



Australian Government

Department of Education, Employment and Workplace Relations

RIIPHA302A Operate and monitor filter processes

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the operation and monitoring of filter processes in the metalliferous mining industry. It includes preparing for filtering processes, starting up equipment in sequence, operating and monitoring equipment, and shutting down in sequence and/or isolating equipment. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for <i>filtering</i> process	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Plan and prepare work 1.3. Receive, interpret and clarify shift changeover details 1.4. Communicate with other personnel 1.5. Check and test remote control and monitoring systems for correct operation 1.6. Select appropriate type of auxiliary equipment for work activities and check for availability 1.7. Identify, address and report potential risks and hazards 1.8. Identify, address and report environmental issues 1.9. Follow emergency procedures to ensure safety of personnel and plant 1.10. Use approved dust suppression and extraction methods 1.11. Ventilate work area before entry
2. Start-up equipment in sequence	2.1. Carry out start-up checks and procedures according to plant configurations and system requirements 2.2. Confirm plant readiness for operation
3. Operate and monitor equipment	3.1. Take and interpret data from indicator readings to determine filtering efficiency 3.2. Continuously monitor plant and identify defects and potential problems 3.3. Adjust equipment to approved operating parameters to optimise performance, maintain efficient filtering and to meet product quality targets 3.4. Control feed to equipment 3.5. Monitor moisture in cake and density of filtrate 3.6. Monitor cleaning processes 3.7. Monitor and maintain air systems to specified moisture parameters 3.8. Maintain cleanliness of pressure/vacuum

	systems 3.9. Complete all required documentation clearly, concisely and on time 3.10. Pass on end of shift information to oncoming shift
4. Shutdown in sequence and/or isolate equipment	4.1. Clear slurry from filtering circuit after commencing shutdown 4.2. Check and clean filter chamber and changes failed <i>filter</i> components 4.3. Shutdown or isolate equipment based on process and safety requirements 4.4. Perform post shutdown or isolation checks 4.5. Pass on shift change-over details to oncoming shift

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to operate and monitor filter processes:

- apply legislative, organisation and site requirements and procedures for operating and monitoring filter processes
- change filters
- identify hazards
- interpret reports,
- report defects
- apply safe work practices

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to operate and monitor filter processes:

- air systems plant and configuration
- contaminant identification
- emergency procedures
- environmental procedures
- filter plant configurations and functions
- filter plant operation
- plant and equipment limitations and operating parameters
- plant and equipment safety requirements
- filtering procedures
- hazardous goods procedures and consequences of spills
- troubleshooting techniques
- isolation procedures
- metallurgical and technical data (basic)
- OHS procedures
- operational procedures and checks
- site procedures
- site safety requirements
- ore characteristics
- confined space entry procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for operating and monitoring filter processes • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of filter processes operation and monitoring • working with others to undertake and complete the operation and monitoring of filter processes that meets all of the required outcomes • consistent timely completion of filter processes operation and monitoring that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those

	required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the operation and monitoring of filter processes
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant compliance documentation may include:	• legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Monitoring systems may include the checking of:	• air systems • blockages and spillages • feed rates • filters • levels of ponds and catchment areas • mineral content • overloads • power draw • pressures • temperatures • wear and tear
Auxiliary equipment may be anything that is portable and mobile that is not part of the fixed infrastructure, and may include:	• belt weighs • distribution control systems • gantry cranes and attachments and other mobile equipment • hand and power tools • hoses (water and air) • pump systems
Environmental issues may include:	• drainage • dust (dump) • emissions • flora and fauna • hazardous chemicals • noise • recycling • run-off

	• spills • waste management and disposal • water quality
Start-up checks and procedures may include:	• availability of equipment • detection of conditions that are unusual • job requirements • personnel availability • walk through plant • communications • air systems • cameras and monitors • checking interlocks • checking distribution control system (DCS) • chutes • display instruments, lights and gauges • equipment stop engine lights • filters • hydraulic system • isolations • lighting • suppression systems • valves
Indicator readings may include:	• current • flow • levels • pressure • time • speed • unusual noises • vibrations
Filtering may include:	• candle • drum • pressure • compression • leaf • hyperbaric
Cleaning methods may include:	• degreasing • forced air • hosing with water
Post-shutdown may include:	• actions similar to start-up checks and procedures

Unit Sector(s)

Processing

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.