

Domain**MINERAL PROCESSING**
Neutralise cyanide spillage**Title:****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: Plan and prepare for neutralising cyanide spillage; demonstrate knowledge relating to the neutralising of cyanide; neutralise cyanide spillage; and complete duties pertaining to cyanide neutralising.

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 mineral 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. Glossary of terms:

- '*Cyanide*' refers to liquid calcium cyanide and liquid sodium cyanide.
- '*Hazchem*' refers to an internationally used warning plate system for vehicles transporting hazardous substances, and on storage facilities.

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

7. 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: Plan and prepare for neutralising cyanide spillage

Performance Criteria

- 1.1 Clearance to enter the cyanide spillage area, 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 An assessment of the location and extent of the spillage is carried out in line with risk assessment practices and according to workplace procedures.
- 1.4 Equipment, tools, fuel, lubricants, attachments 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.
- 1.5 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.6 Work area is inspected and cordoned off to prevent unauthorised entry according to workplace procedures.

Element 2: Demonstrate knowledge relating to the neutralising of cyanide

Range:

Neutralising reagents include ferrous sulphate and sodium hypochlorite.

Equipment include first aid equipment; personal protective and safety equipment; cyanide antidote; oxygen; hydrogen cyanide gas monitor; neutralising reagents; hazchem information; and communication equipment.

Emergency procedures include basic first-aid treatment of cyanide poisoning; entry into confined spaces; and spillage disposal.

Performance Criteria

- 2.1 The actions and conditions pertaining to a safe, healthy work environment to the neutralising of cyanide are described.

- 2.2 The importance of neutralising cyanide spillage is described in terms maintaining the safety and health of human and animal life in the vicinity of the spillage.
- 2.3 The potential impact of the cyanide spillage on the immediate environment is described with regard to ground, air and water pollution.
- 2.4 The physical properties of cyanide and neutralising reagents are described in terms of standard chemical terminology.
- 2.5 Hazards and associated risks are identified through relevant risk assessment procedures.
- 2.6 The location of equipment essential for the safe neutralising of cyanide spillage is described in terms of operational requirements.
- 2.7 Corrective actions, in case of sub-standard conditions and problems be encountered, are described.
- 2.8 Emergency procedures to be followed in the event of cyanide spillage and poisoning are explained.
- 2.9 First aid procedures pertaining to cyanide poisoning are described according to workplace procedures.

Element 3: Neutralise cyanide spillage

Performance Criteria

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 Task-specific personal protective and safety equipment is used according to manufacturer's specifications and workplace procedures.
- 3.3 Tools and equipment are used according to the manufacturer's specifications.
- 3.4 The cyanide spillage is contained or diverted to prevent ground and water pollution.
- 3.5 Recoverable cyanide is collected and stored according to workplace procedures and supplier directives.
- 3.6 Residual cyanide is neutralised according to guidelines set out by the cyanide supplier and local authority.
- 3.7 The neutralising of cyanide spillage is consistent with environmental policies and other legislations.

Element 4: Complete duties pertaining to cyanide neutralising

Range

Housekeeping may include but is not limited to ensure the work area is ready for next user; remove work materials to designated locations; correctly identify waste and re-usable material; and remove waste and re-usable materials to designated locations.

Performance Criteria

- 4.1 Task-specific tools, personal protective and safety equipment, are cleaned, maintained and stored for further use according to workplace procedures.
- 4.2 Good housekeeping practices are maintained according to workplace procedures.
- 4.3 Reporting and recording requirements are met according to workplace procedures.
- 4.4 Work related documents are completed according to job requirements and workplace procedures.

Registration Data

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