RIIPRO302A Perform process control room operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the performance process control room operations in the mining and extractive industries.   It includes: planning and preparing for operations; performing start-up operations; monitoring and managing operations; conducting housekeeping activities; shutting down in sequence and/or isolating plant and equipment.

Application of the Unit

This unit is appropriate for those working in processing plant operator roles, at worksites within:

- Coal mining
- Extractive industries
- 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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply **compliance documentation** relevant to the performance process control room operations
	1.2. Receive, interpret and clarify shift changeover details
	1.3. Establish and maintain communications with other **personnel** using approved communication methods
	1.4. Select personal protective equipment appropriate for work activities
	1.5. Identify, address and report potential risks and hazards
	1.6. Complete computer systems and **equipment** pre-start checks
	1.7. Identify, address and report **environmental issues**
	1.8. Check records and record outstanding maintenance inspections and identified defects
2. Perform start-up operations	2.1. Confirm plant readiness for operation
	2.2. Carry out **start-up checks** and procedures according to plant configurations and system requirements
	2.3. Start-up individual plant and process and entire system
	2.4. Build production rate steadily with no surges and lulls
	2.5. Stabilise plant operation to meet process output and quality requirements
3. Monitor and manage operations	3.1. **Monitor** and manage processing utilising appropriate indicators for safe and efficient operations
	3.2. Read and interpret data from **equipment indicators**, programmable logic and SCADA, and take action where required to maintain operations according to operating parameters
	3.3. Identify, manage and report faults to appropriate personnel in a timely manner
	3.4. Coordinate support personnel to ensure

	continuity of process
	3.5. Manage material flow within specified parameters
	3.6. Respond to alarms to, investigates conditions, and takes corrective action
	3.7. Complete all required documentation clearly, concisely and on time
	3.8. Pass on shift changeover details to oncoming shift
4. Conduct housekeeping activities	4.1. Maintain and *clean* control room ensuring work area is free of obstructions
	4.2. Report hazards to maintain a safe working environment
5. Shutdown in sequence and/or isolate plant and equipment	5.1. Shutdown or isolate plant and equipment based on process or safety requirements
	5.2. Perform post *shutdown* or isolation checks

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 in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to perform process control room operations:

- apply legislative, organisation and site requirements and procedures
- identify hazards
- handle hazardous goods
- interpret plans, reports, specifications
- apply operations monitoring techniques
- apply problem solving techniques
- apply defects reporting procedures
- apply safe work practices
- use computer and database management systems
- apply operational safety requirements
- access, interpret and apply technical information
- applying the plant operating procedures
- apply production and equipment records maintenance requirements
- apply diagnostic techniques
- work wearing personal protective equipment

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to perform process control room operations:

- colour codes (e.g. pipes)
- contaminant identification
- emergency procedures
- environmental procedures
- equipment processes, limitations and operating parameters
- *distribution control system* operation
- equipment safety requirements
- function of plant
- hazardous goods procedures and consequences of spills
- identifying repair requirements
- isolation procedures
- metallurgical and technical data (basic)

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- occupational health and safety procedures
- operational procedures and checks
- optimal plant capacity and throughput
- physical layout of plant
- shutdown procedures
- site procedures
- site safety requirements
- start-up and shutdown procedures
- wet and dry working 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 performing process control room operations • implementation of requirements, procedures and techniques for the safe, effective and efficient performing of process control room operations • working with others to undertake control room operations that meet all of the required outcomes • consistent timely performing of process control room operations 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. • 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

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	language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • 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
	    • consistently achieving the required outcomes
	• first hand testimonial evidence of the candidate's:
	    • working with others to perform process control room operations

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, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Personnel may include:	• operators • transport • maintenance • plant attendants
Equipment may include:	• communication devices • computers and database management system accessories • desks and chairs • monitors • power controls • touch pad
Environmental issues may include:	• drainage • dust and fumes • emissions • hazardous chemicals • noise • run-off • spills • waste management and disposal • water quality
Start-up checks may include:	• availability of equipment • detection of conditions that are unusual • job requirements • personnel availability • levels

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	• pressures • flows • vibration • communications • agitators • cameras and monitoring • interlocks • distribution control system • launders • hydraulic systems • pumps and pumping systems • screen, pipe, valve • valves • visual and audible warning devices and lights • suppression systems • motors • availability of oxygen and blower and plant air • cooling water supply • fans and draft systems
Monitoring may include:	• blockages and spillages • feed rates • overloads • pressures • power draw • wear and tear • emissions • levels • temperatures • moisture content • on-stream analysis (OSA) • filtering • corrosion
Equipment indicator readings may include:	• current • flow • levels • pressure • weight • speed • unusual noises • vibrations
Equipment and plant **cleaning**	• cleaning agents and chemicals

methods may include:	• dusting
	• mopping
	• screen cleaning
	• vacuuming
	• wiping
Post shutdown checks are like pre-start checks. **Inspections** may include:	• distribution control system (panel)
	• equipment fluid levels
	• isolations (electronic)
	• light positioning and cleanliness
	• pages through equipment
	• personal proximity
	• possible faults and problems
	• safety equipment

Unit Sector(s)

Processing (General)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.