

Risk Management Paper

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## Introduction

Inappropriate risk management practices can lead to catastrophic occurrences especially in the energy and engineering sectors as observed in the BP oil spill in the Gulf of Mexico. The accident that was reported to have been caused by lack of communication is supposedly among the biggest environmental calamities in the U.S. history. Human and marine life loss plus the financial burden of the aftermath of the accident were unbearable especially considering that the disaster could be prevented. The BP corporate risk management team failed to execute its mandate in the most methodical and timely manner (“Deepwater: The Gulf Oil Disaster and the Future of Offshore Drilling”). The Minerals Management Service (MMS), despite being under heavy condemnation for its failure to tame BP’s greedy method of drilling was still being allowed to function. The British Petroleum (BP) and the Deepwater Horizon disaster of 2010 claimed lives and brought the company’s and the United States’ economy to its knees in an instant (Ingersoll, Locke and Reavis, 2012).

To fully understand the risk management failures that led to the calamity, it is indeed imperative to examine what really happened on Tuesday, April 20, 2010. Mike Williams was the chief electronics technician for Transocean. Transocean is a U.S.-owned, Switzerland-headquartered oil industry support firm that majored in deep water drilling equipment. Transocean had a 4560 million Deepwater Horizon rig operating in the Gulf of Mexico; of course, working on the Macondo well. BP bought the rights to harness the well and had leased the right plus its workforce from Transocean. There were 126 persons on board of the Deepwater Horizon and 79 of these happened to come from Transocean. BP had 7 people, while the rest belonged to other companies such as Anadarko, Halliburton, and M-1 Swaco, a constituent of Schlumberger.

As the electronics technician, Mike Williams was responsible for emergency alarms up on the sense of excess temperature gradient in the Deepwater Horizon. The levels of gas had been running high enough to disallow any hot work like wiring and welding that could give rise to sparks. It was usually designed for the alarm system to go off when gas levels went as high as they were. Unfortunately, the technician turns off the alarm to prevent false sirens from waking up people in the middle of the night. However, the emergency announcement – “Reach your hand around your life jacket, grab your ear, take one step off, look straight ahead, and fall” - that sounded over the PA system April 20, 2010 was too rational to be ignored.

The actual accident started as a small fire that exploded to unbelievable proportion. Two explosions that killed 11, injured 17 with William included. The fire lasted for 36 hours and burned 700,000 gallons of oil and left a trail of smoke spreading over 30 miles. Moreover, 205.8 million gallons had spilled into the Gulf of Mexico. This accident courted controversy. Analysts and federal investigators struggled to find a reason for a reputable company like BP to allow such a careless and preventable accident to take place. BP had history of taking pleasure in its commitment to safety. People had been failed by the same company that claimed safety was its primary consideration.

#### Risk Management Issues at BP

On March 23, 2005, an explosion at BP’s Texas City Refinery killed 15 and injured 180 more, dragging BP into a monetary loss of over \$1.5 billion. James Baker, a former United States Secretary of State and oil industry attorney was then commissioned to conduct investigations and come up with a result-based report. The *Baker Report* suggested that the main causes of the explosion were the company’s rolling back of its maintenance and safety measures at the plant to

reduce expenses and the negligence exhibited by BP senior executives (“Root Causes/Failures That Caused the Macondo Well Explosion (BP Oil”).

Poor project management approaches by BP hierarchy were the recipe for economic losses. Transocean charged BP \$500,000 per day to lease the rig and \$500,000 per day in contractor fees. The project manager approximated the drilling to take 51 days with a \$96 million budget. However, when the accident occurred on April 20, 2010 BP had worked for 80 days. This overshot the original budget. The increase of drilling cost forced BP to overlook safety measures in a bid to neutralize the losses. The amount spared for risk management was insufficient to fully protect the rig and its crew from accidents.

The Deepwater Horizon Rig had maintenance problems before it was even leased. For example in Sep 2009, BP undertook a safety audit on the rig. The audit spotted 390 repairs that demanded immediate action and would need over 3,500 hours of labor to rectify. Further worrying reports indicated that Deepwater Horizon stayed on water continuously from 2001-2010 and that the rig worked for 7 months nonstop. This is a careless step in safety management. The rig should work for 2-3 months and rest for a while then come back to work. This should be done in a cyclic fashion. The Deepwater Horizon also had not gone to dry-dock for nearly a decade. This behavior increases the chances of equipment failure.

Locke et al. (2012) maintains that “as Transocean’s Chief Electronics Technician Mike Williams experienced, the crew had to be adept at developing workarounds in order to maintain the function of the rig”. Locke et al (2012) continues that “Williams was responsible for maintaining the Drilling Chairs - the three oversight computers that controlled the drilling technology. Sadly, the three computers were operating on a mid -1990s era Windows NT OS.

This operating system froze frequently. The Chair A, Chair B and Chair C worked in this way. However, if Chair A broke down, the driller would have to move to Chair B if he or she was to maintain control of the well. In the worst case scenario that all the three chairs fail at exactly the same time, the drill goes out of control. Williams from time to time reported the software issues and the importance to have them rectified but his suggestions met deaf ears. The Windows NT must have failed and led to the disaster Deepwater: The Gulf Oil Disaster and the Future of Offshore Drilling).

### Conclusion

BP and Transocean should shoulder the blame together. Transocean operated the Deepwater Horizon rig with outdated software and refused to go into a dry-dock for unbelievably 9 years and went ahead to work without rest for 7 months, driving the crew and equipment into undeserved fatigue. It is also agonizing to see a company of unmatched status like BP experience two major accidents within five years; in 2005 and 2010. Billions of dollars were lost as a result of these preventable misfortunes. In short it is a suicidal attempt to ignore the recommendation of the Chief Electronic technician to undertake 390 critical repairs. The BP and Transocean management claimed to be safety-focused but never walked their talk. If the seniors had acted as requested by Mike Williams and learned from previous accidents and their causes and employ strategic methods of safety assurance, the two accidents would not have occurred. BP had an avaricious oil exploitation method that cared less about safety and concentrated on profits only. The reduction of maintenance procedures and funds only contributed to the disaster. BP should have learned from the 2005 tragedy and used it to prevent the 2010 one. Mistakes should act as learning curve.

## References

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