

Domain**MINERAL PROCESSING****Title:****Monitor tailings dam environment****Level: 3****Credits: 8****Purpose**

This unit standard is intended for those who carry out metallurgical processing operations. People holding credit for this unit standard are able to: Prepare to measure routine tailings dam performance; demonstrate knowledge relating to the monitoring of the tailings dam environment; conduct routine performance inspection; monitor integrity of the dam; and complete duties pertaining to the maintaining of a daily logbook.

Special Notes

1. Entry information:

Prerequisite

- 1449 - *Comply with health, safety and environmental rules and regulations pertaining to processing operations*; or demonstrated equivalent knowledge and skills.

2. Assessment evidence may be collected from a real workplace or a simulated workplace in which processing operations are carried out.

3. Safe working practices include day-to-day observation of safety policies and procedures and compliance with emergency procedures.

4. Specifications refer to any, or all of the following: manufacturer's specifications and recommendations, and workplace specific requirements.

5. Performance of all elements in this unit standard must comply with relevant regulatory, legislative, workplace requirements and/or manufacturers' specifications.

6. Regulations and legislation, including subsequent amendments, relevant to this unit standard may include but are not limited to the following:

- Labour Act, No. 11, 2007
- Mineral Act, No. 33, 1992
- Mine Health and Safety Regulations, 1999
- Regulations relating to the Health and Safety of employees at work, 1997 and all industry specific regulations, legislations, code of practice, or code of conduct.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications

and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Prepare to measure routine tailings dam performance

Performance Criteria

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, explained, clarified and applied to the allocated task.
- 1.2 Safety and security requirements, including personal protective clothing and equipment are obtained from the site safety plan, workplace policies and procedures, explained, and applied to the allocated task.
- 1.3 Measuring equipment and accessories selected to carry out tasks are checked for consistency with the requirements of the job, their usability and any faults rectified or reported prior to commencement of work.
- 1.4 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.5 Work area is inspected and prepared according to workplace procedures.

Element 2: Demonstrate knowledge relating to the monitoring of the tailings dam environment

Range

Principal components may include but are not limited to logbook; Marcy scale; rain gauge; measuring cylinder; and safety devices.

Performance Criteria

- 2.1 The actions and conditions pertaining to a safe, healthy environment in monitoring the tailings dam environment are described.
- 2.2 The importance of the monitoring process is described in terms of achieving specified production requirements.
- 2.3 Hazards and associated risks are identified through relevant risk assessment procedures.
- 2.4 The principal components and the specifications of the measuring and recording process are identified and their functions described in terms of operational requirements.
- 2.5 The communication requirements pertaining to the monitoring process are described.
- 2.6 Corrective actions, in case of sub-standard conditions and problems be encountered, are described.

Element 3: Conduct routine performance inspection

Flora and fauna may include but is not limited to bird life; mammals; and native trees and vegetation.

Environmental issues may include but are not limited to drainage; dust; emissions; flora and fauna; hazardous chemicals; noise; recycling; run-off; spills; waste management and disposal; and water quality.

Performance Criteria

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 Presence and status of flora and fauna are recorded according to workplace procedures.
- 3.3 Condition of mine site parameters are checked and maintained.
- 3.4 Measuring equipment is used according to manufacturer's specifications and workplace procedures.
- 3.5 Environmental issues are identified, addressed, and reported according to workplace procedures.

Element 4: Monitor integrity of the dam

Water quality may include but is not limited to contaminants; colour change; settlings; and other changes to usual characteristics.

Performance Criteria

- 4.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 4.2 Dam wall characteristics and any sign of seepage is checked and monitored according to workplace procedures.
- 4.3 Access to decant tower is maintained according to workplace procedures.
- 4.4 Quantity of water in the dam is controlled to avoid weakening of dam structure.
- 4.5 Water table depth and water quality is visually monitored to determine source of water and integrity of the dam according to workplace procedures.
- 4.6 The dam is visually checked for depositing of unauthorised materials according to workplace procedures.
- 4.7 If necessary, corrective and/or reporting actions are taken according to workplace procedures.

Element 5: Complete duties pertaining to the maintaining of a daily logbook

Performance Criteria

- 5.1 Task-specific tools, measuring equipment, personal protective and safety equipment, are cleaned, maintained and stored for further use according to workplace procedures.
- 5.2 Good housekeeping practices are maintained according to workplace procedures.
- 5.3 Reporting and recording requirements are met according to workplace procedures.
- 5.4 Work related documents are completed according to job requirements and workplace procedures.

Registration Data

Subfield:	Metallurgy
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