Overview of the EU Offshore Oil and Gas Safety Directive

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Introduction

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Topics

- Background to the Directive
- Key Obligations
- UK North Sea Transposition
Safety Moment

- Pemex Abkatum platform (April 2015, Offshore Mexico)
- Major fire
- 7 fatalities
- 45 injuries
- 301 personnel evacuated – some jumped to sea
- Fire extinguished after 16 hrs – successful isolation – but major damage
- No oil spill reported

A major accident:

*prevention and mitigation barrier failures*
EU Offshore Safety Directive

New Legislative regime to:

- Reduce occurrence of Major Accidents
- Limit consequences of Major Accidents

Risk based, goal setting, demonstration regime
Why the Directive

Europe:

- ~500 + installations (ex Norway), ~50% in UK waters
- Europe: 3 x challenges recognised:
  - Fragmented legislative regime
  - Current regulatory framework/arrangements do not provide effective response to major accidents
  - Liability regimes – responsible party may not be identifiable/able/liable to pay to remedy damage
New Major Hazard Control Basis

Several regime options proposed:

- **Option 0**: Do nothing – Commission takes no role in offshore safety and environmental protection (“baseline”)

- **Option 1**: “North Sea Basic” – all EU regions to N.Sea standard – Safety Case, inspection regime by Competent Authority

- **Option 1+**: as Option 1, + some improvements to existing EU law, consider technical capacity of applicants for licences

- **Option 2**: Comprehensive reform raising all EU (inc. N.Sea) to agreed best practice. Integrated Safety and Environmental control

- **Option 3**: as Option 2, addition of EU agency to implement
Summary

- **Option 2**: Comprehensive reform raising all EU (inc. N.Sea) to agreed best practice = Preferred
  - Most risk reduction
  - Meets most of regime measures/expectations

- Overall vision – regime similar to Option 2, reflected in the Directive
Objectives of the Directive

Regime to reduce risk – improve offshore HSE Performance

- North Sea Safety Case (SC) regime – viewed as contributing to improved safety
Key Requirements of the Directive

Report on Major Hazards (RoMH)

■ Similar to Safety Case

■ Describe Emergency Response Plans (ERP)

■ Considers impacts of Major Accidents to the environment (oil spill)

■ Reviewed, assessed, accepted by Competent Authority (CA)

■ RoMHs required for Production and Non-production (e.g. MODUs)

■ Summary of workforce involvement
Key Requirements of the Directive

Report on Major Hazards

- Description of installation, activities, wells
- Description of equipment/arrangements to ensure process safety, well control, prevention fire/explosion
- Description of Escape, Evacuation, Rescue arrangements
- Design, construction, commissioning standards
- Description Safety and Environmental Management System
- Demonstration that………

- Hazards identified
- Risks have been assessed (people and environment)
- Control measures are suitable and sufficient (Safety and Environment Critical Elements)
- Oil spill response will be effective
Key Requirements of the Directive

Typical Safety Case document structure – addressing new requirements

Part 1
Introduction
- Workforce Engagement
- Sensitive Environment

Part 2
Description of Facility and Operations
- Major Accident Prevention Policy
- Independent Verification (inc wells)

Part 3
HSE Management
- Consequences of Major Accidents to the Environment
- Appropriate Oil spill risk assessment
- Safety and Environmental Critical Elements

Part 4
Major Hazard Assessment And Control
- Internal Emergency Response Procedures
- Interface with external ERP

Part 5
Emergency Response

Part 6
Conclusion & Justification for Operations
Key Requirements of the Directive

Licencing
- Operators to demonstrate technical and financial capability
- Mandatory public participation (new exploration)

Competent Authority
- Independent
- Verify HSE provisions
- Enforcement actions/penalties
Key Requirements of the Directive

Independent Verification

- Independent opinion on critical HSE systems ("SECEs")
- Well plans

Transparency

- Sharing of Competent Authority and Industry performance data
- Protection of "whistle blowers"
- Submission of accident reports for operator overseas events – share lessons learned
Key Requirements of the Directive

Emergency Response

■ Scenario based
■ Appropriate resources available
■ Member States base national emergency plans on operator plans
■ Trans boundary
■ Periodic testing

Liability

■ Oil and gas companies will be fully liable for environmental damages.
Documentation Requirements

- Design or relocation notification for a production installation
- Report on Major Hazards for Operation of a Production Installation
- Report on Major Hazards for Operation of a Non-Production Installation
- Notification of Well Operation
- Verification Scheme
- Information related to a Material Change to an Installation
- Notification of Combined Operations
- Corporate Major Accident Prevention Policy
- Safety and Environmental Management System
- Internal Emergency Response Plan
Monitoring the Effectiveness of the New Regime

- Major Hazard Indicator Regulations (13\textsuperscript{th} October 2014)
- Operators required to submit incident data
- Submit information on details on SECEs failures – deterioration on critical controls
- Member States share performance data
UK North Sea Transposition

- Close consultation with industry
- Assessment templates prepared/available e.g.:
  - Safety Case
  - Well Ops Notification
  - SEMS
  - OPEP
- Regulator workflow processes, timescale commitments
UK North Sea Transposition

Safety Case Regulations 2015
• Additional/amended requirements of the Directive – definitions, SECEs, SEMS, CMAPP

Marine Pollution (Environmental Functions) Regulations 2015
• Implements environmental requirements of the Directive
• Oil Pollution Emergency Plan (OPEP)
• Effectiveness

Petroleum Licencing Regulations 2015
• Implements licencing requirements of the Directive
Prevention of Fire and Explosion and Emergency Response Regulations (1995)
- Amended to align to definitions
- Implements requirement to maintain inventory of emergency response equipment
- Internal/external emergency plan requirements

Merchant Shipping Regulations 1998
- Amended to align to definitions
- Non-production Installation to hold Oil Pollution Emergency Plan (OPEP)
- 5 yearly review of OPEP
- Internal/external emergency plan requirements

- Revised OPEP Guidance Issued Jan 2015

Management and Administration Regulations 1995
- Amended to align to definitions
- Safety Zones requirements moved from Safety Case Regulations
<table>
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<tr>
<th>Regulator</th>
<th>Major Accident Definition</th>
<th>Policies</th>
<th>Plans</th>
<th>Management Systems</th>
<th>Submissions</th>
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<tbody>
<tr>
<td>A new ‘Competent Authority’ will be formed, with DECC and the HSE working together under a formal agreement.</td>
<td>A Major Accident now includes the potential environmental impacts of accidents which also threaten life.</td>
<td>A Corporate Major Accident Prevention Policy must be prepared (CMAPP).</td>
<td>An ‘Internal Emergency Response Plan’ must be described in the Major Hazards Report. This includes provisions for responding to environmental and safety impacts.</td>
<td>Management systems must be in place to cover both Safety and the Environment. These must be described in the Major Hazards Report.</td>
<td>A web portal is being created, and all submissions will go through this single portal.</td>
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<td>Hazard identification and risk assessment must also include the consequences of the major accident to the environment must address both frequency and consequences.</td>
<td>The management of risk must address the adequacy of measures to protect against major accidents to the environment. (as well as safety)</td>
<td>The Verification Scheme must address both Safety and Environmental Critical Elements (SECEs).</td>
<td>The Design Notification must include information relating to the management of the environmental impacts of major accidents. (as well as safety impacts)</td>
<td>The applications for licences must now include information on the safety performance of an operator.</td>
<td>There is no change to the approval timescales, the need to do a thorough review (or the date), the need to seek approval for material changes, and the need to ensure that the Major Hazards Report is up to date.</td>
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OSDR – Offshore Safety Directive Regulator

SECES