

**Domain****MINERAL PROCESSING****Title:****Operate and monitor a dust collection  
plant****Level: 4****Credits: 15****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 to operate a dust collection plant; demonstrate knowledge relating to the operating and monitoring process; operate dust collection plant; test plant operation; analyse dust collection plant faults; monitor and inspect plant; and complete duties pertaining to the operating and monitoring process.

**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](http://www.nta.com.na).

## **Elements and Performance Criteria**

### **Element 1: Plan and prepare to operate a dust collection plant**

#### **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 Plant inspection and field preparation for service are carried out according to workplace procedures.
- 1.4 Plant operational prerequisites are established according to workplace procedures.
- 1.5 Sequence for recommissioning of plant is determined to suit existing circumstances in according to workplace procedures.
- 1.6 Communication methods are determined according to workplace procedures and manufacturer's requirements.
- 1.7 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.8 Work area is inspected and prepared according to workplace procedures.

### **Element 2: Demonstrate knowledge relating to the operating and monitoring process**

#### **Performance Criteria**

- 2.1 The occupational safety and health and risk management requirements are explained.
- 2.2 The importance of monitoring the dust collection process is described in terms of achieving specified production requirements.
- 2.3 The security requirements and emergency procedures pertaining to the dust collection process are explained.
- 2.4 The communication requirements pertaining to the dust collection process are described.

- 2.5 The process flow and interlock systems of the dust collection process are described in terms of operational requirements.
- 2.6 The operating procedures, parameters and control methods of the dust collection process are explained in terms of workplace and legislative requirements.
- 2.7 Corrective actions, in case of sub-standard conditions and problems be encountered, are described.

### **Element 3: Operate dust collection plant**

#### **Performance Criteria**

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 Plant is operated in accordance with workplace procedures and manufacturer's specifications.
- 3.3 Plant is monitored and observed to detect deviations from routine operating conditions.
- 3.4 Corrective actions, in case of sub-standard conditions and problems be encountered, are taken according to workplace procedures.

### **Element 4: Test plant operation**

#### **Range**

Tests may include but are not limited to motor direction checks; stand-by plant "cut-in" tests; performance tests; and alarm initiation tests.

#### **Performance Criteria**

- 4.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 4.2 Tests are performed according to workplace procedures and manufacturer's requirements.
- 4.3 Plant is observed for correct operational response.
- 4.4 Corrective action is taken when response is not in accordance with documentation, plant integrity or personnel safety requirements.
- 4.5 Plant is returned to required operational status upon completion of test.

### **Element 5: Analyse dust collection plant faults**

#### **Performance Criteria**

- 5.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements
- 5.2 Causes of abnormal plant operating conditions are identified by analysing the technical and operational information in a logical and sequential manner according to workplace procedures.
- 5.3 Corrective action is taken according to workplace procedures.
- 5.4 Plant integrity and personnel safety is maintained through consultation with appropriate personnel, and with reference to plant, technical and operational documentation according to workplace procedures.

**Element 6: Monitor and inspect plant**

**Performance Criteria**

- 6.1 Plant is inspected and monitored for normal operation or for detecting deviations according to workplace procedures.
- 6.2 Corrective action is taken, as required, according to workplace procedures.

**Element 7: Complete duties pertaining to the operating and monitoring process**

- 7.1 Good housekeeping practices are maintained according to workplace procedures.
- 7.2 Reporting and recording requirements are met according to workplace procedures.
- 7.3 Work related documents are completed according to job requirements and workplace procedures.

**Registration Data**

<b>Subfield:</b>	Metallurgy
<b>Date first registered:</b>	28 September 2016
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<b>Body responsible for review:</b>	Namibia Training Authority