



Australian Government

Department of Education, Employment and Workplace Relations

PMC557001A Manage trials

Revision Number: 1

PMC557001A Manage trials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the managing of trials of new/modified materials, process, methods, equipment and/or plant. The trial is aimed at determining suitability or checking performance. It will result in a report which may include recommendations for a new trial and/or for improvement or may result in a recommendation to accept the subject of the trial.
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Application of the Unit

Application of the unit	This unit of competency requires the application of technical knowledge about the subject of the trial along with a critical evaluation of trial outcomes. It may include aspects of project management and people and process management in order for the trial to be completed. This unit could apply to any sector in the industry and it may be appropriate to consider relevant technical units concurrently. Trialling may refer to: - the scale-up and other development steps required to take a new product or process from its design/laboratory trials to full commercial operation on a plant - direct trialling of the proposed new material, method, process, plant or equipment - large scale pilot plant, demonstration plant or full scale plant trials. This unit of competency applies to individuals who will be managing a trial. They will typically be the sole manager of the trial or a co-manager with a defined scope of responsibility. The trials will involve liaising with various technical experts and stakeholders and coordinating the work of people at all levels in order to complete the trial. This unit may apply to individuals working for the organisation conducting the trial, a consulting organisation or a customer or supplier organisation conducting the trials on behalf of their customer or supplier.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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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. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine purpose of trial	1.1. Analyse documentation available on trial 1.2. Consult with trial proponent and other stakeholders 1.3. Define purposes of trial 1.4. Confirm trial purpose with all stakeholders 1.5. Identify health, safety and environment (HSE) and other risks from the trial 1.6. Negotiate conflicts in trial purpose 1.7. Promulgate agreed trial purpose
2. Determine trial metrics	2.1. Determine information required from trial 2.2. Identify relevant data which is available or which could be made available 2.3. Identify gaps in data and negotiate suitable proxies for data 2.4. Arrange for data to be collected 2.5. Ensure there is appropriate capability for required data manipulation 2.6. Ensure the availability of appropriate procedures/protocols for collection and manipulation of data
3. Coordinate trial	3.1. Develop procedures required for trial 3.2. Check procedures to ensure appropriate risk management is included 3.3. Draft trial plans 3.4. Confirm trial plans with all relevant personnel 3.5. Negotiate conflicts as required 3.6. Promulgate agreed trial plans 3.7. Arrange for the required resources to be available when required by plan 3.8. Coordinate the implementation of the trial plan 3.9. Recognise indications of developing problems and take appropriate action 3.10. Monitor the progress to plan and take appropriate action to achieve required outcomes 3.11. Conclude trial when appropriate
4. Interpret trial results	4.1. Ensure all data is collated and manipulated as required 4.2. Interpret data in terms of trial purpose 4.3. Analyse data for unexpected outcomes

ELEMENT	PERFORMANCE CRITERIA
	4.4. Determine trial outcomes 4.5. Draft trial report, including recommendations 4.6. Discuss report with relevant stakeholders as appropriate 4.7. Publish final report and recommendations as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- solving problems
- communicating at all levels
- using organisation knowledge system
- analysing
- interpreting and manipulating data
- negotiating
- technical reporting
- interpreting technical documentation

Required knowledge

Required knowledge includes:

- problem/trial purpose definition techniques
- risk management protocols and procedures
- maths and statistics to the level required to analyse and manipulate trial data
- skills gap/training needs analysis as related to possible trials
- project/trial planning and management
- production/trial scheduling and resource requirement estimation
- communication protocols and methods of achieving them
- indicators of developing problems and appropriate action required
- data interpretation methods
- protocols and regulatory limits on discussions of results and recommendations
- recognition and application of significant unexpected results
- reporting requirements

Evidence Guide

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

Assessment of this unit should include demonstrated competence in a workplace based project or a simulated workplace project. Evidence from one large trial may be sufficient, while generally several small trials will be required to generate sufficient evidence.

Access should be available to all normally accessed tables, data etc which would be available to and used by a competent refractory specialist performing this assignment.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Competence must be demonstrated in the ability to manage an appropriate trials and write the required reports.

Context of and specific resources for assessment

Assessment may occur on the job or in an appropriately simulated environment. Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.

Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Manufactured Mineral Products Training Package.
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge.
- Assessment methods which include direct observation of tasks should also include questioning on underpinning knowledge to ensure its correct interpretation and application.

EVIDENCE GUIDE	
	• Assessment may be applied under project related conditions (real or simulated) and require evidence of process. • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment may be in conjunction with assessment of other units of competency where required.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

Range Statement

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. 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.

Documentation

Documentation available may include:

- plant/process/equipment drawings/schematics
- technical specifications
- sales/promotional information
- technical papers
- notes/minutes from meetings/discussions
- emails

Purpose of the trial

Purpose of the trial may include:

- evaluation of new
- examination of existing
- specific improvements aimed at:
 - better sustainability outcomes
 - better technical outcomes
 - greater reliability
 - greater efficiency
 - cheaper costs

Promulgate

Promulgation of information includes:

- providing the right information to the right person in the right format in a timely fashion

HSE and other risks

HSE and other risks include:

- health and safety risks
- sustainability risks
- regulatory risks
- business risks

Capability

Capability for data manipulation includes:

- required hardware
- required software
- required competence of the workforce

Procedures

Procedures may be written, verbal, computer-based or in some other form. They include:

RANGE STATEMENT	
	• all work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions • any similar instructions provided for the smooth running of the plant For the purposes of this Training Package, procedures also includes good operating practice as may be defined by industry codes of practice (e.g. responsible Care) and government regulations
Resources	Resources required for trial include: • materials • plant and equipment • required utilities • waste disposal/emission control and similar • time allocation • personnel • competencies of personnel • space
Appropriate action	Appropriate action may include: • immediately ceasing the trial • modifying the trial and proceeding • continuing the trial with modified monitoring/data collection • no change
Trial results	Trial results may include a recommendation: • for adopting the trial as standard • for another trial with some changes • to stay with the <i>status quo</i> • a recommendation which is outside the initial scope but which is consistent with the results of the trial

Unit Sector(s)

Unit sector	Operational/technical
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		