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WORKPLACE SAFETY AND WORKER PROTECTIONS AT BP

HEARING

BEFORE THE

SUBCOMMITTEE ON EMPLOYMENT AND WORKPLACE SAFETY

OF THE

COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS

UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

ON

EXAMINING WORKPLACE SAFETY AND WORKER PROTECTIONS AT BP

JULY 22, 2010

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WORKPLACE SAFETY AND WORKER PROTECTIONS AT BP

THURSDAY, JULY 22, 2010

U.S. SENATE,
SUBCOMMITTEE ON EMPLOYMENT AND WORKPLACE SAFETY,
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:02 a.m. in Room SD–430, Dirksen Senate Office Building, Hon. Patty Murray, chairman of the subcommittee, presiding.

Present: Senators Murray, Mikulski, Casey, Hagan, Merkley, Franken, Bennet, and Isakson.

OPENING STATEMENT OF SENATOR MURRAY

Senator MURRAY. Good morning. The subcommittee will come to order.

On June 10th, I held a hearing on the topic of keeping workers safe in the oil and gas industry. We were joined by expert witnesses from the Occupational Safety and Health Administration, the Steelworkers Union, the Hazardous Materials Programs Office in Contra Costa County, CA, and the National Petrochemical and Refiners Association.

I did invite BP to send a representative to help us understand what has been going wrong at their company that led to so many deaths and injuries and accidents over recent years, and what lessons they have learned from recent disasters at their company, but they declined that invitation.

I found that decision to be outrageous, given the company's shameful record of workplace safety and worker protections, including 11 workers killed in the Deepwater Horizon disaster; 15 workers killed and more than 170 injured in a 2005 explosion at its Texas City refinery; a record $87 million in fines levied against BP by OSHA in October 2009 for failing to correct safety hazards after the Texas City explosion—fines which came after a 6-month inspection revealed hundreds of violations of a settlement agreement put in place to repair hazards at the refinery; countless reports about unsafe practices at its pipeline operations in Alaska; and evidence that corners have been cut in operations, cuts that put workers at risk in the interest of maximizing profits.

The inability or unwillingness to fix known problems raises serious questions about BP's commitment to create a safe workplace and protect its workers. So I am glad we were able to work out an

arrangement today to have BP testify about its safety practices and record.

This hearing is a bit unusual. There is only one panel and only one witness. That is for a number of reasons. First, this subcommittee, Congress, and working people deserve an accounting of BP's safety practices. The families of our workers who have been killed under BP's watch deserve to understand what is going on at the company.

And BP's own workers—whether they work onshore or offshore, whether they work on drilling rigs, in refineries, or on pipelines—deserve to know what the company is doing and what they will do differently to ensure their safety and avoid another disaster.

But let me be entirely clear. BP is not the only problem company in the industry. And fixing BP's safety record is not the only solution we need. Despite what anyone tries to say, this is not a safe industry. The materials being handled are toxic, highly combustible, and deadly. The processes and procedures used are complex and carry inherent risks, and too many companies still carry a swagger from the early days of the industry; more wildcat than refined.

BP may be an extreme case of a company with unsafe practices, but it is not alone. In just the last 3 months, there have been 21 fires, 26 deaths, and 33 injuries in oil and gas refineries alone. That is in the last 3 months.

In 2010, there has been on the average one fire per week at our refineries. And I should say those are the fires that have been reported, as refineries have no legal obligation to report every incident.

Between 2006 and 2009, there were an additional 30 worker deaths, 1,298 injuries, and 514 fires on rigs located on the Outer Continental Shelf. To me, this doesn't seem like simply a string of bad luck. It appears to be a pattern of safety violations across an entire industry, and I am very concerned that it is the result of oil and gas companies that put profits and production over workers and their safety.

It seems to me the oil and gas industry as a whole has a hard time learning from their mistakes and making sure their workers are protected. And it seems to me that BP is an exceptionally poor student. That is unacceptable. We need to make sure that everyone knows that business as usual in this industry will no longer be tolerated.

So, once again, I am looking forward to hearing from our witness today. I thank you for coming. This is an extremely important issue, and I look forward to today's testimony and the questions and answers that many of our Senators will have.

Before we move to our witness and opening statements, I want to recognize Senator Isakson and thank him for coming and joining us and being a part of this.

STATEMENT OF SENATOR ISAKSON

Senator ISAKSON. Well, good morning.

And Chairman Murray, thank you very much for calling this important hearing.

Dr. Flynn, thank you for appearing to testify today.

Over 2 months ago, an explosion onboard the Deepwater Horizon oil rig claimed the lives of 11 workers and saddened our entire country. This catastrophic event continues to devastate the residents of the Gulf Coast. We still do not know how bad the tragedy is or how bad it will turn out to be.

BP must be held accountable for the loss of life, the damage inflicted on the local economy, and the devastation of the Gulf Coast's vast natural resources. For that reason, I cosponsored legislation that would require BP to live up to its promises to pay all legitimate claims of economic damage from the spill.

There is no reason we should have to choose between safe jobs and human life and domestic energy resources. Onshore, offshore drilling should be done, can be done, and it can be done in a responsible way that is safe for workers and safe for the environment.

A range of Federal agencies have varying degrees of jurisdiction over offshore oil and gas drilling. I was pleased to join Chairman Murray on a recent letter to the Administration, urging additional cooperation between these agencies in the regulation of the industry and the safety of the workers.

Our prayers remain with the victims and their families and the people of the Gulf Coast in this terrible tragedy. And again, I thank Chairman Murray for calling this hearing and Dr. Flynn for attending and appearing.

Senator MURRAY. I will turn to our other members who wish to make an opening statement, a short opening statement.

And Senator Franken, would you like to make an opening statement?

STATEMENT OF SENATOR FRANKEN

Senator FRANKEN. Yes, thank you, Madam Chair. And thank you for holding today's hearing.

Thank you, Mr. Flynn, for being here today.

BP has been in the news and on the minds of the American people. BP is an enormous company. Last year, they had over $230 billion in sales and operated 16 refineries, 5 here in the United States. But more importantly, they employ over 80,000 people. They are responsible for the workplace safety of 80,000 employees.

That is the same number of people who live in Bloomington, MN, and that is the reason we care so much about the process safety procedures of BP.

Just as for any other employer in the oil and gas industry, when mistakes are made, lives are lost. And BP has established a very disappointing track record. Twenty-six workers have died under its watch in the past 5 years alone.

One reason why Americans are so outraged about Deepwater Horizon is because we lived through the horror of a fatal BP explosion just 5 years ago at the Texas City refinery. After that accident, BP declared that it was the worst tragedy in BP's recent history and that it would do everything possible—this is a quote—it would "do everything possible to ensure nothing like it happens again." But now it is clear that BP didn't do everything that it could.

In the aftermath of the Texas City accident, the Chemical Safety and Hazards Investigation Board issued an urgent plea for BP to

commission a panel to assess their safety procedures. The resulting Baker report was very comprehensive and included many recommendations for improving process safety at BP facilities.

One of their suggestions was improving the culture of safety. Yet in this morning's *New York Times*, we read a survey of Deepwater Horizon workers in which workers reported that they saw unsafe behaviors on the rig but didn't report them because they were afraid of reprisals.

The workers said they felt comfortable reporting things to their immediate supervisors on the rig but feared corporate-level repercussions for anything beyond that. I understand that the rig was operated by Transocean, but BP hired them to operate this rig.

Almost all workers agreed that the process used for tracking safety issues was counterproductive. One worker reported the company was always using "fear tactics." That is a quote. This situation seemed like a massive failure on BP's part to create a culture of safety. If these workers' concerns had been heeded, 11 lives might have been saved.

Finally, I want to remind others that we had a hearing on this topic last month, and one of our witnesses was Mr. Charles Drevna, president of the National Petrochemical and Refiners Association. I mentioned to him that BP had 97 percent of the egregious willful—willful—violations in the industry. And so, I asked him about the industry's efforts to self-monitor and why they weren't on BP.

He said, "Well, our trade association or trade group doesn't represent BP." And I remember being kind of shocked to hear that, and then I said, "Well, let me ask you, is BP the only major company that does refinery that you don't represent?" And he said, "Yes." I would like to ask you why you are not a member of that association.

I appreciate the opportunity to follow up with Dr. Flynn on BP's progress in implementing the Baker report's recommendations and other safety improvements I presume they are currently undertaking.

Thank you, Madam Chair.

Senator MURRAY. Thank you.

Senator Bennet.

STATEMENT OF SENATOR BENNET

Senator BENNET. Thank you, Chairman Murray.

And thank you to the Ranking Member for being here.

I would like to also acknowledge Dr. Flynn from BP for joining us this morning.

This committee has a serious responsibility to explore the issue of workforce safety and workplace protections generally, and BP in particular. The chairman convened a similar hearing over a month ago where BP was unable to attend, and I appreciate your persistence in making sure BP is here.

A great deal of attention stemming from the explosion of the Deepwater Horizon has focused on the spill. We should not forget that the initial explosion killed 11 workers and injured 17 others. Beyond the tragedy in the waters of the Gulf, we should also re-

member that a 2005 explosion at a BP refinery in Texas City, TX, killed 15 workers and injured at least 170 others.

These two tragedies took a tremendous toll on human life, and unfortunately, there are other problematic lapses in recent company history that also worry me. Just 3 weeks ago, for example, BP was ordered to pay $5.2 million in fines to the Federal Government after "false, inaccurate, or misleading"—that is in quotes—reports of its natural gas production on the Southern Ute Indian Reservation in my home State of Colorado.

When Southern Ute auditors told BP about the problems, the company promised to fix them. But auditors found the same problems in subsequent reports. That led regulators to believe that BP's underreporting to the taxpayer and our Native American tribes was "knowing or willful."

It is a smaller example and certainly not one involving human life, but it is a worrisome track record across the country. The tragedies on the Deepwater Horizon and at the Texas City refinery should serve as stark reminders that energy development without proper safety and environmental precautions can be a very dangerous business.

To be sure, traditional resources provide an important contribution to our Nation's energy portfolio, as they do in my home State of Colorado. However, these recent tragedies should give us all pause and remind us that the proper balance must be struck between traditional energy development and the absolute obligation we have to worker health and safety. Oil and gas development that comes at the expense of American lives is not oil and gas drilling that I or anyone on this committee can support.

Thank you, Madam Chairman, for the opportunity to make an opening statement and for organizing today's important hearing.

Senator MURRAY. Thank you very much.

And with that, we will turn to our witness today. Joining us is Mr. Steven Flynn. He is the vice president of Health, Safety, Security, and Environment for BP.

Mr. Flynn, welcome, and I would invite you now to present us with up to 5 minutes of opening testimony. Your full statement will be included in the record.

STATEMENT OF STEVE FLYNN, Ph.D., VICE PRESIDENT OF HEALTH, SAFETY, SECURITY, AND ENVIRONMENT, BP GLOBAL, LONDON, UK

Mr. FLYNN. Thank you, Chairman Murray, Ranking Member Isakson, members of the subcommittee.

I am Steve Flynn, vice president of Health, Safety, Security, and Environment for BP PLC.

We are devastated by the catastrophic events in the Gulf of Mexico. I personally want to offer my sincere condolences to the families and friends who have suffered such a terrible loss and to those in the Gulf Coast whose lives and livelihoods are being impacted.

At BP, safety is our top priority. As I will explain, that is not a slogan. It is BP's most fundamental corporate policy.

I appreciate the opportunity to appear before you today to discuss the important steps we have taken to enhance worker safety across BP over the past several years. We have had challenges, but

we have taken a hard look at ourselves. We have made serious substantive changes, and we have seen important successes.

The fire and explosion at BP's Texas City refinery in 2005 was a devastating tragedy. Roughly a year later, the Prudhoe Bay spills occurred. These disasters were watershed moments that shook us to the core, and we have publicly acknowledged our responsibility for them.

BP also undertook a brutally honest self-examination. We knew that we could not change the past, but we were determined to learn from it and to fundamentally change the way we operate based on what we learned. To do that, BP commissioned unflinching, non-privileged examination of the factors that caused the Texas City incident. That hard-hitting report led to significant changes in our U.S. refineries.

BP also committed to implementing each one of the challenging, but important recommendations of the Baker panel. Their review is widely considered one of the deepest and most far-reaching internal investigations in corporate history.

Following the 2005 and 2006 incidents, we developed a global agenda to transform our safety culture company wide. This is not just a commitment on paper. We have taken real steps, observed measurable and sustained results, and invested billions of dollars in implementing this agenda.

The change agenda had four main elements. First, we acknowledged that leadership and management oversight is critical. The tone from the top matters.

From the moment that Tony Hayward became CEO in 2007, he has made it clear that for BP, safety is our No. 1 priority. BP has worked to drive the safety agenda across the entire company, starting at the most senior levels and cascading through the front line.

For example, BP formed the Group Operations Risk Committee, chaired by the CEO and comprises the company's most senior executives. The committee provides valuable safety oversight through regular reviews of incidents, detailed reviews of the progress of safety-related activities, and identifying areas where additional focus is needed.

BP also enhanced the role of the board-level Safety, Ethics, and Environment Assurance Committee, which receives regular reports from management on operations and safety performance.

Second, we finalized the development of a single new comprehensive operating management system framework. Based on global best practices, this drives standardization, including standardization of safety practices in BP's businesses worldwide. This OMS provides a common way to focus on what we know are the key elements of safety—plant integrity and investment, systematic procedures to identify and manage risks, enhancing workers' capabilities and the expectations of leaders, implementation of process safety metrics and audit procedures.

Third, we focused and augmented our training programs because we believe that effective training is key to developing a robust safety culture. To build capabilities of our personnel, BP significantly expanded existing safety training at all levels. Rigorous new programs were developed for our operations and our craftspeople. In

addition, BP has established innovative safety training for leadership, which has been delivered in conjunction with MIT.

Fourth, BP has developed robust audits and performance metrics that effectively assess and monitor performance. We want to understand how our safety performance matches up to the standards that we set ourselves and also to identify trends that require intervention.

BP's safety and operations audit team of approximately 50 auditors audit both BP's internal standards and regulatory compliance. Senior management closely monitors audit findings and action closure through quarterly performance reports. In addition, BP personnel have played a leading role in industry-wide efforts by the API and the CCPS to identify new indicators to measure process safety performance.

BP is not the same company that existed at the time of the Texas City and Prudhoe Bay accidents. While we cannot change the past, we have learned from it, made tangible changes, and fundamentally strengthened our safety culture as a result. BP's first and highest responsibility is to protect the workforce, including 23,000 in the United States, and I spend every day thinking about how to do this better.

Consistent with this commitment, we stand ready to learn from and apply the lessons of the Deepwater Horizon tragedy. We are conducting a non-privileged review of this incident that is looking at complex actions and decisions made by multiple parties involved, including BP. We will share the results of this review so that we and everyone in the industry can learn from this terrible event.

Thank you. And I look forward to your questions.

[The prepared statement of Dr. Flynn follows:]

PREPARED STATEMENT OF DR. STEVEN A. FLYNN, PH.D., VICE PRESIDENT, HEALTH, SAFETY, SECURITY AND ENVIRONMENT, BP PLC[1]

Chairman Murray, Ranking Member Isakson, members of the subcommittee. I am Steven Flynn, vice president, Health, Safety, Security and Environment, BP plc.

At BP, safety is our top priority. We are devastated by the catastrophic events in the Gulf of Mexico. We offer sincere condolences to the families of the 11 men who lost their lives in the accident on the Deepwater Horizon, and we are sorry for the hardships every person and business affected by this spill is experiencing. We do not yet know why this accident happened. But we are committed to finding out and to learning what can be done to prevent tragic events like this in the future.

I joined BP more than 25 years ago and have served in a variety of Health, Safety and Environmental ("HSE") roles. After the incident at Texas City in 2005, I joined the team charged with developing a new, company-wide safety agenda. Our goal was simple but quite significant: make safety the first and highest company priority and fundamentally change the way BP operates to reflect that prioritization. As part of the change agenda, BP created, in May 2005, a new Safety & Operations ("S&O") function at the Group level which I joined. In November 2007, I was appointed vice president of Health, Safety, Security & Environment ("HSSE"), a component of the S&O function.

I am here today to discuss what we have done to enhance worker safety over the past several years. I will highlight both the successes we have achieved and the challenges we have encountered.

[1] The data described throughout this testimony is accurate to the best of my knowledge as of 9 a.m., July 21, 2010, when this testimony was prepared. The information that we have continues to develop as our response to the incident continues.

TEXAS CITY AND PRUDHOE BAY—A TURNING POINT

The fire and explosion at BP's Texas City Refinery Isomerisation unit on March 23, 2005 was a devastating tragedy. Fifteen people died, and at least 170 people were injured. That was a terrible day, not only for those lost or injured and their families and friends, but also for the whole BP community. It shook us to the core. A year later, the Prudhoe Bay spills occurred.

These disasters were two of the lowest points in BP's history. We were rightfully criticized by the government, the public, and our own employees. We acknowledged our mistakes. But most significantly, those events were a watershed moment. In the wake of these accidents, BP undertook a brutally honest self-examination—we knew we could not change the past, but we could learn from it, and we could shape the future by fundamentally changing the way we operate based on what we learned.

As part of that self-evaluation, BP undertook an extensive, non-privileged examination of the factors that caused the Texas City incident. This was not the typical response of a corporation to a major disaster, but BP strongly believes in the importance not only of learning from incidents itself, but also of sharing those learnings broadly in the hope of preventing similar incidents in the future. The resulting study, the Mogford Report, is quite self-critical and led to many important reforms within the company. Among these were the removal of thousands of portable buildings from potentially hazardous areas; relocation of non-essential personnel offsite or to newer, hardened buildings; removal of all blow-down stacks operating in heavier-than-air light hydrocarbon service (the type of service involved in the Texas City incident); and implementation of enhanced safe control of work procedures and training.

We also incorporated learnings from a number of independent, external reviews of the causes of the Texas City incident, including the investigation report by the U.S. Chemical Safety Board ("CSB"). And, in response to a recommendation from the CSB, BP commissioned the BP U.S. Refineries Independent Safety Review Panel, chaired by former U.S. Secretary of State James Baker III. The Independent Panel spent 16 months assessing the effectiveness of the corporate oversight of safety management systems at BP's five U.S. refineries and BP's corporate safety culture more broadly. Its review is widely considered one of the deepest and most far-reaching internal investigations in corporate history.

The Independent Panel issued its report in January 2007, and in it made 10 challenging but important recommendations focusing principally on BP's U.S. refineries. BP published the report in its entirety.[2] Among other things, the Panel recommended that BP management demonstrate leadership on process safety from the top down: implement an integrated and comprehensive process safety management system; enhance the process safety culture within BP's refineries; and take steps to become an industry leader in process safety management. BP accepted the Panel's challenge to improve and publicly committed to implementing each one of the Report's recommendations. Moreover, BP appointed an independent expert to monitor and report on our progress in implementing the Independent Panel recommendations. In the 3 years since his appointment, the Independent Expert has conducted repeated intensive inspections of BP's U.S. refining sites and its management oversight of those facilities. He reports to the Safety, Ethics and Environment Assurance Committee of the BP Board of Directors, and, just as it did with the Independent Panel's report itself, the company publishes his annual reports.

In 2006, BP experienced two major leaks on oil transit lines in BP's Greater Prudhoe Bay operations. BP again undertook an internal investigation and commissioned several external reviews. The outcomes of these reviews have also been made public, and they resulted in a number of key changes in BP's Alaska business and throughout its U.S. operations, including the appointment of an independent ombudsman to investigate confidential issues raised by concerned individuals, the replacement of miles of pipeline on the North Slope, and the enhancement of BP Alaska's corrosion monitoring and technical support organizations.

BP has sought to apply learnings from these tragic events throughout its global businesses. As described below, the company did not brush aside the events or sidestep its accountabilities. Instead, we recommitted ourselves to improving process safety globally and, with that, improving the way we do business.

[2] Available at *www.bp.com/bakerpanelreport*.

THE NEW SAFETY AGENDA

The agenda we developed to carry out our commitment to making safety our first and highest priority and to change the safety culture in the company in the wake of the 2005–6 incidents focused on four elements:

- Leadership and Management Oversight;
- Management System Improvements;
- People—Safety and Operations Capability Building; and
- Audit and Performance Monitoring.

This is not just a commitment on paper. We have taken real steps; observed measurable and sustained results; and invested billions of dollars in implementing this agenda.

1. Leadership and Management Oversight

As we recognized when we began our journey of change in 2005–6, leadership and management oversight is critical to the development of a robust and effective company-wide culture that prioritizes safety. Towards this end, BP has taken a number of steps to drive the safety agenda across the entire company, beginning with the most senior executives and the board of directors and cascading through all levels of the company.

First, in October 2006, BP formed the Group Operations Risk Committee ("GORC"), which is comprised of the company's most senior executives. The GORC is chaired by the group chief executive, and includes the chief executives of the upstream and downstream businesses, as well as safety and engineering functional leaders. The GORC provides the foundation for consistent, safe and reliable operations, and is responsible for driving a consistent and focused safety message company-wide. In its regular meetings, the GORC focuses on a number of key areas, including:

- Analyzing incidents and discussing key learnings;
- Monitoring safety performance indicators;
- Reviewing delivery of the short-term risk reduction plan;
- Oversight of development and implementation of BP's Operating Management System (OMS);
- Oversight of safety and operations capability development; and
- Overseeing implementation of Independent Panel recommendations.

Second, as recommended by the Independent Panel, BP enhanced the role of the Board-level Safety, Ethics and Environment Assurance Committee ("SEEAC"), comprised of non-executive directors. The SEEAC is responsible for, among other things, monitoring and obtaining assurance on behalf of the Board related to management of significant non-financial BP risks.

Third, and as noted above, BP adopted the Panel's recommendation to appoint an independent process safety expert to advise on the implementation of the Panel's recommendations across U.S. Refining. Duane Wilson was appointed Independent Expert for a 5-year term that began in 2007. Mr. Wilson was a member of the Independent Panel and is recognized as an expert in process safety management in the refining industry, with nearly 40 years of industry experience. In addition to his annual reports, he provides regular updates to the SEEAC based on an extensive program of inspections and assessments, conducted by him and his team of technical experts, of the U.S. refineries and the broader organization.

Fourth, the company has set new expectations for line management to set the right tone by, among other things, having a visible presence in the field to reinforce safety as a priority. In a related step, BP also strengthened the requirements for those in line management to acquire more process safety knowledge and to have stronger technical and/or engineering backgrounds.

Fifth, BP's leaders have a new and robust set of tools to carry out their safety responsibilities. For example, comprehensive management information—leading and lagging metrics, monitoring of program delivery, and safety audit information—is disseminated company-wide. Moreover, the chief executives of the business segments and regional business leaders have open channels of communication and work together to develop safety plans, monitor performance and audit responses, and share learnings.

2. Management System Improvements

Developing an effective safety culture in a large multinational company is not something that occurs overnight. Even before the Texas City and Prudhoe Bay incidents, we were taking steps to enhance our management system to encompass a single comprehensive approach capable of standardizing risk identification and mitigation company-wide and improving reliability and operational effectiveness on a con-

tinuous basis. Prior to those incidents, we had relied on a number of different management systems inherited from the many heritage companies that now form part of the BP family, including Amoco, Arco, and Castrol.

Following the 2005–6 events, we finalized development of a single, new, comprehensive Operating Management System ("OMS") framework, based on global best practices, to drive a standardization in BP's businesses worldwide. OMS represents a sustainable approach to managing risk and continuously improving through a management system that includes consistent standards and practices across all our operating businesses. It is at the heart of our enhancements.

The OMS framework is anchored by a series of "Elements of Operating" that apply to all business entities in our company. These Elements fall into four categories:

- Plant—which we define as managing plant integrity and investments to produce safe and reliable operations;
- Process—which are systematic procedures to identify and manage risks and to report and investigate incidents so that lessons can be learned and procedures improved;
- People—under which we review and enhance workers' capabilities and the expectations of leaders; and
- Performance—which is the category under which we have developed additional leading and lagging metrics for process safety and implemented comprehensive management system audits to track performance and identify improvement actions.

A key feature of OMS is its foundation in the principles of Continuous Improvement. On an annual basis, every BP entity operating on OMS conducts an annual performance improvement exercise during which it looks to improve safety performance by effectively identifying process safety risks and prioritizing activities to reduce those risks. As the system matures at each entity, any gaps will be smaller over time. Our operating philosophy is that there are always ways to operate more safely and to reduce risk, and OMS provides concrete tools and processes to guide our business entities in this process.

The Elements of Operating and the annual performance improvement cycle are implemented on the ground through local operating management systems for the particular operating business. These local systems build upon the uniform safety standards applicable company-wide to encompass the specific local requirements of BP's many individual businesses. Local implementation is aided by self-assessments, performance monitoring, and audits.

BP businesses began transitioning to the new OMS framework in 2008 and, at the end of 2009, all U.S. upstream, refinery, and chemical manufacturing locations had completed the transition.

3. Safety and Operations Capability Building

Effective training is key to developing a robust corporate safety culture. To build the capability of our personnel, BP significantly expanded existing safety training at all levels, beginning on the front lines with our operations technicians and maintenance craftspeople. This enhanced training has focused on key elements of process safety knowledge and control of hazardous work processes.

In addition, BP has established an innovative and extensive training program for the leadership ranks, including supervisors, managers and those executives who oversee operations. This capability development framework is ever-expanding and presently involves coursework tailored to the following individual audiences:

- Operations Essentials—This program is targeted to front line supervisors and their managers. It is a modular program delivered at the work site, and includes workshop sessions and on-line computer-based modules that provide in-depth study of a variety of technical subjects. This program was specially designed and paced to fit with the work environment. By the end of 2009, approximately 2,300 people had already begun this program.
- Managing Operations—This program is targeted to operations management personnel. It is delivered in residential regional programs, primarily in the United States and United Kingdom. The program was piloted in late 2009 and is being rolled out more broadly in 2010.
- Operations Academy—This program is targeted to business leaders who oversee multiple operations. The program, which has been running since 2007, is provided through three 2-week residential programs in conjunction with the Massachusetts Institute of Technology (MIT). By the end of 2009, approximately 100 managers had graduated from this program.
- Executive Programs—These programs are also provided in partnership with MIT, and consist of 2- to 3-day programs for senior executives. The programs cover

the key elements of the Operations Academy program and programs held to date have had nearly universal attendance from BP's top senior executives.

Each of these programs drives home a uniform set of important themes: leadership and culture; management systems; process safety; and continuous improvement. They supplement existing basic operational training and projects and engineering education programs for relevant individuals. These new programs have already proven invaluable in establishing a common safety conversation and more consistent safety culture company-wide.

4. Audit and Performance Monitoring

Getting the right leaders, processes, and training in place is critical. Effectively assessing and monitoring the company's performance is equally critical—and BP has developed robust audits and performance monitoring metrics to do so.

First, BP established a corporate Safety & Operations Audit team. The team's first pilot audits were carried out in 2006. The Audit team has approximately 50 full-time auditors, recruited both internally and externally, based in the United States and the UK. Importantly, each auditor is required to have more than 20 years' relevant experience, across a wide range of engineering and technical disciplines. The audit program is risk-based, operates on a rolling 3-year cycle, and covers upstream and downstream activities across the globe. The high-quality, comprehensive nature of these audits is one of the ways that BP is differentiating itself in its journey to becoming an industry leader in process safety management. Audits identify gaps in requirements, provide clear actions to close the gaps, and assure verification of action closure. Senior management closely monitors audit metrics and action closure status through quarterly performance reports. Over 100 audits have been completed.

Second, BP developed comprehensive management information that is used by GORC and SEEAC members to monitor process safety performance. This management information includes process safety metrics and leading/lagging indicators, such as number of workforce fatalities, number of losses of primary containment, number of process safety incidents, number of high potential incidents, number of major incidents, number of compliance notices, and number of approved audit due date change requests.

WHERE WE STAND TODAY

BP is not the same company that existed at the time of the Texas City and Prudhoe Bay tragedies. While we cannot change the past, we have learned from it, made tangible changes, and fundamentally strengthened our safety culture as a result. We have focused relentlessly on safety as our No. 1 priority—and spent billions to put words into actions. We have appointed new leadership, many of them from outside BP, across all levels of the company. We have new and better safety procedures, policies, and training, and we continuously strive to improve the process safety culture at each of our operating entities.

For these reasons, we were disappointed when OSHA issued hundreds of citations to BP at Texas City and Toledo after recent audits. Although OSHA's discretionary enforcement approach against BP—issuing "per-instance" violations that carry higher cumulative penalties and result in disproportionately higher numbers of citations than others in industry—is understandable considering the scale of the human tragedy that the 2005 Texas City accident represented, we do not believe the number of citations or level of penalty is indicative of the management of risk on these sites or the level of hazard reduction that has occurred since the Texas City accident in 2005. BP is currently in discussion with OSHA to resolve their concerns, and to be clear: if there are safety improvements that need to be made at those sites—and, in the spirit of continuous improvement that characterizes our approach to operations, we believe there are always ways to improve—we will make them.

At the heart of this change is our drive to become an industry leader in process safety management, which is the core recommendation from the Independent Panel. BP is active in many industry associations, professional institutions, and technical societies committed to improving safety across the oil and gas business, including the American Petroleum Institute (API), the International Association of Oil and Gas Producers (OGP), the Center for Chemical Process Safety and the Mary Kay O'Connor Process Safety Center. BP employees are also very active in technical societies such as the Society of Petroleum Engineers, the American Society of Safety Engineers, and the American Industrial Hygiene Association. BP has hundreds of employees who participate in these various groups on behalf of BP, including 320 at API alone.

Our participation in these organizations provides a structured format for developing safety standards and improvements, learning from incidents, and supporting safety research. For example, BP was an active participant in the development of the new API Recommended Practices on Buildings and Process Safety Indicators. BP has routinely served as a presenter at the API Operating Practices Symposium and the Mary Kay O'Connor Process Safety Center International Symposium where the focus is learning from incidents as well as new developments in process safety. Our affiliation with these and other groups associated with improving worker health and safety has been a key part of our strategy for improving our overall safety performance.

CONCLUSION

I have described to you our safety journey to date. We have come a long way. Of course, our safety journey continues, and, as we strive continuously to improve, it will never be complete. Our employees—including 23,000 in the United States—are responsible for the company's success, and we could not exist without them. BP's first and highest responsibility is to protect them, and I spend every day thinking about how to do this better.

Consistent with this commitment, we stand ready to learn and apply the lessons of the Deepwater Horizon tragedy. As we have done in the past, we are conducting a non-privileged review of this incident that will take an unflinching hard look at the actions of everyone involved, including ourselves. This incident included a complex set of decisions and actions taken by multiple parties—BP and others. The results of this examination will be public. We are also eager to learn from other investigations and the reviews of technical experts external to the company who may also investigate the incident. At this time, we do not yet know why the accident happened or why fail-safe mechanisms failed. As noted, when we obtain answers to these questions, BP will openly share the findings and learnings with the public.

In the meantime, since the April 20 explosion and fire, BP has been carefully evaluating the subsea blow-out preventers used in all our drilling operations worldwide, including the testing and maintenance procedures of the drilling contractors using the devices. We will participate in industry-wide efforts to improve the safety and reliability of subsea blowout preventers and deep water drilling practices. And we will work closely with other interested parties as we do so.

We know that we will be judged by our response to this incident. No resource available to this company will be spared. Please know that we and the entire industry will learn from this terrible event, and emerge from it stronger, smarter and safer.

Thank you, and I look forward to taking your questions.

Senator MURRAY. Thank you, Mr. Flynn.

Mr. Flynn, I want to start by talking about BP's culture of safety. Your CEO, Tony Hayward, said that he has a laser focus on safety within the company.

Well, I am fundamentally concerned that the culture of the company is anything but safety-oriented, despite what we are hearing from senior management. In fact, we know that BP has a record of trying to say the right thing, but following its many disasters here in the United States, there is disturbingly little evidence of actual changes on the ground.

To that point, following the 2006 pipeline leaks in Prudhoe Bay, AK, Mr. Hayward's predecessor, John Brown, claimed that the company would get the priorities right. And Mr. Brown went on to say, "We don't just sort them out on the surface. We get them fixed deeply."

Well, Mr. Brown made that statement just 1 year after BP Texas City refinery explosion that killed 15 workers and injured 170 more. That was the explosion that led to the creation of an independent panel, chaired by former Secretary of State James Baker, and they produced a series of recommendations to BP to fix its leadership, its culture, and its practices.

But just this past November, BP was fined a record $87 million for 270 violations of the 2005 settlement agreement to repair hazards at the Texas City refinery, hazards that the company committed to fixing, but obviously never did, and 439 new willful violations for failure to repair pressure release safety devices—439 new violations. And I should mention that since 2005, there has been four additional fatal accidents at the Texas City refinery.

So, Mr. Flynn, I would contend that in the last 5 years, nothing has been fixed deeply. But the company, as we know, has made record profits and kept production running at all costs. So can you explain to me, to this committee, and importantly, to the American people, what exactly a culture of safety means to BP?

Mr. FLYNN. Since the accidents at Texas City and Prudhoe Bay, there have been very significant changes. That started with a commitment from the top to put safety as the No. 1 priority for the company.

But it wasn't just words. What also happened was there was investment, investment to upgrade plant, to remove buildings, to harden buildings, to replace pipelines, to improve plant. Real, tangible changes on the ground. Also, we had to look at systems, and we focused our priority on putting in place required processes for managing the integrity of plant and also for safe work practices.

The other investment was in people. Because at the end of the day, it is the workers and their leaders that need to understand how to implement those practices and how to make the workplace safe.

But not only did we do that, we have to understand we need checks and balances. And that is why we hired some of the best people we could find in the industry to join our audit team. We do very rigorous, detailed audits to go out and check when things aren't on track. And we put in place actions to close them.

So we have made progress over the last 5 years. Things have really changed in BP.

Senator MURRAY. Well, you just described to me and the committee a number of processes and plans. Can you tell me exactly when you expect to have that all in place because, frankly, I am kind of tired of having to worry about companies that handle processes and dangerous and hazardous materials in unsafe ways that obviously our workers and our communities are impacted by.

So you described all these processes and these plans and these words on paper. When is that all going to be in place?

Mr. FLYNN. Significant changes have already taken place over the last 5 years. So there really have been very significant changes, physical changes on the ground, systems put in place, and training underway.

Now it is a multiyear program, and I believe there will always be more to do. That is what I spend my entire career doing.

Senator MURRAY. But you can't give us a definite timeline for when these—I mean, last November, 270 violations as I just described to you.

Mr. FLYNN. Yes. So as far as the violations at Texas City were concerned, we were very disappointed by the outcome of that audit. We believed that we had a program which we had agreed with

OSHA, a year-on-year program to abate those findings and to put in place the requirements——

Senator MURRAY. So you would agree with me that these process and plans haven't been put in place yet?

Mr. FLYNN. We had put in place a program, significant progress had been made, and we understood that we were—we had a program——

Senator MURRAY. Are you satisfied with the process?

Mr. FLYNN. I believe that we have made progress that was required that we committed with OSHA and that we had fulfilled our commitments. Clearly, there was a difference with OSHA. We are working with OSHA to resolve those differences.

But at the end of the day, we want the same thing as OSHA in that we want a safe workplace, and we want our workers to go home safely. So we will fulfill those commitments.

Senator MURRAY. But you can't give us a specific timeline to do that?

Mr. FLYNN. I would be happy to work with your staff to explain what the timeline is.

Senator MURRAY. Well, I think we would all be interested in seeing that.

Let me ask one more question before I turn it over to Senator Isakson.

There are a lot of accounts from workers on the Deepwater Horizon who report that it was BP engineers and staff who kept cutting corners on safety, overruling additional testing, denying the use of proper equipment, and rushing the completion of the well in order to save costs. In fact, evidence presented just this week suggest that BP failed to act on reports of failed equipment.

Do such reports like that depict a culture of safety that you are trying to establish?

Mr. FLYNN. The reports that you described certainly concern me. But we don't know yet what the cause of the accident on the Deepwater Horizon was.

Senator MURRAY. Well, does it bother you that you know that people were cutting corners and overruling tests and denying the use of proper equipment?

Mr. FLYNN. I have heard the allegations. And of course, if workers have concerns, then naturally, we would be concerned.

Senator MURRAY. My question to you is does that bother you that that is going on in the company? You are the head of safety.

Mr. FLYNN. We don't know what caused the accident on the Deepwater Horizon. Of course, if workers are concerned, then naturally, I am concerned. And when workers raise concerns, we investigate them and put in places to correct that. But on the Deepwater Horizon rig, it is a very complex, very complex incident with many factors and many different parties involved, and we need to understand all the facts so that we can put in place actions to prevent recurrence.

Senator MURRAY. Senator Isakson.

Senator ISAKSON. Thanks.

Dr. Flynn, is BP's relationship with Transocean a contractual relationship as far as the Deepwater Horizon?

Mr. FLYNN. Yes.

Senator ISAKSON. Do you know what provisions that contract requires for safety on behalf of Transocean in relation to BP's culture of safety?

Mr. FLYNN. What we require is that there are contractual requirements for health, safety, and environment when we work with contractors. So it would have been required that the Gulf of Mexico business put contractual requirements for safety into that contract with Transocean and that they also followed up on those requirements. I am not aware of the details of those requirements, but I know that is what BP would expect.

Senator ISAKSON. If your company and its lawyers would allow you to do so, would you see if we could have a copy of that contract?

Mr. FLYNN. I will work with your staff to see what we can provide.

Senator ISAKSON. Thank you.

The third item in your testimony on the commitment of BP to safety reads as follows:

> "Third, to build the capacity of our personnel, BP significantly expanded safety training at all levels, beginning on the front lines with our operational technicians and maintenance crafts people and including an innovative and extensive training program for the leadership ranks."

Now this is referring to post Houston time, I believe. Do you train Transocean, or do you contract with them and rely on their training?

Mr. FLYNN. We require them to provide competent people to do the job. So it is a contractual requirement that their employees are fit to do the tasks.

Senator ISAKSON. On an offshore rig, when you contract with a subcontractor to actually do the drilling, do you have a BP officer who is the supervisor of the rig that is ultimately the decision-maker, or do you actually delegate to Transocean the decision-making process with regard to stops, tests, safety, etc?

Mr. FLYNN. The details of how decisions are taken and who takes what, that should be set out in the contract ahead of time. So it could be that the BP company man onboard has certain decision rights and that the contractor has certain decision rights.

Those would be set out ahead of time. I don't know in this particular case what the details were.

Senator ISAKSON. Understanding that you obviously are doing a lot of internal investigations post explosion to try and find out what happened, and I know that is an ongoing procedure. So are others. Has BP implemented any change in standards and safety on offshore rigs since the Deepwater Horizon explosion?

Mr. FLYNN. Absolutely. Although the investigation is ongoing, if we find things that need responding to, then we absolutely do that. So already, we have initiated tests of blowout preventers around our operations and looked at the procedures that our contractors use for testing and maintaining blowout preventers would be an example.

Senator ISAKSON. In your fourth requirement or fourth statement on the culture of safety, it reads from your statement, "BP has developed robust audits and performance monitoring metrics to effec-

tively assess and monitor the company's performance." And I assume that also applies to the subcontractors working on behalf of the company. Is that correct?

Mr. FLYNN. What we would expect is that we would audit that our businesses are fulfilling BP's requirements. And one of BP's requirements would be that they have safety requirements in their contracts with contractors that set out who is going to do what on safety, and that would include management of subcontractors.

And we would also expect that a business would go and check that those contractual requirements were being implemented in the way that a contractor was managing its subcontracts. So we expect our people to audit that BP's requirements are in place and that they are fulfilling their obligations.

Senator ISAKSON. As the chief safety officer for BP, do you have a required paper trail of safety concerns? If a worker, either contractor or BP employee, reports a safety concern either on an offshore rig or at a refinery site, do you have required paper trail that you, as the safety officer, require them to have to see to it that, first, it is noted and, second, it is investigated?

Mr. FLYNN. There are multiple channels. If a worker raises a concern with his supervisor, then we would expect them to take action to address a safety issue immediately. Our requirement is that they make it safe. If the concern is one that requires an investigation, and we set out at what level an internal investigation would be required, then that would need to be documented, and that is auditable.

But we also have other channels for workers to raise concern, independent channels. Inside the company, we have our confidential anonymous line, a 1-800 number where people could raise concerns. And that goes to a separate function, our compliance and ethics function who would carry out an independent investigation, would work out what was going on, and then would give feedback to the employee.

In the United States, we also have an external independent person, the judge, Judge Sporkin, the ombudsman. Confidential calls could be made to him. It would be investigated and documented. So, yes, when concerns are raised, then they would be documented.

Senator ISAKSON. I thank you for your testimony and would appreciate it if you would let the committee know if you can supply us with that contract between BP and Transocean.

Mr. FLYNN. I will work with your staff to see what we can do.

Senator ISAKSON. Thank you very much.

Senator MURRAY. One question really quickly before I turn it over to my committee members. You mentioned in a response to one of my questions that you have 50 outside safety auditors. Can you provide the members of this committee with their audits?

Mr. FLYNN. I would have to work with your staff to see what we can provide as information on audits.

Senator MURRAY. OK. Thank you.

Senator Franken.

Senator FRANKEN. Dr. Flynn, thank you for being here today.

I know that you have been the target of a lot of anger and frustration of late, and I appreciate your being here. And thank you for

your expression of empathy and sadness for those who died on the rig.

When we had the hearing a few weeks ago, one of the fathers of one of the men who died on the rig was here. And he said that no one from BP had ever talked to him and expressed their apologies or condolences. Have you talked to any of the members of the families of those who died?

Mr. FLYNN. I have not personally talked to them, but I would have expected that BP people would have done that.

Senator FRANKEN. You would have expected it?

Mr. FLYNN. Normally, if there is an accident, then our business people would get involved. But I don't know the details in this particular case.

Senator FRANKEN. So you don't know for sure whether anyone from BP has contacted any of those families, do you?

Mr. FLYNN. I don't know that, but I could find out.

Senator FRANKEN. Well, this gentleman said that no one from BP had talked to him, and I think you should know that.

The Center for Public Integrity recently published a report noting that BP is responsible for 760 of the 761 egregious and willful—that is what they call them—OSHA violations over the past 3 years. This is post-Texas City, of course, when you were going to change your culture of safety.

That is a pretty hard statistic to believe. Do you have any comment on that?

Mr. FLYNN. We were disappointed with the 760 violations because we believed that we were in compliance with the requirements of those orders.

Now what I would say is that in making those citations, OSHA did use a differential approach. They did do a per-instance citation versus in other cases where they would find a system finding. And so, that generates a higher number of citations. We wouldn't be comparing apples with apples in other cases.

All of that said, we are absolutely committed to resolving those differences with OSHA, to fixing the problems. And at the end of the day, OSHA and ourselves do want to achieve the same thing, a safe workplace and safety for workers.

Senator FRANKEN. OK. Well, I mentioned in my opening statement my conversation with Mr. Drevna, the president of the National Petrochemical and Refiners Association. And I was asking him about the industry's efforts to self-monitor and self-regulate. And in response, he explained that there were efforts within his group to set and meet industry safety standards, as I said, within their trade group.

And then when I asked, when I mentioned this figure, 760 out of 761, I mean, it makes BP seem to be something of an outlier. And this is an egregious and willful—egregious and willful, willful violations. So when I asked him why more hadn't been done to correct the problems at BP, he replied that BP wasn't a member and that it was the only major refinery that wasn't a member.

Why aren't you a member of that trade association, which seems to have at least some self-policing within their own group on safety? I mean, the 760 of 761 seems to suggest that you may be something of an outlier.

Mr. FLYNN. I have talked about the 760 and how a different approach was taken on that and the fact that we are working to resolve those differences with OSHA. I don't believe that we are an outlier, and we work with multiple trade associations, both in the USA and around the world. So we certainly have——

Senator FRANKEN. You work with them, you say, but I am asking why you aren't a member of a trade group that self-polices its safety standards? And yet, you are the only major refinery that operates in the United States that isn't a member of this self-policing trade association.

Mr. FLYNN. I will need to look into the specific situation with the NPRA. I understood that we were a member of the NPRA and so would need to find out—

Senator FRANKEN. You thought you were a member of this?

Mr. FLYNN. BP certainly has been a member of NPRA. So perhaps something has changed. I will need to look into it and get back to you.

Senator FRANKEN. OK. Thank you very much.

Senator MURRAY. Senator Bennet.

Senator BENNET. Thank you, Madam Chairman.

And thank you, Dr. Flynn, for your testimony.

I wanted to follow up on some of the questions the ranking member was asking. When you answered, you said that when workers raise concerns, "we collect them and we document them." Today, in the *New York Times*—and I also recognize that the investigation is ongoing and that conclusions haven't been reached. But there is information that is coming out every day.

In today's *New York Times*, there is a story that recounts a troubling confidential survey that was taken of the workers on the Deepwater Horizon in the months leading up to the explosion. Among other things, the story tells of how workers "often saw unsafe behaviors on the rig and voiced concerns about poor equipment reliability, which they believed was the result of drilling priorities taking precedence over planned maintenance. One worker commented at 9 years old, Deepwater Horizon has never been in dry dock. We can only work around so much."

I would be interested to know, just in the wake of this horrible accident, what specifically BP has done to ensure that deferred maintenance is actually being carried out and that drilling isn't taking a priority over the maintenance, either planned or not, of your assets around the world.

Mr. FLYNN. There are two aspects to that. I mean, first, at the highest level, we would never put work above safety, the need to make progress above safety, and we wouldn't expect those who are contracting with us to do that. In terms of maintenance for our own operations, we have put in place standards for making sure that safety-critical maintenance does get done and is delivered.

Senator BENNET. Have those been changed since the Deepwater Horizon accident?

Mr. FLYNN. Our standards haven't changed. Those standards would require that we have fit-for-purpose, safety-critical maintenance up to date.

Now if there is something that is happening in the contract and with our contractors, then that is something that we would need

to look at. I know we have already looked at blowout preventers critically——

Senator BENNET. I will come to that in a second. I am just trying to figure out—it would appear that if the standards were in place that they weren't followed in the case of the Deepwater Horizon.

I understand the investigation is still going on. But what has BP done to assure itself that the standards are being followed and that the priority on safety that you are discussing actually is being carried out in your operations today? Have you changed anything in the day-to-day operations of your rigs around the world since the Transocean disaster?

Mr. FLYNN. We already had in place requirements for that to happen. That would already be there. It is already a requirement. We would expect audits, and we would expect maintenance to be up to date.

Whether there has been a specific new move on that, I am not aware of it because as far as the accident is concerned, there could be multiple factors, and we don't want to jump to early conclusions on that——

Senator BENNET. I understand that. But I would, if I were reading the things that you also are reading—I guess I will try one more time—rather than expecting that people are actually fulfilling their obligations, what are you doing to assure that people are fulfilling their obligations?

Mr. FLYNN. We do audits of our contractors around the globe, and we expect our operations to be doing those audits and making sure that maintenance is up to date. This is one of many factors that has come out during the investigation.

Senator BENNET. What are the tests of the blowout preventers showing?

Mr. FLYNN. I can't say what has happened in the tests to date. I know the tests have occurred, and we wouldn't—and if there was a problem with any of the blowout preventers that we have, then we would have looked at that, and we would have made sure that we could operate safely.

Senator BENNET. Could you let the committee know what the results of those tests have been?

Mr. FLYNN. I will work with you.

Senator BENNET. And I guess I would be interested to know what other tests of safety equipment or other equipment have been done around the world since the accident happened. Are you aware of other things besides simply testing the blowout preventers?

Mr. FLYNN. Can I work with your staff to give an update on the things that have happened?

Senator BENNET. Sure. What I think would be most useful to the committee would be to know what tests you have done since the accident occurred as a result of the accident and what those tests have shown. I think that would be helpful to know.

Mr. FLYNN. OK. I understand that.

Senator BENNET. Thank you, Madam Chairman.

Senator MURRAY. Senator Casey.

STATEMENT OF SENATOR CASEY

Senator CASEY. Thank you, Madam Chair.

Sir, we appreciate you being here and thank you for your testimony.

As Senator Franken and others, I know, have noted, we share a broad sense of condolence as it relates to the families who lost loved ones, and we appreciate any expression of that sorrow and condolence.

I wanted to ask you principally about a news article. I will read the headline and then provide somewhat of a summary and ask you a few questions. This is from The Observer, Sunday, July 18 of this year. Headline, "BP Oil Spill Failed Safety Device on Deepwater Horizon Rig Was Modified in China." That is the title of the article.

Madam Chair, I would ask consent that this article be made part of the record.

Senator MURRAY. Without objection.

[The information referred to follows:]

[THE OBSERVER, JULY 17, 2010]

(By Tim Webb)

BP OIL SPILL: FAILED SAFETY DEVICE ON DEEPWATER HORIZON RIG WAS MODIFIED IN CHINA

BLOW-OUT PREVENTER WAS SENT TO FAR EAST AT BP'S REQUEST RATHER THAN OVERHAULED IN US

BP ordered the owner of the Deepwater Horizon rig, whose explosion led to the worst environmental disaster in US history, to overhaul a crucial piece of the rig's safety equipment in China, the *Observer* has learnt. The blow-out preventer—the last line of defence against an out-of-control well—subsequently failed to activate and is at the centre of investigations into what caused the disaster.

Experts say that the practice of having such engineering work carried out in China, rather than the US, saves money and is common in the industry.

This weekend BP remained cautiously optimistic that the cap placed on top of the Gulf of Mexico well on Thursday night would continue to hold back the torrent of *oil*. It is the first time the flow has been stopped since the accident happened almost three months ago. But BP said that the pressure readings from the Macondo well were not as high as it had hoped, which could indicate that it has ruptured and that oil could be leaking out somewhere else.

There is no evidence that the significant modifications to the blowout preventer (BOP), which were carried out in China in 2005, caused the equipment to fail. But industry lawyers said BP could be made liable for any mistakes that a Chinese subcontractor made carrying out the work. It would be almost impossible to secure damages in China, where international law is barely recognised.

It is understood that lawyers for Cameron International, the manufacturer of the BOP, will argue the device was so significantly modified in China that it no longer resembled the original component, and that Cameron should therefore not be held liable.

Transocean, the owner of the Deepwater Horizon, which bought the BOP from Cameron, has already told congressional hearings into the disaster that the modifications were carried out at BP's request and "under its direction" as the lessee of the rig. BP and Cameron declined to comment this weekend.

Responding to the latest developments in the Gulf, President Obama said that it was too early to say if the well had been permanently fixed. "We're moving in that direction, but I don't want us to get too far ahead of ourselves," he said.

BP has been monitoring the pressure inside the well since Thursday. Thad Allen, the retired Coast Guard admiral overseeing the response effort, said that pressure of about 7,500 pounds per square inch would show the well was intact, while pressure that lingered below 6,000 psi would indicate it had been damaged and could be leaking. The pressure on Friday night remained at about 6,700 psi and was rising only fractionally.

Allen has told BP to step up monitoring for any seabed breaches and gather additional seismological data to detect any pockets of oil in the layers of rock and sediment around the well.

This week David Cameron will travel to the US to meet Obama and other politicians where he will stress the importance of BP to the UK economy. Business figures such as Lord Jones, the UK trade ambassador and former CBI boss, criticized Cameron for not being sufficiently supportive of the company last month after he said that he "understood the US government's frustrations" over BP's failed attempts to stop the leak.

A government adviser said that Cameron and Obama shared common interests over the crisis, and that both wanted BP to survive the incident. BP accounts for over a tenth of all share dividends paid by UK companies, and pension funds rely on the income it generates. Politicians in the US want BP to make enough profits to pay potentially billions of dollars in compensation and damages arising from the spill.

Senator CASEY. Sir, I wanted to ask you a couple of questions. Here is the lead on the story. It says, and I am quoting,

> "BP ordered the owner of the Deepwater Horizon rig, whose explosion led to the worst environmental disaster in U.S. history, to overhaul a critical piece of the rig's safety equipment in China, The Observer has learned. The blowout preventer, the last line of defense against an out-of-control well, subsequently failed to activate and is at the center of the investigation into what caused the disaster."

The third sentence,

> "Experts say that the practice of having such engineering work carried out in China rather than in the U.S. saves money and is common in the industry."

Later in the article, just to put something on the record that is clear as to what is known or not known by the author, it says, and I quote, in the fourth paragraph,

> "There is no evidence that the significant modifications to the blowout preventer, which were carried out in China in 2005, caused the equipment to fail."

OK? I am just giving you the summary, and I wanted to make sure that was made part of the record as well, that reference to no evidence. But I have a couple of questions.

First of all, one of the threshold questions is, Did BP order this overhaul work on the blowout preventer be done in China?

Mr. FLYNN. I am not aware of the answer to that. It is presumably something that may be looked at in the scope of the investigation, but it is not something I know.

Senator CASEY. From your understanding of the contractual relationship between BP and Deepwater Horizon, would BP have the authority to order that that type of work be done in China or anywhere else?

Mr. FLYNN. I don't know the answer to that. The area that I am aware of is that we would have safety requirements in there, but going beyond that isn't something I would know about.

Senator CASEY. Based upon your answer to those two questions, I am assuming, but I want to ask—you don't know whether or not these modifications were done in China?

Mr. FLYNN. I don't know that.

Senator CASEY. OK. Are you aware of modifications to the blowout preventer that were done in 2005, any modification, anywhere?

Mr. FLYNN. I am not aware of that.

Senator CASEY. OK. Are you—do you have any information about or knowledge about—I am assuming by the answers to the first

couple of questions, you don't have knowledge about the contractual relationship as it relates to any kind of modification, and you also don't know whether the modifications were done in China.

But do you have information or knowledge about whether this is a practice in the industry to have such modifications done in China as opposed to the United States or anywhere else to save money? Do you have any information or knowledge about that?

Mr. FLYNN. I don't have any knowledge of that.

Senator CASEY. I would ask you, because we have limited time and just in order to make the record complete, if you would go back and check whether or not you have any other information in written form that relates to these questions and make that available to the committee. And also I would ask that you seek information from the leadership of BP. If you don't have the information, you don't have the knowledge, someone does—to make that part of the record.

Because, obviously, this blowout preventer is central to the investigation. We ought to know in the United States, I think the world needs to know, whether or not an action was taken to make modifications to the blowout preventer, as a cost-saving measure, as opposed to, making sure that those overhauls or modifications were done with an eye toward quality.

And I realize your testimony today is that you don't have knowledge about that. But we need to know the answers to these questions. And I know I am out of time, but I appreciate your forthright answers.

Mr. FLYNN. We will work with you.

Senator MURRAY. Senator Hagan.

STATEMENT OF SENATOR HAGAN

Senator HAGAN. Thank you, Madam Chairman.

Dr. Flynn, thank you for being here today. I have certainly had many prayers going out to the family members of the 11 individuals that were killed on the rig, and certainly, we are all so concerned about the devastation that has wreaked havoc in the whole Gulf area having to do with the explosion and obviously the leaks.

I wanted to start by talking about your thoughts on the Baker report that was released in January 2007. And I understand after the 2005 refinery explosion in Texas City that BP put together this Baker report, chaired by former Secretary of State James Baker, and the report was released in January 2007.

And just one paragraph, the final report finds that BP did not provide effective process safety leadership and did not adequately establish process safety as a core value across all of its five U.S. refineries. And the report noted that BP emphasized personal safety in recent years, but did not similarly emphasize process safety and that BP did not always ensure that adequate resources were effectively allocated to support a high level of process safety in its refineries.

The panel found instances of a lack of operating discipline, toleration of serious deviations from safe operating practices and apparent complacency toward serious process safety risks at each refinery. And I understand that the process safety hazard is one that

can cause major accidents involving fires, explosions, and the release of toxic materials.

With that background, as you know, the Baker report provided 10 recommendations. Can you tell me what BP has learned from the Baker report and which recommendations have been implemented, and can you provide specific examples? And then I have a series of questions to follow up with that.

Mr. FLYNN. Yes. The Baker panel investigation was very deep, very hard-hitting, and to be honest, a difficult read. But we accepted it. We knew we had to change. And so, we have been working tirelessly to implement those Baker recommendations, and I believe they have influenced the industry, too.

And so, what we have done is each of the recommendations are incorporated into a plan. For example, they talked about the tone at the top and leadership. We made changes, and our CEO Tony Hayward, the board who met with the Baker panel, the executives who met with the Baker panel, certainly heard that, and they made that personal commitment.

But it is much more than about their words and the actions that they take personally. It also has to translate into physical changes in the plant. And the Baker panel report talked about changes that needed to occur, engineering changes, those sort of things. And there has been billions of dollars invested—a billion dollars at Texas City, tens of billions of dollars across BP—to make engineering changes to reduce risk and tackle process safety issues.

The Baker panel talked—a central theme was a comprehensive system for managing risk and driving continuous improvement. And that is why we developed the operating management system that brought together all the standards that we have been working on to make sure it was comprehensive, risk-based. That has been implemented now in all of our major operations in the United States. That has been a very important change.

Then, finally, they talked about process safety capability, and we recognized that that had to be at all levels in the company. Not only do workers in the front line need to know the things they need to know to work safely, but so do supervisors, so do managers. We have even sent our executives back to college at MIT to learn about process safety as relevant to them and those type of things.

But finally, very importantly, what the Baker panel and others have said is that we needed a balanced set of leading and lagging metrics, not to rely on one measure alone. So we have put those in place, and our executives and our board spend a great deal of time on those leading and lagging metrics, and that is backed up by independent audit.

So that is a summary of the changes. It has been very substantive. It has been huge for us.

Senator HAGAN. Has BP issued a follow-up report addressing these safety recommendations and the corrective measures taken by BP?

Mr. FLYNN. We have provided update. But more importantly, the Baker panel themselves recommended that we appoint an independent expert that reports in at the board level, and we have done that.

Duane Wilson, the independent expert who was a member of the Baker panel, reports in to a nonexecutive committee of the main holding company board, and he does independent inspections in those U.S. refineries. He gives an annual report which we make public, as we did with the Baker panel report, and it says what is good and where we need to try harder. So we have done that.

Senator HAGAN. Is he looking into what happened on the Deepwater Horizon?

Mr. FLYNN. His remit is very specifically the Baker panel report and the five U.S. refineries and the corporate aspects of those recommendations. So that is his scope. There is an investigation going on into Deepwater Horizon, which is quite separate.

Senator HAGAN. Are any of the recommendations from this report, have they failed to be implemented in the 3½ years since the report was issued?

Mr. FLYNN. The report was very extensive, and in a sense, it wasn't about Texas City and the things we needed to do to comply. The challenge that the Baker panel gave us was to become an industry leader. And so, in many ways, the challenges that the Baker panel report sets out for us will never be complete in the sense that they are ongoing.

Setting the tone at the top isn't something you do once. Monitoring leading and lagging indicators isn't something you do and then you move on. And so, I would say the Baker panel report has just been fundamental in sort of changing the way we think. It has been a great gift.

So there are many things in it which you can close out, and we have had a prioritized year-on-year program to deliver those which the independent expert views and our nonexecutive directors would look into. But we recognize this is a journey.

Senator HAGAN. I don't have the numbers in front of me right now, but as I recall, BP had somewhere in the neighborhood of 700 egregious violations. Would those have been a part and parcel of recommendations that should not have happened if the Baker report recommendations had been followed?

Mr. FLYNN. The citations that OSHA gave after the audit was a big disappointment for us because we believed that we were meeting the requirements of the settlement. So we were disappointed, and we are working with OSHA to resolve that difference.

The violations, the 700 of them, OSHA had chosen to give those on a per-instance basis, and so it is a large number. It is not an apples with apples with the way that OSHA has typically done that.

But at the end of the day, we are committed to working with OSHA to closing out and meeting all of the requirements of the settlement and working cooperatively because at the end of the day, we want the same thing as OSHA does. We want a safe workplace. We want to make sure that we are putting things right.

Senator HAGAN. Thank you, Madam. My time is up. Thank you.

Senator MURRAY. OK. I understand Senator Merkley has conceded to let Senator Mikulski go ahead of him as she has a time constraint.

Senator Mikulski.

STATEMENT OF SENATOR MIKULSKI

Senator MIKULSKI. Thank you very much, Senator Murray, for conducting this hearing.

I apologize. I was at an Intel hearing and had to come up.

Dr. Flynn, good to see you. Last week, I held a hearing as my responsibility for NOAA on the consequences of using dispersants in the Gulf. My question to you sir, is, No. 1, in your work, are you looking at the impact of the use of dispersants on workers' health?

Mr. FLYNN. Absolutely. Dispersants are being used in the response. They are approved. Out there in the response, we have—there are multiple agencies, in fact.

Senator MIKULSKI. I know that there are multiple agencies—and that is the problem. There are multiple agencies that need to conduct epidemiological surveys.

Let me get right to what we were told at the hearing. One, and I will tell you it is by an advocacy group. But what they said was that any oil cleanup worker under contract with BP, if they show any sign of a medical problem, must go to a care center only run by BP. According to them that when workers presented themselves—for example, BP cleanup contractors were not allowed to go to the West Jefferson Medical Center but were told that they had to go to the BP EMS tent.

And that anyone trying to get information—we are not talking about individual patient information, but epidemiological information, BP was not forthcoming. Is it true that BP cleanup contractors, if they show any respiratory problems or any case of blisters on their feet, blisters on their hands, things that seem to be appearing, are they mandated only to come to the BP EMS, or can they go anywhere to get treatment?

Mr. FLYNN. We provided medical support, but as I understand it, we couldn't limit where—people are perfectly welcome to see their own physicians. But what we have done is tried to put in place medical provisions so that people can get early treatment and stop things from getting worse.

Senator MIKULSKI. I just want to clarify, Dr. Flynn, I know that BP has an emergency medical service facility or tent or whatever there. But there is also the West Jefferson Medical Center and some others. When somebody comes in off the boat, comes in off the beach, if they are having respiratory problems, which we are interested in, blisters on their hand from picking this stuff up, which may not only be an impact of the oil but also may be an impact of the dispersant, which has actually been banned in some areas, are you saying that they can go to any medical facility of their choosing? And they are not mandated to come to the BP EMS?

Mr. FLYNN. Yes, what you have described gives me concern. I have not heard of that, but we would be happy to look into it. What we want for our workers is the best treatment that they can get. Our highest priority is the safety and health of the workers in the response.

So I think that what we would want to do is to make sure they got the best treatment that they could. We have also committed to having independent health monitoring done. Now we won't do that. We want that done independently, and we want that done by the—

Senator MIKULSKI. What is the independent method for doing that?

Mr. FLYNN. Well, we are working with Health and Human Services, with the right agencies so that they agree to a protocol and a way of carrying it out.

Senator MIKULSKI. Do you have that protocol established now?

Mr. FLYNN. I don't think that is for BP to propose. I think that is for the——

Senator MIKULSKI. But is that protocol in existence, and you are complying with it?

Mr. FLYNN. I don't think it is in existence. But we are monitoring the health of people and through the sort of things you have described, and we are committed to long-term studies. And I could get information when more is available.

Senator MIKULSKI. Doctor, we are, of course, concerned about the care of individual people. But, we are also concerned about epidemiology, which tells us the consequences of what is going on in the Gulf and determines both care and also the consequences of what is being used.

One of the things that seems to be emerging is that some pharmacists in the area have said that the use of asthma and respiratory over-the-counter medicines were up 10 percent. Now I don't know that. There are a lot of rumors out there. There is a lot of anecdotal information.

I believe you, as a man of science—we, as Members of Congress—must be data driven. And so, No. 1, I want to be sure that people can go to wherever they need for healthcare; that, No. 2, that whatever your treatment is that you are participating in epidemiological work. And it seems, Madam Chair, quite troubling that our own Government hasn't set up a biosurveillance.

I don't mean it in a sleuth way. A biosurveillance set of protocols so we know the consequence of what is going on out there. Because it is not only the heat, but it is oil and it is these dispersants. And very little is known about these dispersants—the consequence on marine life, the consequence on human life, the consequences on our seafood.

We were shocked at our hearing last week at how little our Government knows—and I will put it on our Government—about the impact of dispersants on both marine and human life. I am looking for care for the people, epidemiological information, and more resolve on this.

So we would like to talk with you more. I would like to share with you, my staff, where I got the information that I raised these issues. They are not meant to be pugnacious. They are meant for getting at what I raised.

Thank you.

Mr. FLYNN. I will be happy to work with you.

Senator MURRAY. Senator Merkley.

STATEMENT OF SENATOR MERKLEY

Senator MERKLEY. Thank you very much, Madam Chair.

Dr. Flynn, quite frankly, I found your introduction to your testimony saying, "Safety is our top priority" to be offensive. You are in charge of safety. You have been for several years. You have a

long history with the company, and yet all of the documentation that we have in front of us is about systematic bypassing of an emphasis on safety in favor of an emphasis on profit.

Do you really believe with all your heart you can tell the families of the workers who died, not in just this incident, but in others, that you have set aside profit to do everything for safety as your top priority?

Mr. FLYNN. You heard what I say or said is that safety is our No. 1 priority, and profit doesn't come before safety in BP.

Senator MERKLEY. Well, let us take a look at the material then. According to the Center for Public Integrity, in the last 3 years, BP refineries in Ohio and Texas have accounted for 97 percent, 97 percent of the egregious, willful violations handed out by OSHA. How can one company account for 97 percent of the egregious and willful violations handed out by OSHA if safety is their top concern?

Mr. FLYNN. The situation with OSHA, where those citations have occurred, we were disappointed by those audits. OSHA chose to take a different approach in handing down those citations. Instead of in the other cases where, for example, a system failing would be noted, these were on a per-instance basis.

What I mean by that is if, for example, you had found an electrical fault, that may be one finding in one case. In this case, OSHA chose, to give an analogy, to offer a citation for every single outlet in the house.

Now it is a matter for them as to how they do citations, but I just want to say that there is a different approach. We are not comparing apples with apples, and we don't believe that the number of citations reflects the level of risk or the progress that we have made.

So we are working with OSHA. We are working with OSHA to resolve our differences, and we are committed to dealing with the issues that they have brought up. But I did want to point out that difference.

Senator MERKLEY. Don't you think it is a little bit strange that given that you are blaming it on a process, that same process was used throughout the industry? While BP ran up 760 of the safety violations that were designated egregious and willful, Sunoco and ConocoPhillips had 8, Citgo had 2, and Exxon had 1. Yet, they were all under the same process. And you are blaming it on a process rather than on a culture of ignoring safety?

Mr. FLYNN. A different approach was taken. So we are not comparing apples with apples there. OSHA chose to issue citations in a different way.

But at the end of the day, we are closing out those, the issues that they have identified, and we are working on our differences in the way that that was done. At the end of the day, we have the same goal as OSHA. We want to create a safe workplace.

Senator MERKLEY. The former chairman of BP America, Robert Malone, did not blame it on the process. He said, "What I saw were breakdowns in a culture of safety." Do you disagree with BP America Chairman Robert Malone's assessment?

Mr. FLYNN. I think what Bob Malone was talking about was what we saw after the incidents of 2005, 2006. As I have said,

these were terrible incidents. There were breakdowns, and we have accepted that, and we have accepted we needed to change.

But since then, I do believe that we have changed. We have invested in our plants. We have invested in our people.

Senator MERKLEY. There was a survey of workers on the Deepwater Horizon in the weeks before the oil rig exploded, and it showed that many of them were concerned about safety practices. But they feared reprisals from upper management if they reported mistakes or problems.

Have you taken to heart the feedback from that study, and are you concerned about the fact that your own workers are afraid to report safety problems for fear of reprisal because the company doesn't want to hear any bad news and doesn't want it reported?

Mr. FLYNN. The reports that you talk about trouble me deeply. Those workers on that Transocean rig were raising concerns, and within BP, we expect workers to raise concerns and we expect people to respond to them. So what you describe does trouble me.

What we have to do is to look into what was happening there. We have to look into the multiple factors of what was happening with the Transocean operation to find out what were the things that led up to the incident. There are multiple investigations going on. Our own investigation, plus the Chemical Safety Board, plus various external investigations that will look at the multiple factors and the multiple different parties that were involved.

Senator MERKLEY. Well, my time has expired. But the list continues almost without end of shortcuts that were taken to increase profits at the expense of safety.

I must say if you were testifying that we are determined to change our culture. We are determined to have a situation where we don't encourage workers to not report problems and that they won't be afraid of those reports. We are going to make sure that we aren't in a rush to produce, and we are going to make sure that X, Y, and Z happen that will prevent the blowouts.

I mean, there is everything from the failing battery on the blowout preventer, the problems with the hydraulics, the fact that you chose to have a blowout preventer with only one valve, the fact it wasn't tested at depth, the fact that you replaced mud with light water, even though there had been gas irregularities in the pipe. The list goes on and on and on of shortcuts.

And for you to come here today and say we really are at the top of the world in terms of safety and it comes before everything else, there is nothing in the testimony of any sort that backs up that position. And I feel on behalf of those who have been injured in your company, it would be a far better position to say I am going to change this culture rather than to come and tell us all is well.

Senator MURRAY. Senator Merkley, thank you.

Dr. Flynn, on May 5 of this year, a couple of months ago, Washington State's Department of Labor and Industries cited the BP Cherry Point refinery in my home State for 13 serious safety violations during an inspection that started last November. Twelve of those violations included failure to routinely inspect or maintain safety control devices, such as pressure safety values.

Now I am obviously very concerned about the safety practice of refineries in my own State. Can you assure me today that funda-

mental changes are being made at Cherry Point to address those violations? These are regulations that are being violated that have been there for a long time.

They are regulations that your employees should be well aware of and following. They are too often ignored, clearly. And I want to hear from you today what fundamental changes are being made as a result of that at Cherry Point today.

Mr. FLYNN. Our requirement is that our operations do comply with all aspects of legal requirements, including those process safety management rules, the OSHA PSM rules. For each of those findings, we will agree abatement with the regulator, and we will close them out.

And we also have put in place our own independent process safety management auditing function that we will go around and we will check each of those refineries independently so we get to it because we don't want to—certainly don't think we should—that OSHA should be finding them.

So we are committed to both having the standards in place and to having the auditing in place to check that we are not off track.

Senator MURRAY. You are vice president of safety. It is one of your hats you wear. Have you picked up the phone and conveyed that to the management at BP?

That you want those changes to be made and for those fundamental changes to be made at Cherry Point?

Mr. FLYNN. The managers who I work with, the executives in the company, we work together on a shared goal of compliance.

Senator MURRAY. But you haven't talked with anybody at Cherry Point to follow up on this?

Mr. FLYNN. On those particular ones, I haven't talked directly to Cherry Point. But I have spoken to the regulatory person who covers that at the refining level to ask about those particular citations and to get——

Senator MURRAY. Because one of the things that we know is that if no one is calling up and saying, "We have a culture of safety. You need to follow it. We are very concerned that these violations have taken place. Fix it." How do you convey that you have a culture of safety?

Mr. FLYNN. That is very clear. We actually do measure the number of citations that are occurring so that the executives can see when things are occurring. And we also set very clear expectations, and we audit.

So Cherry Point will be audited independently by our process safety independent auditor team, and we will put in place actions to prevent recurrence. Those conversations occur with the chief executives of the company, and they are transmitted down to that refinery.

Senator MURRAY. OK. Well, I am also very concerned about the company's ability and willingness to address mechanical integrity issues in the future since they seem to be identified as a contributor to many of BP's recent failures not only in the Gulf, but the Alaska pipeline and U.S. refineries. In fact, I heard you state in your opening statement that the first layer of protection is plant and equipment.

Well, I am told by my State's Occupational Safety and Health Department that they see disturbing evidence that BP has a pattern of delayed maintenance at the Cherry Point refinery. In some cases, they see maintenance that should be conducted that has been put off for multiple years, and testimony offered this week in the investigation of Deepwater Horizon indicates that there were over 300 deferred maintenance jobs that would have required over 3,500 hours of work to fix.

So I have to ask you again, how does that represent the culture of safety that we keep hearing you talk about?

Mr. FLYNN. Following the incidents that we talked about earlier, we put in place standards for mechanical integrity. And as part of that, not only are there audits, but if there are overdue actions, those get reported up through the line. So those are visible, and we have been driving that down so that they are not hidden.

So that is happening inside of BP operations, and tremendous progress and changes have been made because there is visibility to the executive level.

On the Deepwater Horizon, there would have been a contractual requirement between BP and Transocean that safety requirements were met and that that rig was fit for purpose and that there weren't maintenance issues. I believe we would have expected that it would also be audited, and if those issues were found, then the team should have taken it up and sought resolution.

Senator MURRAY. OK. Well, I guess one of my frustrations is there is a disconnect between what the executives are saying is being done and what actual practice is. We have management saying one thing. We have workers experiencing a different reality. And either management isn't being truthful or BP's culture of safety is nonexistent. Which one is it?

Mr. FLYNN. I believe our executives' commitment is sincere, and also they have put in place processes and systems that will make sure that the requirements of the corporation are transmitted down to the front line. So, for example, the management system that has been put in place puts mandatory requirements down into the front line.

The second thing that happens to make sure that that is happening are these independent checks and balances. The fact that we have measurement on the delivery of progress on leading and lagging indicators, but also independent audit to make sure that what the top of the house is saying needs to be done is happening down there in the front line.

Senator MURRAY. Well, I am concerned. I am seeing a disturbingly high number of press reports that suggest that BP workers are afraid of speaking out about safety concerns for fear of being fired. There was an article in the June 8 edition of the *Washington Post*. A worker raised some safety concerns, was criticized by a survivor, and eventually removed.

I would hope that you would agree that unless workers feel 100 percent safe in coming forward about their concerns about safety, that change can't and won't be fully effective and the culture doesn't change. So I would like to ask you today if I can get a commitment from you, as vice president of safety, that any worker re-

porting safety concerns at any of BP's facilities will be taken seriously and that those workers will not be retaliated against.

Mr. FLYNN. That is both my personal commitment, and that is company policy.

Senator MURRAY. So we have your commitment that that is the case?

Mr. FLYNN. Yes. That is both my personal commitment, and that is company policy.

Senator MURRAY. Thank you, Dr. Flynn.

Senator Isakson.

Senator ISAKSON. Thank you, Madam Chairman. And I apologize. I have got to leave in just a minute because I have to testify at 11:30, but I did have a parochial question of interest.

I represent the State of Georgia, which does not front on the Gulf of Mexico but is 35 miles from the panhandle of the Gulf. So we own most of the condominiums in Pensacola and Panama City, my constituents do.

Are you a medical doctor?

Mr. FLYNN. No. I am a Ph.D.

Senator ISAKSON. Do you know of any longitudinal studies of the effects of oil spills in seawater?

Mr. FLYNN. Excuse me, could you——

Senator ISAKSON. Do you know of any longitudinal studies of past oil spills and seawater and the effect it might have long-term on human beings?

Mr. FLYNN. There have been past studies of the fate and effects of oil in water. In this particular case, what we are doing is we have contributed $500 million to make sure there is—going forward, also a long-term study of the fate and effects of the Gulf of Mexico oil spill. And that will be done independently. There will be a guiding body. BP won't be directing that. That will be done through independent channels that will look into that.

Senator ISAKSON. The old saying is oil and water don't mix, and I have personally seen that before. They don't mix. But in some of the dispersant that you have been using, does that cause oil, some properties of oil to dissolve in the water, or does it just break the oil up? Which does it do?

Mr. FLYNN. Dispersants are really no more than detergents. I mean, they work in the same way as a washing liquid would to clean a greasy plate. In fact, they contain many of the same components.

And so, the Unified Command each day has a difficult decision as to is it better to disperse oil or is it better to have floating oil? What we know about the long-term fate and effects, studies have been done that when you add the dispersant, it breaks it up into small droplets, the way it would with washing up. And that makes it more biodegradable. The microorganisms can biodegrade the components of the oil and effectively render them harmless.

Senator ISAKSON. OK. The impact of the spill has been devastating economically throughout the Southeast where tourism is, I know, Florida's No. 1 industry and certainly a significant component to Alabama, Mississippi, and Louisiana. So the attention of the company to the long-term potential effects and to rectifying what those concerns could be is going to be tremendously impor-

tant to people who have invested an awful lot of money from my State along the Gulf.

I hope you will remain committed to that $500 million commitment to the study and then to react to the facts that come from that study to protect those investments on behalf of my constituents and those of many other members of the Senate.

Thank you very much for your testimony, and I apologize, Madam Chair.

Senator MURRAY. Senator Franken.

Senator FRANKEN. Mr. Flynn, how do you feel this is going?

Mr. FLYNN. I am happy to answer your questions.

Senator FRANKEN. If we had come to you the day before the Transocean explosion, would you have said that there are processes and systems in place to make sure that it didn't happen? I think you suspect that would have been your testimony?

Mr. FLYNN. That is our intent, that we operate safely. We put in place processes and systems to do that, among other things.

Senator FRANKEN. A number of us have referred to these egregious and willful citations, and you said that we are not comparing apples with apples. We will have to take your word for it, I guess, that OSHA somehow treated your willful and egregious violations differently than others.

Let me read you the definition of an egregious, willful citation.

Willful citations are issued for violations with intentional disregard for employee safety and health. Is that a culture of safety? Would you say that having intentional disregard for employee safety and health is a sign of a culture of safety? Or would you say that is maybe the opposite?

Mr. FLYNN. We were really disappointed with the outcome of that——

Senator FRANKEN. Yes. You said a number of times. You said that every time. You were very disappointed. Were you alarmed?

Mr. FLYNN. We are working with them to resolve.

Senator FRANKEN. Were you alarmed?

Mr. FLYNN. As you described and as I described earlier, it is a large number, and so, naturally, it attracts attention and attracted our attention, which is why we have looked into it to understand what is happening and are working constructively with OSHA to resolve our differences.

Senator FRANKEN. So I take it you weren't alarmed? Were you embarrassed?

Mr. FLYNN. I mean, we take feedback from the regulator very, very seriously. And so, therefore, we have responded. We are working with them. We are absolutely committed to resolving the issues.

Senator FRANKEN. I will take that as a no. Serious citations, of which you have 30, issued for violations with the substantial probability of death or serious injury.

OK. Again, we had the father of one of the men who was killed at the Transocean explosion testify here, and he said that no one from BP had come and talked to him. Christopher Jones—I am sorry, the brother testified. His brother, Gordon Lewis Jones, died on the Deepwater Horizon.

Would you commit to this committee to reaching out to each of the families of the men who died and personally apologizing? Because he said no one had ever—from BP—apologized, and he felt really awful about that. Would you personally commit to the committee that you will do that?

Mr. FLYNN. Let me take that request back because I think BP will want to reach out.

Senator FRANKEN. No, I am asking you a different question. I am not asking you to commit to going back to BP and discussing it. I am asking you, Dr. Flynn, if you will commit to us that you will personally get in touch with each of the families of the 11 men who died and reach out personally to them?

Mr. FLYNN. If any of those families want to talk to me, then I would be happy to do that. It is a devastating tragedy, and I could only begin to imagine what those folks are going through. And if there is——

Senator FRANKEN. So they have to reach out to you?

Mr. FLYNN. If there is anything I can do to help, then I would be glad to do that.

Senator FRANKEN. OK. Would you then reach out to these families in a way where they have the opportunity to talk to you and where you can express your condolences and express your sorrow?

Mr. FLYNN. Of course. I mean, I have already expressed my condolences and sorrow here.

Senator FRANKEN. I meant to each of them personally, to the families.

Mr. FLYNN. I am happy to do whatever would help. If that will help, then I will do it.

Senator FRANKEN. OK. Thank you.

Senator MURRAY. Senator Merkley.

Senator MERKLEY. Thank you, Madam Chair.

The *New York Times* ran an article on July 12, and it has a number of statements in it based on their review of BP's record. They start with Thunder Horse. Are you familiar with Thunder Horse?

Mr. FLYNN. Yes.

Senator MERKLEY. The Thunder Horse is a large billion-dollar oil platform that tilted badly and nearly sunk because of a series of mistakes that were made. "It could have been catastrophic," said Gordon Aaker, senior engineering consultant on the project. "You would have lost a lot of oil a mile down before you would even know it. It could have been a hell of a spill, much like the Deepwater Horizon."

If you look at the incidents that occurred before Deepwater Horizon and the incidents like this that occurred afterwards, do you see a pattern of shortcuts related to safety? Because if the engineering shortcuts are taken, the drilling operation is imperiled. Do you see a pattern here that is of any concern to you?

Mr. FLYNN. Sir, you referred to the Thunder Horse incident. That happened around the same time as Texas City, Alaska, and so that is why we took a look at all of our operations across all of the company. That is why it was a global response to what we heard from the Prudhoe Bay investigation, from the Baker panel, from our own investigations.

So there was a global process put in place to look at mechanical integrity, to look at safe work controls and to put in place management systems and processes and then measurement to detect when things were going wrong. So we did respond. We have changed things.

In the case of the Deepwater Horizon, there was a particular drilling operation, a particular set of circumstances that was going on, and we don't know what happened yet. So we will need to look into the causes of the accident and put in place actions to prevent recurrence.

Senator MERKLEY. If I can ask my question again, it is a pretty simple yes or no answer. Did what happened with Thunder Horse and other incidents in which a number of people died create a pattern that caused concern for you? I don't want a long explanation. I just want a, yes, it caused concern, or, no, it didn't.

Mr. FLYNN. Of course, we are concerned when there are—

Senator MERKLEY. OK. Thank you. Let me go ahead here then.

I am glad to hear that because it appears from much of the review that that concern didn't translate into changes. It translated into retaliation against workers who reported safety problems, and that is a very different type of way to respond to safety than to actually improve safety.

The authors of this *New York Times* article say that,

> "The problems at Thunder Horse were not an anomaly but a warning that BP was taking too many risks and cutting corners in pursuit of growth and profits."

Do you disagree with that characterization?

Mr. FLYNN. I disagree with that.

Senator MERKLEY. OK. It goes on and says,

> "Despite a catalogue of crises and near misses in recent years, BP has been chronically unable or unwilling to learn from its mistakes, an examination of its record shows."

Do you agree or disagree?

Mr. FLYNN. I think we have learned from our mistakes, and we have put in place things that have made real changes on the ground and to our processes going forward.

Senator MERKLEY. So you disagree?

Mr. FLYNN. I believe we have learned from the accidents that have occurred in the past, and we have made real changes on the ground.

Senator MERKLEY. Do you disagree with that statement then?

Mr. FLYNN. I believe we have learned from those lessons of the past.

Senator MERKLEY. "Steve Arendt, a safety specialist who assisted a panel appointed by BP to investigate the company's refineries after the deadly explosion at Texas City, TX, facility, said they were arrogant and proud and in denial. It is possible they were fooled by their success."

Is that an ongoing challenge for the company?

Mr. FLYNN. We have placed safety as the No. 1 priority in BP, and we have put in place actions to learn from the past and to manage risks in the future. So we are always going to be looking to see if there are issues, to see if there is more to be done. So I

think we would always be concerned and looking for potential improvements. But I think we have learned from the lessons of the past.

Senator MERKLEY. BP is not the only company that has taken on difficult projects with a shaky safety net, but a company's attitude toward risk stands in contrast to its competitors, most notably ExxonMobil, whose searing experience with the Exxon Valdez spill in 1989 spurred a wholesale change in its approach to safety.

So Exxon Valdez, which had far fewer citations, had a wholesale change in its approach to safety. Not a change in terms of suppressing workers' reports of problems, but in actually tackling safety issues. Is it possible that we will see from BP a wholesale change in its approach to safety?

You are in charge. Will you lead that change? Do you intend to lead that change? Are we going to see more of the same?

Mr. FLYNN. There has been a significant change that started in 2005, and there has been dramatic change over the last 5 years. And I have been very much part of that as a safety professional. That is what I do every day. I have spent the last 20 years dedicated to making those improvements.

So we have made progress, and our commitment is to carry on with that. That if things do go wrong, then we will investigate them. We will look at the causes, and we will put in place actions that prevent recurrence.

Senator MERKLEY. Thank you, Madam Chair.

Senator MURRAY. Yes, Dr. Flynn, as you are aware, following the explosion and fire on the Piper Alpha platform that resulted in the deaths of 167 workers, the United Kingdom completely revamped its system of offshore safety regulations. And as part of that reform, the Health and Safety Executive implemented safety case regulations that provide a comprehensive core document that can be used to ensure that risk control measures and health and safety management systems are in place and operate as they should.

The safety case is required for all installations operating in British waters, and it is an offense to operate an installation without a current safety case that has been accepted by HSE.

Royal Dutch Shell, which is one of your international competitors, has confirmed that it always develops safety cases on each of its thousands of wells in the world, whether it is required by their laws or not. Can you tell us, does BP submit safety cases for all of its offshore installations in British waters or in UK-designated areas off the continental shelf?

Mr. FLYNN. It is a legal requirement in the UK. So, therefore, we would submit safety cases.

Senator MURRAY. OK. Well, as I said, Royal Dutch Shell develops safety cases for all of its offshore installations, regardless of statutory requirements. Does BP similarly develop safety cases for all of its offshore installations worldwide?

Mr. FLYNN. Safety cases are one particular method for assessing risks and putting in place management systems and arrangements to manage those risks. So we use them in many jurisdictions. They are not used extensively. They are not used completely around the world for existing—

Senator MURRAY. So your answer is, no, you don't use them in——

Mr. FLYNN. We would use them for new developments. But in existing cases, we have essentially a management system that would cover the same ground.

Senator MURRAY. But you do not develop these same safety cases?

Mr. FLYNN. The safety case is a particular way of putting together that information. It is a particular format. But what it does is it identifies risks, which is a BP requirement. It then puts in places the roles and accountabilities for managing those risks and then the processes and measurements by which you know that you are on track.

Senator MURRAY. OK.

Mr. FLYNN. We require that of every operation.

Senator MURRAY. OK. Well, I understand that according to the Sunday Telegraph that BP did admit that it did not use a safety case on any of its U.S. wells, including the high-pressure deepwater Macondo well that blew out on April 20?

Mr. FLYNN. So what would have happened is that the right safety arrangements would need to be in place to manage the risks from the wells, from the activities. So the requirements that are in our management system for doing this type of activity are essentially the same as would be in the safety case. The safety case is a format, a way of doing it.

Senator MURRAY. Is there a particular advantage to not completing a safety case for each of your worldwide worksites?

Mr. FLYNN. It is up to others, the format that they choose to present their management systems. What we have is a management system that we believe is adequate for controlling risks and putting in place and the requirements for managing those risks.

A safety case is one way of doing it, but there are other ways of achieving the same. The most important thing is achieving the outcome.

Senator MURRAY. OK. Well, let me turn to another question. In our previous hearing at this committee, we talked about trailers and tents, especially at refineries, but in any hazardous location. And I was really shocked to hear at that hearing a number of disturbing facts about trailers and tents at refineries.

At the time of the BP Texas City explosion, the American Petroleum Institute's Recommended Practice 752 was in use. That recommended practice did not specify any minimum safe distance from hazardous area for trailers that were used. The 15 fatalities at BP Texas City all occurred in a trailer that was located less than 125 feet from the explosion. And following the explosion, the Chemical Safety Board asked the American Petroleum Institute to revise or issue a new recommended practice.

API did that. However, API's Recommended Practice 753 specifically excluded tents and temporary structures, such as welding enclosures, from coverage. API's recommended practices are just that. They are recommendations and, further, recommendations developed by industry members. So no company is actually required to follow those.

So my question to you is, Does BP or the industry really think that tents are safer in blast zones than trailers are?

Mr. FLYNN. I think the structures to which you are referring, these are shelters from the elements to protect our workers from sun or rain. They are not there to provide protection from explosions. So they are really just there to protect them from the elements.

And I have actually seen these tents or these structures at one of our refineries. I was actually very impressed. I have not seen them elsewhere. They are engineered and designed for that environment as a shelter for workers.

Senator MURRAY. Do you think they are safer than a trailer?

Mr. FLYNN. They are not.

Senator MURRAY. I mean the regulation said that trailer couldn't—changed it from trailers. So instead of using trailers, you are now using tents.

Mr. FLYNN. So let us be very clear that the shelters that are used to protect workers from the elements are not used in hazardous zones. That is not what they are for.

Senator MURRAY. So are tents currently used in any blast zones at any BP facility in the United States?

Mr. FLYNN. They are not used in hazardous zones that I am aware. They are for protecting workers. If, for example, a unit is shut down and maintenance is needed, or if some maintenance is being carried out outside of the zone, then they are there to protect workers from the elements.

Senator MURRAY. OK. Well, I do want to follow up on that because it was my understanding that tents are being used in blast zones. So I will have more questions on that.

I have a couple other questions here. Dr. Flynn, as you know, under OSHA requirements, companies have to report occupational injury and illness numbers. And I have become very concerned that these reports, while they are important, are inadequate at best and often misleading and at worst allow us to divert our attention from more serious indicators of safety and protection both for workers and for broader communities and environments where the industry operates.

Do you believe that reports of injuries and illnesses truly and fully represent the safety in your facilities?

Mr. FLYNN. This is one of the fundamental learnings from Texas City and the Baker panel inquiry was that we needed leading and lagging metrics for process safety. So while injury statistics are important—we do monitor them, and they are important, and they certainly are reported—we use a range of leading and lagging indicators inside of the company to give a broader picture of process safety.

Senator MURRAY. OK. I wanted to ask about your company's current state of readiness. How is your planning and preparedness for a possible worst-case scenario of a massive hydrogen fluoride leak at one of your U.S. refineries similar to or different from your planning and preparedness for the Deepwater Horizon disaster?

Mr. FLYNN. For any hazard on a plant, then the first step is prevention. And so, when something where a material like that you

describe is used, then there are multiple defenses to make sure that that material doesn't get out.

Senator MURRAY. Can you assure me that BP is ready to respond to an accident of similar proportions at a refinery like in Washington State?

Mr. FLYNN. There will be contingency plans for responding to an accident—

Senator MURRAY. Will be? So there aren't today?

Mr. FLYNN. No, there are. Sorry. There are plans in place for responding to an emergency at the refinery.

Senator MURRAY. OK. I just have one more question. So, Senator Franken, if you have any other additional questions?

Senator FRANKEN. Do you want to go——

Senator MURRAY. No.

Senator FRANKEN. OK. Dr. Flynn, I really believe that worker participation in improving workplace safety is essential. Workers are really in the best position to identify on the ground safety risks. The original Baker report notes that BP had not established a "positive, trusting, and open environment." Do you remember that from the report?

Mr. FLYNN. I remember the comments.

Senator FRANKEN. Yes, I think it was a written report, right? An environment in which workers could approach management—it said BP had not established a positive, trusting, and open environment in which workers could approach management about their concerns at all of their facilities.

So, that was the report about the 2005 explosion there and deaths. Yet, as I mentioned in my opening statement, the *New York Times* reported this morning that workers, Transocean, were afraid of reporting safety concerns. They were afraid of "corporate-level reprisal." One of the workers complained of "fear tactics."

So this is the environment employees were working in 3 years after the Baker report recommended implementing a positive, trusting, and open environment. When can we expect such an environment to become a reality for people who work for BP?

Mr. FLYNN. Inside of BP, I would have to agree that a cooperative relationship with the workforce so they can bring forward concerns is really important. The Baker panel pointed it out. We are very, very committed. So we have put in place actions to promote that. So we are already in action about it.

When I hear those reports for what happened onboard the Transocean enterprise rig, then that gives me cause for concern. We wouldn't expect that sort of thing to be happening, and so, therefore, it is something that would need to be looked into.

Senator FRANKEN. OK. You took this job, when, in 2007, right?

Mr. FLYNN. Yes, 2007.

Senator FRANKEN. And when we went over these statistics on egregious, willful citations and willful citations and serious citations, these are from 2007 through 2010, from June 2007 to February 2010.

I have to agree with the chair that there seems to be a disconnect between your testimony and what appears to be the reality here. Now you are the vice president of Health, Safety, Security, and Environment. Is that correct?

Mr. FLYNN. Yes.

Senator FRANKEN. You are in charge of all this, right? You are responsible?

Mr. FLYNN. My role is to set standards, to advise executive management and those that are implementing those standards, and then to monitor trends and give advice to the executives if intervention is needed. But in BP, we are clear that the business line is accountable for delivering safety along with business, and safety is the first priority.

Senator FRANKEN. OK. I am not sure what that answer meant. Do you feel responsible? Do you feel that you have a responsibility for the safety of people working for BP?

Mr. FLYNN. I have a part to play, and my role is to establish standards that extend company-wide and programs. I am also responsible for advising executive managers and those that implement those standards and for monitoring progress through things like audit. That is what I am responsible for.

Senator FRANKEN. I think part of the disconnect isn't just between your testimony and reality, it is sort of between the human catastrophe and tragedy that we saw and the affect that we get from you. And I think that is disturbing to other members of the committee. That is what I felt.

And I just think that it was very disturbing to me that no one from BP had made any attempt to get in touch with the families. Maybe you are right. Maybe they don't want to hear from you at this point. Maybe it has just been too long.

But just speaking to you man to man, I just don't get it. I don't get BP. I don't get its lack of remorse or the way it expresses it.

Thank you, Madam Chair.

Senator MURRAY. Dr. Flynn, thank you for coming today.

I was not happy when previously BP refused to participate in the committee hearing. So I know that the last 2 hours have not been a fun experience for you.

I did want to ask you, you have heard from our committee members. People are very concerned about what happened and the reaction and want to know that the company truly understands the deep impacts of this. And I just have to ask you, when you go back to your corporate headquarters and into the offices, are you going to say, "Whew, I made it through the hearing," or are you going to go back and tell them that there are serious concerns that this company needs to address in the future?

Mr. FLYNN. We have heard those very serious concerns. We have heard those concerns coming from those affected, those in the Gulf Coast. We are very committed to investigating the incident, putting right whatever we discover, and to continue to improve safety in BP.

Senator MURRAY. Well, would you give me your commitment today to work with me and Senator Isakson, this committee, and this Administration in leading fundamental and really lasting change in BP's own and in the oil and gas industry's general approach to safety and protection standards and regulations in this country?

Mr. FLYNN. We would be happy to work with you.

Senator MURRAY. OK. I appreciate that. Thank you very much. And thank you for coming and being a witness today.

And I want all of our members to know that they can submit additional questions to you, and they may do that. We would ask for your response.

And for members who do want to submit a statement for the record, this hearing record will remain open for 7 days.

And with that, this hearing is adjourned.

[Additional material follows.]

ADDITIONAL MATERIAL

PREPARED STATEMENT OF SENATOR BROWN

Chairman Murray and Ranking Member Enzi, thank you for holding today's hearing.

We are here to determine the extent to which the Deepwater Horizon explosion, sinking, and subsequent oil spill were preventable. Specifically, we are here to establish the extent to which BP's workplace safety initiatives failed workers and the families of the 11 men who died on the evening of April 20, 2010, and determine the true extent to which worker safety guided operational decisions at BP.

Assistant Secretary of Labor for Occupational Safety and Health, David Michaels, recently questioned BP's ability and willingness to protect its workers, noting that BP has failed to ensure the safety and health of those responding to the oil spill.

Does this indicate a systemic problem at BP? A culture that disregards the importance of worker safety? That's one of the key questions driving today's hearing.

Congress must determine what—if any—systemic problems contributed to the most devastating oil spill ever recorded.

The public must understand why BP's Group Operations Risk Committee initiatives, established by BP 3½ years ago as their primary means of ensuring consistent, safe, and reliable operations at all personnel levels, failed to halt any one of the series in events that led to the explosion on board Deepwater Horizon on April 20, 2010.

With managers at all levels completing extensive specialized process safety and management training and with safety being the company's proclaimed top priority, how could this disaster have occurred?

We must also determine what factors really drove the decision-making process on board Deepwater Horizon. It has been reported that, as of April 20, 2010, the Deepwater Horizon well operation was running 5 weeks late. The drilling vessel had experienced several power blackouts, had 390 maintenance jobs uncompleted, computer glitches, and an unreliable propulsion system.

Did the 5-week production lag contribute to the decision to replace the heavy drilling mud in the pipes with lighter seawater? This process removed the substance holding down the gas pressure of the leaking well, dangerously increasing the speed of a $750,000/day process. This decision was made despite the fact that the emergency disconnect system, which would halt flowing oil from the wellhead, wasn't operational.

Why did BP personnel override the protests of Deepwater Horizon's chief driller and continue to delay over 300 maintenance projects?

The answers to these and other questions may lead to understanding the causes of this disaster and prevent future tragedies such as Deepwater Horizon. I look forward to the testimony of the witness and thank Chairman Murray again for holding today's hearing.

Thank you. Thank you very much.

[Whereupon, at 11:55 a.m., the hearing was adjourned.]

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