given the recent allegations pending before the Commodities Future Trading Commission that your company attempted to artificially inflate propane prices for a

profit, I want your assurance to the members of this committee that BP did not deliberately enhance profits for itself or any subsidiary by the timing of the Prudhoe Bay shutdown.

Mr. MALONE. Senator, I was involved in that decision. I can assure you that my decision was made around the safety and integrity of that pipeline and to prevent a spill. We are cooperating with CFTC and providing documents looking at all of our trading activities post-disclosure, and to date, I'm assured they have found no improper trades take place, sir.

Senator BUNNING. One last question, as time will allow. Mr. Malone and Mr. Marshall, as production slows down in older oil fields, as it has been nearly 70 percent in Prudhoe Bay, it becomes more expensive to operate and maintain pipeline networks. Do you believe that the diminished returns on investment in older oil fields have led to maintenance problems in the industry?

In other words, as the production we saw on your charts has gone down—and it's now only about 30 percent effective in bringing the oil out, where it was once at 100 percent—is that the reason we're not getting the maintenance that we should get?

Mr. MALONE. Senator, for the bigger BP I can address the issue and I'll ask Mr. Marshall specifically on Alaska. But in the reviews that I've done so far—and it's still the early days in the job, but the reviews I've done so far, I'm not being told that we had a problem because of the age of the field or the lack of funds. But I'll come back and assure you of that in short order.

Senator BUNNING. It isn't lack of funds by anyone that's pumping oil out of Prudhoe Bay. We all know that. It's lack of attention to the maintenance of the pipelines.

The CHAIRMAN. Are you finished, Senator?

Senator BUNNING. Yes.

The CHAIRMAN. We're now going to go to Senator Landrieu.

**STATEMENT OF HON. MARY L. LANDRIEU, U.S. SENATOR
FROM LOUISIANA**

Senator LANDRIEU. Thank you, Mr. Chairman.

I'm going to go to a little different line of comment and questioning. And I say this—not that there's any excuse for what happened. My colleagues on both sides of the aisle have pressed that issue I think very well, but there's no excuse for what happened and the company has a serious obligation to address it and to fix it and to take those steps immediately.

But I think this record would be absent an important point, Mr. Chairman, if I did not raise for the record that one of the reasons that a breakdown like this can affect our markets is because our markets are so tight, because the demand is rising and the supply is sometimes questionable. And Mr. Chairman and ranking member, while there is no excuse for what happened in Alaska, from an oil-producing State, I have to say that if the industry had greater access to less hostile environments—i.e., where temperatures are not 50 degrees below zero—that we might have a better opportunity to manage the infrastructure necessary to produce the oil and gas the country needs.

Now, there's no excuse for what happened, but it is hard for me, from an oil- and gas-producing State, understanding the extraor-

inary technology and effort that goes into tapping into these resources, finding them and delivering them safely, and the extraordinary effort it takes to maintain these pipelines, to have to sit here and be quiet when I know that the Federal Government, itself, along with many members, particularly in the Democratic Party, and some Republican members, won't allow us to drill where it's easy to lay pipelines and to manage the infrastructure necessary to produce the oil and gas for the Nation.

So I don't want BP to get off the hook, but I do want to add that to the record. And I'm going to submit a statement along those lines for the record for this hearing.

My question is about the maintenance of pipelines. Could someone that is representing the company talk about whether you do this in-house or through contractors? Are most of your workers in-house BP or contractors? If they are in-house, are we increasing, and what are we doing to increase the amount of money in that budget and how much? And if not, what procedures are in place to watch or to monitor or to report your outside contractors that are responsible for the maintenance of these pipelines? I don't know what—

Mr. MARSHALL. Senator, I'll take the response to that question. BP employs about 1,500 direct staff. We also have somewhere in the range of several thousand contractors working across various aspects of our business. With specific reference to the maintenance activities, we have a combination of both BP staff providing the supervision, the management, and a number of the specialized technicians that we rely on to cover everything from turbine maintenance to pump maintenance, pipeline repair and so on.

In addition, we have a number of contractor companies which provide specialized expertise, whether it's for insulation removal, for inspection testing, with specific reference to these pipelines. We employ a number of companies to provide that.

The amount of expenditure—before you cover the expenditures, we are adding people, have been adding people for several years now. This year we're—over the next—this year and next we're adding between 80 and 100 technicians as part of our renewal program of people. We've added between 200 and 300 contractors over the last few years to increase the level of maintenance activity. As the production drops, the level of maintenance requirements increase and the amount of activity that we have to take on has also increased. And at the same time, since I've arrived in 2001, where quite frankly we didn't have the kind of maintenance system that I believe a first-class company should have, we've been addressing that. We've been getting back to basics and eliminating backlogs, particularly in safety-critical equipment, working toward getting that baseline established so we can actually go ahead now and lay in the amount of expenditure, both operating expense and capital, that needs to keep that infrastructure healthy for the next many years.

Senator LANDRIEU. Mr. Chairman, I raise this question because I think it's important for our committee to think about the answer to this, because if Starbucks doesn't invest in their infrastructure, the country might just get a little groggier every day because we just can't access the coffee. And that's a problem, but it's not a

major problem. But when the oil industry is not investing properly in its infrastructure, it causes major problems for everyone, from the automobile manufacturers and the airline manufacturers to the small businesses to our farmers. It drives up prices and makes prices volatile.

I'm not one for mandating industries. I believe in the competitive market and the free market. But I want to go on the record as saying I'm going to consider the solution to this dilemma that we find ourselves in is to deal with the investment aspect, to make sure that the investments and the maintenance of just infrastructure meets the standards of a great economy like America and the world that depends on us to function regularly and without dramatic situations like this.

I don't have anything to offer, but I just want to go on the record, Mr. Chairman, as thinking that we may have to explore some options that would not be appropriate for industry generally, but maybe for the energy industry we have to think about it to ward off any dramatic effects that are causing a shutdown of major pipelines and particular fields, et cetera.

I'll leave it there and thank you.

The CHAIRMAN. Thank you very much, Senator.

Now we're going to go to this side with Senator Talent.

Senator TALENT. Thank you, Mr. Chairman.

Well, you can tell everybody up here is pretty upset. I'm going to give you my perspective on this. We have a very sophisticated oil company and we have an agency that's supposed to be expert in regulating this, and I think those of us in the Congress are thinking that the elementary things that need to be done to maintain these lines and these pipelines aren't being done, and clearly it was not done.

I read, Mr. Malone, your statement about, "With a program this comprehensive, what happened?" I think that's the question we're all asking. I guess the closest thing to an answer is—and you asked the question—why wasn't the corrosion detected by BP's monitoring program? You said, while you had an active inspection program, the isolated pits were too widely spaced to be detected by that program.

So I guess the question is why didn't you have a program that would have inspected and would have discovered the isolated pits even though they were widely spaced?

Admiral Barrett, why don't we have regulations that are adequate to make sure that we are protected against disruption in supply? It seems to me you've been oriented in the past very much toward protecting population and the environment, and of course that's very important, but the supply of energy is hugely important as well. And I don't think anybody's explained yet, given that I think we understand the technology and understand how these lines work, why, for example, it was 15 years—I think your testimony in the House was it was 15 years since you've done any pigging on these low-stress lines.

So, given that that's how you discovered the problem with the lines and that that technology was available—it wasn't new—why weren't you doing it?

Mr. MARSHALL. Senator, with respect to the eastern lines, which are the ones that had not been pigged since the early 1990's—Prudhoe Bay consists of two halves, the east and the west. The east is what was formerly operated by Arco. It is essentially a mirror image of the west, which BP operated—three major facilities and 8 miles of transit lines on each side.

BP had run pigs in 1990 and 1998. The smart pig data from both results confirmed the line was fit for service. We looked when we took over the eastern line, which is the one that you referenced had not been pigged. We looked at the data and we instituted a testing program, but admittedly ultrasonic testing. Those results confirmed the condition of the line to be very similar to the line which had been pigged only 2 years prior. We had good evidence there were virtually no solids in that pig run, less than 2 cubic yards, and the line was pronounced fit for service.

So we viewed that data and saw the lines were in broadly similar shape. It was only in 2005, when we were doing the testing, that we started to see increases in corrosion, which certainly proved to be the pitting type of corrosion that you referenced.

Senator TALENT. So are you telling me that this problem developed over the course of the last year or two?

Mr. MARSHALL. Senator, it's too early to say definitively exactly what the cause is. That will only be determined when we complete the failure analysis of both sections of failed line. That has not been done. We need to get that lab work done to really understand accurately what the corrosion mechanism was and to be able to make a determination about over what timeframe it occurred.

Certainly there is evidence on the west that there was a very rapid deterioration of that line, but right now that is still a theory, not a confirmed outcome.

Senator TALENT. Admiral Barrett, can you assure us that when you're done with these new regulations that all the pipelines which are necessary to protect supply are going to be the subject of regulations requiring inspection and that those regulations will be designed to protect not just population and the environment, as important as that is, but also the supply of energy to the country?

Admiral BARRETT. Two comments, sir. First, the lines we're talking about, the BP lines, with the regulation we propose, the corrosion management program they'll have to put in place would have prevented this from occurring, and that's the case on their other lines up there that we do regularly. What they had in place, particularly the absence of the maintenance pigging, would not have been acceptable. And I will certainly take into account the point you make that in assessing the safety and environmental risk that we focus on that and we look at, as well, how our actions can advance the energy security of the country.

Senator TALENT. Yes, I would say the energy security of the country is worth being the subject of your regulatory review. I certainly think we all believe that that was one of the objects of your regulation and I certainly hope it is in the future.

Mr. Chairman, I thank you for holding this hearing. I'll just join in the comments that have been made by other Senators that this is very unsettling, especially for those of us who have been trying so hard to open up new sources of energy. We have to have assur-

ance that when we do that, when we get the energy, it's not going to be disrupted because of a lack of investment in the use of technology that is, if not routine, at least commonly used technology. And I appreciate the hearing.

The CHAIRMAN. Thank you very much. Thank you very much, Senator. I'm just wondering, do you have any wrap-up questions or did you get out what you wanted to ask?

Senator TALENT. I'm fine, Mr. Chairman.

The CHAIRMAN. How about you, Senator?

Senator BUNNING. I have some others, but I'll submit them.

The CHAIRMAN. Let's go right now with them. Give them to him.

Senator WYDEN. I have one.

The CHAIRMAN. You have one additional. And, Senator, you and I will stay and do whatever we want. Please proceed.

Senator BUNNING. First of all, let me assure the people at the table that I am a big supporter of additional exploration on our own domestic soil and securing more domestic energy, including the exploration and production in ANWR, but I believe that this type of situation completely sets back any hope that we had to get that bill passed in the Congress of the United States. And I can assure you that if we are going to do what the President wants to do and get our dependency off foreign sources of oil, this is a major setback.

We were assured when we were up at Prudhoe Bay, at Alpine, that this was the gold standard, as Senator Murkowski has said. And we went to your new platforms at Alpine, where you had seven safety valves on your drilling, but we didn't see any of the pipelines. And this is just 2 years ago, so those pipelines were corroding at that time badly.

Why in the world wouldn't you make sure that we weren't going to have any kind of spills, if in fact we want to discover and be able to drill in other areas in Alaska? Why, when it's so essential to rid ourselves of foreign sources of oil? I'm asking the president of BP.

Mr. MALONE. Senator, I can't address specifically the issues in Alaska, but I can tell you that, Senator, you have our commitment to operate Prudhoe Bay at a gold standard and I can assure you of that. And as I have said several times, I have the financial support, I've got the people and I have the resources to assure you of that.

Senator BUNNING. If that be the case, you have set back our ability in the Congress to move any type of exploration close to Alpine or Prudhoe Bay in the immediate future. It's taken a giant step backward. I want you to understand that because of the spills and the things—we were assured that nothing like this could ever happen in Prudhoe Bay.

Thank you.

The CHAIRMAN. Senator, we're going to start back.

Senator BINGAMAN. Let me ask you, first, Admiral Barrett, as I read the statute that sets up your office, your job is to look after safety. In particular, that's defined as "risk to life and property posed by the pipeline transportation facility." You are not directed in this statute to look after supply, to ensure the reliability of supply, and accordingly, you take into account if this is an area that

a lot of people live in. You look after the things that you have traditionally looked after.

Senator Talent was asking questions about if you are also committed to dealing with the energy security and protecting supply and all that. We haven't told you to do that, as I read your statute.

Admiral BARRETT. Sir, I think there are two points there. One is in our Pipeline Reauthorization Act. The administration this year has proposed, in cooperation with the Department of Energy, authority to conduct a study of the impact of capacity problems on the energy supply. And if that reauthorization passes with that provision that the administration has requested, we would provide perhaps some basis for you to consider what additional action might be necessary.

Senator BINGAMAN. But you're saying we should go ahead, first of all, and authorize a study before we decide whether or not someone, your office presumably, should be responsible for looking at the reliability of our energy infrastructure. It seems to me that's sort of a no-brainer, that we ought to have a Federal agency whose job it is to look after the reliability of our infrastructure for purposes of maintaining supply, and we don't have that today. I don't really see why we need to have another study to decide whether or not that's an appropriate thing for someone to do.

Admiral BARRETT. The only other observation, as I noted, is that I do believe strongly that if we focus on safety and some of the other risks we're talking about, that will improve reliability.

Senator BINGAMAN. I agree, they're related. And to the extent you solve the safety problems, you help solve the reliability problems, but you don't necessarily solve the reliability problems, as evidenced by the fact that you had never asserted jurisdiction over this line because the line is a long way from where the public is.

Admiral BARRETT. Well, it posed lower risks than other lines.

Senator BINGAMAN. Lower risks to the public?

Admiral BARRETT. Yes, sir.

Senator BINGAMAN. But not lower risk to interruption of supply?

Admiral BARRETT. I understand your point, sir.

Senator BINGAMAN. It seems to me we ought to fix that problem, Mr. Chairman. I don't know exactly how we get it done, but we ought to make sure that the statute clearly directs Admiral Barrett's office to look at safety, but also look at reliability of supply. That seems to me to be another goal that we've given short shrift to.

Mr. Van Tuyn, let me ask you, there have been a lot of statements here that this is an anomaly, that the problem is not a more general one on the North Slope or elsewhere in Alaska or around the country. I think the statement in Admiral Barrett's statement is that these BP transit line failures are not indicative of the state of the rest of the U.S. energy infrastructure, and I guess then more specifically on the North Slope.

Is that your assessment, as well, or do you feel like you know enough about the condition of the infrastructure on the North Slope to pass judgment on the condition of it?

Mr. VAN TUYN. Mr. Chairman, Senator Bingaman, thank you for the question. I think the old adage "If you don't want to know the answer, don't ask the question" applies at every level of industry

and regulatory review on the North Slope. So I can't stand here or sit here today and say that I have an absolute understanding of the facilities' integrity or lack of integrity.

I can tell you that I have witnessed, in specific, numerous examples, for over 15 years, situations where the questions were intentionally not asked. Examples such as the Teshekpuk Lake region, where the Federal district court judge last week issued a temporary ruling that, despite promises from the Interior Department to look at cumulative impacts of oil development in that area, that Interior once again put off asking the questions.

I can tell you that the State of Alaska Department of Environmental Conservation has not looked at its prevention authority as something that it's strong to implement. I can tell you the same with DOT. Thank you for the question, but that's the reality on the North Slope.

Senator BINGAMAN. Thank you, Mr. Chairman.

The CHAIRMAN. Well, Senator Bingaman, I accept your thoughts just preceding the answer, when you suggested that perhaps we should do something about this, and I think we should, in our manner of doing business, ask both our staffs collectively to look at that issue and see what it is, and how we would fix it easiest and quickest. No use waiting. It's all by itself. It could get done if we set ourselves to doing it. And, not letting BP off the hook or anything, it's just straightening up an anomaly that we find.

Now, Senators, both of the remaining Senators wanted to take time, and I think we'll get by before the floor takes us away by following the regular course. So you will be next, Senator Murkowski, and then we'll come back to you, Senator Wyden, and that will be it, I guess.

Senator MURKOWSKI. Thank you, Mr. Chairman.

To follow up, just from the legislative perspective, Admiral Barrett, you and I have had a chance to talk about the tools that you have at your disposal, and when it comes to the compliance orders that you have put before BP, the four compliance orders, you have indicated to me that legislatively you have what you need, the authority that you need. Is that still the situation? What else can we provide you in terms of the tools that you need?

Admiral BARRETT. Senator, thank you. In terms of our ability to enforce the safety requirements that we feel are essential, either by way of orders or by bringing forward regulatory packages, which is generally done, I would say that our authority in that area is adequate.

Senator MURKOWSKI. You mentioned in response to a question from Senator Domenici—this was as it related to the Trans-Alaska Pipeline and the soundness of that line itself—you indicated that there were issues from time to time, but then you stated that you had no immediate concerns with TAPS. That raised a red flag with me. You don't have immediate concerns, but do you have long-term concerns about the safety and soundness of the operation of that line?

Admiral BARRETT. What I meant was we inspect that line on a regular basis, and from time to time TAPS and other lines that we regulate are required to have a risk management program to continually assess and reassess the risks that they face on that line.

For example, most recently, the drop in production would have caused us to look at how they manage the hydraulics on the line and was their program adequate for that.

But from time to time, as they look at their risk and we oversee that, we will identify areas where they think—we think and believe they need to pay more attention. It may be some aspects of their corrosion management or their integrity management that we'll identify in the course of our inspections, and we will require them to take corrective action.

So what I meant was, based on the recent inspections that we've done, there are no actions where we feel we would be compelled to order them, to direct them to some immediate problem. There is not an immediate hazard on our scope with respect to TAPS.

The CHAIRMAN. Mr. Hostler, you have been pretty quiet throughout this hearing. I know that there are many who, when they learned of the situation up North, assumed that it was a shutdown or that there were problems with the Trans-Alaska Pipeline itself, and of course we know that that is not the case. But you've got the same oil that is causing corrosive problems within the BP feeder lines going into the main line. What assurances can you give me that we won't have the same corrosion issues that you are facing with the BP operations on their lines?

Mr. HOSTLER. Well, thank you, Senator. Immediately following the March 2 spill, we put in a program to accelerate and enhance our corrosion monitoring program, the same program that Admiral Barrett has been speaking to. And we put steps in to look for this accelerated corrosion aspect that BP experienced and looked at our pump stations and looked throughout our system down to the terminal. But most importantly, we looked in the main line, and we are currently running an intelligent pig through that line, a year ahead of schedule, looking for any potential anomalies as experienced by BP.

But as Admiral Barrett has said, we have quite an extensive integrity management program that they oversee, as well as a corrosion management program the Joint Pipeline Office, which includes BLM and other agencies, also oversees, and we have an annual audit of that program. So we've looked back at our past and looked at ways we can enhance it. So my assurance to you is we've taken all the steps we believe are appropriate to look at this problem as it was experienced by BP at Prudhoe Bay.

Senator MURKOWSKI. Looking at the 50-year vision diagram over there for BP and your efforts in Alaska, we want to believe that that picture can continue, that that chart, that graph, will continue with the levels of oil and with the additional level of gas brought on. But we want to make sure that you're only going to continue in that capacity if you are an operator that is up to the standards that we expect of you as Alaskans and that we expect of you as Americans.

I feel a little bit humbled after Senator Feinstein said that my questions to you were too gracious and perhaps I'm "not beating up enough on the operators here," but our reality is we want those that will perform to the level and a standard that is acceptable and is above what we are seeing from BP, and if BP cannot bring the standards up, I don't know that we want that 50-year vision. And

that's a very difficult statement for me to make, but we can't have it at the expense of our environment. And I would certainly hope that this is a turn-around for this company, this is a turn-around for every employee, from the guy who's working out in the 50 below to those of you that are back in London, that there is an attitude and a change about how we deal with safety, how we deal with maintenance, how we deal with ongoing operations, and that there is never, never a reason to back off on those standards.

Thank you, Mr. Chairman.

The CHAIRMAN. We're about to finish, Senator. If you let me go and then you go, then that will be even.

Senator WYDEN. Whatever you think, Mr. Chairman.

The CHAIRMAN. You go ahead, Senator. You've been waiting a long time.

Senator WYDEN. Mr. Malone, according to the Government Accountability Office, the taxpayers of this country are going to lose out on at least \$20 billion in royalties that your company and others are supposed to be paying for oil and gas that is extracted from Federal lands. Now, this has been a bipartisan ripoff. What you've had is essentially the Clinton Administration in the late 1990's not including price thresholds that would protect the taxpayers. Then the new Secretary of Interior, Gale Norton, came in and sweetened it up even more. And then in the last energy bill, over my opposition, it got even sweeter.

What is your objection to your company paying normal royalties on oil that your company extracts from lands that are owned by the people of this country?

Mr. MALONE. Senator, we do not object to paying fair rent. You may or may not be aware, on the 1998 and 1999, we have voluntarily moved forward to negotiate with MMS and we're very close to a settlement on that.

Senator WYDEN. Will that settlement involve normal royalties? If you're talking about the 1998 and 1999 leases, those of course are the ones where the Clinton Administration messed up.

You've used a term "fair rent," which I think is a little different than what the statute is talking about. I want to know, are you committing this morning to saying that you will pay the normal royalty that you would have paid on those 1998-1999 leases if the Clinton Administration had not fouled up?

Mr. MALONE. Senator, if you'll allow me. I'm sorry, I don't have enough detail on exactly what you're speaking about. I don't have that level of detail to make that commitment.

Senator WYDEN. Well, it's just a question of whether you're going to pay the normal royalties.

Mr. MALONE. Again, if the normal royalties are what are in the standards and the law, yes, we'll pay them.

Senator WYDEN. I appreciate the answer, and we're going to do everything we can to drain this swamp. It is outrageous that there is a prospect now of upwards of \$70 billion being the final sum here, as you know, if the Kerr-McGee suit is successful. But if you will follow through on the pledge you're making for the committee now that you will correct those leases so that you would pay the normal royalties, as if the Clinton Administration had not fouled

up in 1998 and 1999, that is a constructive step, and I appreciate getting that information this morning.

Thank you, Mr. Chairman.

The CHAIRMAN. Well, let me take that issue, because it always gets out of focus. The distinguished Senator is quick to have it his way and let it read as if it's his way, but the truth of the matter is there are a number of oil companies that are negotiating with the Department relative to the royalties that were attributable to 2 years during which the Clinton Administration quite inappropriately issued leases without royalties being required, and those are just as valid and legal as anything you can have out there. They don't owe the money. You can't go claim they do.

But I have indicated, and the companies have listened carefully, that I believe it's time they all come to the party and sit down and solve this problem so that they're not in litigation.

And you're one of the companies that stepped forth rather quickly in that round of negotiations to see what could be done to get rid of that litigation. That's good. That's going to be solid money and it's good for the country.

Now, before we close, let me make sure that we see a couple of other things around here. I don't know how to do this, but for me it's pretty easy. Do you see this diagram?

Mr. MARSHALL. Yes, sir.

The CHAIRMAN. Mr. Steve Marshall, you can see this. Now, can we put it up there so everybody can see it. This is a pipeline and it looks like it's got something wrong with it, right? What's wrong with it?

Mr. MARSHALL. That is an example of the pitting type of corrosion that we've experienced here. It's essentially a piece of broadly good pipe with something about the size of an almond showing where the corrosion has occurred. That's what this shows.

The CHAIRMAN. OK. Now, that is the situation where, if you had been running a smart pig up and down that pipeline in the last few years, you would have found that. And that smart pig is right here. It's this one here. Maybe you can get that and put it up and everybody can see it. That's this one right here. See, that one down on the right hand, looking at it from this side, the bottom right hand. Isn't that the smart pig?

Mr. MARSHALL. That's correct, yes.

The CHAIRMAN. You own those, don't you?

Mr. MARSHALL. We own some of those. We bring some other pigs in that are specialized pieces of equipment from suppliers.

The CHAIRMAN. Now, that's the kind of thing we would be complaining that you did not use on this 16 miles of pipeline, which thus permitted it to go undetected as to what that smart pig would otherwise find, right?

Mr. MARSHALL. Well, the smart pig was run on the western lines in 1998 and 1990.

The CHAIRMAN. Where was it not run?

Mr. MARSHALL. The smart pig was attempted on the eastern lines, which Arco operated, in the early 1990's, but it was an unsuccessful run.

The CHAIRMAN. What does it mean for an unsuccessful pig run?

Mr. MARSHALL. To the best of my knowledge, the technology used in that particular device was not proven to be market-worthy. It was withdrawn from the market soon after that, that pig run.

The CHAIRMAN. So it wasn't a very good product; is that what you're saying?

Mr. MARSHALL. Apparently that's correct.

The CHAIRMAN. But there must have been a better product than you used, that you just didn't get a hold of to run on that pipeline or that was running elsewhere; is that not correct?

Mr. MARSHALL. I don't have the knowledge of what conversations might have occurred in Arco at the time once they got that data back.

The CHAIRMAN. Well, what are we saying you didn't do then? What equipment was around that you didn't use that everybody's either saying or implying that you should have used, that the Admiral was talking about? Which equipment is it?

Mr. MARSHALL. Mr. Chairman, certainly we've reflected deeply on that, in light of the incident, since March. Clearly, looking back, we should have—as the Admiral has said, we should have been maintenance pigging those lines. It would have eliminated the solids, which we didn't anticipate to be a problem. Smart pigging was scheduled for 2006. It was based on the evidence, the data that we've seen coming back from our inspections last year. Unfortunately, it was just too late to prevent the spill in March.

The CHAIRMAN. So then we don't have any argument over whether I'm using the right pig picture here or not. We are talking about the fact that there was usable technology that should have been used that wasn't during this period of time; is that right?

Mr. MARSHALL. The technology was available, yes.

The CHAIRMAN. It was available.

Now, I was going to ask the other gentleman, Mr. Hostler, you're part of TAPS, how often was the pig used on TAPS?

Mr. HOSTLER. Sir, we run a maintenance or cleaning pig every 7 to 14 days and we run an intelligent pig every 3 years. And we've run, over the life of this field, the pig I spoke of earlier. We are on our 61st intelligent pig.

The CHAIRMAN. On the lines we are talking about, BP's, it was 16 years since they'd run one, correct?

Mr. HOSTLER. That's my understanding, sir.

The CHAIRMAN. I don't want to beat a dead horse because, Mr. Malone, you have come here saying there was a mistake, you know it, you knew you'd done wrong, and you've now got all the authority and all of the resources and manpower to do it right, and that you're going to do it right. The question we have, that you have, is you're going to have to prove to some people that believed you before, you've got to prove to them that they ought to believe you now. That's a tough problem because you already had a fragile atmosphere, you can understand.

I was up there and I was convinced. I saw Alpine. I use Alpine as an example—in my mind it is fixed—that you can build a full plant out there for 150,000 barrels a day from scratch right there on the ice, and when it's all finished and everything melts around it, it's self-executing. You've been there, haven't you?

Mr. MALONE. Yes.

The CHAIRMAN. They mention Alpine. They don't think I know about it. 150,000 barrels a day, that's what comes to my mind.

But you know what else? I came home from there telling everybody that I saw that there was a culture of cleanliness the likes of which I had not experienced. Do you know that? Here I am, I don't come from there, he took me up there, I come back, I'm ready to tell the world, "Boy, that's perfectly clean, they don't make mistakes."

Now, I'm not saying you've made them, because you didn't make any up there. I'm quite sure Alpine has no mistakes. But I'm also sure that we've got to look at this issue of cleaning these lines up and we've got to make sure that we reinstate credibility into this system that it is safe, or we won't get the votes we had already with reference to ANWR, much less move ahead, right? We only need a couple of votes, but let's hope it's a couple of votes we get and get going in the right direction. It might be they go backward with this kind of event. So you really carry a lot of weight here.

Now let me change directions because we've all forgotten. Maybe this will bring this very bright, intelligent man, Mr. Peter Davies, to talk a little bit. We had an expert sitting here for 3 hours and never asked him a word. How come all the bad things didn't happen when this spill occurred? We had everything go the opposite direction. We didn't have prices go up; we had them come down. We didn't have the price of oil go up; it came down, tumbling down, still coming down. We had the price of a gallon of gasoline come down, even on the West Coast, which is the most onerous one and the one most directly affected by mistakes where they were allegedly made. The West Coast was supposedly affected adversely. It went the other way. It then affected it positively.

Can you tell us, as an expert, what happened? Why did we not get all of these shocks to the system, as you see it?

Mr. DAVIES. Well, thank you, Mr. Chairman. Thank you for the opportunity to speak. I think there's two reasons. First of all, the world oil market was adequately supplied at this time. It was the time when we have seen increasing levels of both crude and product, and as a result there was some flexibility in the world market to absorb a shock such as this.

Second, the actual decline was triggered as a result of some other developments as we went forward during the week which began on August 7. Most particularly, August 10, on the Thursday, there was a terrorist event or there was a warning of a terrorist event in London. This had the impact of reducing oil prices. The oil market had observed the effect of 9/11 on crude markets, where we had a \$10 decline in the 2 months after September 11th, and there was a fear that air travel would be adversely affected and that this would undermine the demand for oil.

The CHAIRMAN. Which event was that one?

Mr. DAVIES. That was in London, where there was a plot or the alleged plot to bomb aircraft coming from the U.K.

The CHAIRMAN. The aircraft going to America.

Mr. DAVIES. And the fear was that this would affect air travel substantially, like we saw after September 11, when air travel was seriously disrupted.

There was also news that a Nigerian pipeline had been restored, one of the pipelines that had been closed as a result of disruptions in that country. And there were some other trading developments concerning gasoline which led to a reduction in the price of gasoline.

So all these developments had a negative impact on price that brought the price down fortuitously, and the result was that we ended the week with lower prices for crude oil on the West Coast, on the NYMEX, in London, and also the price of gasoline around the world. It was a global development.

The CHAIRMAN. A pretty good deal, right?

Mr. DAVIES. It was fortuitous timing.

The CHAIRMAN. I guess you couldn't say, "Let's have a spill like this, so we can get a result like this; we'll take the spill." That's not true, right? They're unrelated?

Mr. DAVIES. It's unrelated.

The CHAIRMAN. So we had better not take any spills presuming that we'll get this kind of good deal?

Mr. DAVIES. Absolutely.

The CHAIRMAN. How long is this downward trend going to go? Give us your best thinking.

Mr. DAVIES. I have learned never to predict oil markets and prices. I think at the present time we're in a downward trend. The sentiment is certainly very cautious about prices and there is a downward momentum, but there are many uncertainties out there which could reverse as we go forward, so we shouldn't rely on a continuation of this for a long period of time.

The CHAIRMAN. Dr. Howard, how about you? You guys are really the real experts. I mean, your boss isn't here, but he doesn't hire people who don't know. You know about as much as him.

Mr. GRUENSPECHT. Well, I don't know about that. He's out talking to OPEC, so he may know more than me.

The CHAIRMAN. Well, OPEC said they were going to keep producing. They have, right?

Mr. GRUENSPECHT. They did. They did make that statement.

The CHAIRMAN. They made the statement, but did they live up to it for a little while?

Mr. GRUENSPECHT. Well, we'll see. Again, I discussed the short-term outlook in my testimony, and we do see somewhat of a downward trend in gasoline prices and diesel prices. But we do have a roller-coaster type of scenario in mind and, as I noted earlier in the oral statement, the price of wholesale gasoline and the price of crude oil have gotten very close and that probably won't persist. So there are some factors that could cause prices to rise again, hopefully not to the peak that we've unfortunately become familiar with, the \$3 a gallon area.

The CHAIRMAN. Senator Murkowski, I'm ready to close the hearing, unless you have something very important that you want to do.

Senator MURKOWSKI. Mr. Chairman, I just wanted to just make sure that I understand, because I had initially heard you say, Mr. Marshall, that the reason that the pigging operation and the data didn't work was the technology was not up to par at that particular

time. But is it not correct, Admiral Barrett, that everybody else in the industry up north was pigging?

Admiral BARRETT. That's essentially correct, Senator.

Senator MURKOWSKI. So the technology was there, it was just a corporate decision to not do pigging for BP's operation?

Mr. MARSHALL. Senator, if I could maybe just provide perspective on that. The pigging in question, in 1991, thereabouts, that Arco did, that was just related to that specific pig run, where the technology did not work for that particular device.

Senator MURKOWSKI. For that particular device.

Mr. MARSHALL. For that particular device.

Senator MURKOWSKI. You could have gotten another device similar to what other companies were utilizing.

Mr. MARSHALL. Technologies clearly existed at that time to do smart pigging. Only 2 years prior to that, BP had successfully smart-pigged the western transit lines in 1990, and did so again in 1998.

Senator MURKOWSKI. But then the question remains, why was BP the only one on the slope to not do pigging through their lines? If others do it, did it, why did BP take another route?

Mr. MARSHALL. Well, BP was pigging, smart pigging, the western transit lines in 1990, 1998. We planned another pig run in 2006 on the eastern lines, which BP did not operate until 2000. That line had only been pigged once, in 1990 or 1991.

As I said, the smart pig run was not successful. I cannot speak to why a follow-up pig run wasn't made in the 1990's. What BP did when we took over those lines in 2000 was institute the ultrasonic testing that we had been doing on the west.

Senator MURKOWSKI. Admiral Barrett, if the testing was done every 8 years then on the western one, as Mr. Marshall has indicated, what were the other companies doing in terms of their pigging and the time period within which they would run a pig?

Admiral BARRETT. Senator, there were two things in play. One is the type of pigging. One of the things that did not go on here was regular maintenance pigging, and that takes place typically over several weeks or over several months on those lines.

And by the way, on the other lines BP has up there that we regulate, they don't have an option. They have to do it on their regulated lines.

But there are two different things that failed here. One is they weren't maintenance pigging the lines, and what happens when that occurs is you get sediment, you get calcification on the sides of your lines, you get sludge, if you will, build-up that can keep your corrosion inhibitors away from the wall of the pipe. And then you get the type of—you run the risk of the type of biologically induced corrosion that is shown in that picture.

So it was both the maintenance pigging that wasn't taking place on this line and then regularly looking on some regular basis to do the in-line inspection. The best analogy I can give you is probably a dental X-ray: If you don't look inside the tooth, you may have a cavity you don't know about. They fundamentally, in my view, didn't know enough about the condition of the insides of those lines.

Senator MURKOWSKI. And yet everybody else up north was doing a routine maintenance pigging operation.

Admiral BARRETT. Senator, yes. What we saw reflected on these particular lines by BP was not typical of the standard of care we saw exercised elsewhere on the Slope and elsewhere in the industry in this country.

Senator MURKOWSKI. Thank you. I appreciate it.

Mr. Chairman, Mr. Van Tuyn had made reference to creating a citizens oversight group and I would like to submit for the record a letter and a fact sheet from the Prince William Sound RCAC, which kind of describes the actual operation of the RCAC and how they currently work, just for the record. Thank you.

The CHAIRMAN. Certainly that will be done.

[The prepared statement of Dr. Devens follows:]

REGIONAL CITIZENS' ADVISORY COUNCIL,
Anchorage, AK, September 12, 2006.

Hon. LISA MURKOWSKI,
Chairman, Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR SENATOR MURKOWSKI: As Executive Director of the congressionally authorized Prince William Sound Regional Citizens' Advisory Council (PWSRCAC), I was interested to hear through a public radio broadcast last week your view that, with respect to the feeder pipelines on the North Slope, it does make sense to consider additional pipeline oversight and that a citizen oversight panel for that purpose is worth considering.

In light of that, I thought that you might find it helpful to have a current, short briefing paper on the oversight responsibilities and activities of the PWSRCAC, and on how this Council's experience fulfilling congressionally mandated oversight activities of certain oil operations in Alaska can be easily applied to the North Slope.

As you know from our work with you and your office in the past, citizen oversight plays a unique and crucial role in the often tedious, sometimes complicated, detailed and time-consuming task of overseeing oil transport activities by the private sector that have potential to cause serious adverse effects on people, the environment, and the national and state economies.

As you also are aware, your predecessor, Governor Frank Murkowski, played a key role in incorporating the provisions that created the PWSRCAC in the Oil Pollution Act of 1990. He studied the experience at Sullom Voe in Scotland, the largest oil terminal facility in Europe. He recognized that, in light of the Exxon Valdez oil spill, to have citizen confidence in and support for continued oil development and transportation, the public must be engaged in overseeing that development and transportation in a meaningful way.

Considering that nearly 20 percent of the daily U.S. oil production flows through Valdez, the vigorous and effective citizens' oversight of the terminal facility to ensure its integrity is of substantial national importance. In part as a result of the combined effort of the Alaska delegation and others in Congress to establish rigorous oversight of the equipment, facilities, procedures and operations at the Valdez oil terminal through citizen oversight, today the transport of oil from the Valdez terminal is the safest of any similar facility anywhere in the world.

The PWSRCAC has provided substantial results and is now viewed as a model for other countries interested in establishing citizens' oversight panels. The citizen oversight model that Congress established in 1990 is a good one. And, although not perfect, it has made a huge difference for the better in terms of effective oversight of the terminal and in terms of building the public's confidence in its safe operation. If something is not going right, the public knows that the chances are very good it will be uncovered through such oversight and another potential accident likely averted.

If Congress decides to establish a citizen panel similar to the one it established in 1990 to help oversee other aspects of the oil transportation system in Alaska such as on the North Slope, the PWSRCAC stands ready to provide information and any other assistance that may be helpful to you and your colleagues.

Thank you for your continuing assistance to the PWSRCAC as it seeks to fulfill its mandated responsibilities to and on behalf of the public.

Sincerely,

JOHN S. DEVENS, PH.D.,
Executive Director.

[Enclosure.]

BACKGROUND BRIEFING PAPER

ROLE OF STATUTORILY ESTABLISHED CITIZEN OVERSIGHT COUNCILS IN THE CONDUCT OF OVERSIGHT OF OIL TRANSPORTATION OPERATIONS, FACILITIES AND PROCEDURES

Seventeen years ago, following the *Exxon Valdez* oil spill in Prince William Sound, Alaska, through the efforts of Senator Ted Stevens, Senator Frank Murkowski, Congressman Don Young and strong bipartisan action in Congress during the Administration of President George H. W. Bush, two citizen panels were authorized to help reduce the frequency and impacts of oil spills in Alaska's waters through more effective oversight: the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) and its counterpart for the Cook Inlet. The genesis of such panels came from congressional review of similar panels established in Sullom Voe, Scotland, the largest oil terminal in Europe, and from citizen concerns following the 1989 oil spill.

The diverse make up of the PWSRCAC includes:

- Villages of Chenega Bay (ground zero of the impacts of the 1989 oil spill) and Tatitlek.
- Cities of Valdez, Seward, Kodiak, Cordova, Homer, Seldovia and Whittier
- Alaska State Chamber of Commerce
- Kenai Peninsula Borough
- Kodiak Island Borough
- Kodiak Village Mayors Association
- Alaska Wilderness Recreation and Tourism Association
- Chugach Alaska Corporation
- Cordova District Fishermen United
- Oil Spill Region Environmental Coalition
- Prince William Sound Aquaculture Corporation

The accomplishments and effectiveness of this membership and its citizen-based approach to oversight have clearly vindicated the judgment of including such authorization and direction in the Oil Pollution Act of 1990.

Recent concerns raised by Congress over several incidents on the North Slope of Alaska underscore the need for increased and enhanced oversight. Considering the record in Alaska of citizen oversight, applying best practices from citizens' oversight efforts to the North Slope could be similarly beneficial there.

1. Rationale for and Purposes Served by Citizen Oversight

In the aftermath of the 1989 Exxon Valdez oil spill in Prince William Sound, Congress in the Oil Pollution Act of 1990 (OPA 90) established citizens' councils to help combat the complacency seen as responsible for the 1989 spill and provide a needed layer of scrutiny to increase public confidence in the safety of the state's oil transportation system. The council role, defined by OPA 90 as purely advisory, was to help correct the problems leading to the oil spill by fostering partnership among the oil industry, government, and local communities in addressing environmental concerns. The responsibilities assigned to the PWSRCAC by Congress in OPA 90 include:

- *provide advice and recommendations . . . on policies, permits, and site-specific regulations relating to the operation and maintenance of terminal facilities and crude oil tankers which affect or may affect the environment in the vicinity of the terminal facilities;*
- *monitor . . . the environmental impacts of the operation of the terminal facilities and crude oil tankers;*
- *monitor those aspects of terminal facilities' and crude oil tankers' operations and maintenance which affect or may affect the environment in the vicinity of the terminal facilities;*
- *review . . . the adequacy of oil spill prevention and contingency plans for the terminal facilities and the adequacy of oil spill prevention and contingency plans for crude oil tankers operating in Prince William Sound;*
- *provide advice and recommendations . . . on port operations, policies and practices;*

- *recommend . . .*
- *standards and stipulations* for permits and site-specific regulations intended to minimize the impact of the terminal facilities' and crude oil tankers' operations in the vicinity of the terminal facilities;
- *modifications of terminal facility operations and maintenance* intended to minimize the risk and mitigate the impact of terminal facilities, operations in the vicinity of the terminal facilities and to minimize the risk of oil spills;
- *modifications of crude oil tanker operations and maintenance* in Prince William Sound intended to minimize the risk and mitigate the impact of oil spills; and
- *modifications to the oil spill prevention and contingency plans* for terminal facilities and for crude oil tankers in Prince William Sound intended to enhance the ability to prevent and respond to an oil spill.

Additionally, the Council is authorized to conduct its own scientific research and review the scientific work undertaken by or on behalf of the terminal operators or crude oil tanker operators as a result of a legal requirement to undertake that work. The Council is authorized to review the relevant scientific work undertaken by or on behalf of any government entity relating to the terminal facilities or crude oil tankers.

2. *Examples of Tasks Accomplished by the PWSRCAC*

In almost two decades of existence, the PWSRCAC, working closely with industry and regulators, has made many contributions to improving the environmental safety of oil-industry operations in Alaska waters. A few of these include:

- Representatives from the Council worked closely with Congress and the Coast Guard to establish and implement double-hull requirements pursuant to OPA90;
- The Council led the effort, and commissioned much of the technical research, that led to the world-class system of tanker escort tugs operating in the Sound today which are vital to the system of transport of oil through the Port which is the safest in the world;
- The Council sponsored research and financed much of the hardware for a radar system that detects glacial icebergs that could threaten tankers and other vessels in the Sound as such icebergs did in connection with the Exxon Valdez oil spill;
- The Council sponsored research that led to the installation of vapor controls on the loading systems at the Valdez tanker terminal to reduce the release of dangerous air pollution.

In recognition of its work, the PWSRCAC has twice received the Legacy Award from the Pacific States-British Columbia Oil Spill Task Force.

3. *Structural Attributes Needed for a Citizens' Oversight Panel*

Over time, the Council has learned that certain structural attributes are necessary for effective and constructive citizen oversight. These include:

Independence

- The panel's independence should be assured if it is to effectively conduct oversight activities and its work to have credibility. In furtherance of that independence, it should be allowed to devise its own system for seating board members. The makeup of a federally mandated panel may be usefully specified in law—for example, a requirement that board representation must include Alaska Natives organizations, local municipalities, the tourism industry, and an environmental seat, from within the group's area, but not representation of government agencies, companies or industries within the panel's oversight responsibilities. The specific details of the manner in which representatives from the designated community interests are chosen and seated on the board are best left up to the panel, rather than being a matter of political appointment and confirmation. In the case of the PWSRCAC, under the regime established under existing law, each member entity selects its representative to the Board; the Board then votes to seat the representative.
- Within reasonable constraints and guidelines provided by law and/or contract, the panel should be able to establish its budget. As long as the panel operates within those guidelines, it is critical that neither industry, regulators, nor government officials have veto authority over council projects or initiatives (although the budgeting process, like all the panel's activities, would be public and open to comment by any interested party).

- The panel should be able to retain technical experts and commission research even if, in some cases, this research may be in the same areas as, or intended to verify, industry or regulator-sponsored research.
- The panel should be able to communicate with the public, news media, regulators, and elected officials as necessary to carry out its mission and inform the public of its work.

Assured funding: The panel should have adequate, inflation-adjusted funding not subject to undue influence that a political process would entail. In PWSRCAC's case, funding is through a long-term contract with industry. Such a funding contract should be mandatory as a matter of law in order for the industry being overseen to be considered in compliance with its oil-spill contingency plans and other regulatory requirements.

Access: The establishing law, as well as any funding contract, should assure that the panel is provided authority for access to company facilities, personnel, and records on the same basis as regulators. In addition, regulators and companies receiving formal advice or other communications from the panel should be directed to respond in writing to panel requests (though, of course, they would not be required to accept the advice or agree with the communication). In the case of Prince William Sound, OPA 90 requires that federal agencies consult with the PWSRCAC when taking actions in the region that would affect the Council's mission.

4. Conclusion: Compelling Benefits of Citizen Oversight

Given the long history of responsible achievement by the existing Alaska citizens' councils, and today's problems at Prudhoe Bay on the North Slope, it is clear that a properly constituted citizen oversight panel could materially contribute not only to environmental safety, but also to protecting the nation's oil supply from the disruptions caused by major spills, breakdowns, and other technical problems.

Given the increasing challenges of operating in the oil industry, and realizing the important role that industry plays in the state and national economies, our nation's oil supply and its homeland security, instituting a responsible and vigorous citizens' oversight capability for the North Slope can substantially bolster public confidence in the integrity and safety of ongoing as well as new oil operations.

Thanks to all of you who are in attendance, we appreciate the interest that you've shown and the long period of time that you've spent. And the witnesses, thank you, each and every one of you. We hope you've been treated fairly, considering the seriousness of these hearings.

And we now are in recess until the chair calls another meeting. We stand in recess.

[Whereupon, at 12:21 p.m., the hearing was adjourned.]

APPENDIX
RESPONSES TO ADDITIONAL QUESTIONS

RESPONSES OF RET. VICE ADMIRAL THOMAS BARRETT TO QUESTIONS
FROM SENATOR DOMENICI

Question 1a. We have always been told that oil and gas operations on the North Slope of Alaska are the cleanest and most environmentally friendly in the world. I've visited many of these sites personally and was very impressed, but what I'm hearing today is very troubling. Your agency looks at pipeline systems across the country.

How would you describe the condition of the oil delivery system on the North Slope today?

Answer. Based on our previous inspections, the additional reviews which we conducted of all North Slope pipelines following the BP incidents, we have no immediate safety concerns beyond those identified on the BP low stress lines.

Question 1b. In terms of the severity of oil spills, where do these recent spills rank when compared to other U.S. spills? Are they within the top 10 . . . the top 50?

Answer. At the estimated 205,000 gallon volume, the BP crude oil spill discovered March 2, 2006 ranks 94th among the largest 100 hazardous liquid pipeline spills since 1985. The August 6, 2006 spill was much smaller.

Question 1c. The BP transit lines that failed at Prudhoe Bay were not regulated by DOT. How many other lines are without regulation?

Answer. We estimate there are about 5,000 miles of unregulated low stress transmission lines nationwide. We recently proposed rules to bring low stress lines that pose risks to unusually sensitive environmental areas under federal oversight.

Question 1d. How would you describe the condition of the TAPS line? Can the country depend on a 30-year-old pipeline to continue to reliably deliver oil?

Answer. We believe, based on our past inspections and recent inspections conducted since the BP spills, that the TAPS is fit for service. TAPS, like most other large pipelines, can be operated safely for the foreseeable future if maintained properly in full compliance with our regulations.

RESPONSES OF RET. VICE ADMIRAL THOMAS BARRETT TO QUESTIONS
FROM SENATOR THOMAS

Question 1. You said in testimony before the House Energy & Commerce Committee that, "the type of problem you've seen with BP, we have not seen repeated elsewhere in the country." This may be a rhetorical question, but, how do you know to be true if we have not been checking these pipes?

Answer. In developing our regulatory proposal for rural low stress transmission pipelines PHMSA conducted public meetings, including consulting with our Hazardous Liquid Technical Advisory Committee, and consulted with state regulators and operators to understand operations and maintenance practices currently in use. We also reviewed spill incident history on these types of lines. My statements are based on this information.

Question 2. The initial spill of 270,000 gallons of oil in March of this year prompted further inspections by your agency. Those inspections did not take place until July, however. Why did it take so long?

Answer. Our inspectors have been on the scene at Prudhoe Bay since early March. I took over as Administrator in June and personally visited Prudhoe Bay in July to assess the situation and what I perceived as slow compliance with our orders. We continue to maintain on scene presence at Prudhoe Bay, and will continue to do so as long as needed to resolve the situation.

RESPONSE OF RET. VICE ADMIRAL THOMAS BARRETT TO QUESTION
FROM SENATOR WYDEN

Question 1. Is there any precedent for repeat violators of pipeline safety regulations to lose their leases?

BP employees, Alaska state officials, EPA and the U.S. Public Interest Research Group have documented dozens of safety violations at BP's Prudhoe Bay operations starting in 1999 with their illegally dumping hazardous waste into the groundwater at the Endicott Oil Field. EPA fined BP in 2001 for Clean Water Act violations. In 2002, BP was fined again for failing to install systems to detect pipeline leaks and the costs related to cleaning up a 60,000 gallon spill. In 2003, pipeline corrosion caused a 6,000 gallon spill near a caribou crossing. Then in March and August, 2006, corroded pipelines leak more crude oil over state lands. How many violations of health, safety or environmental regulations does it take before the federal and/or state government can revoke BP's North Slope leases and look for someone else to manage these vital resources responsibly? Do we need a new law that gives DOI and DOT the authority to penalize repeat offenders by revoking their leases? Additional authority that provides states delegated authority to revoke leases when safety regulations have been repeatedly violated?

Answer. PHMSA does not have the authority to grant or revoke leases. The Department of Interior has informed us that the regulations of the Minerals Management Service (30 CFR 250.135) provide for revocation of a company's designation as a lease operator if their safety or environmental performance on a federal lease is deemed unacceptable. This prohibits a company from conducting drilling and production operations on the specified leases. The State of Alaska claims authority to take action under States leases including those at Prudhoe Bay.

RESPONSES OF DR. HOWARD GRUENSPECHT TO QUESTIONS FROM SENATOR DOMENICI

Question 1. It appears that the partial shutdown of Prudhoe Bay has had little effect on markets.

a. Why would this be the case?

b. How might the result have been different in a more volatile time?

Answer. While the initial announcement on Sunday, August 6, indicated that 400 thousand barrels per day of crude oil production might be curtailed, it was clear as early as Tuesday, August 8, that the maximum sustained production curtailment was likely to be half, or less, of this amount. Several other factors served to cushion the impact and calm markets. U.S. inventories of crude oil and products were high for that time of year. In particular, West Coast crude oil inventories, where the loss of production would first be felt, were at the high end of the typical range at the beginning of the month before the announcement. In addition West Coast refineries are among the world's most sophisticated, in part due to the very stringent clean fuel requirements in the California market. These refineries have the capability to process different types of crude oil from many sources, providing them with more flexibility to replace lost crude oil than less complex refineries.

A number of other market factors during August also served to counter the potential price impacts of the Alaskan supply loss. These include the foiled terrorist plot to bomb multiple flights between the United Kingdom and the U.S., which raised concerns of a substantial drop in demand for air travel and jet fuel, such as occurred following the 9111 attacks; counter-seasonal builds in gasoline inventories that suggested the availability of surplus supply; and reduced concerns regarding the potential for weather-related disruptions in production and refining operations during the 2006 hurricane season.

The results could have been different if the supply loss had occurred during a period of very low inventories and when geopolitical and other market concerns were high. However, the loss of 200 thousand barrels per day can generally be made up, even though the loss of nearby supply sources like Alaska can leave a temporary gap until alternative supply sources are identified and diverted.

Question 2. What could happen if we were to lose the full 800, 800,000 barrels of production from the North Slope at one time?

Answer. Clearly that would be a much larger problem than the loss that actually occurred. It is very difficult to generalize, because the extent of any impacts would depend on myriad factors, such as the level of West Coast crude and product stocks, world surplus capacity, seasonal factors, and the perceived duration of the hypothetical disruption. Looking just at the global upstream balance, ETA estimates that the current excess production capacity worldwide is only about 1.0 to 1.5 million barrels per day, with all of this residing in Saudi Arabia. At the current low level of worldwide surplus production capacity, the loss of around 800 thousand barrels

per day of supply from Alaska for an extended period could trigger a noticeable rise in the world oil price. Initial responses by West Coast refiners would likely include both some drawdown of crude oil stocks and efforts to increase crude imports, as mentioned in the answer to the previous question.

RESPONSES OF ROBERT MALONE TO QUESTIONS FROM SENATOR DOMENICI

Question 1. In your written testimony, you describe corrosion as a “natural degradation of pipe that cannot be eliminated but that can be effectively managed-through monitoring and mitigation.”

How does a company with the global experience of BP fail to find and correct this kind of corrosion before suffering an oil spill?

Answer. BP has nearly a 30 year history and record of safe operation of pipelines in Alaska.

Despite this experience, an unusual combination of circumstances and conditions resulted in localized, pitted corrosion in the oil transit lines at Prudhoe Bay. This corrosion was not detected by our corrosion monitoring efforts and resulted in the leaks that were discovered in March and August.

The OT21 oil transit line in the Western Operating Area (WOA) was subjected to a program of monitoring, corrosion inhibition, inspection and repair. Under this monitoring and corrosion management program, the line was operated for 27 years without a spill or leak. Those tests and monitoring procedures were reviewed annually by regulators and consultants, and were thought to be appropriate. This line was also smart pigged twice (in 1990 and 1998) and after the last smart pig run in 1998, BP regularly inspected the OT21 line to monitor the status of corrosion. In 2004, BPXA’s Corrosion Inspection and Chemicals Group (“CIC”) Group noted increased corrosion rates within the Gathering Center 2 facility. As a result of that observed increase, BPXA substantially increased the number of inspections in 2005, which led to the discovery of increased rates of corrosion within the oil transit lines between GC2 and Pump Station 1. As a result of this emerging data, BPXA scheduled a smart pig run for the OT21 line for 2006, but the March leak in the line occurred before the smart pig run could be executed.

Protecting its operations against the harsh effects of corrosion present on the North Slope is accorded a high priority within BPXA. This is evident in the steadily increasing budgets for BPXA’s CIC group over the last 5 years. BPXA deeply regrets that this leak occurred despite all of these efforts and expenditures. In retrospect, BPXA’s program had a gap that allowed the corrosion in the oil transit lines to escape discovery until it resulted in the leaks in March and August. BPXA’s corrosion monitoring programs will, therefore, be supplemented with additional use of cleaning and intelligent pigs in the future.

Question 2. Some have argued that if BP had pigged these pipelines this mishap could have been avoided. Others have accused BP of cutting corners to save on costs.

In comparison to the overall costs associated with operating an oil field the size of Prudhoe Bay, how costly can it be to routinely run pipeline cleaning pigs and intelligence collecting pigs?

Answer. BPXA routinely runs in excess of 370 pigs per year in our Prudhoe Bay operations. Pig runs vary in cost depending upon the type of operation being performed (cleaning vs. inspection) as well as the length of the pipeline segment. As a general rule, internal line inspection (i.e., smart) pigs cost between \$15,000 and \$20,000 per mile of pipe.

The frequency of pig runs on the oil transit lines was not determined based on cost. It was based primarily on the results of prior pig runs, inspection and monitoring data, and engineering analyses, which, in the aggregate, indicated that the conditions of the oil transit lines did not warrant more frequent pig runs. Many other lines are routinely pigged on the North Slope by BPXA because they transport substances with a higher potential for corrosion and operate at high pressures that present greater risks to personnel and to the environment when corrosion events occur. We have found no indication that a recommendation to conduct a pig run was ever dismissed over concerns regarding its cost. BPXA further notes that over the last 5 years, its maintenance and corrosion spend on Prudhoe Bay has increased by 45% while oil production has declined by 23%.

Question 3. For some of those that are opposed to opening the Arctic National Wildlife Refuge, this situation has provided a new argument for not drilling in ANWR. How would you respond?

Answer. This is the first spill from this line in the almost 30 years that Prudhoe Bay has been in operation. BP deeply regrets its occurrence but we don’t believe the ecological impacts of this incident supports suspension of development in the Arctic

region. In all, the spilled crude oil impacted less than 2 acres of the North Slope. BPXA responded immediately and has expended significant efforts to remove the spilled oil and to begin the steps to restore this roughly 2-acre area. No animals were harmed by or exposed to the spilled oil before cleanup was complete. We will continue to monitor the area to assess any impacts to the tundra.

BP believes that its response to the spills in the Eastern Operating Area reflects a commitment to the environment that should reassure those concerned about operating in the Arctic. In August, BPXA shut down its entire Prudhoe Bay eastern area operation because of our concern about possible impacts to the environment.

Question 4. While visiting the North Slope 2 years ago, I had the opportunity to visit some of your facilities at Prudhoe Bay. Quite frankly, I was very impressed. As I recall, we were told at that time that BP has sufficient resources to sustain production for more than 30 years.

Wouldn't that make it prudent to invest more in maintaining delivery infrastructure?

Answer. The Prudhoe Bay Unit presents complex and evolving conditions. Over the years, BPXA's maintenance and integrity management program has successfully identified and mitigated or addressed these complex challenges. Unfortunately, the recent incidents exposed a gap in that program, despite the fact that BPXA had devoted significant resources to it. Over the last 5 years, BPXA's inspection, corrosion inhibition and maintenance and corrosion management spend on Prudhoe Bay has increased by 45% while oil production has declined by 23%. Each year, additional resources are spent to repair or replace lines that are found to be no longer fit for service. For example, in April 2005, BP devoted substantial resources to replacing approximately 5000 feet of production pipe from Milne Point based on corrosion degradation that it discovered on the lines.

BP is committed to closing the gap in our integrity management program and restoring public confidence in our Alaskan pipeline operations. We have announced plans to replace 16 miles of oil transit lines and BP has retained three of the foremost experts in the world on corrosion and infrastructure management to evaluate and make recommendations for improving the corrosion management program in Alaska. BP will apply their recommendations throughout its pipeline operations in the U.S.

Further, BP has added an additional \$1 billion to the \$6 billion already earmarked to upgrade all aspects of safety at its U.S. refineries and for integrity management in Alaska. Over \$550 million (net) will be spent on integrity management improvements in Alaska over the next two years.

Question 5. Your testimony refers several times to your business partners in the Prudhoe Bay field. You stated that the costs and production are shared by nine companies.

a. Who are the other companies?

b. To what extent do the other companies participate in decisions made with respect to maintenance?

Answer. Prior to 2000, the owners of Greater Prudhoe Bay included: Amerada Hess, ARCO, BPXA, Chevron, Exxon, Forest Oil, Mobil, Phillips and Texaco. After several recent company mergers and owner sales of their Prudhoe interests, the leasehold owners of the field are currently: ExxonMobil: 36.4%, ConocoPhillips: 36.1%, BP: 26.4% and ChevronTexaco: 1.2%.*

Budgets are agreed annually among the three major owners of Prudhoe Bay (ExxonMobil (36.4%), ConocoPhillips (36.1%), and BPXA (26.4%)) in November for the following year. (In August 2006, Forest Oil sold its share to ExxonMobil, ConocoPhillips and BPXA.) The Prudhoe Bay Operating Agreement requires BPXA as operator to put forward a preliminary budget in August and a final budget in October which the major owners approve in November. With the exception of emergency spending, the agreed budget constitutes a spending limit.

Typically, discussions between the major owners begin in the second or third quarters of each year to evaluate the maintenance priorities and scope of work for the following year. As Operator, BPXA then formalizes the budget request in August and October. As Operator, BPXA generally has the authority to determine, on its own and without the agreement of the other owners, whether equipment and elements of the Prudhoe Bay Unit's infrastructure are safe to operate. Additionally, as the Operator of the unit, BPXA has authority to spend up to \$1.25 million on individual items without seeking the approval of the other owners. Items that require spending above this limit typically must receive approval from ExxonMobil and ConocoPhillips although there are provisions for emergency expenditures. Most major maintenance and repair items would require approval however.

*Equities add to 100.1% due to rounding.

RESPONSE OF ROBERT MALONE TO QUESTION FROM SENATOR THOMAS

Question 1. BP has invested a significant number of dollars in my home state of Wyoming. The state has benefited from that investment and your company has profited. What are you doing in Wyoming to ensure that my state does not have to endure the consequences of irresponsible acts?

Answer. BP believes that it is a responsible corporate citizen in all communities where it operates including Wyoming. BP has a core commitment to safety in its operations not only to provide a safe workplace for its employees but also to avoid any adverse impacts to its neighbors or the environment. BP's history of operating in Wyoming dates back to the early 1900's through our heritage companies. As one of the state's leading gas producers, BP continues to be a major contributor to Wyoming's economy where we contribute approximately \$100 million in state and local taxes.

We have ongoing drilling and field improvement programs at the Jonah natural gas field and are expanding operations in the Wamsutter natural gas field. We will invest over \$2 billion to double production from our acreage in Wamsutter. This multi-year drilling program is expected to increase BP's share of ultimate recovery from the field by 450 million barrels of oil equivalent and increase our daily net production from 125 to 250 million standard cubic feet per day by the end of the decade. This will include drilling of 2,000 wells over the next 15 years and a two-year, \$120 million technology field trial program which could lead to additional field development in the future.

Recently, we took responsibility for cleaning up areas impacted by legacy refinery operations which facilitated the redevelopment of the site in concert with the State and local community. This site, now known as Platte River Commons, is a mixed-use development that comprises an office complex, an 18-hole golf course designed by Robert Trent Jones, an industrial development area, pedestrian trails and a whitewater course along the Platte River.

At BP we take the privilege of developing natural resources seriously. We are guided by important environmental and business performance values and principles—our health, safety and environmental goals are to have no accidents and do no harm to people or the environment.

In response to the spills in Alaska and other events, BP is taking affirmative actions to ensure that all BP operations throughout the United States are run in a manner that meets our operational expectations. For instance, we are currently reviewing our pipeline monitoring, maintenance and corrosion management practices. In doing so, we have retained three of the world's leading experts in corrosion and infrastructure management.

These individuals will evaluate our existing systems and make recommendations for improving our operations. We will apply the relevant lessons learned from these reviews and the Prudhoe Bay oil transit line experience throughout our operations in the U.S.

 RESPONSES OF STEVE MARSHALL TO QUESTIONS FROM SENATOR THOMAS

Question 1. It is my understanding that the pig used in your transit lines during the early 90's produced faulty data. That particular model of pig, however, was subsequently taken off the market because it was poorly designed. Assuming you knew that the faulty data produced by that particular pig was the result of a faulty product and not a shortcoming of the pigging process itself, why then did BP not subsequently employ the use of a pig that actually worked?

Answer. The event in question refers to a pig run that was conducted by ARCO Alaska when it was the operator of the Eastern Operating Area of Prudhoe Bay. Our knowledge of ARCO Alaska's historic operating practices is incomplete. BP has been informed by individuals who were employed by ARCO Alaska at that time that the pig that was used did not provide accurate data and subsequently was taken off the market. Our inquiry into these matters continues and as we learn more we will provide you with an update.

BPXA operated the oil transit lines in the Western Operating Area since their installation and BPXA maintenance pigged and smart pigged those lines in 1990 and 1998. When BPXA took over the Eastern Operating Area from ARCO Alaska in 2000 and 2001, it substantially increased the level of corrosion monitoring on those lines and instituted a program of ultrasonic testing. BPXA then compared the results of that testing to the data it had developed on the Western Operating Area oil transit lines, which had been smart pigged two years earlier. The 1998 pigging of the Western Operating Area oil transit lines produced a very small volume of solids, revealed very little corrosion activity, and indicated that the lines were fit for

service. Because the lines on the eastern side of the field were nearly identical and carried virtually identical sales quality crude oil, and because the ultrasonic test results were consistent with what BPXA obtained on the western side of the field, BPXA concluded that the oil transit lines on the eastern side of the field were, likewise, free from either significant solids or corrosion and were fit for service. Therefore, BPXA did not believe a pig run of the Eastern Operating Area was necessary. Even with this increased scrutiny, in retrospect, and in light of what we have learned from this incident, we regret that we did not schedule a baseline pig run when BPXA assumed operations in 2001.

Question 2. Your company is the operator in Prudhoe Bay and owns a 26% share. ExxonMobil, ConocoPhillips, Chevron and Forest Oil Group control the remaining shares there. It's my understanding that the majors must agree on how much to spend on maintenance and how those dollars are spent. Can you please explain exactly how that process works and how those decisions are made? As operator of the field, do you have final say on how and where money is spent on maintenance or is there a more inclusive process in place?

Answer. Budgets are agreed annually between the three major owners of Prudhoe Bay—ExxonMobil (36.4%), ConocoPhillips (36.1%), and BPXA (26.4%)—in November for the following year. The Prudhoe Bay Operating Agreement requires BPXA as operator to put forward a preliminary budget in August and a final budget in October which the major owners approve in November. With the exception of emergency spending, the agreed budget constitutes a spending limit.

Typically, discussions between the major owners begin in the second or third quarters of each year to evaluate the maintenance priorities and scope of work for the following year. As Operator, BPXA then formalizes the budget request in August and October. As

Operator, BPXA generally has the authority to determine, on its own and without the agreement of the other owners, whether equipment and elements of the Prudhoe Bay Unit's infrastructure are safe to operate. Additionally, as the Operator of the unit, BPXA has authority to spend up to \$1.25 million on individual items without seeking the approval of the other owners. Items that require spending above this limit typically must receive approval from ExxonMobil and ConocoPhillips although there are provisions for emergency expenditures. Most major maintenance and repair items would require approval however.

RESPONSE OF PETER DAVIES TO QUESTION FROM SENATOR THOMAS

Question 1. The low-pressure pipelines involved in the Prudhoe Bay incident have generally been left un-regulated because of a belief that it is in the best interest of the companies that operate them, economically and otherwise, to maintain them. Can you explain the situation in Prudhoe Bay as a business decision? It must be more expensive to install a new pipeline than to clean the one that is already there, is it not?

The costs of maintaining a pipeline, including any inspection or cleaning costs, are far less than installing a new pipeline. As a general rule, internal line inspection (i.e., smart) pigs cost between \$15,000 and \$20,000 per mile of pipe. In retrospect, maintenance and smart pigging these lines some time before 2006 would have been the right thing to do.

However, the oil transit lines in the Western Operating Area were pigged in 1998, two years before the ARCO merger, and follow-up inspection using ultrasonic techniques had confirmed the results of the testing. The observed corrosion rates in both oil transit lines were within ranges for safe operation. Moreover, the documents from 1998 suggest that only a small amount of solids were recovered in connection with the pigging of the oil transit line in the western operating area.

It was the judgment of the BPXA CIC group that the oil transit lines did not pose a high risk of aggressive corrosion that would lead to the type of pitting that actually occurred. The important considerations include the fact that they transport processed oil (from which the water has largely been removed) and which do not present the same high corrosion risk as other fluids on Prudhoe Bay (i.e., three-phase fluids); the data being developed on a yearly basis from the coupons (the corrosivity of the fluid) and through the ultrasonic testing that did not show high corrosion rates; and from the data about the amounts of solids in the line after the 1998 pigging.

When ultrasonic inspection in 2004 found some increasing rates of corrosion in pipelines within GC2 that carried processed oil, BPXA significantly expanded its inspection program for the oil transit lines in the western operating area to monitor for corrosion.

When that inspection determined that there were increasing rates of corrosion within the line, BPXA scheduled a smart pig for 2006. Unfortunately, the leak occurred before this pig run was conducted.

As a result of these incidents, BP has announced that it will replace 16 miles of oil transit lines.

RESPONSES OF KEVIN HOSTLER TO QUESTIONS FROM SENATOR DOMENICI

Question 1. Since the Trans Alaska Pipeline System provides a significant percentage of America's energy security and will for some time to come, do we need to be worried that the TAPS line is also developing serious corrosion problems?

Answer. No. As referenced in our testimony to the committee, we have not seen indications of accelerated corrosion on TAPS. Adverse conditions on any one line connecting into TAPS are partly mitigated because the oil from all of the fields is combined at Pump Station One. Further, Alyeska Pipeline Service Company maintains a corrosion control program that is part of our overall Integrity Management Program (IMP) and uses multiple techniques to prevent, identify, and repair corrosion in the mainline, storage tanks throughout the system, and pump station and terminal piping. This IMP is audited by the U.S. Department of Transportation Office of Pipeline Safety and monitored annually by the Joint Pipeline Office. Our top priority is safe operations and maintenance of this asset.

Question 1a. What is your primary issue with respect to managing corrosion and other pipeline integrity matters on the TAPS system?

Answer. Managing corrosion, as part of overall integrity management program, is critical for the future operation of TAPS. Our primary corrosion issues on TAPS are external corrosion on the mainline and internal corrosion in facilities piping, both at the pump stations and at the Valdez Marine Terminal. Alyeska uses cathodic protection for the below ground segments of the pipeline. We are currently working with the DOT to resolve low cathodic protection performance in the last southern 20 miles of the pipeline. For our facilities piping, Alyeska is reviewing our inspection practices to determine if we need to change our monitoring approach for some of the harder to reach facility piping. For example, we are conducting inspection digs at PS 1 this Fall to examine a buried line that connects the Prudhoe Bay field into TAPS. We are also reviewing corrosion inspection practices at the Valdez Marine Terminal.

Alyeska runs instrumentation pigs through the pipeline to gather data about corrosion, mechanical damage, pipe curvature, and settlement. We use the data from all instrument pig runs to make calculations about investigating the integrity of the pipeline. When we find an anomaly that exceeds one of seven criteria (e.g., wall loss, remaining strength, curvature, dents, gouges) listed in our Pipeline Integrity Pigging Procedure (MP-166-3.04, Table 1), we schedule the location for inspection. These physical investigations then help us determine if repairs or some other remedy is required to address the anomaly. In many cases, our criteria are more conservative than required by regulation (e.g., Alyeska digs corrosion calls greater than 40% whereas DOT regulations require investigation at 50% because the corrosion pig error tolerance is $\pm 10\%$).

We continue to challenge ourselves to ensure we are taking the appropriate steps to manage corrosion on TAPS. Going forward we have taken the lessons learned from the North Slope incidents and are incorporating them into our integrity management program. It should be noted that security and mechanical damage remain greater threats to system integrity than corrosion. Both are important pieces of our overall integrity management program.

Question 1b. When was the last time TAPS had a smart pig inspection?

Answer. We concluded our 61st instrumentation pig run on September 1e, 2006. We had previously planned on running this pig in 2007 and made the decision to move it up on year as part of the action plan we prepared after the March spill on the North Slope. As a result of waxing issues associated with lower throughput, we did not meet our data standards for this pig run (on the southern part of the line) and plan to repeat it in late October if BP is able to restore full production-by then. In addition to corrosion pigs, Alyeska runs instrumentation pigs that look for pipe curvature and settlement. Alyeska also runs a cleaning pig every seven to fourteen days.

Question 1c. What does it cost to run a smart pig through TAPS?

Answer. Cost is primarily determined by length of the pig run. For TAPS, it costs approximately \$2 million dollars to run a smart pig the entire 800 miles. This includes staff time, pig transit time, and data analysis.

Question 2. With diminishing amounts of oil coming through TAPS, does this create technical problems in your operation of the line?

Answer. Should short term throughput drop below 500,000 barrels per day (as a result of additional suspension of production on the North Slope) under our current configuration, we will face technical challenges. Our engineering and technical staff are currently analyzing the impacts of these challenges could present. Among the more significant issues we are evaluating are: the challenges associated with cooler temperatures of the oil, particularly in winter, and the potential for water and paraffin drop out from the oil; the potential for increased vibration due to slack line conditions at the three mountain passes the pipeline must cross; and the efficiency of the biological treatment process of our ballast water plant because of lower ballast water flows due to reduced tanker traffic to the Valdez Marine Terminal. Alyeska has some of the best technical resources available for analyzing these conditions. We are also establishing appropriate mitigation plans for my management team to consider. It is worth noting that our \$500 million dollar pipeline upgrade project will introduce significantly more flexibility into our ability to manage through variations in pipeline throughput.

Once full production has been restored on the North Slope, Alyeska will continue with its long range planning process to identify and address operational challenges associated with the slow decline of North Slope production.

Question 3a. There are many concerns that have been raised about the pipeline shutting down in the dead of winter for a significant period of time.

What contingency plans do you have for restarting the pipeline and dealing with the impacts from cold weather?

Answer. Alyeska has had contingency plans in place to restart the pipeline in the event of a cold restart situation since operations began in 1977. Cold restart refers to restarting the pipeline after a pipeline shutdown for a prolonged period of time during extremely cold winter conditions. Our current studies and plan indicate that if the pipeline is shutdown during continuous -40°F temperatures, we will need to restart within 14 days to avoid significant problems. If BP reduces throughput this winter to 500,000 barrels or less, we may only have 9 days to restart after a cold temperature shut down.

There are four issues about cold restart that concern us: the crude oil develops a gel strength that is too strong to allow pipeline start-up; water drops out of the crude oil, collects in low spots, and freezes; ice in the pipeline upon restart could plug the mainline pump suction piping and custody transfer flow meter strainers, causing restart to fail; and the pipe steel temperature cools to -40°F or -50°F , making pipe welds susceptible to fracture. Given the current lower throughputs that we're faced with for this winter, we have also undertaken a full effort to insure we are prepared for any situation this winter. Alyeska is evaluating whether some contingency piping should be preinstalled due to a shorter restart window as a result of colder oil temperatures.

I'm including a fact sheet we prepared about this issue for your review. It's important to stress that we are continuously evaluating our cold restart plan. We work on this issue with the Joint Pipeline Office. It's also worth noting that in nearly 30 years of operation we have never needed to enact our cold restart plan. The longest the pipeline was shutdown was during the November 2002 earthquake when the system was down for 66 hours.

Question 4. The primary federal agency that oversees TAPS is DOT.

Answer. As part of the regulatory framework established by the passage of the Trans Alaska Pipeline Authorization Act and the establishment of the Federal Grant of Right of Way (the state manages their piece of the TAPS corridor via the State Lease of Right of Way), the Bureau of Land Management also has a significant role to play in the oversight of TAPS as the lead agency for the Joint Pipeline Office. The JPO mission is to ensure the safety, integrity and environmental protection of TAPS. The BLM also coordinates agency regulatory activity within the JPO.

Question 4a. How rigorous and detailed has their oversight been?

Answer. DOT oversight of TAPS is consistently rigorous and detailed. TAPS has been subject to rigorous inspections and audits by the DOT. The DOT has conducted an inspection of Alyeska's Integrity Management Program three of the past four years (2002, 2004, 2005); and an additional inspection is scheduled for October.

Standard DOT inspections have taken place every year (most pipelines are inspected every two years), with additional inspections occurring for such items in the recent past as Integrity Management and Operator Qualifications. Notices of Amendment (requests to change our procedures) or Probably Violation (failure to follow regulation) usually result. During standard inspections, TAPS has been divided into 4 or 5 sections, with a week spent in each segment. TAPS operations and main-

tenance practices were inspected via a task force in August. This group will review findings and recommendations with Alyeska as their work is completed.

DOT also conducted a routine inspection of the TAPS SCADA and Controls systems and the Operations Control Center (OCC) in September.

Question 5. How many other State or Federal agencies provide oversight?

Answer. Over 60 federal, state, and local agencies provide some level of oversight on TAPS activities. The activities of 12 major oversight agencies (the Alaska Department of Natural Resources, Alaska Department of Environmental Conservation, Alaska Department of Fish and Game, Alaska Department of Public Safety Division of Fire Prevention, Alaska Department of Transportation and Public Facilities, Alaska Department of Labor and Workforce Development, the Bureau of Land Management, the Department of Transportation Office of Pipeline Safety, and U.S. Army Corps of Engineers, the U.S. Coast Guard, the Minerals Management Service, and the Environmental Protection Agency) are coordinated through the JPO. The JPO currently has approximately 70 full time staff employees. On average, Alyeska receives four or five letters from a government agency each work day.

Question 5a. Has the Joint Pipeline Office arrangement (in which 12 agencies regulate activities of the Trans Alaska Pipeline System) been effective in overseeing the 800 miles of 48 inch pipeline?

Answer. Yes, the JPO has been very effective in its oversight role for TAPS. JPO staff understand TAPS operations and the oversight role they perform. Alyeska and the JPO work to resolve issues in a proactive manner before they become problems. The JPO performed 689 surveillances in 2005 (406 YTD 2006) related to Grant & Lease compliance. Approximately 3% of their findings were unsatisfactory, requiring corrective action by Alyeska.

Question 6. I understand that TAPS is in the middle of changing its pumps and modernizing its control system to meet its needs for the future.

What are you doing to insure that this updated system will work as effectively as the system being replaced that has delivered 15 billion barrels of crude oil?

Answer. Alyeska is in the process of a nearly \$500 million dollar upgrade to its pump stations and control systems that is designed to help the company better manage future variation in throughput. It is designed to maintain high pipeline reliability—the time that the system is available to receive and transport crude oil—with no decrease in safety or operational integrity.

Four of the critical pump stations will be upgraded with modular, scalable facilities. The design provides more flexibility to adjust for changing crude oil forecasts, and allows those adjustments to be made more easily. The installation of electrically driven pumps, modem automation and control equipment, and other facilities will allow centralized remote monitoring and unattended operations creating a simplified, fit-for-purpose system that is less expensive to operate. In addition, maintenance requirements for the new equipment will be much less than that required for the current equipment. Maintenance of the equipment that employs a high degree of monitoring increases equipment reliability. We have a very detailed commissioning and start up plan that we will follow to ensure the new equipment will work as designed. We will not start up the new system until we are confident it will meet safety, integrity, and reliability criteria.

Our current schedule is to start up the new facilities at Pump Station 09 by December of this year and then to complete construction and start up of the other three stations next year.