**Failure to Learn – the BP Texas City Refinery disaster Notes**

Why was BP so willing to investigate its own culture and organisational structure (the Baker report) when Exxon had been unwilling after Longford in 1998? Pg 2

Due diligence – Michael emphasises it

Influencing people is the most important part – as a safety regulator (managing clients is the most important area) or as a safety engineer

All by Andrew Hopkins I think (books to read from Harit)

First 4 are hazard identification – last is how companies know they are safe

1. Failure to Learn
2. HAZOP
3. Bow-tie assessment
4. LOPA – Layer of Protection Analysis
5. QRA
6. Risk Background – R2P2 UK HSE
7. SFARP Understanding

Two types of changes can be ordered on businesses by regulators like SafeWork – admin changes or hardware changes

Harit focuses on hardware because admin will always be implemented by managers, and lots of admin (such as rules and diagrams) won’t make the operators job any easier nor safer – hardware is usually more expensive but safer in the end

Most Aus businesses aren’t big or complex like Texas City – means that they wont cost cut safety and take away safety measures as it isn’t worth the savings (they will just shut the MHF down)

How then can companies make themselves more adaptable to learn from past problems and major disasters? Pg 4

Clearly more of an emphasis now on safety culture rather than the safety of the process and what went wrong there – is this because most processes are relatively safe now and we have guidelines around them, but company culture means people are more lax and this is the cause of these disasters? Pg 7

Seems like it is very important that there is communication between operators and management at chemical plants so that the operators are accountable for maintaining best practice – is this something that has improved? Pg 13-14

It seems like BP caught themselves in a storm, where they were not implementing hardware safety solutions to cost-cut, but this should have meant that operators required closer supervision, so it would have cost money anyway. I’m assuming this still happens today, but is it to such a large extent? Pg 15

Do you try to get companies to follow the hierarchy of controls, or is it something they are often already familiar with? Pg 15

Are simulators used at all in industry to train operator how to deal with abnormal situations? Pg 20

As a bit of a sidenote, the comparison with the hypothetical ‘high-reliability organisation’ is very useful

Do you ever have issues where businesses say that they are mitigating risk and that the process is safe AFAIRP but it isn’t, and how do you get around this if the legislation doesn’t prescribe that businesses must make the changes you believe are necessary, like how BP didn’t make the changes that the EPA believed were necessary? Pg 29-30

The causes of these incidents are never straight forward – there always seems to be multiple factors that go wrong. I’m guessing that this is because they aren’t designed to break and fail straight away which is a good thing

This risk-based decision-making strategy is what is used currently (to my knowledge). Do we currently use any strategies to mitigate the problems with this strategy that the book outlines here, or is this the best method we have and we understand that very rarely it fails badly? Pg 48-49

Read and find some questions about as far as reasonably practicable on pg 49-50

Are there still issues with companies focusing too greatly on personal safety and not process safety – have they learnt from BP? Pg 51-53

Further to this, do companies use stats to drive improvement in process safety like the book recommends? Pg 54-56

Do companies hold their CEOs and other executives accountable to not compromise safety for profit and their own personal gain, and how do they do this? Pg 81-82

Do companies have different bonus schemes based on the role within the organisation? Pg 87-88

As a safety regulator, do we do, or do we have the capacity do, what is outlined on pg 89?

Do matrix organisations actually work in reality? Pg 96-97

Yes mostly, they are better than standard chain management systems – I think he mentioned that Origin have this type of structure, or a variation of it

Do any companies have their own technical engineering authority (are they big enough?)? Pg 100-101

Did BP actually learn from Texas City and did the changes to management structure and the auditing system work? Pg 101-105

Kinda, but it took the 2010 BP oil spill for them to fully realise and change

Do you think that a HRO culture would work, and has it at other businesses in the past – in the US navy it did? Pg 146-147