The BP Oil Spill and Failures in Technical Writing

A look at where we went wrong and how to improve technical communications, by z1813822 October 20, 2018

Questions to Explore

We will be asking:

1. How does the BP oil spill demonstrate the importance of good technical writing, specifically putting proper emphasis on important safety information?
2. What principles of good technical writing were not followed which may have contributed to the disaster?
3. How can we make it more likely that readers will heed guidelines and warnings?

Summary

Timeline of Key Events

- December 1 2000, what will be BP's preparedness plan, "Regional Oil Spill Response Plan " is issued
- February 2009, BP submits Initial Exploration Plan
- June 30 2009, "Regional Oil Spill Response" is revised
- June 2009 "Regional Oil Spill Response" copyright is registered under The Response Group
- April 20 2010 BP oil spill occurs
- April 20th 2010, BP team commences research for internal investigation report
- September 8 2010, "Deepwater Horizon Accident Investigation Report" published

Graphics

20 km

Problem 1

Problem The writers did not consider their audience. They were found to “lack rhetorical strategies to counter the culture of an organization and challenge managerial decisions. The analysis indicates that the documents are writer-rather than reader-based

Outcome Workers did not have the authoritative backup needed to challenge the decisions of upper management

Suggested future response

- Have standards for length and readability. Ban fluffing tactics like adding nearly blank pages to the end of a section or using oversized headers.
- Required oil companies to have contingency plans for events specific to the given environment which may occur, and they should be distributed to everyone on board.
- Stress the authority of the manual or other document. Add a section at the beginning stating that the manual is the highest authority, the consequences of disregarding it, and outline how employees can report superiors who disregard it.
- “select rhetorical devices that consider the reader's knowledge, reading processes and styles”

Problem 2

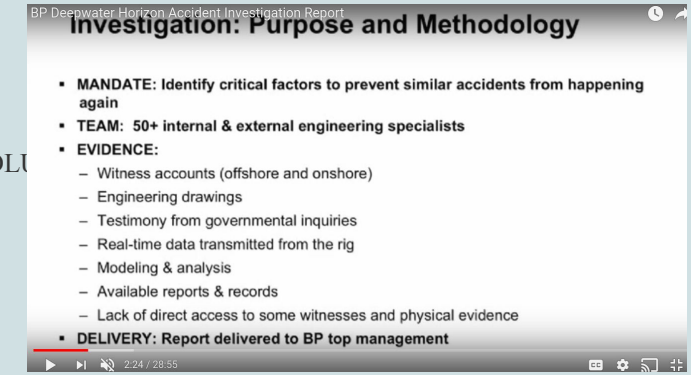
- **Problem** Inadequate information. Not specific enough to the situation. Info that did not apply to this situation was reused rather than tailoring the topics included to the specific purpose
- **Outcome** They lacked protocols for problems specific to the deep-water environment. They didn't know how to deal with a blowout
- **Suggested future response** The government should require oil companies to publish contingency plans specific to situations that could occur when operating in a certain environment, and they should review them regularly to ensure quality and honest practices

Problem 3

- Problem The potential dangers were downplayed rather than emphasized.
- Response They did not take its warnings seriously.
- Outcome The BP disaster.
- Suggested future response

1. Don’t say that something is unlikely to happen, and explain what depends on each component and what chain of events a failure may set off.
2. Make sure people know what other systems/components depend on a given vulnerable component/system and what chain of events may ensue if it gives out.
3. *Emphasize* potential dangers; never deemphasize them.

Video Analysis https://www.youtube.com/watch?v=zE_uHq36DLU



1. **Goals of investigation presented**

- A. "Identify critical factors to prevent similar accidents"
- B. "Not to apportion blame or liability, but rather to learn, find opportunities for improvement, and share lessons with others"

2. **Notes**

- "Work was limited by lack of access to some witnesses and physical evidence"
- "Not intended to serve as final word on the incident"
- Team assembled April 20th to conduct research for internal investigation report.

3. **Events leading up to incident summarized**

4. **Key findings presented**

- 17:09 "improved technical assurance, risk management, and management of change by BP personnel could have raised awareness and led to better decisions regarding acceptance and implementation of the cement proposal"

Key Images

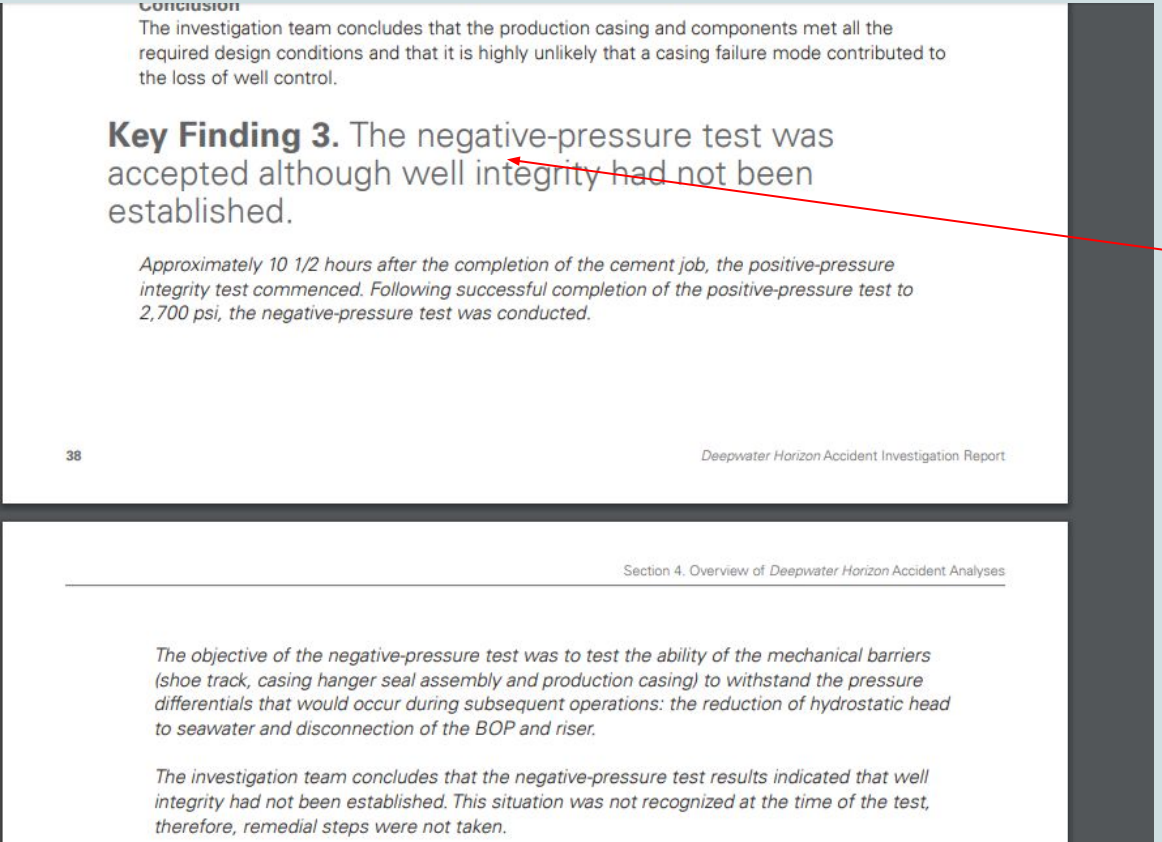
Upon reaching final well depth, five days were spent logging the well to evaluate the reservoir intervals. After the logging was complete, a cleanout trip was conducted to condition the wellbore and verify that the open hole section was in good condition. Part of this procedure included circulating bottoms up to verify that no gas was entrained in the mud. Upon achieving bottoms up, no appreciable volumes of gas were recorded, indicating that the well was stable.

On April 16, 2010, the MMS approved the procedure for temporary abandonment of the well. At the time of the accident, the 9 7/8 in. x 7 in. production casing had been run and cemented in place at 18,304 ft., and pressure testing had been completed. (Refer to Figure 3.) The rig crew was preparing for the final activities associated with temporary well abandonment when the accident occurred.

Was all this empty space

really necessary?

Key Images



Conclusion

The investigation team concludes that the production casing and components met all the required design conditions and that it is highly unlikely that a casing failure mode contributed to the loss of well control.

Key Finding 3. The negative-pressure test was accepted although well integrity had not been established.

Approximately 10 1/2 hours after the completion of the cement job, the positive-pressure integrity test commenced. Following successful completion of the positive-pressure test to 2,700 psi, the negative-pressure test was conducted.

38 *Deepwater Horizon* Accident Investigation Report

Section 4. Overview of *Deepwater Horizon* Accident Analyses

The objective of the negative-pressure test was to test the ability of the mechanical barriers (shoe track, casing hanger seal assembly and production casing) to withstand the pressure differentials that would occur during subsequent operations: the reduction of hydrostatic head to seawater and disconnection of the BOP and riser.

The investigation team concludes that the negative-pressure test results indicated that well integrity had not been established. This situation was not recognized at the time of the test, therefore, remedial steps were not taken.

Was it really necessary for the header to be

That Big?

Or did they do this just to take up space?

What We Need to Do

1. Mandate or encourage higher standards for important documentation, especially use of rhetorical strategies which will stress the authority of the document and encourage readers to both read it carefully and take it seriously.
2. Require oil companies to have preparedness plans specifically tailored to the unique needs of each operation.
3. Require oil companies to refrain from using language which downplays the likelihood of potential malfunctions and facilitate a comprehensive understanding of what systems/other components critically depend on the component in question (what will ensue if it fails).

Works Cited

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