SAFETY CRITICAL ELEMENTS AND PERFORMANCE STANDARDS

CAPABILITY STATEMENT

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MANAGEMENT OF SAFETY CRITICAL ELEMENTS

• Regulatory bodies such as Health and Safe Executive (UK), Petroleum Safety Authority (Norway) and Danish Energy Agency (Denmark) have set out the requirements for the management of Safety Barriers.

• Safety Barriers in this context implies physical or non-physical elements which prevent, control or mitigate undesired Major Accident Hazards (MAH).

• Safety Critical Elements (SCE) may form a safety barrier partly or as a whole entity.
SAFETY CRITICAL ELEMENTS

• A SCE is classified as an equipment, structure or system whose failure could cause or contribute to a major accident, or whose purpose is to prevent or mitigate the effect of a major accident.
  – Examples include emergency shut down valves (ESDV), deluge, pressure safety valves (PSV) or similar.

• Management of the identified SCEs ensures that the safety barriers are in place and functional.
PERFORMANCE STANDARDS

• When SCEs are identified, Performance Standards (PS) for each SCE needs to be defined.

• A PS is basically the performance required by the SCE for managing hazard in terms of:
  – Functionality, Availability, Reliability, Survivability and Interaction/Dependency

• Assurance and verification activities ensures that SCE meet their PS
ORS CAPABILITY

- ORS provide services for new-development projects and on existing installations. Typical activities are:
  - Identify Major Accident Hazards
  - Define Barriers
  - Set Safety Critical Element groups
  - Define Safety Critical Elements
  - Develop Performance Standards
  - Align with Preventive Maintenance Strategies
ORS CAPABILITY

• We provide following services:
  – Identification of SCEs
  – Development of SCE registers
  – Classification of SCEs in Master Equipment List (MEL) and maintenance programs (e.g. SAP-, MAXIMO based etc.)
  – Development of platform-specific Performance Standards
  – Independent verification of SCE Registers
  – Validation of Performance Standards
  – Onshore Assurance Checks for SCEs
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