

From: Flynn, Steve A
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To: G Safety & Operations HSSE LT; G Safety & Operations LT; West, Mike; Kalpee, Tyrone; Birrell, Gordon Y; Wall, Dave; St John, Karen
Subject: RE: Link to hearing on website
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Attachments: BP America - Dr. Steven Flynn Testimony.pdf; BP America - One Page Summary of Dr. Steven Flynn Testimony.pdf

Plus written Testimony.

Steve
Steve Flynn
Vice President HSSE
Group Safety and Operations
BP Sunbury Business Park, Sunbury-on-Thames, TW16 7LN, UK
Tel: +44(1932) 774040
Mobile: +44 (7767) 495 236

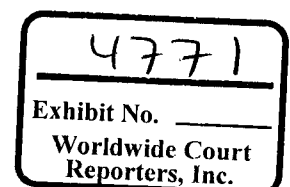
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From: Flynn, Steve A
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For those that missed it here is the link to the Congressional hearing on the Senate web-site:
help.senate.gov/hearings/hearing/?id=66aa1e20-5056-9502-5dee-920e86a67d8d

Regards,

Steve



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United States Senate
Subcommittee on Employment and Workplace Safety
Committee on Health, Education, Labor and Pensions

Dr. Steven A. Flynn

Vice President, Health, Safety, Security and Environment, BP plc

July 22, 2010¹

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 eleven 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.

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.

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.

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 US Chemical Safety Board ("CSB"). And, in response to a recommendation from the CSB, BP commissioned the BP US Refineries Independent Safety Review Panel, chaired by former US 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 US 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 ten challenging but important recommendations focusing principally on BP's US 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 three years since his appointment, the Independent Expert has conducted repeated intensive inspections of BP's US 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 US operations, including the

² Available at www.bp.com/bakerpanelreport.

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.

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 2005-06 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 US Refining. Duane Wilson was appointed Independent Expert for a five-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 forty 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 US 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 continuous 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 2005-06 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; and
- 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 2300 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 US 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 two-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 two-to-three-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 US 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 three-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 number one 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 US – 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.

Summary of Dr. Steven A. Flynn testimony

We are devastated by the catastrophic events in the Gulf of Mexico. We offer sincere condolences to the families of the eleven men who lost their lives in the accident, and we are sorry for the hardships every person and business affected by this spill is experiencing.

At BP, safety is our top priority. The fire and explosion at BP's Texas City Refinery Isomerisation unit in 2005 and the Prudhoe Bay spills the following year were two of the lowest points in BP's history. But they were also a turning point. In the wake of these accidents, BP undertook a brutally honest self-examination to learn from this, and to make fundamental changes to the way we operate based on what we learned. As part of this, BP undertook a number of actions not typical for corporations involved in a major disaster, including among other things, releasing an extensive report of BP's hard hitting, non-privileged examination of the Texas City incident, and appointment of an independent expert to monitor and report on our progress in implementing the ten challenging but important recommendations made by the BP US Refineries Independent Safety Review Panel, which was chaired by former US Secretary of State James Baker III.

BP has made important changes in four key areas to change the safety culture in our company and to drive safety as our first and highest priority. First, leadership and management oversight is critical. With a tone at the top reinforcing safety as the company's top priority, BP has acted to drive the safety agenda across the entire company, including the establishment of a new Group Operations Risk Committee comprised of the Company's most senior executives and a new Board-level committee. Second, BP finalized development of a single, new, comprehensive Operating Management System ("OMS") framework. This is based on global best practices and provides consistent standards and practices across all operating businesses to manage risk and to continuously improve. Third, to build the capability of our personnel, BP significantly expanded safety training at all levels, beginning on the front lines with our operations technicians and maintenance craftspeople and including an innovative and extensive training program for the leadership ranks. Fourth, BP has developed robust audits and performance monitoring metrics to effectively assess and monitor the company's performance.

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. Of course, our safety journey continues, and, as we strive continuously to improve, it will never be complete. BP's first and highest responsibility is to protect our workforce, including the 23,000 employees in the United States.