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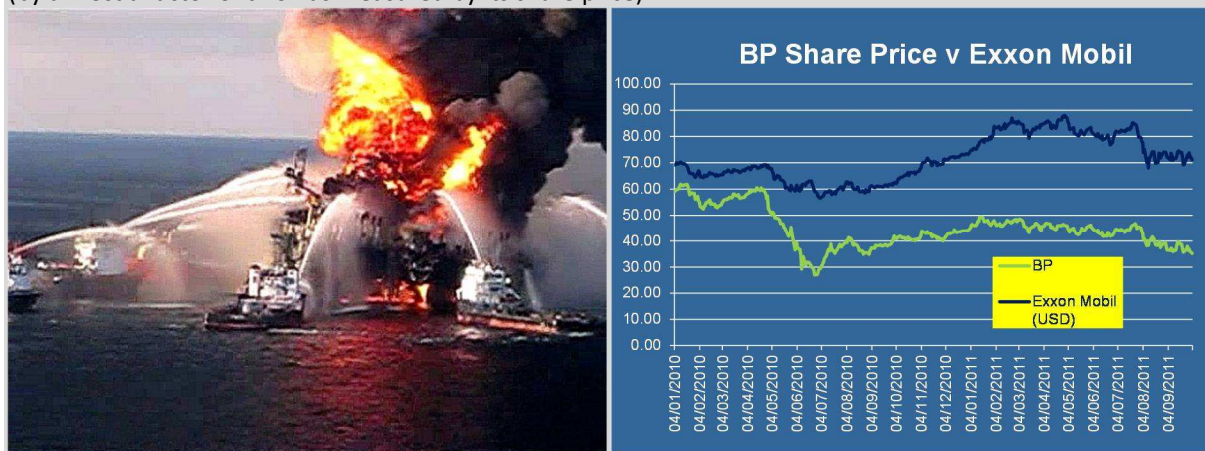
Major Hazard Management in the Oil and Chemical Industries

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Abstract

The presentation will illustrate the importance of major hazard management in the oil and chemical industries by referring to a number of past incidents and their impact in terms of injuries and fatalities, environmental damage, disruption to communities, reputation damage to company and industry, legislative reaction, and impact on business performance. As an illustration, the explosion and blowout which occurred on the Deepwater Horizon drilling rig in the Gulf of Mexico on April 20, 2010 led to the sinking of the rig, 11 fatalities and the spillage of an estimated 5 million barrels of crude oil. The impact on BP's share price – owners of the well – can be seen in the figure below. The incident led to an immediate reduction in the value of the company (by almost a factor of two - as measured by its share price).



The presentation will go on to show how the risks of major accidents can be assessed and managed by following a process consisting of

- Hazard identification
- Assessment of frequency and consequence to give a measure of risk
- Evaluation of risk and whether or not further remedial measures are required

It will introduce the concepts of the “swiss cheese” and “bow tie” models which identify the pathways for a hazard to result in damaging consequences and the barriers in place to prevent this happening. It will then go on to describe how the elements of a safety management system provide these barriers and ensure their integrity.