Australian Government

Department of Education, Employment and Workplace Relations

RIIPGP202A Handle reagents

Release: 1

INDUSTRY SKILLS COUNCILS

Creating Australia's Future

RIIPGP202A Handle reagents

Modification History

Not applicable.

Unit Descriptor

This unit covers the handling of reagents in the metalliferous mining industry. It includes planning and preparing for reagent handling, starting up equipment in sequence, mixing reagents, adding reagents, transferring and storing reagents, shutting down in sequence and/or isolating equipment, and conducting housekeeping activities. 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 assistant 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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for reagents handling	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 using approved communication methods 1.5. Select personal protective equipment appropriate for work activities 1.6. Select appropriate type of ***auxiliary equipment*** for work activities 1.7. Perform equipment ***pre-start checks*** 1.8. Identify, address and report potential risks and hazards 1.9. Identify, address and report ***environmental issues*** 1.10. Select appropriate reagents 1.11. Adhere to emergency procedures 1.12. Use approved fume suppression and extraction methods
2. Start-up equipment in sequence	2.1. Carry out ***start-up procedures*** and complete start-up checks according to plant configurations and system requirements 2.2. Confirm plant is operational
3. Mix reagents	3.1. Safely ***mix reagents*** to required parameters 3.2. Continuously inspect plant and identify defects and potential problems
4. Add reagents	4.1. Add reagent according to specified dosage and recommended location 4.2. Complete all required documentation clearly, concisely and on time 4.3. Pass on shift changeover details to oncoming shift
5. Transfer and store reagents	5.1. ***Transfer reagents*** 5.2. ***Store reagents*** in approved storage ***facility*** 5.3. Confirm sufficient quantities of reagents are maintained according to site requirements

6. Shutdown in sequence and/or isolate equipment	6.1. Shutdown or isolate equipment based on process and safety requirements 6.2. Perform ***post shutdown*** or isolation checks
7. Conduct housekeeping activities	7.1. ***Clean plant*** to maintain condition of all equipment 7.2. Manage and report hazards

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 handle reagents:

- apply legislative, organisation and site requirements and procedures for handling reagents
- operate, maintain and clean equipment
- identify hazards
- handle hazardous substances interpret reports
- apply lifting techniques (manual, cranes and loads)
- monitor operations
- report defects
- apply safe work practices
- use hand and power tools

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 handle reagents:

- contaminant identification
- emergency procedures
- environmental procedures
- equipment limitations and operating parameters
- equipment safety requirements
- hazardous goods procedures and consequences of spills
- identifying repair requirements
- isolation procedures
- metallurgical and technical data (basic)
- occupational health and safety procedures
- operational procedures and checks
- reagent types and how to mix them
- site procedures
- site safety requirements

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 handling reagents • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of reagent handling • working with others to undertake and complete the handling of reagents that meets all of the required outcomes • consistent timely completion of reagent handling 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 handling of reagents

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
Auxiliary equipment may be anything that is portable and mobile that is not part of the fixed infrastructure, and may include:	• feeders • gantry cranes and attachments and other mobile equipment • hand and power tools • hoses (water and air) • hydraulic units • pump systems • racks • radiation gauges • spray systems
Plant cleaning may include:	• degreasing • high pressure cleaning • hosing with water • suction
Monitoring may include the checking of:	• blockages and spillages • pressures • temperatures
Pre-start checks may include:	• availability of equipment (e.g. conveyor) • detection of conditions that are unusual • fluid levels • job requirements • personnel availability • walk through plant
Post-shutdown checks are like pre-start checks.	

Start-up procedures may include:	• auxiliary check equipment • establish relevant communications • plant checks • safety mechanisms • shift changeover details
Storage may include:	• box • silo • tank
Transfer of reagents may include:	• conveyors • mobile equipment • pump-line
Reagent mixing may include:	• automated • manual • some reagents may not require mixing
Environmental issues may include:	• drainage • dust (dump) • emissions • flora and fauna • hazardous chemicals • noise • recycling • run-off • spills • waste management and disposal • water quality

Unit Sector(s)

Processing

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.