May 2016: Deepwater Horizon drilling rig explosion - 6 years on a report by the US Chemical Safety and Hazard Investigation Board

On April 20th 2010, the Deepwater Horizon drilling rig lost control of the well which led to a blowout. The resulting explosions and fire led to 11 fatalities, serious injuries to 17 people, the evacuation of 115 individuals from the rig, the sinking of the Deepwater Horizon and massive marine and coastal damage from an estimated 4 million barrels of released hydrocarbons.

Much has been written about the incident and the consequences. The US Chemical Safety and Hazard Investigation Board (CSB) has recently issued a report which identifies lessons learned as a result of new information available following the initial legal process and the availability of data from tests. The CSB report therefore identifies technical, human, organisational and regulatory perspectives beyond the findings of previous reports.

This article will focus on the human and organisational factors that were identified by the CSB report and how these lessons learned can be applied to any business:

1. *"Humans are critical barriers, or layers of defence, to protect against incidents"*
   Competent people with a consistent great attitude to their work are required in any organisation and the strength and limitations of their performance must be regularly checked

2. *"No effective testing, monitoring or routine inspections were in place"*
   Organisations cannot assume that their safety management system is functioning correctly and people understand and implement their roles – good supervision and regular monitoring and inspection is required

3. *"The gap between work-as-imagined by managers / designers and work-as-done by operatives must be understood and the gap minimised. Technical competency is only one aspect of an individual's performance capabilities. Nontechnical skills are necessary to prepare individuals to react appropriately and operate successfully within imperfect systems"*
   Directors and managers must understand the business and understand what happens on a normal day. Only by creating a great culture where trust is evident and honest conversations occur about the challenges workers face to deliver work safely will organisations close the gap between the imagined process and the actual performance

4. *"Imbalanced key performance indicators focussed on and rewarded personal safety performance metrics without an equal focus on process safety"*
   Personal safety statistics are a measure of performance but should not be relied upon to indicate overall safe performance. Many factors can lead to inaccurate metrics (eg poor culture leading to under-reporting of incidents / accidents); organisations need to understand the key high risks they face and focus on pro-actively preventing these occurring and not become complacent

5. *"Questions raised about corporate governance on safety issues …. rigourous corporate policies for risk management existed but implementation was not ensured"*

A safety management system that is communicated, understood, implemented and regularly checked for compliance and levels of performance are critical to achieving consistent great performance. A mindful approach by Directors and managers to 'good news' audits is required – there will always be room for improvement, good managers seek out the bad news and welcome it as an opportunity to learn and improve

6. *"The complexity of multi-party risk management led to inadequately defined safety roles and responsibilities between the client and contractor … an audit identified the interface of client and contractor safety management systems as a major issue"*
   Any interface introduces potential for mis-communication, mis-understanding, mis-interpretation, etc. Organisations must identify the relationship with contractors as a key risk and focus on management at the interface to minimise potential areas of concern

7. *"Safety culture assessments need to be conducted that address worker / management perceptions and the context as they relate to the values of the organisation, demonstrated by the actual practices carried out as opposed to written corporate policies that may not reflect actual practices"*
   Organisations need to create a culture where trust is built between management and employees such that open and honest communication occurs 'up-and-down' the organisation. A safety culture assessment is a great tool to gather data which can be used to inform discussions in small focus workshops. The outputs from the survey and discussions in workshops can be used to design and deliver a change programme to move the organisation to a more positive safety culture

The content of this article is intended to provide a general guide to the subject matter. Specialist advice should be sought about your specific circumstances.

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