A case for safety: A Regulator's View

Presentation to IChemE Safety Group

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• A brief history
• Vision and mission
• Legislation and legal framework
• Approach to safety regulation
• Annual offshore performance report
• 2014/15 inspection focus areas
A brief history

1988
Piper Alpha disaster, North Sea, United Kingdom

1996
Safety case regime enacted in Australia

2001
COAG review recommended single Commonwealth offshore safety regulator

2005
National Offshore Petroleum Safety Authority (NOPSA) established

2006
*Offshore Petroleum Act 2006*

2009
PTTEP AA Montara blowout, Timor Sea

2010
BP Macondo, Gulf of Mexico, United States

2011
Regulation of *well integrity*

2012
National Offshore Petroleum Safety and *Environmental Management Authority (NOPSEMA)* established

‘Polluter pays’ principle legislated (May 2012)

2014
NOPSEMA endorsed as ‘one stop shop’ for environmental approvals (Feb 2014)
Vision

Safe and environmentally responsible Australian offshore petroleum and greenhouse gas storage industries.

Mission

To independently and professionally regulate offshore safety, well integrity and environmental management.
Note: State and Northern Territory coastal waters conform more or less to the Australian continent and associated islands. Commonwealth waters extend seaward from the edge of the three nautical mile limit of designated coastal waters, to the outer extent of the Australian Exclusive Economic Zone at 200 nautical miles.
Legislation administered

Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006*

Schedule 3 – OHS law

Safety Regulations

Part 5 – Resource Management and Administration Regulations 2011 (Wells Regulations)

Environment Regulations
Australian offshore regime

• NOPSEMA established following recommendations of the Montara Commission of Inquiry

• Enforces an objective-based regulatory regime
  – Holds to account those that create the risk
  – Recognised as international regulatory best practice
  – Provides flexibility for offshore industry to drive continuous improvement in risk management
Legal framework

• ‘General Duties’ regime
• Performance-based (some prescriptive elements)
• Independent safety, integrity and environmental management authority
• Funded by levies on industry
• A duty holder’s management plan, accepted by NOPSEMA, is used as a ‘permissioning’ document:
  - Safety case
  - Well operations management plan
  - Environment plan
Objective/performance based regime

- Operator of offshore petroleum facility is responsible for safe and effective operation.
- Onus on industry to ensure and demonstrate to regulators that risks of an incident are reduced to ‘as low as reasonably practicable’ (ALARP).
- Not self-regulation by industry:
  - Industry must demonstrate to regulators.
  - Regulators must assess and accept (or not accept) that risks of an incident have been reduced to ALARP.
Regulatory functions

Monitor and Enforce

Investigate

Compliance

Promote

Advise

Improvement

Co-operate

Report

Governance
Regulatory activities

Assessment
  – Challenge operators: “Have you done enough?”

Inspection
  – Challenge operators: “Are you doing what you said you would do?”

Investigation
  – Challenge operators: “What wasn’t done? What can we learn?”

Enforcement
  – Action within powers under the Act and Regulations to secure compliance
• Facility must have a registered operator
• A safety case must be in force (accepted by NOPSEMA) to conduct activities on the facility
• Work at a facility must not be contrary to the safety case in force for the facility
• Assumption that information in the safety case is correct

• Assessment in accordance with regulations:
  – Contents requirements
  – Appropriateness (Fitness for Purpose)
  – Validation

• Revised safety case - Assessment to focus on the change
Assessment Principles

- Information contained in submissions will be treated as confidential
- Assumption that information is correct
- Assessment of submissions will be in accordance with Regulatory requirements
- Assessments will be fair and technically competent
- Consistency of methodology between assessments
- Assessment processes will be transparent
- Level of assessments will be proportional to the risk
- Good project management and quality management practices will be applied by NOPSEMA
Content and Level of Detail

• Appropriate to facility and activities
• Content & Level of detail requirements
• Self contained document
• MAE controls identified & described
• Comprehensive & integrated SMS described
• Well structured and coherent
• Demonstration of workforce involvement
Common Deficiencies

- Lack of alignment – FD, FSA and SMS
- Level of detail
- Recycled / ‘cut & paste’ submissions
- Failure to detail likelihood and consequences of each MAE
- ALARP demonstration statements that do not relate to control measures and their alternatives
- Insufficient detail in the ERP description
- Confusion between preventative and mitigative controls
- Failure to address all Safety Case content requirements
- Lack of workforce involvement
• Regulation – Not Project Facilitation

• Maintain Reputation - Personal & Organisation:
  — Integrity & Credibility
  — Professional & Ethical

• Embrace the process
  — Regulations, Policies, SOPs & Guidance
• Support & Use the Processes Positively
  – Not pre-empting procedure
  – Not undermining procedure

• Apply the legislation – NOPSEMA does not prescribe solutions
  – Appropriately formulated Assessment requests for further written information
  – In writing, following procedure.
• Interaction with Operators / Industry - Professional & Ethical

• No Coffee-Shop Regulation
  – Meeting protocols:
    Agenda, Location, Attendees, Minutes / File note
    Courtesy & Respect between parties

• Practical application of APS standards
No concurrent assessments: one revision of a safety case at any one time

Requests for further written information

  New safety case – limited to 2
    – Must allow 30 days for response
  Revised safety case – limited to 1
    – Must allow 10 days for response

Timely, unconditional decisions

Negative decisions – reasonable opportunity to change and resubmit
Critical factors for acceptable safety cases

- safety case content that is consistent with the OPGGS(S) Regulations; description with an appropriate level of detail that accurately explains the physical characteristics of the facility, its operating envelope, the activities that take place at or in connection with the facility and its technical safety-related control systems;
- a consistent, integrated overall structure to the safety case such that there is a logical flow through the assessment process with links between the causes and consequences of MAEs, their associated risks, the selection of strategies and measures to control the risks, and the performance required from specific measures to maintain risk levels to ALARP;
- description with an appropriate level of detail that explains the hazards and MAEs identified and the risk assessment conducted;
- description with an appropriate level of detail that explains the means by which the operator ensures adequacy of the design, construction, installation, operation, maintenance or modification of the facility;
- a transparent and robust argument to show that the adopted control measures reduce risk to ALARP;
- a transparent and robust provision of evidence that the SMS provides for reduction of risk to ALARP, and that it is comprehensive and integrated;
- a description of the processes by which the workforce are consulted and involved in preparation or revision of the safety case;
- consideration for interrelatedness of the information being presented; and
- implementation of appropriate referencing techniques for both SMS documents and external material the case relies on (e.g. standards, codes, data, etc.).
Standards in the regime

- Standards applied must be listed in the safety case and the operator must comply with these standards.

- Validation:
  - independent confirmation that appropriate standards selected and applied for design, construction and installation
  - part of safety case assessment

- Performance standards must be specified (e.g. for emergency preparedness)
Annual offshore performance report
Regulatory information about the Australian offshore petroleum industry

to 31 December 2013
Annual offshore performance report

Total recordable cases for mobile facilities

Total recordable cases for fixed facilities

Vessels
MODUs
Pipelines
Platforms
FPSO/FSOs
Uncontrolled hydrocarbon releases - OHS

Rate per million hours

2005 2006 2007 2008 2009 2010 2011 2012 2013

Total HC liquid releases
Total HC gas releases
Annual offshore performance report: Data analysis

• Industry needs to pay greater attention to managing the impact of different work circumstances
  – MODUs consistently account for the highest number of injuries suffered by the offshore workforce across all facility types

• Consistent incident root causes means industry isn’t putting enough focus on these areas to reduce risk
  – Design specifications, preventive maintenance and procedures

• Managing ignition sources better is critical to safety and the prevention of major accident events.
  – NOPSEMA made 113 recommendations and issued 14 improvement notices and two prohibition notices during its topic-based inspection on control of ignition sources - hazardous area equipment
## 2014-2015 Focus areas

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<th>Process Safety</th>
<th>Technical Controls</th>
<th>Performance standards</th>
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<tr>
<td>• Management of Change with focus on risk assessment (incl temporary deviations)</td>
<td>• Well Control – BOP &amp; related equipment; Primary well control; &amp; Application of well barrier policy</td>
<td>• Implementation of controls to specified performance standards</td>
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| • Asset Integrity & Maintenance Management | • Escalation / Emergency Preparedness:  
  • F&G detection  
  • ESD system integrity & integration  
  • Lifeboat operations  
  • Oil pollution emergency response plans | • Integration of developed performance standards into testing / inspection / maintenance regimes |
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• **Questions?**