| TSC Category | Process Safety Management |
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| **TSC** | Major Hazard Installation Safety Case Management |
| **TSC Description** | Develop Major Hazard Installation (MHI) Safety Cases to mitigate risks arising from major accident hazards, and reduce risks to As Low As Reasonably Practicable (ALARP) |

| TSC Proficiency Description | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 |
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| | | | ECM-PSM-3001-1.1 | ECM-PSM-4001-1.1 | ECM-PSM-5001-1.1 | ECM-PSM-6001-1.1 |
| | | | Implement hazard identification and risk mitigation measures, to reduce risks to As Low As Reasonably Practicable (ALARP), to support the development of Major Hazard Installation (MHI) Safety Cases | Establish hazard identification and risk mitigation techniques to reduce risks to As Low As Reasonably Practicable (ALARP) to develop Major Hazard Installation (MHI) Safety Cases | Evaluate Major Hazard Installation (MHI) Safety Cases against technical guidelines | Advocate Major Hazard Installation (MHI) Safety Cases |
| **Knowledge** | | | • Definitions and terms of MHI and Safety Case<br>• Principles and purpose of MHI Safety Cases<br>• Principles and definitions of ALARP<br>• Processes and procedures in developing MHI Safety Cases<br>• Definitions of hazardous substances and dangerous substances<br>• Hazard classifications<br>• Safety Data Sheet (SDS) information<br>• Types of risk mitigation measures | • Purpose of, and key elements in, developing MHI Safety Cases<br>• Concepts of major accident hazard (MAH) and major accident scenario (MAS)<br>• Principles of preventive and mitigation measures<br>• Relationships among hazards, consequences and preventive and mitigation measures<br>• Human factors in Safety Cases<br>• Elements of Emergency Response Plans (ERPs)<br>• ALARP demonstration principles and fundamental approaches | • Major accident prevention policy (MAPP)<br>• Safety and health management system (SHMS) of Safety Case<br>• Safety critical events (SCE) for ALARP demonstrations<br>• Qualitative risk assessments (QRAs)<br>• Process hazard analysis (PHA)<br>• Performance standards and indicators of MHI Safety Cases<br>• Human factors implementation roadmap (risk-based approach)<br>• Emergency Response Plans (ERPs)<br>• Considerations for selecting or rejecting risk reduction measures | • Critical success factors for implementation of MHI Safety Cases<br>• Major accidents prevention policy (MAPP)<br>• Safety and health management system (SHMS) of Safety Case<br>• Safety Case technical and assessment guides |

| Abilities | | | • Assist in the development of MHI Safety Cases<br>• Perform hazard identification<br>• Interpret information from SDS of hazardous and dangerous substances<br>• Identify and implement risk mitigation measures | • Provide technical input to the development of MHI Safety Cases<br>• Prepare information about MAH and MAS<br>• Develop preventive and mitigation measures to prevent foreseeable failures<br>• Emphasise human factors in Safety Cases<br>• Develop ERPs for MHI Safety Cases<br>• Establish factors in selecting or rejecting risk reduction measures | • Evaluate MAPP and SHMS of Safety Cases<br>• Review MHI Safety Cases in accordance with assessment guides and industry best practices<br>• Evaluate QRAs and PHAs<br>• Review the performance on the integrity of the MHI's control measures and recommend improvements<br>• Develop human factors implementation roadmap based on a risk-based approach<br>• Evaluate the effectiveness of risk reduction measures and ALARP demonstrations | • Drive a team of discipline experts in the development and implementation of MHI Safety Cases<br>• Liaise with regulators to ensure compliance with MHI regulations<br>• Integrate and demonstrate robustness of all Safety, Health and Environment (SHE) protocols to regulators<br>• Lead all Safety Case pre-receipts, submissions, interventions and assessments<br>• Endorse MHI Safety Cases<br>• Lead continuous improvement on MHI Safety Cases |
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