Statement of Kenneth W. Abbott
House Subcommittee on Energy and Mineral Resources Hearing
June 17, 2010

Mr. Chairman and Members of the Committee:

Thank you for inviting me to testify today.

Background and Career

My background and training is in the field of engineering project management. For over 30 years, I have worked in the management of a wide variety of large engineering projects. My employers have been among the largest engineering construction managers in the world including M.W. Kellogg, GTE Mobilnet, Stone & Webster, Brown & Root, Shell Oil, Jacobs Engineering and others. While I have worked on a wide variety of projects, the large majority have involved petrochemical and energy projects, including refineries and offshore facilities. (Resume attached as Ex. A)

Engineering project management is a field dedicated to management of large engineering projects. I am not an engineer and I do not do engineering. I provide management support for engineers by establishing project schedules and budgets and auditing performance against them. In addition, I manage engineering document control systems, database records, financial records and other types of management records necessary for the engineers to do their work.

Importance of Engineering Documents

Before a skyscraper, or a petrochemical plant, or an offshore production facility, or a wireless data network or any other major project can be physically constructed, it is first constructed on paper, or now in computers.

The first phase of building a project is to design the project, from overall concept down through systems and subsystems to individual parts. A complex project usually involves thousands of engineering drawings and documents; each one of which goes through many drafts and revisions before the final design is approved. Part of my job is to organize and

manage those drawings and documents so that engineers can find the correct document when they need it. The design phase ultimately arrives at an approved design which is certified by the engineering staff for the owner of the project.

After a design is certified, it is typically necessary for new drawings to be prepared to be used in the fabrication and construction of the project. These fabrication or construction drawings add details needed for the manufacture or construction of the physical equipment. These drawings are also approved and certified, again by the engineering staff for the owner. They are then turned over to vendors who use them for the actual fabrication or construction.

During the fabrication and construction phase, it often becomes necessary to make changes to account for unforeseen issues, such as how equipment physically fits together or takes up space. All such changes must be approved by the engineering staff for the owner and the drawings are modified and certified by engineering as matching the physical construction.

At the end of the project, the owner then has, not only the physical facility, but a large body of engineering drawings and documents which correctly record the actual physical construction, along with the history of changes made during the project which led to the final result. These final documents are referred to as “As-Built” drawings and documents; the term “as-built” means that these documents are up to date and correspond to the physical equipment in the facility. Therefore, someone can learn the physical facility by looking at the “as-builts.”

Many of the as-builts will be used by the Operations Department (the department which actually operates the facility) to create safe operating procedures, testing and maintenance procedures, training procedures, etc.

One of the important categories of drawings is P&IDs -- the abbreviation for Piping and Instrument Diagrams. Their importance lies in the fact that a petrochemical operation is similar to a giant spider web of pipes that connect vessels which contain the product with valves, pumps, heaters, and instruments which measure temperatures, flow rates and pressures. The Operations Department of the facility must constantly start, stop, redirect or maintain product flow or flow rates, or raise, lower or maintain

temperatures and pressure. Electronic signals are used to control the valves, heaters, pumps and other equipment based on information gathered by instruments and computerized operation procedures. The P&IDs document all of this equipment and how it is interconnected from the wellhead to where the product leaves the facility, and are the basis for developing the operating procedures.

In my experience, it is universally true that, for petrochemical facilities, as-built P&IDs must be turned over to the operations department that will operate the facility *before* startup of the facility. It is my training that a facility cannot be safely operated without up to date P&IDs. Textbooks say that P&IDs serve as a guide for those who will be responsible for the final design and construction. Based on this diagram:

1. Mechanical engineers and civil engineers will design and install pieces of equipment.
2. Instrument engineers will specify, install, and check control systems.
3. Piping engineers will develop plant layout and elevation drawings.
4. Project engineers will develop plant and construction schedules.

Before final acceptance, the P&IDs serve as a checklist against which each item in the plant is checked.

(Richard Turton, Richard C. Bailie, Wallace B. Whiting, Joseph A. Shaewitz, Analysis, Synthesis, and Design of Chemical Processes, 2nd Edition, 2003)

Experience at BP Atlantis

BP Atlantis is the world's deepest moored oil and gas production facility; it is located in over 7,000 feet of water in the Gulf of Mexico about 150 miles south of New Orleans. It is rated to produce 200,000 bbls. of oil per day and large quantities of natural gas, far more than the Deepwater Horizon well now fouling the Gulf and its beaches.

In August, 2008, I started work under contract for the BP project management office for the BP Atlantis Project, on the Subsea Team. I was hired as a "project controls lead" and had responsibility which included management of the engineering documents.

The BP Product Execution Plan (PEP) for Subsea Atlantis fit into this system. BP Lead engineers were assigned to each sector of the project. Outside vendor Technip Offshore, Inc. was primary engineering contractor. At each phase, the BP Lead Engineers were to review and approve designs and technical documents for their respective sectors. It was specifically provided that:

> As-Built Documentation
> The Lead Engineer for each discipline area will ensure that all technical documentation is updated to reflect the as-built condition of the equipment prior to deployment to the field.

A project such as Atlantis is incredibly complex in two ways: First, there are many components produced by many vendors which must all work together. Second, there are many challenges created by the extreme water depth which must be overcome by cutting edge engineering techniques. One of the functions of the owner/operator, BP in this case, is to assure that engineering knowledge and expertise look at the system overall to be sure that all of the parts function together; this is called "integration." The signature of the BP engineer signing off on a given drawing signifies approval taking into account this integration function.

Almost immediately upon reporting to work, I was confronted with the problem that BP Atlantis Operations was demanding as-built P&IDs and we did not have them to provide to Operations. At this time, Atlantis had already been in operation for about a year and the equipment had long-since been deployed to the field.

I received a copy of an email (attached as Ex. B) written by my immediate predecessor in my job, Barry Duff, who had been promoted to another position. In it, he wrote why he was refusing to provide P&IDs to Operations. He wrote that:

- "The P&IDs for Subsea are not complete have have [sic] not been approved or handed over to Operations."

- "This could lead to catastrophic Operator errors due to their assuming the drawing is correct. Turning over incomplete drawings to the Operator for their use is a fundamental violation of basic Document Control, the IM Standard and Process Safety Regulations."
- "Currently there are **hundreds if not thousands** of Subsea documents that have never been finalized, yet the facilities have been turned over."

From this time until I was fired on February 5, 2009, I worked to obtain BP engineer approved, as-built P&IDs and all other as-built project drawings with little, if any, progress. Technip, the vendor company which was the lead engineering contractor did not have and could not provide up to date P&IDs. The lead engineers responsible for various sectors within the project did not have and could not provide up to date P&IDs. The more I insisted that we had to develop or obtain them, the more unpopular I became. At one point, BP management vetoed one plan because of its estimated cost of $2 million.

BP Atlantis Deficiencies

While I was at BP Atlantis, we developed a database in which we had all of the engineering documents and coded the database with the completion status (or latest approval status) of each document. We also obtained and put in the database the completion status as shown by Technip's document control system. This allowed us to analyze overall what documents we had and their completion status.

The results were astounding to me. The Table (attached as Ex. C) shows the completion status for all documents in the various sectors of the project. The overwhelming majority of documents and drawings had never received any engineering approval at any phase of development. The last column shows the percentage never having any approval at all. Out of the total of over 7,000 drawings and documents, almost 90% never received any approval of any kind, not even for design.

With reference to specific systems:

- The oil and gas products under high pressure are managed, contained and transported to the floating surface vessel by the

wellhead, the tree, the manifolds, pipelines and flowlines, controls and risers. For all of these system, less than 10% were certified as approved by engineering.

- The wellhead is the equipment which controls pressures inside the well at the upper end of the casing, below the tree -- none of those documents ever had any engineering approval.
- The tree is a series of valves immediately above the well which have the same function as the BOP stack during drilling; they control pressures and can be used to shut down the well if needed; they are a critical part of the Safety Shutoff System. On Atlantis, they also include valves to control flows related to the manifolds. Of these critical components, 98% never received any engineering approval.
- The software logic for the safety shutoff system does not have engineering approval.
- Welding procedures for such critical items as manifolds do not have engineering approval.

I have now learned that MMS regulations as well as BP internal procedures and project execution plan require that designs for these facilities be approved by BP engineers specializing in the design of offshore structures. BP records reflect that the design was not, in fact, approved by engineers.

The Subsea portion of Project Atlantis was being constructed in "Drill Centers (DC's)," each one of which collects the product from several wells and passes it to the surface facility. When I went to work for Atlantis, DC-1 was in production and DC-3 was under construction. It came to my attention that we did not have "approved for construction" documents for DC-3. In my experience, entering into construction without "approved for construction" documents can be a major problem. I immediately attempted to obtain approved for construction documents, but was never able to obtain them.

During development of such a project, it is normal that much of the equipment must be tested before being placed into service. I learned that the nature of the records kept by BP for such testing did not allow the results of a given test to be correlated to the item which was tested. As a result, there was no way for anyone to learn from the database whether a particular item had been tested with a particular test, or the results of the testing actually done on a particular component. In November 2008, I was

advised that BP personnel and Malcolm Voss, engineer for Technip, had reached an agreement on how to resolve this problem. However, a number of such agreements were reached which were never carried out; I have no knowledge of whether this agreement was actually completed.

While I was at BP, I spent many hours in meetings with my management and others on the Subsea Team attempting to solve the problems of the non-existent as-builts. It was never solved.

The lack of As-Builts is a common thread running through BP disasters from Texas City (15 dead) to Alaska (200,000 gallons spilled into Arctic tundra) to Deepwater Horizon (blowout preventer modified and would not close) to BP Atlantis.

Dept. of Interior and MMS Refuse to Act

Within a few days after being fired, I made a complaint about the situation to the BP Office of the Ombudsman which I understand was created after BP failed to respond to employee concerns regarding unsafe conditions at its Texas City Plant. It is my understanding that the Office of the Ombudsman is supposed to be sure that complaints of unsafe conditions are dealt with properly. I provided full information to the Ombudsman and had a number of meetings, telephone calls and written communications with them over the next several months. I did not receive any substantive reply from them for over a year. I will discuss that response later in my statement.

On March 9, 2009, I emailed Earl Devaney, Inspector General of the Dept. of the Interior at doioig.gov. I sent him full information on the unsafe conditions. I never received any response. Several months later, someone from that office contacted my attorney and confirmed that my email had been received. An employee from the OIG did contact me by phone once in mid 2009, but said he could not help since I was not a government employee. No one else from the DOI OIG ever contacted me about the unsafe conditions of the Atlantis project or took any other action to my knowledge.

After receiving no further response from the Department of the Interior, I contacted an attorney from the firm of Perry & Haas in Corpus Christi,

Texas. They asked me to furnish them with all of my documentary information and they wrote a letter providing all of that information to the Attorney General and the local United States Attorney (attached as Ex. D). They felt that the evidence showed that BP was committing fraud on the Federal Government by operating in violation of the statutes and regulations which govern oil and gas operations in the Gulf. On April 21, 2009, my attorneys filed a *qui tam* suit to force BP to repay to the Government the amount it had taken fraudulently. They also provided the Government with a report from an engineer detailing the importance of the BP Atlantis deficiencies and explaining that those deficiencies could lead to a catastrophic failure with resulting catastrophic harm to the environment of the Gulf of Mexico.

My attorneys have informed me that on May 19, 2009, they had a personal meeting in Houston, Texas with an Assistant United States Attorney. Also present by telephone were an attorney from the Department of Justice; another attorney from the Department of the Interior; and four representatives of MMS, Mr. Saucier, Mr. Domangue, Ms. Moser, and Mr. Herbst. My attorneys have reported to me that the MMS personnel strongly took the position that BP Atlantis was safe and they did not need to take any action.

On May 27, 2009, my attorneys wrote a lengthy letter to the attorney from the Department of the Interior warning that the kind of problems I have told them of created an imminent risk of catastrophe to the Gulf of Mexico (attached as Ex. E.). In this letter, my attorneys pointed out in writing the great threat to the environment created by deep water drilling if proper procedures are not following.

At a later date, I participated in a personal meeting with the Asst. United States Attorney, the attorneys from DOJ and DOI and the MMS representatives. Again, the MMS representatives strongly expressed their opinion that BP Atlantis was safe.

Since that time, I have relied on my attorneys and Food and Water Watch to seek action from the Government. In general, I am aware that they have been in contact with MMS continually for about a year, and have urged upon the MMS the importance of taking action to prevent a catastrophe in the Gulf. FWW has also contacted Members of Congress who have demanded action from MMS.

In April, I finally received a written response from the ombudsman. We have now learned that a BP internal investigation through Judge Sporkin, the ombudsman, verified my complaints about the absence of documentation for Atlantis (letter attached as Ex. F). Judge Sporkin was interviewed by AP and confirmed that BP did not have the necessary documents for Atlantis (attached as Ex. G). Regardless, MMS still refuses to take action.

Atlantis Deficiencies Similar to Deepwater Horizon

I am personally sick at heart over the Horizon tragedy. Like millions of others, my family and I have vacationed and fished in the Gulf, and used it for recreational purposes. My work and career are tied to the oil and gas industry, much of which is in the Gulf. I feel that the pollution of the Gulf, the destruction of the beaches, the destruction of its recreational and economic value is a national tragedy. I feel strongly that it would not have happened with proper procedures.

Several different causes for the blowout have been reported on the news. Many of them would be caused by the same problems I have seen on Atlantis.

1) blowout preventers did not close -- on Atlantis, safety shutdown system logic has not been engineer-approved; this could cause failure of shutdown systems;
2) rig crew did not understand makeup of blowout preventers -- this would be due to failure to have up to date as-built documents; same problem as Atlantis;
3) a mechanic apparently did not have access to manual shutdown procedures for diesel engines -- again, failure to have proper documentation;
4) there was apparently no gas sniffer and automatic shutdown for the diesel engines -- failure to have safety equipment which should have been present happens when proper engineering procedures are not followed.

From my experience working in the industry for over 30 years, I have never seen these kinds of problems with other companies. Of course, everyone and every company will make mistakes occasionally. I have never seen another company with the kind of widespread disregard for proper

engineering and safety procedures that I saw at BP and that we hear from the news reports about BP Horizon, or BP Texas City, or the BP's Alaska pipeline spills. BP's own investigation of itself, by former Secretary of State James Baker, reported that BP has a culture which simply does not follow safety regulations. From what I saw, that culture has not changed.

Dept. of Interior / MMS Refusal to Enforce Regulations

At first, I could not believe it when MMS refused to take any action and loudly insisted nothing was wrong before they had done any investigation. As far as I know, MMS did nothing to investigate my complaints for over a year. They have never contacted me except for the one conference I had with them and the U.S. Attorney. MMS never contacted me as part of an MMS investigation. They have now filed papers in my lawsuit saying that they started an investigation in April 2010, over a year after my first complaints, and only after a demand from many Members of Congress.

Of course, this makes sense only after we learn of MMS history of failure to enforce regulations, granting waivers and taking favors from the industry.

I read that Congress is considering new regulations. Perhaps the regulations should be improved; perhaps we do need some new regulations.

It seems to me that we need to start by enforcing the regulations we already have. My attorneys believe BP is now in violation of many regulations, but that MMS is refusing to enforce the regulations now on the books. No matter what the regulations, BP has a history of ignoring and violating the regulations, so it doesn't matter what the regulations say unless they are enforced.

Among various responses to FWW, MMS has stated directly that it is not enforcing large segments of the regulations. MMS has written that they do not enforce Part I [eye] of the regulations as to subsurface equipment (attached as Ex. H). Lawyers tell me that Part I of the OCS regulations contains requirements that:

- companies create and maintain and provide MMS with access to:
    - as-built drawings
    - design assumptions
    - fabrication records
    - inspection and test results;
- keeping testing records
- construct and use only certified engineer-approved designs
- comply with multiple industry regulations which have been codified into the Federal regulations
- comply with a Certified Verification Program

MMS has repeatedly written to FWW that they DO NOT ENFORCE THESE REGULATIONS for subsea equipment -- even though the written regulations specifically include subsea equipment. The greatest danger of environmental damage is from loss of control of oil and gas in the underwater sector. It makes no sense to simply refuse to enforce regulations for that sector. Because MMS refuses to follow and enforce its regulations, FWW and I have together filed another suit against the Secretary of the Interior seeking a court order to enforce the law and the regulations.

Unbelievably, even when MMS claims to enforce certain requirements, it renders them meaningless. For example, the requirement that companies maintain as-built drawings: MMS has written that its regulations *do not* require the drawings kept to be accurate or complete (attached as Ex. I).

Now, after a year of refusing to act, MMS now says they want to do an investigation that will take months. This is totally unreasonable. BP has a database of the engineering documents and the completion status of each document. I have provided copies of that database to MMS. It would take a qualified person no more than a few minutes to analyze the database for the information needed, and only a few hours to compare the results to the actual electronic images of the documents.

Deepwater Horizon demonstrates the urgency of assuring proper safe procedures. Catastrophe can strike unsafe conditions at any moment. The worst case scenario for BP Atlantis is a torrent of 200,000 bbls. per day into the Gulf, many times worse than Deepwater Horizon. The danger is known to be present, the situation is urgent and delay makes no sense.

Finally, in his court filings, Secretary Salazar says that the court cannot enforce the law, that he has the right to decide to do nothing. The statute passed by Congress says different; the statute says:

> "The Secretary ... **shall** enforce safety and environmental regulations promulgated pursuant to this subchapter." 43 USC Sec. 1348

The Secretary is not above the law passed by Congress; he is required to enforce the law. If the Secretary had followed the law, Deepwater Horizon may not have occurred. Let's not have another tragedy because the Secretary will not follow the law.

New Statutory and Congressional Action

With the assistance of my attorneys and advice from Food and Water Watch, we would respectfully recommend that the Congress consider the following action:

1. Establish a Safety and Environmental Regulatory Agency independent of the Dept. of the Interior.
2. No one presently at MMS should be allowed a regulatory position in the new agency. The culture of corruption and coziness appears too deep to be fixable.
3. Regulatory personnel should not come from the rank of the industries being regulated; statutes should close the "revolving door." The present Deputy Secretary of the Interior for Land and Minerals Management having direct supervision over MMS comes to the Department directly from BP. At BP, she was VP for BP America's Health, Safety and Environment department which was responsible for the Alaska oil spills disaster, the Texas City disaster, and, now, of course the Deepwater Horizon disaster, to name only a few. It does not make sense for a person with that record to be placed in charge of enforcement, yet Secretary Salazar's new "reorganization" of MMS leaves this same person in charge of the new enforcement office.
4. Process Safety Management (PSM) regulations which are enacted under the OSHA and Clean Air Acts in identical language should be applied to OCS. (See 40 CFR Part 68 Chemical Accident Prevention Programs and 29 CFR 1910.119 Safety Process Management of Highly Hazardous Chemicals).
5. The penalties for a disaster such as Deepwater Horizon, or the Alaska oil spills should include forfeiture of the leases which the company holds. A company which cannot properly operate the leases should forfeit them and they should be turned over to a company which can and will operate them properly.

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BACKGROUND SUMMARY

Management professional with thirty years of progressive and diversified experience in the oil and gas upstream and downstream engineering, procurement, and construction, and engineered equipment fabrication industries. Solid record of accomplishment in project controls and project management. I am currently seeking to grow my career with a senior controls management position with an owner or EPC company.

Successful in the development and application of project controls procedures and in the documentation of work flow processes in several different industries. Developed and implemented capital project planning/cost control processes in these industries, which became standard practice and resulted in significant schedule/cost improvements. Authored project controls, productivity and quality improvement, and construction articles for ten different international trade magazines. Completed a certification in marketing program at the University of Houston in 2000, and obtained my Gartner Certification in Project Management in 2001. Also completed a Masters of Science degree at Southern Methodist University in May 2002.

PROFESSIONAL EXPERIENCE

EC Harris
2009

Senior Project Controls Manager – Owner Representative

Supervise EPC Contractor Project Controls effort for $2 billion Downstream Grassroots Petrochemical Plant FEED project. Analyze performance and report progress to owner companies. Establish standard project control procedures and reporting for all contractors, and ensure that project performance issues are identified and resolved.

British Petroleum
2008 to 2009

Project Controls Lead

Supervise Project Controls staff for Offshore Oil and Gas Exploration and Production projects. Prepare offshore facility project budgets and cost reports. Monitor project cost performance and document control for senior BP management and partners. Develop and

implement project management and project controls tools and processes. Direct and monitor subcontractor performance.

GE Energy
2007 to 2008

Manager – Project Controls – IGCC Gasification Projects

Overall responsibility for the planning and project schedule/cost control for mega power/process projects in the energy division of General Electric. Also engaged in the development of controls procedures for a new IGCC group within GE. Current project is a $2.5 billion gasification/power grass roots project in the US.

CDI ENGINEERING
2005 to 2007

Senior Project Controls Manager – CDI/DuPont Alliance

Responsible for the project controls work of 20 staff including schedulers, cost engineers, and estimators for the CDI DuPont southern region engineering center. Currently this includes the planning and project control of over 65 projects in the southern US. Also responsible for development, testing, and deployment of new project control techniques.

JACOBS ENGINEERING
2003 to 2005

Sr. Project Cost Controls Manager

Plan and analyze petrochemical and refinery project cost performance, and report progress to upper management and the client. Identify cost and schedule problems and help implement timely solutions.

SHELL OIL
1997 to 2003

Project Manager
Project Controls Manager

Served as a project controls manager for upstream offshore and downstream oil and gas and petrochemical projects for Shell Oil throughout the US. Worked with engineering staff to identify workflow and to develop standard project plans based on this workflow. Established standard project reporting tools and formats for progress reporting to management.

BROWN & ROOT

1995 to 1996

Business Development Manager
Project Controls Manager

Responsible for all marketing and business development efforts in the PCS/Cellular engineering and construction markets. Project Controls Management for engineering/construction of petrochemical and civil projects.

STONE & WEBSTER
1992 to 1995

Director - Project Planning Department
Project Controls Manager

Responsible for the supervision of planning staff and overall quality of planning effort on all worldwide petrochemical/power/telecommunications EPC projects. Assisted in the development of several project control improvement projects, including the implementation of a better company standard work breakdown structure and a construction driven project control approach for quicker identification and resolution of project schedule problems.

Chosen for a leadership role in successful effort to obtain ISO 9001 Quality Certification. As part of this effort, worked with the various engineering, procurement, and construction department staff to establish standard work flow processes for completion of the various EPC project tasks, and also developed standard unit quantity manpower requirements for each task.

Participated in the successful proposal preparation with AT&T on a joint venture telecommunications project overseas that was the largest ever telecommunications system expansion.

GTE MOBILNET, INC.
1986 to 1992

Sr. Project Manager
Product Manager
Project Controls Manager

Planned and administered all new cellular telecommunication system (mobile phone) expansions in the U.S. Coordinated site acquisition, engineering, procurement, and construction of over 300 new cellular radio transmission sites and computer-controlled switches since 1986. Established company project scheduling and cost control documents and procedures, updated project status, identified and analyzed project problems, and worked with other functions to resolve them. Analyzed and reported work order

cost/schedule performance for all U. S. regional operations to upper management. Served as the coordinator between marketing and network divisions to help translate market needs into network coverage. Also functioned as a product manager over all credit card and rental phone product development and distribution activity.

Developed and implemented a "company standard" new market entry pert chart for the design, installation, and marketing of new cellular systems. Since the deployment of cellular systems was new technology at the time, there were no existing standard pert charts showing the interrelationships of the project workflow. I interviewed and worked with the individual project team members and each department to identify and establish the standard workflow for completing a cellular system from design to installation and operation. After we established this standard deployment plan, we were able to fine-tune it to continuously improve our project productivity and cost, and to shorten the required project duration. I received a GTE employee excellence award for this effort, and later published an article in Cellular Business Magazine on how we used this process to improve our deployment of wireless systems.

Participated in the development and implementation of a work order process and written procedures for GTE Mobilnet.

Introduced new PC based program management system, which resulted in improved schedule and cost performance.

Initiated a program to expand the project control features of the existing Capital Project Management System. The results provided both headquarters and field management with improved schedule and cost tracking and reporting capabilities. I also received a GTE Employee Award for this effort.

PLT ENGINEERING
1985 to 1986

Project Controls Manager

Responsible for all project control functions, including cost and scheduling for assigned pipeline and facility projects. I planned all engineering, procurement, and construction activities and served as the client contact at meetings concerning cost and schedule performance.

Established an engineering quantity measurement and project planning system on the IBM-PC for more accurate reporting of engineering progress on projects.

M. W. KELLOGG COMPANY
1978 to 1985

Division Manager - Construction Planning
Project Controls Manager

Proposals Manager

Supervised all home office and field project control personnel assigned to my projects. Coordinated and administered the scheduling and cost control activity on all Kellogg petrochemical construction projects, including the development and statusing of all project control documents, with responsibility for insuring timeliness and quality. Planned and controlled the engineering, procurement, and construction of projects ranging in value from $30 million to $1.5 billion. Developed and monitored schedules and cost control for Sonatrach Algerian LNG compression plant valued at $3 billion dollars in North Africa.

Developed and implemented a state-of-the-art project control system based on the IBM Personal Computer, which provided Kellogg with a lower cost, easier-to-use alternative to mainframe control systems. Established a marketing plan to increase sales and penetrate into new market areas.

Developed a standardized jobsite schedule and cost-reporting format, which improved the quality of field reporting. I have participated in the development of many standard Kellogg project planning and progress reporting tools and procedures and regularly taught new field engineers how to use these tools.

Acted as a troubleshooter for construction management by analyzing problem jobs throughout the world and recommending solutions. Results were improved project completion dates and lower costs.

EDUCATION

B.S. in Economics, Minor in Math - University of Houston
M.S. in Telecommunications from the electrical engineering department of SMU in Dallas
Management Growth Workshop - University of Houston Management Center
Dyna Cellular Radio Overview, sponsored by GTE Mobilnet
Dale Carnegie Course in Effective Speaking and Human Relations
GTE Supervisory Training Course
Deming Productivity and Quality Improvement Seminar
Marketing Certification based on course work at the University of Houston

ACADEMIC HONORS

Deans List; President of Phi Theta Kappa National Honor Fraternity; Member National Economics Honor Fraternity; Who’s Who in American Colleges

PROFESSIONAL AFFILIATIONS

Member, Project Management Institute and Houston Writers Guild
Regional Correspondent for several business magazines

Gartner Certified IT Project Manager

AWARDS

Who’s Who In The South and Southwest
Several Job Quality Awards from M. W. Kellogg and GTE Mobilnet
Employee Excellence Award from Shell Oil

Kenneth Abbott

From: Duff, Barry C [Barry.Duff@bp.com]
Sent: Tuesday, September 02, 2008 11:14 AM
To: Abbott, Ken (SWIFT); Ken Abbott (Home)
Subject: FW: P&IDs For Operations

From: Duff, Barry C
Sent: Friday, August 15, 2008 7:51 AM
To: Naseman, Bill E; Broman, William H(HOU) (william.broman@bp.com)
Subject: FW: P&IDs For Operations

Bill/Bill,

Per other e-mails, Tinikka has been asked by the Operations Document Control person (Christy), to provide all the Subsea P&IDs **regardless of their status** (e.g, complete or not complete,handed over or not handed over). Christy will not say who has made the request, but we believe it is coming from Nita Oza to support an IM Evaluation she is leading. The reason this is not a straight forward request is the document number scheme is so fundamentally flawed that all drawings are grouped under the document type DWG vs. Mechanical, Electrical, P&ID, PFD etc).

Some back ground on the P&ID Request from Operations. As you can see from the note below. The P&IDs for Subsea are not complete have have not been approved or handed over to Operations.

The current procedures are out of date. However in principle, the project document control person (Tinikka), function is to facilitate the handover of approved and final documents to the Operator (BP). For Atlantis this is Christy in Alastair's group.

The risk in turning over drawings that are not complete are:

1) The Operator will assume the drawings are accurate and up to date. This could lead to catastrophic Operator errors due to their assuming the drawing is correct. Turning over incomplete drawings to the Operator for their use is a fundamental violation of basic Document Control, the IM Standard and Process Safety Regulations.

2) Having the project document control person turnover drawings that are not complete, places the onus on her that they are the most current version. Currently there are **hundreds if not thousands** of Subsea documents that have never been finalized, yet the facilities have been turned over. In some cases, Tinikka does not have all the versions. Turning over the version she has, runs the risk of the wrong version being used.

The point here is that even if we condoned handing over documents that were not approved/handed over, we run the risk of not handing over the most current version, (the one theoretically closest to being the most accurate).

Subsea Systems (DC-1 Only)

Sector No.	Total	IFD	IFC	As-Blt	Not Yet App by BP	% Not App by BP
30 Subsea Systems (well-heads, manifolds, flowlines and risers)	1,266	27	86	101	1,052	**83%**
31 Wellheads	22	0	0	0	22	**100%**
32 Trees	570	1	9	1	559	**98%**
33 Manifolds	161	5	4	0	152	**94%**
34 Pipelines/Flowlines	2,383	1	108	0	2,274	**95%**
35 Controls	1,351	14	36	36	1,265	**94%**
36 Umbilical	454	2	201	56	195	**43%**
37 Risers	750	0	1	80	669	**89%**
38 Installation	219	0	14	0	205	**94%**
TOTALS	**7,176**	**50**	**459**	**274**	**6,393**	**89%**

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April 9, 2009

Via Federal Express overnight delivery
Eric H. Holder, Jr.
Attorney General of the United States
U.S. Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530-0001

Via hand delivery April 10, 2009
Tim Johnson
Acting United States Attorney
Southern District of Texas
515 Rusk Avenue, Suite 1102
Houston, TX 77002

Re: Kenneth W. Abbott – BP Atlantis Project

Dear Mr. Holder and Mr. Johnson:

We represent the above-named individual and will be filing a qui tam suit in his name in the next few days. The purpose of this letter is both to provide a full disclosure of the information known to him and to express our concern for the potential environmental catastrophe that information reveals to be seriously risked if the Government fails to take swift and decisive action in response to this information.

Mr. Abbott was, until recently, a highly placed supervisor in the BP Atlantis Project; he supervised engineering document management for the undersea portion of the project. In that capacity he learned (which information he has also provided to the United States Department of the Interior) that BP is operating highly technical, extremely deep-water, oil and gas production equipment in the Gulf of Mexico (BP Project Atlantis) without the most fundamental engineering information needed (and required by applicable federal law and regulations) to operate the system safely. This conduct directly violates 43 U.S.C. § 1334 *et seq.*, and 30 C.F.R. § 250.101, *et. seq*. The consequence of this non-compliance is that the operation of the platform not only violates federal law and is contrary to express representations and certifications of compliance BP has made to the federal government, it also puts the environment and human lives at great risk.

Specifically, the laws and regulations mentioned above, as well as basic safety requirements, mandate that prior to initiating operations of highly technical subsea equipment, such as that associated with this type of platform, Operations Personnel must have copies of (or immediate access to) "as-built" drawings for critical equipment. This is necessary for safe operations, including emergency shut downs (for example, in anticipation of an oncoming hurricane) without explosion or other catastrophic event. Indeed, in order to obtain authorization to commence production activities, the lessee must certify to the government that it has such "as-built" documents on hand.

In order to obtain authorization to proceed and extract oil and gas owned by the government from the underwater leasehold, on information and belief, BP falsely certified to the government that it had the required "as-built drawings" on hand. It did not, and (on information and belief) does not, to this day, have them.

In addition, it appears that required engineering analysis may not have been done during the construction process of this system.

BP's false certifications expose federal lands and waters to the highly likely catastrophe which federal law is designed to prevent: there is a high risk, which internal BP documents acknowledge and admit, that "catastrophic operator errors" will occur, since "hundreds if not thousands" of required documents are not available or incomplete, rendering all operations extremely unsafe.

Nevertheless, as a result of having falsely certified to the government that it was, and continues to be, in compliance with these applicable regulations, BP has been allowed to extract an estimated $5 billion or more of federally owned petroleum products from the leasehold.

It has been publicly reported that a similar platform in BP's neighboring Thunder Horse Project was in danger of sinking following Hurricane Dennis due to an improperly plumbed pipe which allowed water to flow freely among ballast tanks. Massive, critical undersea equipment on that project called manifolds were leaking oil into Gulf of Mexico waters and must be replaced; similar manifolds are being replaced on BP Atlantis. Failures of this nature could have catastrophic environmental consequences.

Mr. Abbott is very concerned that unless the Government halts production through this platform, and halts continued construction of areas still under construction without the necessary engineering documents, the results could be far worse than the ExxonValdez disaster.

Defendants:

1. BP Exploration and Production, also known under its common or assumed name, "BP," is a corporation which is acting as the operator of the oil and gas production project in question known as the BP Atlantis Project. Mr. Abbott believes that said Defendant is the 56% owner of said project as well as the operator thereof.
2. BP America, also known under its common or assumed name, "BP," is believed to be the direct or indirect owner of all or a majority interest in BP Exploration.
3. BP p.l.c. (also known under its common or assumed name, "BP," and also known as "BP Global,") is the ultimate corporate parent of both BP Exploration and BP America.

Both the ultimate parent and the intermediate parent exercise close control over their subsidiaries and the ultimate parent obtains the ultimate profit from its wrongdoing.

Abbott's Source of Knowledge:

Beginning in August, 2008, Kenneth Abbott was employed to work in the administrative offices of the BP Atlantis Project located on IH-10 at Kirkwood in Houston, Harris County, Texas. Mr. Abbott's office was located at Energy Tower 1, 11700 Katy Freeway. Other offices of the Project were located at 501 Westlake Park Blvd., Houston, Texas.

Mr. Abbott worked as a project control supervisor with the title of Project Services Lead. Part of his responsibility was to supervise the databases which maintain critical project documentation. One of his immediate subordinates was Tinikka Curtis, who was the direct administrator of the documentation databases.

Soon after beginning work on the Project, Mr. Abbott learned, both from conversations with co-workers and from written materials such as emails and the contents of databases,

that BP Atlantis did not have completed "as-built" drawings of the undersea project equipment which, by that time, had been in operation almost a year. Mr. Abbott, in the course of his employment, personally participated in numerous conversations and meetings, sent and received numerous emails, and read numerous documents concerning the need for the Project to have "as-built" drawings. Much of Mr. Abbott's job assignment was involved with attempting to obtain "as-built" drawings from engineers. As part of his job responsibilities in November 2008, he developed a plan to correct the documentation deficiencies although no meaningful progress was made before he was fired.

The factual allegations are based upon information learned by Mr. Abbott during his work with Project Atlantis over the time period of August, 2008 through January, 2009. He was fired on February 3, 2009.

Background And Legal Requirements:

BP Exploration is the operator of an oil and gas production development project known as the BP Atlantis Project which is a joint venture of BP (56%) and BHP Billiton (44%). The project is located upon leases obtained from the United States Department of the Interior pursuant to 43 U.S.C. § 1334 *et seq*. on the Outer Continental Shelf along the Sigsbee Escarpment of Green Canyon Blocks 699, 700, 742, 743 and 744, approximately 190 miles south of New Orleans, Louisiana. The project is located in water depths ranging from approximately 4400 to 7200 feet.

The Atlantis Project arises under and is subject to the provisions of 43 U.S.C. § 1334 *et seq*., and 30 C.F.R. § 250.101, *et. seq*. These provisions authorize the leasing of federal lands for mineral (including oil and gas development) and prescribe the terms upon which the Government will sell its minerals to developing companies such as BP. Compliance with specific health, safety and environment requirements is required by the statutes which impose such requirements into the leases and require compliance as a condition of the continuation of a lease once granted. 43 U.S.C. § 1334(b). Certification of compliance with specific requirements is required.

The Atlantis project is newly constructed. Its production system includes a moored, semi-submersible platform connected to a Subsea System which, in turn, is connected to and receives oil and gas production from under sea oil and gas wells. The first project

phase, known as Drill Center 1 (DC-1/SS1) has been completed and began production in the latter months of 2007. DC-3 is scheduled to begin production in mid 2009.

According to the BP America website, BP Atlantis began production in October, 2007. It is rated to produce 200,000 barrels per day of oil and 180 million cubic feet per day of gas.

BP Exploration, as the operator, was required to compile, retain and make available to representatives of the Government for the functional life of the project certain materials including "as-built structural drawings." 30 C.F.R. § 250.903(a) (2007):

> **§ 250.903 What records must I keep?**
> (a) You must compile, retain, and make available to MMS representatives for the functional life of all platforms:
> **(1) The as-built drawings;**
>
> (c) You must provide MMS with the location of these records in the certification statement of your application for platform approval as required in § 250.905(j)[2007].

(Previously codified at 30 C.F.R. §§ 250.901(d), 250.914 (1998)).

Types of drawings which should be retained include (a) piping and instrument diagrams, (b) electrical classifications and diagrams, (c) equipment arrangement diagrams,(d) pressure relief systems,(e) alarm, shutdown and interlock systems, (f) well control systems, (g) passive and active fire protection systems and (h) emergency evacuation systems. A project of this nature cannot be safely operated without complete "as-built" drawings" available for use by the operations department. BP 's Subsea Project Execution Plan requires that all technical documentation reflect the "as-built" condition of equipment prior to deployment to the field and, therefore, necessarily prior to the beginning of production.

Before beginning construction on leased premises, the Department of the Interior, through the Minerals Management Service (MMS) and its regulations, requires compliance with the Platform Approval Program. 30 C.F.R. § 250.900 (2007).

Part of the Platform Approval Program requires a certification statement that, among other things "[t]he certified design **and as-built plans and specifications** will be on file at (give location). 30 C.F.R.§ 250.905(k)[2007]."

In violation of the regulations and its certification to the Government, BP does not have "as built" drawings of the subsea portions project which is now in operation, as required by 30 C.F.R. § 250.903(a)(1). One of the data files provided (DC-1 n SS-1 Closeout - Sector Report RevA) details thousands of drawings and design documents which are incomplete.

In addition to the Platform Approval Program, there is a Platform Verification Program designed to ensure that platforms located in deepwater meet stringent requirements for design and construction. 30 C.F.R. § 250.909 (2007). The Platform Verification Program is in addition to the requirements of the Platform Approval Program. *Id*. The Platform Verification Program applies to all platforms installed in water depths exceeding 400 feet. Atlantis is installed at far greater depths.

All of these requirements are essential and vital components of what the Government is to receive in exchange for its allowing producers to extract its minerals from under the sea. In essence, the Government hires the producer to extract its hydrocarbons from undersea (which advances the Government's interest in increasing domestic oil and gas production and produces revenue for the Government) and to do so in a specific manner which advances the Government's interest in avoiding desecration of the environment and threat to human life. That is what the Government pays for when it grants a producer the right to extract the minerals it owns under the Outer Continental Shelf, retain a portion of the proceeds for itself, and remit the remaining proceeds (royalties) to the Government.

Evidence Submitted:

Submitted with this letter is a CD containing electronic copies of numerous documents, all of which are true copies of business records of the BP Atlantis Project, with the exception of a few which show on their face to have been created February 3, 2009; all

documents are true and correct copies of what they appear to be. Mr. Abbott had access to and acquired copies of these documents as part of his work for the BP Atlantis Project. The documents substantiate his knowledge as described below.

Abbott's Knowledge:

As part of his work, Mr. Abbott learned that BP Exploration Operations does not have complete "as-built" drawings for the subsea aspects of the BP Atlantis Project, including such critical systems as Piping and Instrument Diagrams (P&IDs), mechanical, controls, and installation drawings. This is well-known to the management of Project Atlantis, including William H. (Bill) Broman, Project Manager.

Project management is aware, and has detailed in writing, that:

a. "hundreds, if not thousands" of critical documents have never been finalized;
b. "this could lead to catastrophic Operator errors;"
c. categories of critical documents which are not complete include such critical documents as Piping and Instrument Diagrams (P&IDs), mechanical, controls, and installation drawings;
d. due to incompleteness, such critical documents cannot be turned over to Operations which is, thus, forced to conduct operations of the Project without access to such documents; this is well-known in the industry to be a fundamental violation of safe practice;
e. "the document numbering scheme is so fundamentally flawed" that document numbering frequently does not distinguish between mechanical, electrical, P&ID, etc.;
f. the document database system frequently does not allow direct association of a given document with the equipment or geographic subsea location to which it relates; for example, documents are not categorized by drill center.

(See email memo of Barry Duff dated August 15, 2008, attached to this letter. See also DC-1 n SS-1 Closeout - Sector Report RevA which details thousands of drawings and documents which are incomplete. Numerous other emails and documents related to this subject are included in the collection of documents on the enclosed CD.)

During a project such as this, any given drawing will likely go through multiple phases and stages. Phases generally expected as per BP procedures include:

a. Drawings "Issued for Approval" (IFA) by the contractor for BP comments;
b. Drawings "Issued for Design" (IFD) by the contractor after BP comments or concerns are incorporated;
c. Drawing "Issued for Construction" (IFC) with BP's approval as fit for use in the actual fabrication and construction of the project;
d. "As-Built" drawings which are the latest revision of construction drawings altered as necessary to reflect the actual, "as-built" condition.

In any phase, there may be several engineering analyses and reviews which are documented on the drawing. At various stages, the final result of that stage will be signed by the responsible engineer. The final drawing contains the history of changes, including the engineering approval and signatures at the earlier stages.

The phase or stage of any particular drawing as it exists is shown by a type of numbering designation (for example IFA, IFC, IFD as shown above) shown on the drawing and carried forward into the database listing of documents.

A great many of the drawings in the BP databases, although they should be final, are only in the early stages of development. The spreadsheet file entitled "DC-1 n SS-1 Closeout - Sector Report RevA" lists thousands of drawings and design documents with the date and latest coding for each. This spreadsheet details thousands of drawings and design documents which have never been completed to "as-built" status; many are still in the very early stages of development although the drill center to which most relate (DC-1) has been completed and in operation for about 18 months. In many cases, the drawing has not reached an approved design status, or an "issued for construction" status. **This means that, for many components of the project, there is no record that necessary engineering work needed was actually done, or that the item was constructed pursuant to an appropriate engineering design. It also means that BP's certifications of compliance to the Government were false.**

While working on the BP Atlantis Project, Mr. Abbott devoted many hours in meetings with the project manager and other staff members seeking to develop procedures to

obtain these needed documents. Although plans were developed and promises made, little progress was made. The "as-built" drawings and documents should incorporate the entire engineering history of the item in question; Mr. Abbotts doubts whether it is now possible to create proper drawings including that history.

Before it could obtain permission from the Government to install equipment to extract and take possession of the Government's hydrocarbons from beneath the sea, BP was required to obtain approval; as a prerequisite for obtaining approval, it was required to assure the Government that design, fabrication, installation and use of all platforms and structures on the Outer Continental Shelf included adequate structural integrity for the safe conduct of drilling and production operations (30 C.F.R. § 250.900), based on detailed plans and specifications certified by a registered professional engineer, and to file a signed certification of such facts with the Government. (30 C.F.R. § 250.900(b)(1) and .905 (k)(2006)) **including the location of the "as-built" drawings and design documents.** (Previously codified at 30 C.F.R. §§ 250.901(d), 250.914 (1998)).

At the Design Verification stage, lessee was required to have a "detailed structural plans . . . and specifications." (30 C.F.R. § 250.901(b)(iii) and (d); 30 C.F.R. § 250.902(b)(2) (1999)). This was not possible since thousands of the drawings appear to have never reached the "approved for construction" stage. At the Fabrication stage, a Verification was required that the project had been fabricated in accordance with the approved plans and specifications. (30 C.F.R. § 250.903(a)(2) (1998)). Again, this was not possible since thousands of drawings appear to have never reached the "approved for construction" stage. Likewise, a Final Report was required following completion, verifying the entire project's compliance (30 C.F.R. § 250.903(a)(3)(iv) (1998), or 30 C.F.R. § 250.918(c)(2006)) but could not have properly verified compliance to drawings never approved for construction.

Mr. Abbott believes and alleges that such certifications and verifications were false when made, because the widespread absence of final, "as-built," drawings with complete engineering histories would have made any certification to the contrary untruthful. Further, Mr. Abbott believes and alleges that BP commenced and continued taking Government property knowing that it was in violation of the requirements and of its lease and that it had no legal right to take possession of oil and gas pursuant to this lease.

Damages to the Government:

Acting under color of its false certifications, BP took possession of Government property (namely, the Government's oil and gas reserves under this leasehold) when it was not entitled to do so. Reasonable estimates of the value of the Government's property which has been wrongly obtained by BP as a result of these false certifications of compliance are probably in the magnitude of 75 million barrels of oil, plus large quantities of natural gas. Although the price of oil has varied over the time since production began, the total value of the oil taken is probably in the magnitude of $5 billion.

Moreover, the lack of complete structural documentation, including "as built" plans required by 30 C.F.R. § 250.903 (2007), is highly likely to result in a catastrophic event at any time in the future, which will irreparably spoil the environment and cost the Government millions or billions of dollars to clean up. Such an event would also destroy considerable government resources (namely, the Government owned oil and gas reserves under the leasehold in the Outer Continental Shelf).

For these reasons, Mr. Abbott states and believes that the actual damage to the Government from BP's false and fraudulent claims of entitlement to commence production (which are "false" because they are predicated upon and include false certifications of compliance with the statutes and regulations indicated above) is probably in the magnitude of $5 billion (less the payment BP has heretofore made to the government in connection with this lease).

Enclosures:

1. An internal BP email written by Atlantis Project management August 15, 2008, which summarizes the gravity of the situation;
2. A list of BP's civil and criminal violations compiled in November, 2007; since this list was compiled, BP has
    a. Pled guilty to criminal violations of the Clean Air Act which resulted in an explosion killing 15 people and injuring hundreds in federal court in Houston;
    b. Pled guilty to criminal violations involving knowing neglect of pipeline corrosion in Alaska; and
    c. Been sued civilly by the U.S. Department of Justice and Environmental Protection Agency for major pipeline spills in Alaska;

3. A CD containing copies of multiple BP internal documents supporting Mr. Abbott's information.

We would be happy to present Mr. Abbott for an interview with a Department of Justice attorney or investigator at your very earliest convenience. He will be glad to review the documents being furnished and explain their significance. We would suggest that it might be desirable for the interview to include representatives of the Department of the Interior and the Environmental Protection Agency, if you so choose.

We urge the Government to act quickly on this information to prevent the catastrophic consequences which could result from continued operations without the necessary "as-built" drawings and documents.

Yours very truly,

David L. Perry
Attorney for Kenneth W. Abbott

DLP:sbd
Enclosures (3)
cc: Gerald Birnberg
René Haas
Patricia A. Shackelford
Kenneth W. Abbott