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| **TSC Category** | Health, Safety and Environment Management | | | | | |
| **TSC** | Safe System of Work Development and Implementation | | | | | |
| **TSC Description** | Develop Safe System of Work (SSoW) frameworks and implement practices to ensure a safe and reliable environment for operations, maintenance and contracting activities | | | | | |
| **TSC Proficiency Description** | **Level 1** | **Level 2** | **Level 3** | **Level 4** | **Level 5** | **Level 6** |
| | ECM-HSE-1003-1.1 | ECM-HSE-2003-1.1 | ECM-HSE-3003-1.1 | ECM-HSE-4003-1.1 | ECM-HSE-5003-1.1 | ECM-HSE-6003-1.1 |
| | Identify Safe System of Work (SSoW) practices in the planning, preparation and execution of work activities | Apply Safe System of Work (SSoW) practices in the planning, preparation and execution of work activities | Interpret Safe System of Work (SSoW) frameworks and practices to ensure effective implementation of SSoW during the conduct of work activities | Establish Safe System of Work (SSoW) frameworks and practices in control of operations, maintenance, contractor and other work activities | Evaluate Safety System of Work (SSoW) frameworks to ensure effective implementation for the control of operations, maintenance, contractor and other work activities | Set direction of Safety System of Work (SSoW) to meet the organisation's health, safety and environment objectives |
| **Knowledge** | • SSoW policies, procedures and practices<br>• Principles of activity-based risk assessments<br>• Permit-to-Work systems<br>• Principles of isolations and de-isolations | • SSoW policies, standards, procedures and practices<br>• Principles of activity-based risk assessments, hazard identifications and risk control measures<br>• Permit-to-Work systems<br>• Permit documentation, formats and layouts<br>• Isolation and de-isolation processes and procedures<br>• Work completion and permit close-out procedures<br>• Methods of planning, preparation and execution of work | • SSoW policies, procedures and practices<br>• Workflows and processes of activity-based risk assessments, hazard identification and risk control measures<br>• Responsibility and accountability matrices pertaining to issuing and authorising permits for work and close-out activities<br>• Standards of isolation and de-isolation processes and procedures<br>• Methods of supervising and administering SSoW policies and procedures in the workplace<br>• Principles of Simultaneous Operations (SIMOPS) and possible impacts on risk assessments<br>• SSoW audit processes | • Workplace Safety and Health (WSH) Act and subsidiary regulations<br>• Singapore Standards and Codes of Practice<br>• Organisational WSH policies<br>• SSoW procedures and practices<br>• Principles and procedures of Permit-to-Work systems<br>• Principles and steps for conducting activity-based risk assessments<br>• Principles and steps for conducting Job Safety Analysis (JSA)<br>• Principles of Safe Operating Procedures and safe isolation procedures<br>• Process equipment and systems operating parameters and isolation procedures<br>• Principles and procedures for Log-Out-Tag-Out (LOTO) | • Workplace Safety and Health (WSH) Act and subsidiary regulations<br>• Singapore Standards and Codes of Practice<br>• Organisational WSH policies<br>• Best industry practices on Permit-to-Work systems, risk assessments, Job Safety Analysis (JSA), Safe Operating Procedures, safe isolation procedures, isolation and de-isolation procedures and Log-Out-Tag-Out (LOTO)<br>• Risk management techniques<br>• Documentation control and management of the SSoW system<br>• SSoW workflows, roles and responsibilities, permit authorities and area authorities | • Workplace Safety and Health (WSH) Act and subsidiary regulations<br>• Singapore Standards and Codes of Practice<br>• Organisational WSH policies<br>• Best industry practices on WSH and SSoW frameworks<br>• Principles and scope of SSoW management and audits |



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| | | | • Methods of ensuring the effectiveness of SSoW activities and processes | • Workflow and documentation control of the SSoW system | | |
| **Abilities** | • Support the application of SSoW practices during the planning, preparation and execution of work activities<br>• Contribute to activity-based risk assessments<br>• Implement risk controls and measures<br>• Support work area preparation<br>• Support permit applications, work completion and close-out activities | • Apply SSoW processes and procedures<br>• Identify risk level categorisation<br>• Conduct activity-based risk assessments<br>• Implement risk control measures<br>• Carry out work area preparation<br>• Prepare work permits<br>• Participate in safe completion of work, sign-off and close-out | • Supervise SSoW processes and procedures<br>• Coordinate work permit applications<br>• Issue work permits<br>• Coordinate activity-based risk assessments and determine risk levels<br>• Coordinate any necessary isolation and de-isolation activities including Lock-Out-Tag-Out (LOTO) if required<br>• Coordinate and control work area preparation, work completion and close-out<br>• Ensure effective implementation of SSoW during the execution of work activities | • Establish and implement SSoW frameworks and practices including Permit-to-Work systems, risk assessments, job safety analysis, safe operating procedures, safe isolation procedures and LOTO<br>• Establish workflows and processes for SSoW practices<br>• Maintain documentation control and management of the SSoW system<br>• Support ongoing improvements to enhance SSoW practices | • Review the development and implementation of SSoW frameworks in accordance with Singapore Standards, Codes of Practice and industry best practices<br>• Review workflows and processes, documentation control and management of the SSoW system<br>• Recommend improvements to enhance SSoW frameworks and practices<br>• Guide SSoW development and audit review processes | • Endorse SSoW frameworks<br>• Set direction for WSH and SSoW frameworks<br>• Drive industry best practice standards for continuous improvement |