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| Title | **Carry out preventive maintenance procedures as part of MHP operations** |
| Level | **3** | **Credits** | **9** |

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| Purpose | This competency standard is intended for those who carry out preventive maintenance as part of MHP operations. ‘Preventive maintenance’ in this context refers to the systematic care and servicing of machinery, equipment and infrastructure by inspection, detection, and correction of early failures either before they occur or before they develop into major defects. People holding credit for this competency standard are able to: Plan and prepare for preventive maintenance; perform daily routine checks; perform preventive maintenance; and complete work. |

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| Classification ISCED | 0713 Electricity and energy |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **F1:** **Plan and prepare for preventive maintenance** | Trainee will be able to:**P1-** Obtain safety and regulatory requirements for maintenance**P2-** Interpret specifications and drawings**P3-** Identify and select tools and equipment | **K1-** Safety requirements; Specifications; Hazard identification**K2-** Drawings and symbols specifications**K3-** Tools and equipment and calibration thereof |
| **F2:** **Perform daily routine checks** | Trainee will be able to:**P1-** Check for suspended trash or material at screens**P2-** Check for water leakage or overflow**P3-** Check for sand sedimentation**P4-** Check for deformation or crack**P5-** Check for mechanical malfunction, sound, vibration, temperature, oil leakage | **K1-** Inspection requirements**K2-** Facilities and equipmentto be checked include but are not limited to:- Intake and waterway; Sedimentation basin, headrace, tailrace, fore bay; penstock; turbine; generator; load stabiliser; transformer; transmission and distribution lines |
| **F3:** **Perform preventive maintenance** | Trainee will be able to:**P1-** Remove debris**P2-** Flush out sand sedimentation**P3-** Remove sand and rocks**P4-** Reduce water intake**P5-** Remove/Replace worn or faulty components**P6-** Record maintenance procedures, and report subsequent actions | **K1-** Maintenance procedures**K2-** Hazards and risks associated with maintenance**K3-** Consequences of **not** performing preventive maintenance**K4-** Checklists and reports, and importance thereof |
| **F4:****Perform Final Check** | Trainee will be able to:**P1-** Complete work related documents and procedures**P2-** Perform final quality inspection**P3-** Clean up and store tools, equipment and materials | **K1-** Importance of quality**K2-** Waste disposal procedures**K3-** Care of tools and equipment |