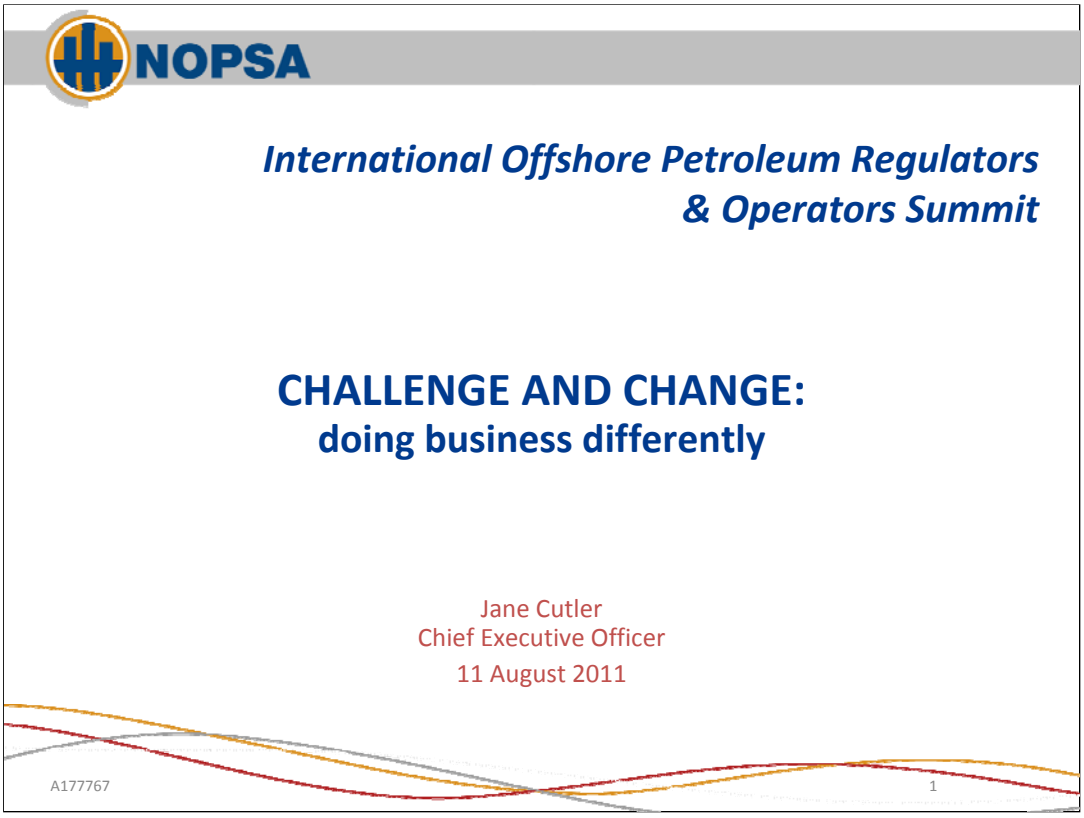
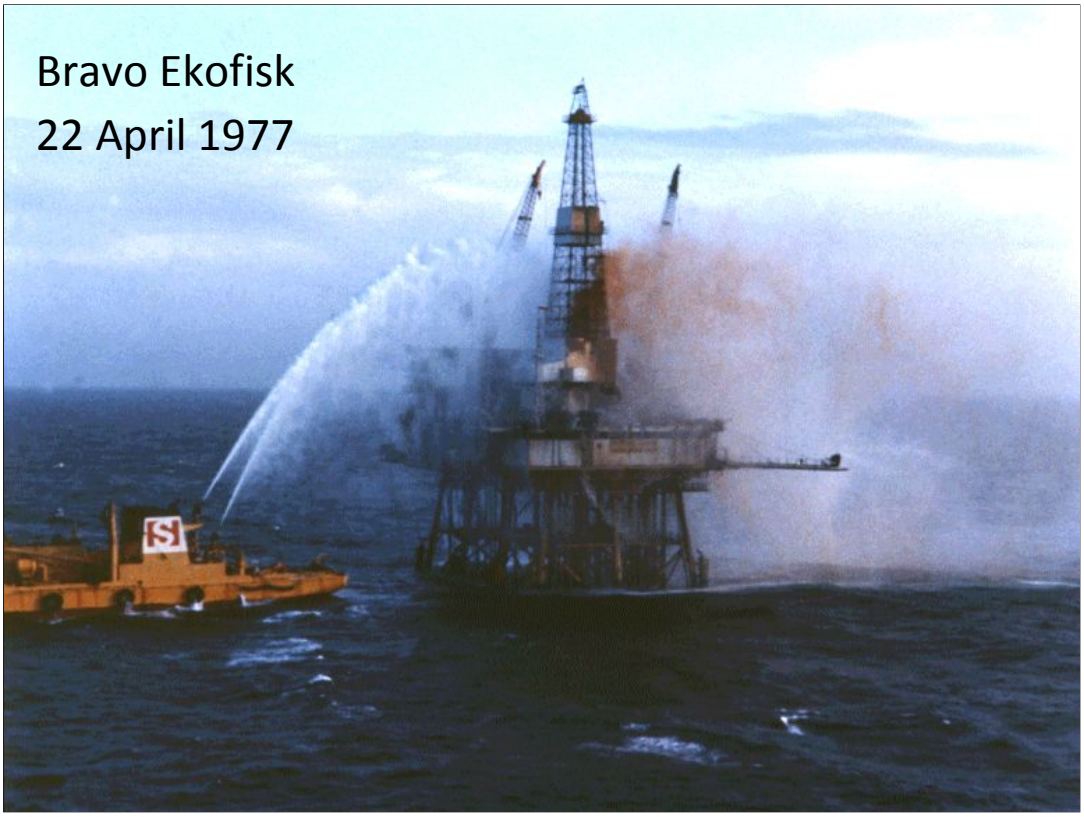


While there is general public acceptance that activities associated with the offshore petroleum industry carry inherent risks, there is also the reasonable expectation that these risks are effectively managed. Events surrounding the Montara and Macondo incidents have raised public expectations of industry and government accountability and intensified the level of scrutiny applied to the industry and its regulation.



Now for a brief tour of history …

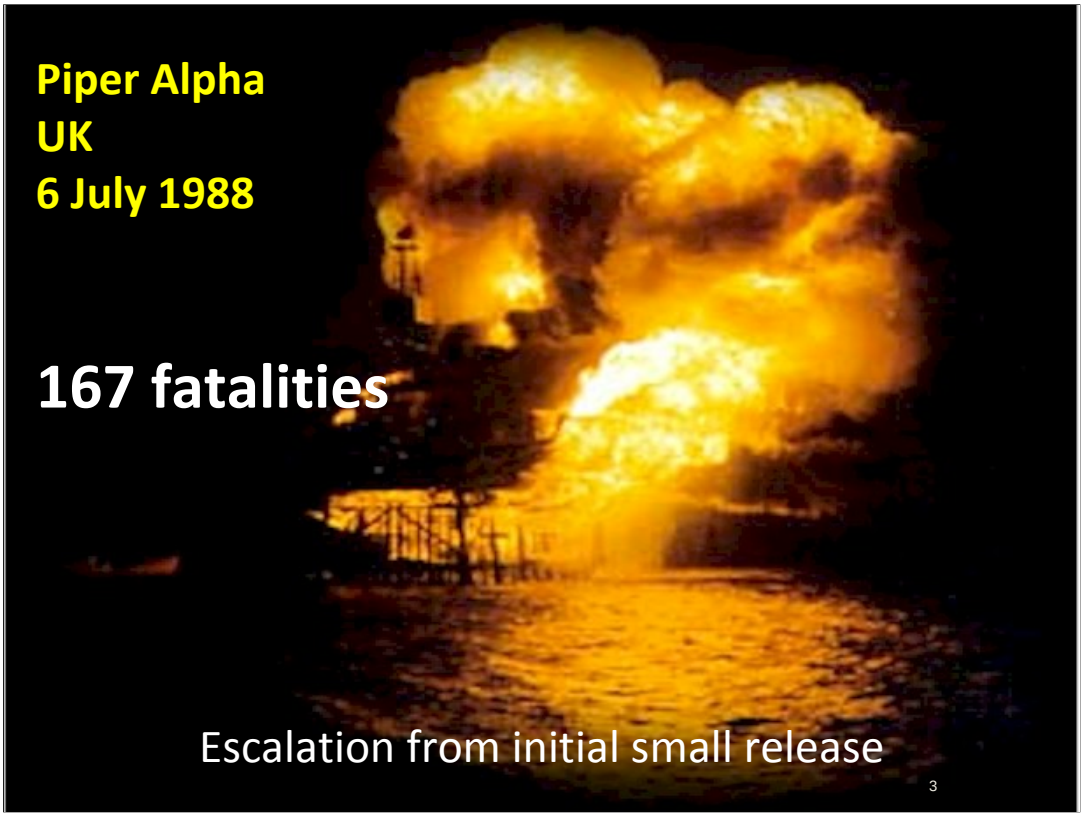
The Bravo Ekofisk blow out occurred on 22 April 1977 – there was no fire, no fatalities but 22,500 tonnes of oil were released. The Inquiry into the events highlighted lessons including:

Lesson 1 – that the risk of a major blow-out exists and must be taken into account in practical planning;

Lesson 2 – The possibility of accidents having far more serious consequences is not to be ruled out;

Lesson 3 – The human error factors were a significant contributing cause. Technological weaknesses were revealed but had only peripheral significance. The Inquiry report highlighted the underlying cause as: “organisational and administrative systems …. were inadequate in respect of the planning and management of the work, the directives for its performance, the formal routines for inspecting and reporting, detecting indications of error and effecting counter measures”; and

Lesson 4 – Measures were still to be adopted at company level and in domestic law – the incident took place when they were still in the process of implementing regulations.



Piper Alpha - UK 1988, 167 fatalities – events escalated from an initial small release, estimated to be in the order of 30-80kg (Lees).

Many lessons were drawn from the Piper Alpha disaster. At a policy level, the British Government established the Health and Safety Executive's Offshore Division, but at the operating level there are lessons for even the smallest workplace:

· Quality of safety management is critical;

· Auditing is vital;

· Safe systems of work, including permit-to-work system, need to be adhered to;

· Need for training for maintenance workers and supervisors;

· Adequate communication between all parties involved or affected by the maintenance operation; and

· Proper isolation of plant for maintenance.

March 23, 2005 explosion and fire at the facility's isomerization unit - 15 people were killed. US Chemical Safety Board investigation identified key issues including:

- Safety culture;
- Regulatory oversight;
- Process safety metrics;
- Human factors;
- Lack of supervisory oversight and technically-trained personnel during startup;
- Operator training program was inadequate; and
- Outdated and ineffective procedures did not address recurring problems.

The cause of the Montara blow-out has been extensively discussed in the last few days.

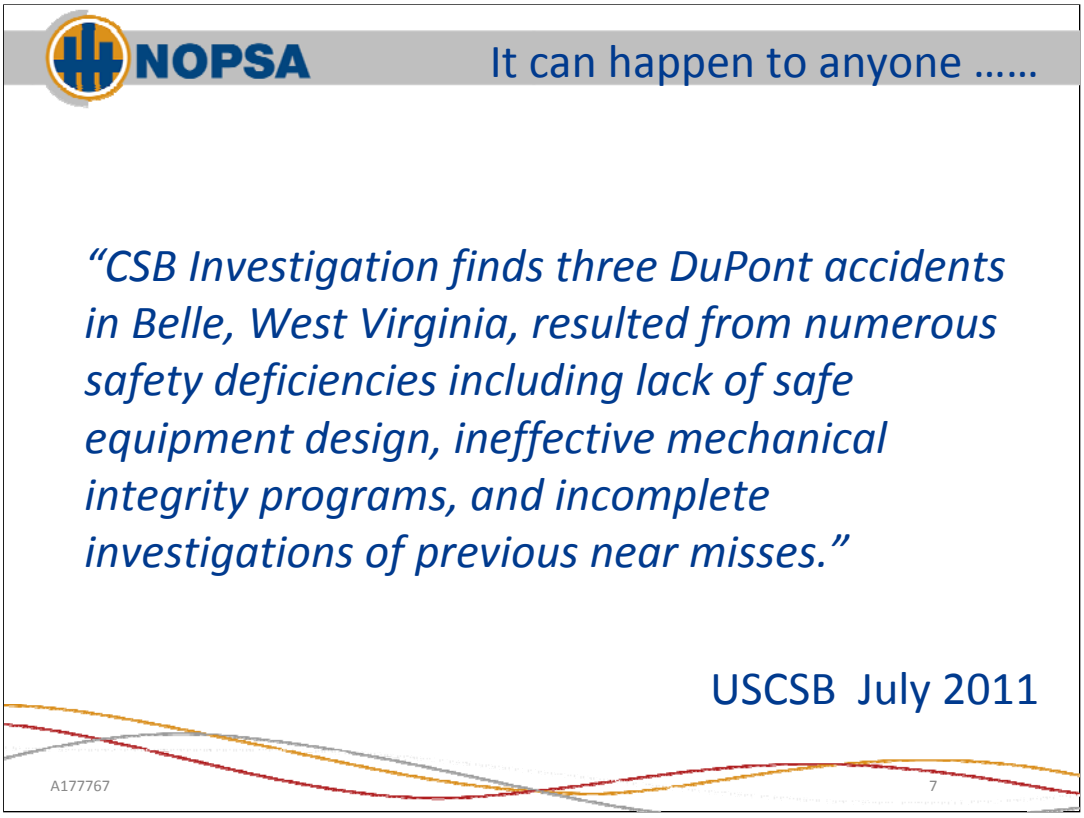
> The Montara Commission of Inquiry concluded “that PTTEP Australasia did not observe sensible oilfield practices … major short comings (in systems and processes, communications, risk management, contractor management) were widespread and systemic, directly leading to the blow out.”

As we have read the reports of the investigations and inquiries into this incident we have seen the attention paid to organisations' processes:

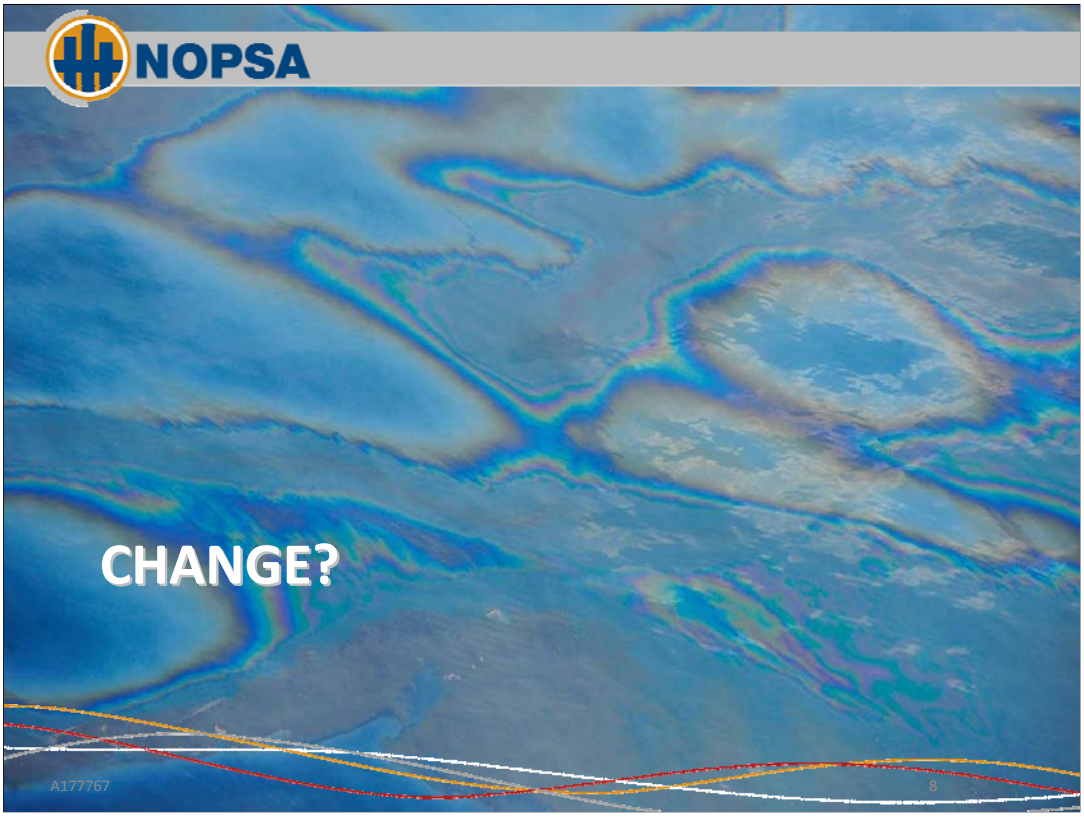
- We have learned (yet again) that 'slips trips and falls' are bad metrics to use if an organisation wants to avoid catastrophic outcomes.

- We see again that cost cutting and the tension between cost, time and safety has again contributed to the circumstances of the disaster. The need for speed can have fatal consequences.

- The importance of culture, organisation competency and capability and actually doing what you say you will do.



Headline in media release from USCSB on release of report into three serious incidents that occurred over a 33-hour period in January 2010. A worker died following exposure to phosgene. "These kinds of findings would cause us great concern in any chemical plant – but particularly in DuPont with its historically strong work and safety culture. In light of this, I would hope that DuPont officials are examining the safety culture company-wide."



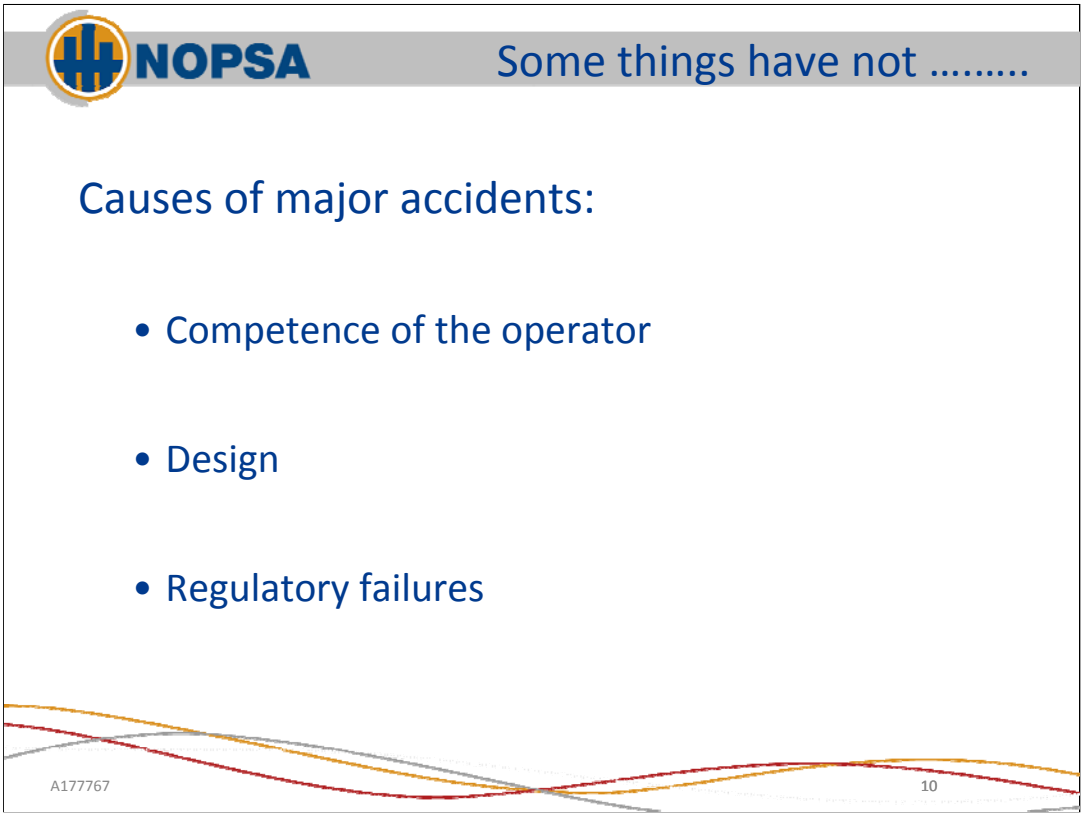
And so …

Each accident has been succeeded by another (and I could add many more incidents to this list)

Each unwinding in a way that was ‘not foreseen’ …

But the underlying causes remain eerily similar.

On an optimistic note – we know that many things have changed in the 34 years since the Ekofisk Bravo. Here is a 1977 Apple 11 – programs were entered, then saved and loaded on cassette tape. Next to it is the 2011 Apple Ipad 2. Think remote sensing, mobile phones, internet, Google, Lycra, carbon fibre …



What has not …

Stepping back from the different technical details and specifics of causation inherent in any particular accident, the parallels and the broader implications for industry as a whole are revealed. Failure to ensure that effective safety-critical barriers were in place is at the heart of nearly all of the incidents, but there is a wide range of root causes that apply equally across industry. Moreover, in both cases the causes span operational, organisational and government domains.

Key causal commonalties include:

Competence of the operator: failures to adequately verify that safety-critical barriers were effectively in place, including misinterpreting the integrity testing of such barriers and general failures of decision making, managing change, situational awareness, communication, and contractor management, safety culture.

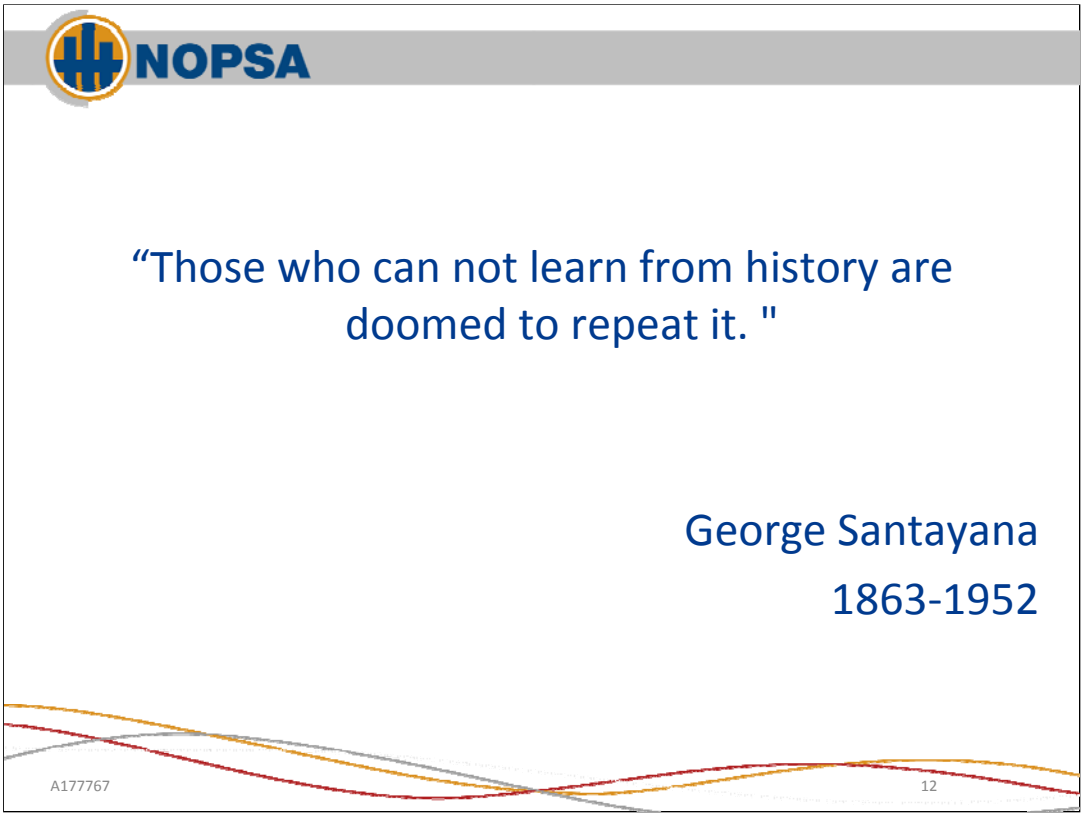
Design: design selections and design changes made on the basis of saving time and money with apparently little regard for effective risk management, ignoring internal quality standards and industry best practice.

Regulatory failures: lack of regulatory capture, independence and legislative arrangements leading to regulatory practices that favoured timely responses to operators in lieu of rigorous and effective oversight.

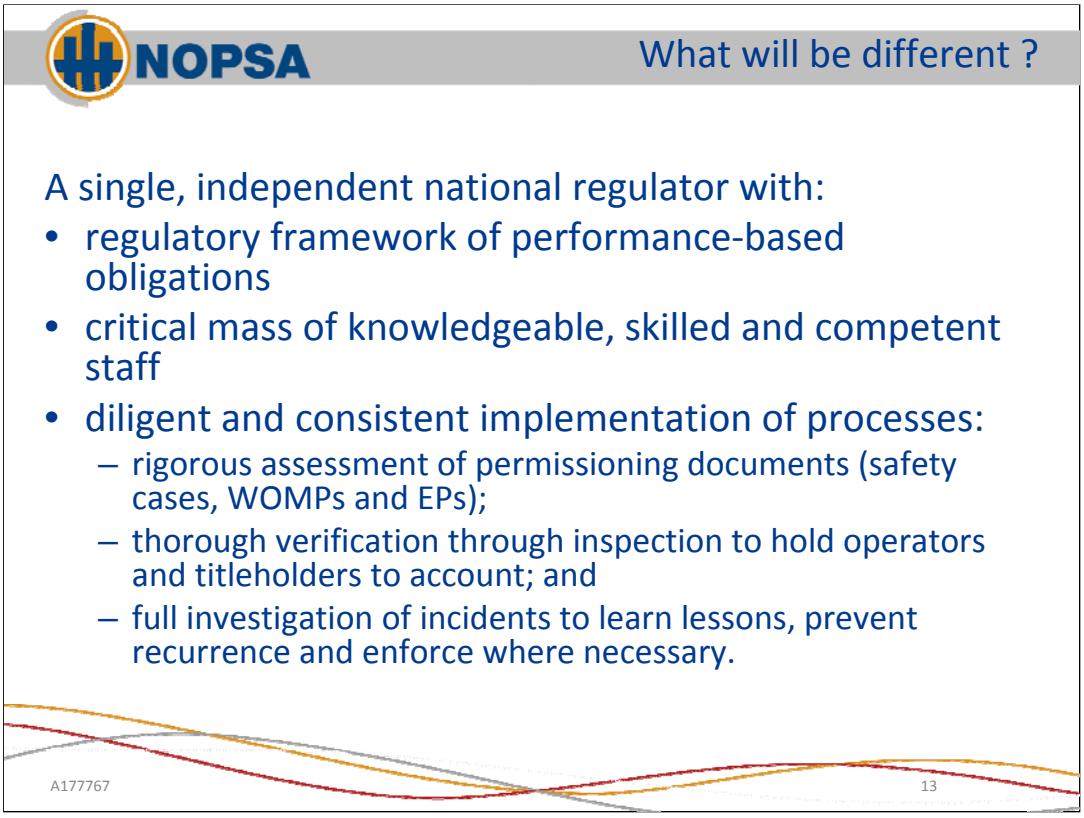
These human factors, organisational and systemic malfunctions are repeated across different industries over time.

These are all things that we as leaders, managers and technical specialists in our own organisations can and must improve.

Before going on I would ask you to pause and reflect on our first challenge – I see, understand and support efforts by industry, governments and others in the areas of capping, containment, pollution prevention and oil spill response. But it is not enough. It is only prevention of incidents and the prevention of major accident events that will keep workers in the industry safe so that they are able to return home to their loved ones. I note that of the APPEA initiatives outlined earlier only one of the four discussed is aimed at preventing the occurrence of a similar incident in the future. The others, whilst very important, are about mitigating the consequences. Whilst the current focus is drilling I would like to remind you that the underlying causes are applicable to ALL aspects of the oil and gas business.

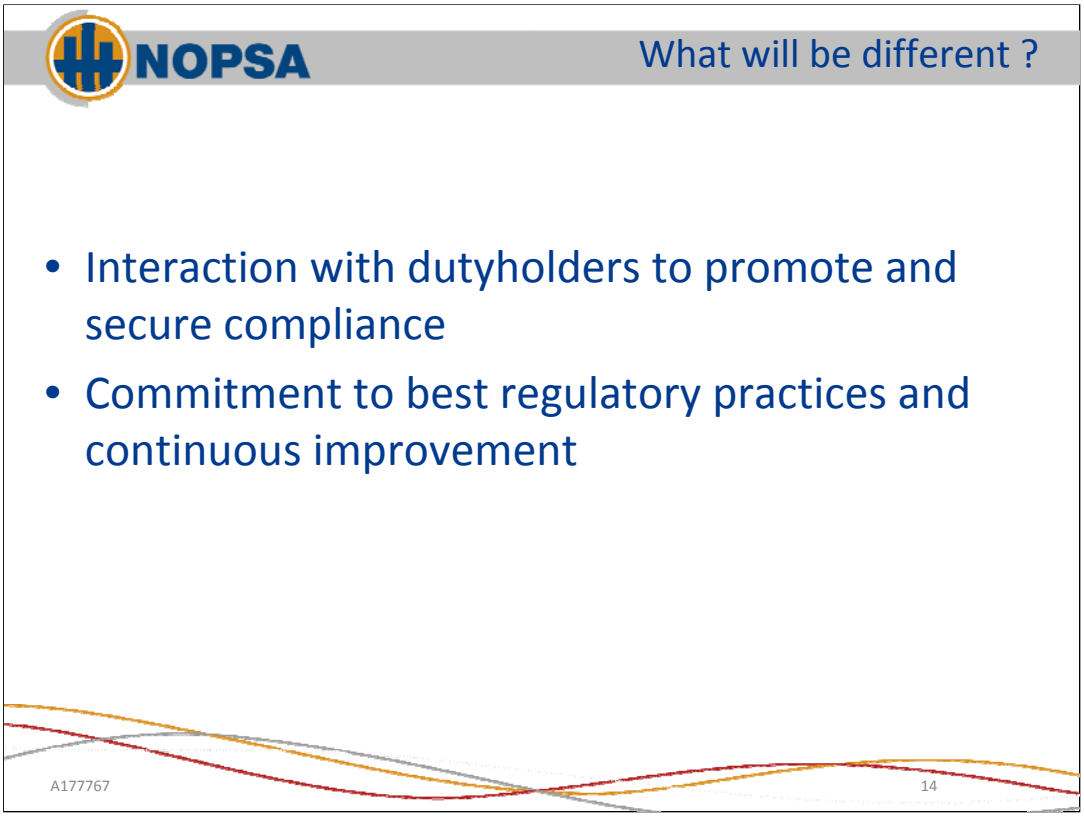


As a starting point – this insight from George Santayana seems particularly pertinent in the context of the high consequence, low frequency events that we characterise as MAEs or major accident events. Another way of looking at this is that only a fool would continue doing things in the same way and expect outcomes to be different. So WHAT is going to be different?

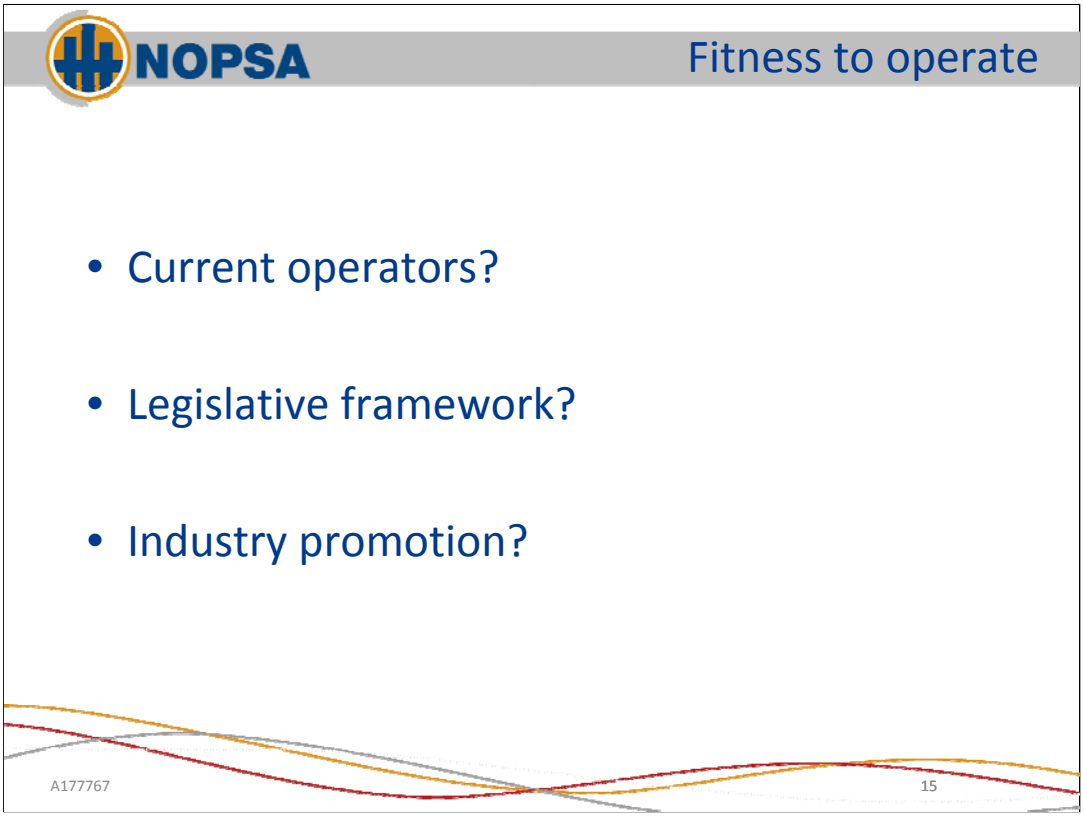


As this session focuses on regulation I will talk about the government's regulatory reform and what will be different.

[WOMP = Well Operations Management Plan; EP = environment plan]



The question that has not yet been addressed here in Australia is the question of the transparency of the regulator. The discussion this morning about sharing of experience within industry has been valuable, but there are other aspects to sharing of information and transparency. In terms of NOPSA's performance data, some information is permitted to be released but its investigation reports for example are not able to be shared. It was pointed out this morning that to regain confidence the regulator needs to be seen to do its job. I am encouraged by the passion of the morning's speakers and APPEA's pledge to approach the Minister about effecting the necessary legislative/regulatory change that would enable NOPSA to share information and insight. Diligent implementation provides the Minister and the community with the assurance that the regulator can drive improvements to industry's safety, well integrity and environmental performance through systems to prevent, and where necessary, mitigate and respond to emergencies.



Fitness to Operate

Being 'fit to operate' requires a depth of organisational capacity, capability and competence to ensure an Operator can not only profitably and efficiently conduct its business, but that it can do so with exhaustive consideration for the health, safety and environmental risks associated with its activities.

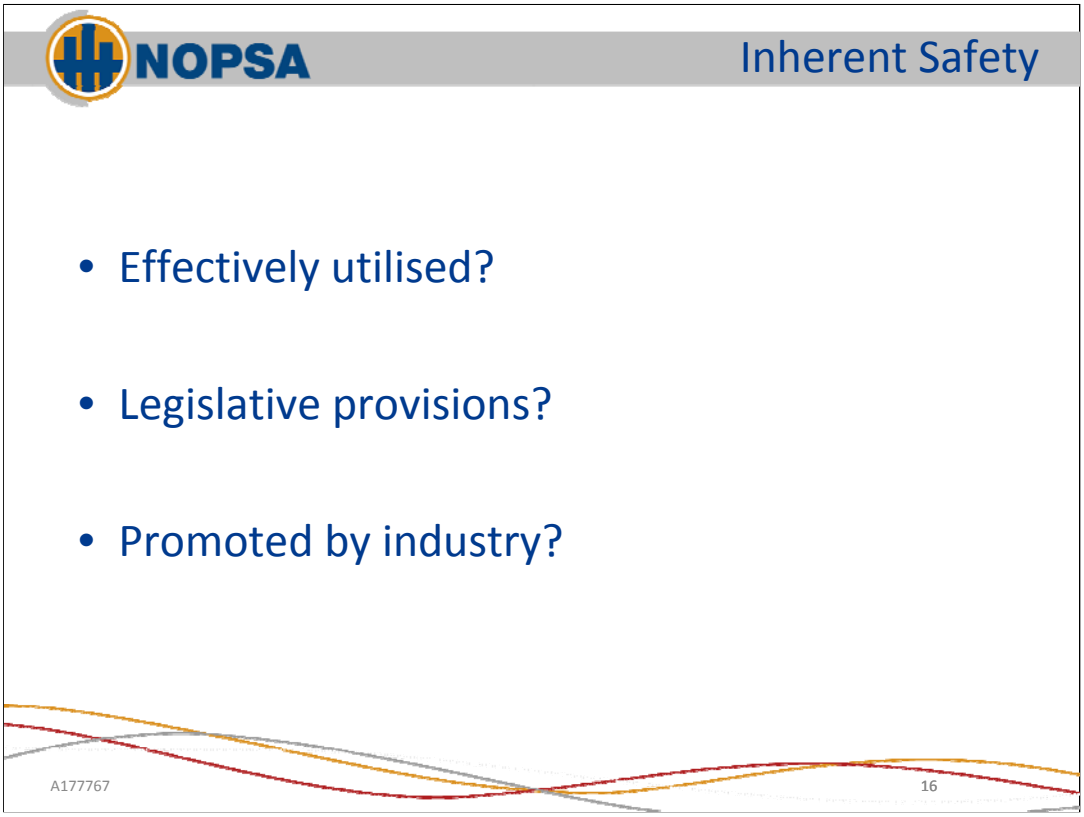
Questions we should be asking:

Are current operators fit to undertake their petroleum activities in a safe and environmentally responsible manner and is their fitness independently and objectively challenged at the time they applied to enter the regime and at every point thereafter? This is not just about financial fitness and technical record but their full cultural capacity.

Does our **legislative framework** ensure that a prospective facility operator's application to enter the regime is assessed not only on its resource management merit but also in terms of health, safety and environment?

Does our **legislative framework** provide for the means to objectively assess and make decisions about an operator's fitness at appropriate points through a development's lifecycle and do negative decisions have appropriate implications in terms of undertaking planned activities?

Does the **industry effectively promote** and support more holistic barriers to entry and periodic verification of operator fitness to ensure the long term viability of the industry and enhance public perception?



Inherent Safety

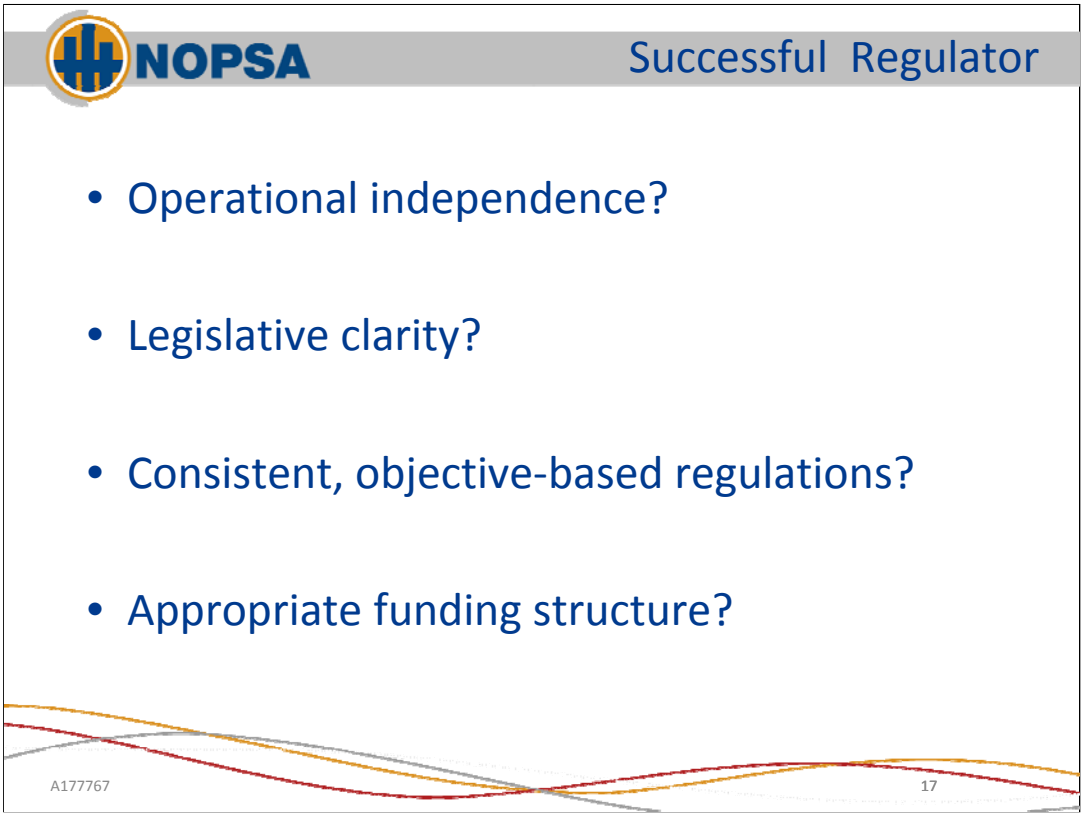
The principles of inherent safety were first formalised by Trevor Kletz in the mid 1980s as a proactive approach to risk management during design and operation. The five guidewords or principles commonly used are: elimination, minimisation, substitution, moderation and simplification.

Questions we should be asking:

To what extent are **Operators making effective** use of inherent safety both in the design of new facilities and throughout the lifecycle of facilities more generally?

Does our **legislative framework** make adequate provisions for regulators to challenge Operators' consideration of inherent safety at appropriate points in a facility's lifecycle?

Is **industry doing enough to promote** inherent safety as an element of best practice?



A Successful Regulator

Arguably the key factors that contribute to a regulator being considered 'successful' are:

Operational independence;

Legislation that establishes a clear regime, appropriate regulatory powers and imposes adequate duties on industry participants; supported by objective-based regulations to effectively monitor and enforce compliance; and

A funding structure that ensures the recruitment, retention and development of quality staff, allows for growth to match the levels of industry activity, supports an effective level of offshore compliance monitoring and enforcement, provides quality safety promotion, information and advice to stakeholders, and makes adequate provision for the regulator to keep up-to-date in order to credibly challenge industry even in an evolving legislative landscape.

Questions we should be asking:

Will the proposed legislative changes ensure appropriate **operational independence** for NOPSA's new identity, 'NOPSEMA'?

Will there be **clarity with respect to the regulated entities**, activities and the duties and obligations to manage risks?

Is there a **consistent, objective-based** approach to regulations?

Is the **funding structure adequate** to ensure the regulator is effective?

Whilst Donald Rumsfeld observed, there have always been ‘unknown unknowns’ I do not believe that the fundamental causes of accidents fall into this category. We know, and have known for decades, what the causes are but the evidence says we have not been successful in making the changes necessary. In the words of the Baker report into the Texas City disaster, “we can forget to be afraid”.

Or in the spirit of the ANZACs, we must never forget … the price of safety is eternal vigilance.

<<ENDS>>