OPGGSA - Safety Case

PTTEP AA SSHE Department Away Day

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What will we cover?

- Legislative Basis
- Safety Case Lifecycle Management
- NOPSEMA Assessment Policy
- Safety Case Content and Level of Detail
- Formal Safety Assessment
- Questions

Schedule 3

Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009

Petroleum (Submerged Lands) (Pipelines) Regulations 2001

Safety Case Guidance Notes
Safety Case Process in Law

- *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009, Chapter 2, Part 2, Division 1*
  - Subdivision A – Contents of a safety case
  - Subdivision B – Safety measures
  - Subdivision C – Emergencies
  - Subdivision D – Record Keeping

  - Division 2 – Submission and acceptance of safety cases
  - Division 3 – Revised safety cases
  - Division 4 – Withdrawal of acceptance of a safety case
  - Division 5 – Exemptions
  - Part 3 – Validation (Part of safety case acceptance process)
Focus of the Safety Case

The primary focus of the FSA is on the high consequence / low frequency events.

- **Risk of Major accident events (addressed in the FSA)**
- **Very high risks, should already be eliminated at design stage**
- **Minor risks**
- **Other health and safety risks**

Increasing Consequence vs. Increasing Frequency
The Safety Case in Context
“An Overview of the Safety Case Regime”
• Efficient vs Effective
• Definitions
• Involving the Workforce
• Summary of Regulatory Requirements
• Regulatory Creep
  - boxed examples
  - safety policy
  - workforce involvement
  - concordance table
Safety Case Guidance Note Map

The Safety Case in Context
“An Overview of the Safety Case Regime”
• **Core Concepts**
  – Planning – time and resources (pre-submission)
  – Operator Registration
  – Agreement on Scope of Validation
    (Note: Validation covered elsewhere)
  – Submission and Assessment Timing
  – Triggers for Revision and MOC
Safety Case Lifecycle

- **Entry to Regime**
- **Cease Operation**
- **Operator Registration**
- **Agree Scope of Validation (SoV)**
- **Validation Statement**

**Decommission**
- **Safety Case Acceptance (commence activities)**
- **Submission of Revised Safety Case**
- **Agree SoV (for modification or decommissioning)**

**30 days**
- Outdated technical knowledge
- Modification/decommissioning
- Significant change in overall risk
- Significant change in SMS
- Different Activities
- Different fluid composition in pipeline

**90 days**
- Construction/Installation/Operation
- Proposed change, request by NOPSA, or 5-yearly revision

**Exit Regime**
• **Agreement of Scope of Validation** prior to submission of a safety case
  – New safety case
  – Revised safety case (modify or decommission)
• **Validation Personnel:**
  – Competent
  – Ability
  – Access to data
to arrive at an independent opinion
Activities vs Stages in the Life

• Operator to decide what activities can be included in a stage of the life of a facility
  – Construction
  – Installation
  – Operation
  – Modification
  – Decommissioning

• There can only be **one** safety case in force at any time
Submission and Notification Timeframes

• Notification – Accept or reject or propose new timeframe
• New safety cases – 90 days
• Revised safety cases – 30 days
• Industry feedback suggests that a major safety case revision (e.g. 5-yearly revision) may take up to 2 years
Triggers for Safety Case Revision

• Change in circumstance or operations
  – Change in technical knowledge
  – Proposed modification or decommissioning
  – Proposed significant cumulative change in risk of MAEs
  – Proposed significant change in SMS
  – Different fluid in the pipeline
  – Different activities to those addressed in the safety case

• Revision on request by Safety Authority

• Revision after 5 years
  – from the date first accepted
  – from each acceptance of a 5-yearly revision
    (Note: does not include other types of revisions)
MoC and Continuous Improvement

- Changes to physical aspects of the facility can be made under the operator’s MOC system provided these don’t trigger OPGGS(S) 2.30 (change of circumstances or operations)

- Continuous improvement of the SMS can be made provided it does not change the basis on which the safety case was accepted

... otherwise revised safety case required
**Policy features:**

- Assumption that safety case is correct
- Assessment based on documentation and any RFFWI
- Assessment in accordance with regulations
  - Contents requirements
  - Appropriateness (Fitness for purpose)
  - Validation
- Revised safety cases – to focus on the change
Policy features:

- No concurrent assessments
- 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
Safety Case Assessment

• Pre-assessment
• Notification – receipt of safety case and assessment commenced
• Assessment Brief preparation (subject to RSA approval)
• Number of topic areas, MAE’s
• Team briefing and submission review
• Conduct assessment
Assessment

- Request further information, where required
- Record assessment findings
- Team Leader/RSA review of findings, results and recommendations
- Decision (accept or reject)
- Finalise assessment records
- Notify operator of decision
- Assessment review meeting (internal and/or external)
- Record items for Planned Inspection
Content and Level of Detail

The Safety Case in Context
“An Overview of the Safety Case Regime”
• Core concepts
  – Demonstration of workforce involvement
  – Appropriate to facility and activities
  – Content & Level of detail requirements
  – Standalone document
  – MAE controls identified & described
  – Comprehensive & integrated SMS described
  – Well structured and coherent
• Documentation that supports:
  – Effective involvement - safety case development
    Provided with or as part of the safety case
  – Effective involvement to enable the workforce to arrive at informed opinions about risks and hazards they are may be exposed to on the facility
    Provided for within the safety case
“The safety case must be appropriate to the facility and to the activities conducted at the facility”
• Content requirements
  – “The safety case for a facility must contain..., specify..., describe...”

• Level of detail requirements
  – “The plan must ensure....”
  – “...the procedures must include...”
  – “...the system must...”
• **Descriptions of** (for example):
  – The safety management system
  – The formal safety assessment
  – The FERA and EERA

• **Appropriate references to** (for example):
  – Actual SMS documents
  – Specific performance standards described within the safety case
• *Identified* in the description of the FSA
• *Described* the FD and SMS description
• Necessary to reduce risk to ALARP
  – Effect on risk
  – The range of controls considered
  – Limitations
  – Robustness
  – References to applicable performance standards
Description of SMS

• **Comprehensive**
  – Activities to be conducted
  – Procedural controls identified in the FSA
  – Prescribed requirements (e.g. PTW system)

• **Integrated**
  – Hierarchy and structure
  – Internal interrelationships and dependencies
  – External interfaces and relationships
Well Structured and Coherent

• Well Structured
  – Internal cross referencing
  – Avoiding duplication

• Coherent
  – Clear linkages between elements
  – Logical flow
  – Reasoned arguments
  – Sound basis
Hazard Identification

- Drawings, e.g. layout, process flow
- Previous Incidents
- Knowledge of workshop participants
  - Example of inputs

Review all inputs

HAZARD Identification Record containing the combined knowledge

Output
For each OHS Hazard

Application of cost effective control measures to reduce risk

Ongoing action to maintain integrity of control measures

Risk reduced to a level that is ALARP

Cost of further risk treatment grossly disproportionate to the reduction in risk
Performance Standards & Continuous Improvement

1. Identify MAEs
2. Establish MAE Controls
3. Perform Risk Assessment
4. Define Performance Standards
5. Verify and Monitor Compliance
6. Apply and Maintain Control Measures
7. Sustain Integrity of MAE Control Measures
8. Investigate Performance Deviations
9. Ongoing Operations and Risk Management
10. Management of Change
11. Change of Circumstances
12. Start Cycle
Questions