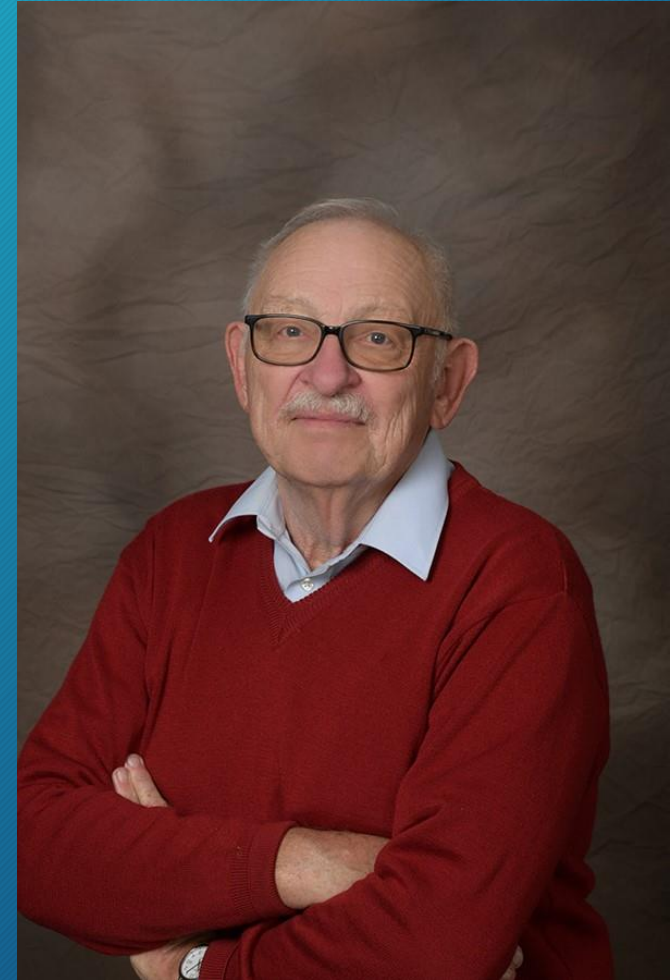


The Process Safety Professional in a Net Zero World

Hazards32

Ian Sutton
October 2022



Four Analogies

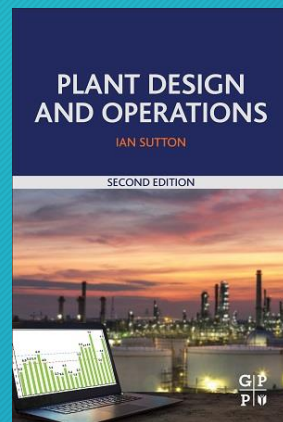
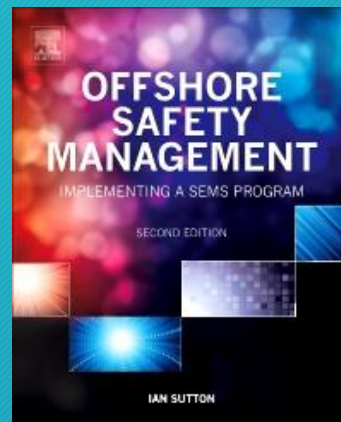
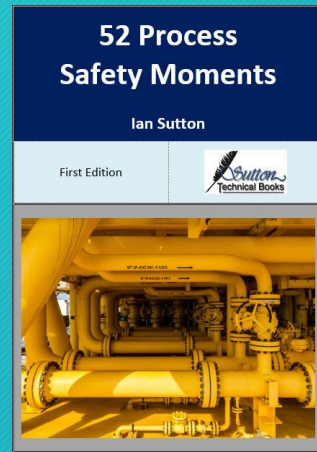
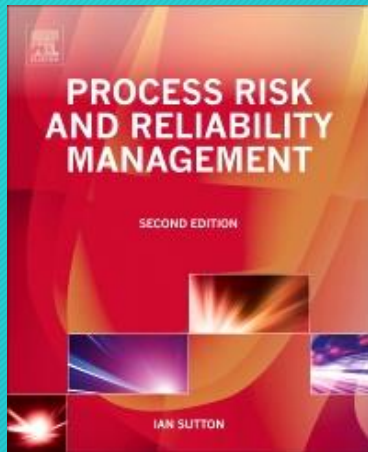
2

1. A sense that “something must be done”
2. The importance of regulations
3. Consistency of reporting
4. The use of process safety management elements



Books

3



Memory Lane

4

- Process Safety Not Going Well: Bhopal
- More Incidents
- Organization of Resource Counselors
- Piper Alpha: Safety Cases



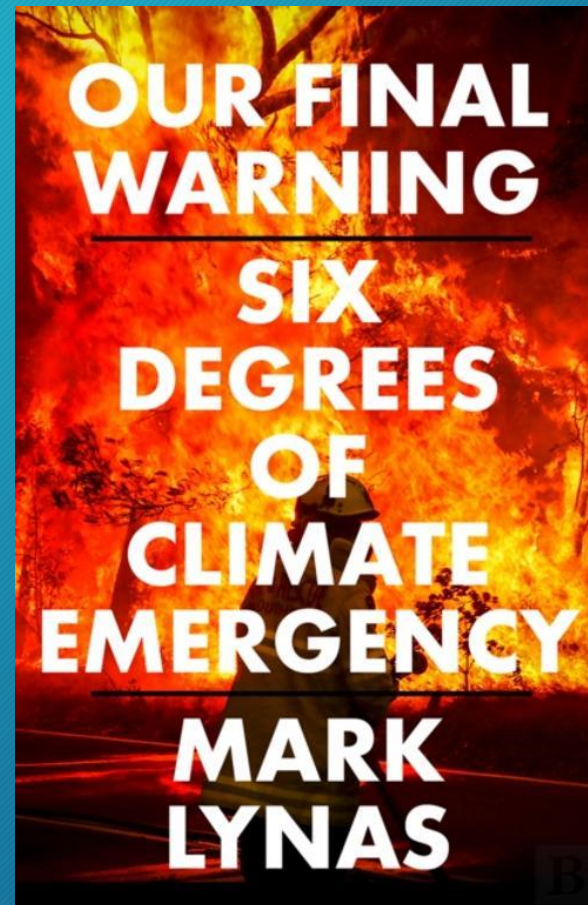
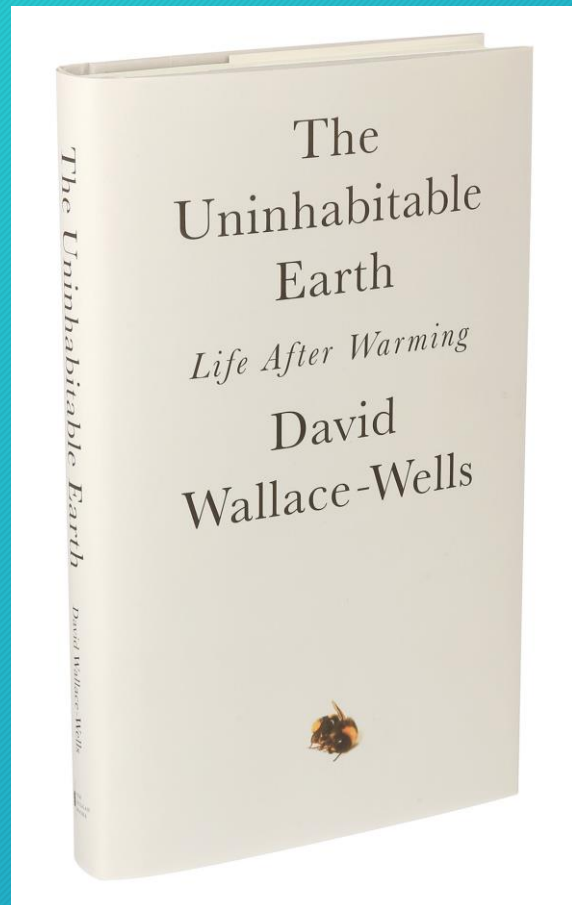
Process Safety Management

5



Analogy #1: “Something Must Be Done”

6



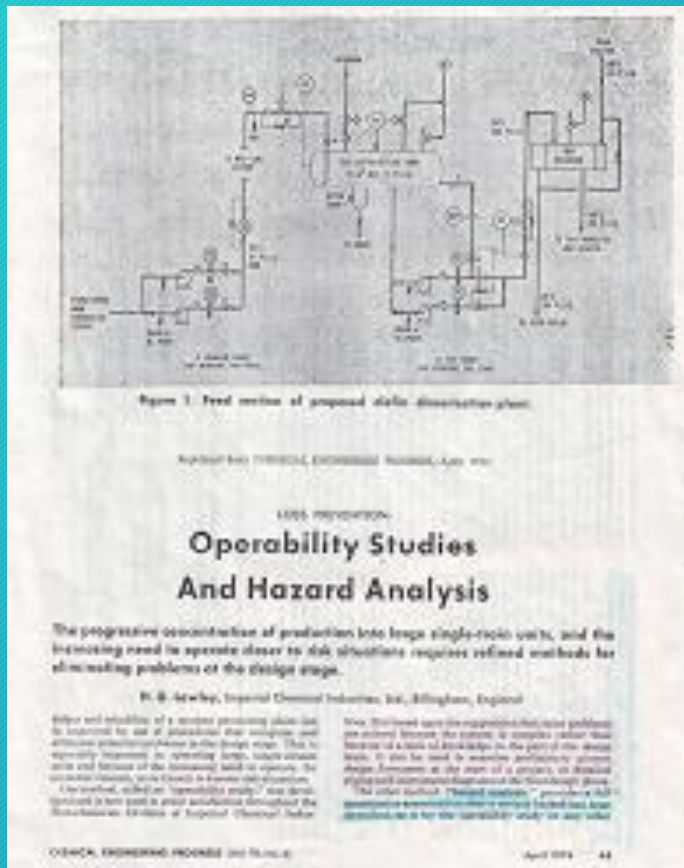
Analogy #2: Regulations

7



Analogy #3: Content and Consistency

8



Analogy #4: Management Elements

9

1. Employee Participation
2. Process Safety Information
3. Process Hazards Analysis
4. Operating Procedures
5. Training
6. Contractors
7. Prestartup Safety Review
8. Mechanical Integrity
9. Hot Work
10. Management of Change
11. Incident Investigation
12. Emergency Planning and Response
13. Compliance Audits
14. Trade Secrets



Technical Information

10



Hazards Analysis

11

		Impact →				
		Negligible	Minor	Moderate	Significant	Severe
Likelihood ↑	Very Likely	Low Med	Medium	Med Hi	High	High
	Likely	Low	Low Med	Medium	Med Hi	High
	Possible	Low	Low Med	Medium	Med Hi	Med Hi
	Unlikely	Low	Low Med	Low Med	Medium	Med Hi
	Very Unlikely	Low	Low	Low Med	Medium	Medium



Participation

12



Systems Thinking

13



- Resource Depletion (Peak Oil)
- Biosphere Loss
- Population Increase/Decrease
- Economics



1. A sense that “something must be done”.
2. The importance of regulations.
3. Consistency of reporting
4. The use of management elements.

