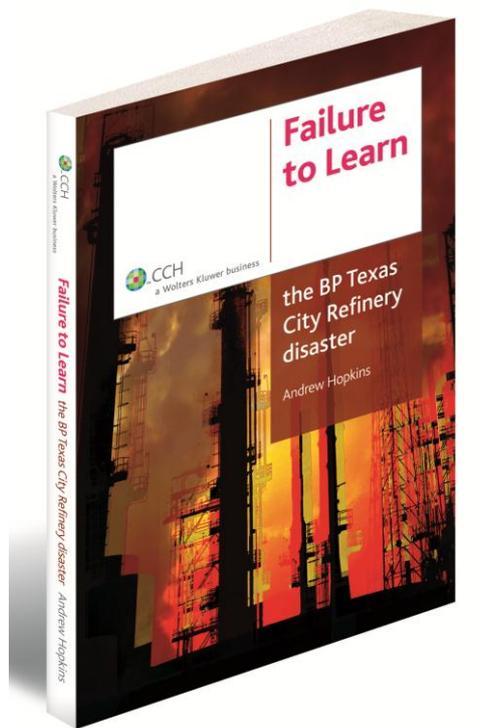


Safety Book Club

Questions for:

Failure to Learn



Prepared by Andrew Hopkins, July, 2013

Chapter 1**Introduction**

- 1 Why did the author write this book?

Chapter 2**Why did Operators do the Wrong Thing?**

- 1 According to the author, why is “why” such an important question? Can you think of any additional reasons?
- 2 Does your organisation have a culture of casual compliance? If so, why? If not, why not?
- 3 The operators deliberately overfilled the column so as to manage the risks as they understood them. Can you explain their thinking? Are you aware of other examples where people deviate from procedures so as to manage the risks as they understand them?
- 4 BPs policy was to rely on operators following procedures, rather than installing automatic cutouts (trips). What can be said about this?
- 5 Why were the operators unaware they had filled the column almost to the top?
- 6 Why did the operators ignore high level alarms?
- 7 What kinds of communication failures occurred on that day? What lessons should be learnt from these failures?
- 8 Does your organization have a fatigue management policy? If so, how effective is it? If not, should it have one?
- 9 *Start-up*
Does your organisation recognise that start up is a more dangerous time than steady state operation? If so, what does it do about the increased risk?
How does this apply to start-ups after trips?
Do your operators have start-up checklists/operational procedures which they refer to at every step?
- 10 *Over-rides (by-passes)*
Does your organisation have a procedure that authorises over-rides, that it by-passes?
If so, how much faith do you have in it?
Are field and asset leaders aware that a prolonged over-ride is an incident waiting to happen?
Do you measure the number of over-rides in place?

Is there any incentive to reduce this number?

Chapter 3

Vapour Cloud

1 *Grandfathering*

BP's policy was not to replace existing vents with flares, although its policies required that new plants be equipped with flares. This is known as "grandfathering" - allowing equipment to serve out its natural or design life, even though according to new standards it is no longer acceptable. Of course real grandfathers should be allowed to live out their natural lives, but this is more questionable in the case of physical plant.

What are the pros and cons of "grandfathering"?

Are you aware of cases of grandfathering in your organisation? How justified are they?

2 What does "continuous risk reduction" mean?

Do you think it should have applied when it came to rebuilding the vent stack?

3 *Rules*

What do you think about the author's argument that risk management should be replaced with rules, where practicable?

(A more detailed version of the argument is presented in Hopkins, A. "Risk-management and rule-compliance: Decision-making in hazardous industries", *Safety Science* 49 (2011) pp. 110–120, available from FutureMedia (info@futuremedia.com.au).

4 How is it that BP's most senior managers could say in all sincerity that they had "never refused expenditure for safety purposes"?

Chapter 4

Ignition

1 How is the risk of ignition minimised in your organisation?

2 In particular, are there rules about leaving engines idling?

If so, can you locate and examine these rules? Are they unambiguous?

Are they complied with? Why? Why not?

Chapter 5

Why so Many Deaths?

1 Identify the assumptions made by the risk engineers in arriving at the 350 feet "rule". How reasonable were these assumptions?

- 2 Why was the site-specific risk assessment *inherently* biased?
- 3 What do you think of the author's statement that:
"The best way to ensure safety in matters such as trailer siting is to devise a rule beforehand, rather than allowing decisions to be made on the basis of individual risk assessments."
- 4 What is normalisation? Can you identify examples in your own organisation?
- 5 Describe the line-in-the-sand philosophy. Can you see any way in which it might be applied in your context?
- 6 What is consequence-based decision-making? How does it differ from risk-based decision making? Can you explain how it might lead to a greater effort to "design out hazards"?

Chapter 6

Blindness to Major Risk

- 1 What is the distinction between personal and process safety?
- 2 Why does the author introduce the term "major accident hazard"?
- 3 Does the term "process safety" fit well in your organisation or would it be better to talk about major accident hazards and major accident safety?
- 4 What is wrong with using injury statistics as an indicator of how well major hazards are being managed?
- 5 According to the author, "most behavioural observation programs are unlikely to be of assistance in identifying process safety issues".
What are behavioural observation programs?
Why does the author make this claim?
- 6 There were dramatic process safety near misses at Texas City from which nothing was learnt. Are you aware of any system in your organisation for recording and learning from such events?

Chapter 7

Inability to Learn

- 1 Is the author too harsh in claiming that Texas City suffered from a learning disability?
- 2 How effectively does your organisation learn from major accidents occurring in other organisations?

Chapter 8 Cost Cutting

- 1 Why did BP let the Texas City site run down?
- 2 What is the meaning of a “flatter organisational structure”? What are the dangers of flatter organisational structures?
- 3 What is benchmarking? How did it contribute to the problems at Texas City?
- 4 How effective is computer-based training in your experience? If you have experience with simulators, what are their strengths and weaknesses?

Chapter 9 Reward Structures

- 1 In your experience, what are the consequences, both positive and negative, of including injury rate measures in bonus systems? How is your own behaviour affected?
- 2 If your company includes measures of process safety in the bonus arrangements, has it functioned as intended? Have there been unintended consequences? How is your own behaviour affected?

Chapter 10 The Problem of Decentralisation

- 1 The author says that it makes sense that major accident hazards be managed centrally, that is, by the corporate centre. Why does he say this? Do you agree?
- 2 In what way did BP’s decentralised structure disempower the voices for process safety in the organisation, in particular, the VP for HSE and the process safety manager at Texas City?
- 3 What are the pros and cons of a matrix structure? Does your organisation have such a structure? If so, what has been the experience?
- 4 Does your organisation have a system of technical or engineering authorities? How powerful are they? To what extent are they independent of commercial pressures?

Chapter 11 Leadership

- 1 Why did the Chief Executive for Refining and Marketing fail to uncover any of the problems at Texas City when he visited the site?
- 2 How could he have behaved differently?
- 3 What attitude do your leaders have to safety, and to process safety in particular? What do they do or say that gives you this impression?
- 4 What is the attitude of your leadership to bad news?

Chapter 12 Blame

- 1 What is the difference between explanation and blame?
- 2 Work through the just culture model to determine the culpability of the front line workers. Where do you end up? Was termination justified from this point of view? Why do you think BP terminated the 6 workers?
- 3 Can you distinguish clearly between accountability and responsibility?
- 4 Do you think the managers who were the subject of the accountability inquiry were at fault? Even if not, did they deserve to pay some price for what happened?
- 5 Do you agree that even though the CEO was not personally to blame for the disaster, he ought to have been held publicly to account in some way?

Chapter 13 Culture

- 1 According to the author, is “culture” best thought of as an explanation or a description?
- 2 Why is it better to think of culture as being about collective practices rather than about attitudes or values?
- 3 Why did BP’s HRO culture change program fail?

Chapter 14 Regulation

This chapter will not be relevant for most book clubs.

Chapter 15 Conclusion

- 1 This chapter identifies a wide array of factors that contributed to the disaster.
Can you select a few that you would regard as the most significant?
Why have you made this selection?
What should be done about the factors you have selected to reduce the risk of a major accident event?