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CNCOHS

CN Centre for Occupational Health & Safety

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Safety Culture & Leadership Improvement

Modern day Alchemy

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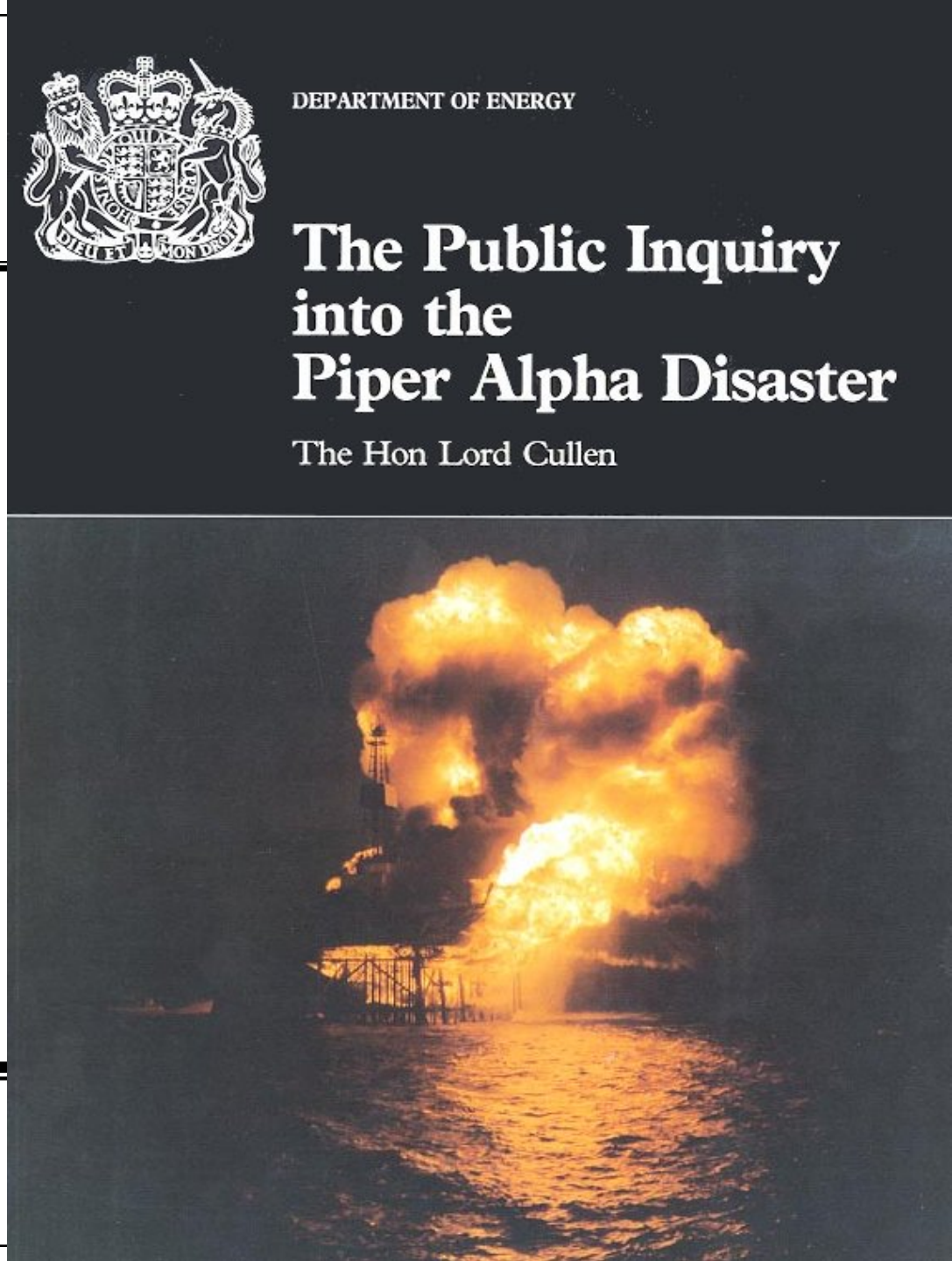
Outline

- Background
- Safety culture and leadership review
  - Integrated model of safety culture
- Cultural causes of offshore disasters
- Safety culture improvement
- Lessons from alchemy
- *i SCIN*

Piper Alpha



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Ubiquitous cause of accidents

Coast Guard slams exploded Gulf rig's owner for **'poor safety culture'**

A recent consultant's report found that the city's *injury* rate for the last few years is three times ... I suspect that a ***poor safety culture*** is to *blame*

Hospital's **poor safety culture** blamed for deaths of stomach patients

Government panel blasts **lack of 'safety culture'** in nuclear accident

LACK of a "health and safety" culture at Macclesfield Borough Council and an outdated water system at the Leisure Centre have been blamed

Report on Fatal Plane *Crash* ***Blames*** **Safety Culture ...** The report points to the airline's ***poor safety culture*** as responsible for many of the failures.

Safety culture review

- create a comprehensive framework
  - theory underpinning safety culture
  - main components of safety culture
  - attributes of a positive safety culture
- evidence of a relationship between safety culture and safety outcomes
- ways to assess or measure safety culture,
- improvement strategies


Normalization of deviance
Strong focus on safety by all
Safety systems
Level of risk
Vigilance
Encourage reporting
Complacency
Attention to employee concerns
Tolerance of inadequate systems
Diversity & redundancy of expertise
Selection & retention of safe workers
Decentralized decision-making
Training
Working conditions
Work pressure
Competence
Leadership style
Management commitment to safety
Safety is a clearly recognized value
Leadership for safety is clear
Safety is integrated into all activities
Accountability for safety is clear
Resiliency (Safety conscious environment)
Safety is learning driven
Shared values that guide decisions about what behaviours are acceptable and the desirability of different outcomes
Basic Assumptions
Artifacts
Espoused values

Safety culture and disasters

- Reviewed 17 offshore disasters to identify cultural causal factors
- 14 disasters contained cultural causes
  - Tolerance of inadequate systems and resources (identified 10 times)
  - Normalization of deviance, (identified 9 times)
  - Complacency, (identified 8 times)
  - Work pressure/ cost (identified 4 times)

Disaster prevention

- Do not view safety culture as an optional extra
- Do not tolerate self deception
- Adopt a systematic approach to safety culture improvement

Systems approach

Safety culture improvement system

Safety culture vision

- Similar to general health and safety policy
- States the desire to continuously strive to improve the safety culture in pursuit of perfection
- May include a definition of a positive (ideal) safety culture

Responsibilities

- Defines responsibility and accountability for key groups in creating and maintaining a positive safety culture
  - Managers
  - Supervisors
  - Contractor management
  - Non managerial staff
- Presents a safety culture framework

Plans and actions

- Review current practices (e.g. using safety culture improvement tool)
- Sets short and long term safety culture improvement objectives
- Specifies processes to promote a positive safety culture
- Links with other aspects of the SMS (e.g. training, incident reporting)

Sample: Commitment to safety

Managers Visiting the Worksite	**Select level**
Managers do not visit worksite to specifically discuss safety	0
Managers visit worksite regularly to discuss safety as specified by a formal policy/ program (e.g. STOP)	1
There is a formal manager worksite visit program that specifies the number of visits to be conducted by each manager and tracks completion.	2
There is a comprehensive program that specifies how to perform a worksite visit, trains managers how to conduct a visit, evaluates managers to ensure they are competent and tracks frequency of visits and close out of actions.	3
There is a comprehensive program described above plus the quality of the managers' visits is evaluated by workers and anonymous feedback is provided.	4

Assessment

- **Episodic (biannual)**
  - **Multi method safety culture assessment (e.g. questionnaire, interviews, document review)**
- **Continuous**
  - **Safety culture metrics**
    - Capturing the markers left by safety culture on daily operations (e.g. the quality of safety reports)

Audit

- Assessing the implementation of safety culture improvement processes:
  - Compliance with specified plan (e.g. leadership training plan)
- Assessing the effectiveness of the processes
  - Extent to which process met desired objective (e.g. change leader behavior)

Review and refine

- **Review**
  - **Safety culture assessment**
  - **Audit**
  - **Other safety performance information (e.g. incident reviews)**
  - **External (e.g. research, other organisations)**
- **Refine safety culture management system**

Where alchemists went wrong

- Alchemy was an applied science rather than philosophical
- Alchemists were not critical of their own theories
- They interpreted their data to fit with their theories
- It was difficult to disprove some of their theories

Modern day alchemy?

Similarities

- Importance of safety culture accepted without question
- Poorly defined
- Difficult to test causal relationship between culture and disaster
- Applied vs academic

Differences

- Much of the research is subject to peer review
- Evidence supporting parts of the causal relationship
- Research using different frameworks reaching similar conclusions (e.g. HRO's)

What can we learn from Alchemy?

- Do not accept the importance of safety culture as a given, but based on the evidence
- If new evidence emerges then be willing to change
- Continue to examine causal relationship between culture and outcomes
- Even if current theories are wrong we have identified an important dimension of safety

Conclusions

- We need to be more critical about safety culture
- Regulators have an important role in promoting a positive safety culture
- Our understanding of safety culture is changing quickly
- The offshore industry can learn from other domains

International Safety Culture Improvement Network

- Cross-industry collaborative (offshore, nuclear, construction and healthcare)
  - Create a repository of safety culture documents
  - Capture best practice
  - Develop safety culture metrics
- If interested in joining then send me an email

It won't happen to me....

When anyone asks me how I can best describe my experiences of nearly forty years at sea, I merely say uneventful. I have never been in an accident of any sort worth speaking about....I never saw a wreck and have never been wrecked, nor was I ever in any predicament that threatened to end in disaster of any sort."

Edward J. Smith
(Captain of the Titanic)

Safety culture improvement system