



Australian Government

Department of Education, Employment and Workplace Relations

PUADEFEO814A Provide survey data for proof and experimental firing

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to conduct surveys and to produce survey data in support of proof and experimental firings.

This survey can be conducted by two people. One person being the observer and the other recording data. This unit of competency covers both roles.

This unit does not cover the planning for the conduct of the survey. Normally survey requirements would be a component of the testing plan. If planning is required, it is covered in PUADEFEO602C Plan explosive ordnance trials.

Application of the Unit

Application of the Unit

This unit applies in a physical science or engineering environment where product undergoes testing to establish that it meets established standards and/or specifications. The production of survey data is crucial in the setting up and validation of a number of these proof tests.

This unit was developed for survey specialists working within proof and experimental organisations in Defence but is applicable to any individual in this field of work.

Typically these individuals must demonstrate the ability to work as individuals and as part of a team under direct and/or indirect supervision, use discretion and judgement, and take responsibility for the quality of their output. All activities are carried out in accordance with relevant organisational policies and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Pre-requisite Unit/s Nil

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for survey

- 1.1 **Stakeholders** and test participants are briefed in accordance with **organisational policies and procedures**, and **test plan**
- 1.2 Safety systems and procedures are checked and initiated in accordance with organisational policies and procedures, and test plan
- 1.3 Purpose and requirements of the survey are identified from written or oral instruction
- 1.4 Survey specifications are confirmed and clarified in accordance with organisational procedures and instructions
- 1.5 Equipment required for the survey is selected and checked for serviceability in accordance with manufacturers' instructions

2. Conduct survey tasks

- 2.1 **Survey equipment** is operated to determine orientation, fixation and other requirements as determined by the survey scheme
- 2.2 Data from the survey is recorded in accordance with organisational procedures and instructions
- 2.3 Results are verified for omissions and errors by re-checking visual clues in measurements or actual data
- 2.4 **Survey data** is **communicated** in accordance with **standard procedures**
- 2.5 **Survey control points** are established and recorded in accordance with standard procedures
- 2.6 Supervisor and colleagues are communicated with regularly throughout the survey activity to ensure smooth operation and progress
- 2.7 Survey equipment is **maintained** in accordance with standard procedures

ELEMENT**PERFORMANCE CRITERIA****3. Finalise survey tasks**

- 3.1 All survey data is completed according to organisation's requirements
- 3.2 All survey data and documentation is stored according to organisation's requirements
- 3.3 Survey data integrity is checked in accordance with the test plan

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- interpret data
- record information
- use communication systems

Required Knowledge

- analytical processes
- characteristics, tabulated data and limitations of the survey equipment
- communication procedures
- principles of survey

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, the Range Statement and the Assessment Guidelines for this Training Package.

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

Assessment must confirm the ability to

- provide the survey data required to conduct proof firings
- maintain the survey data and documentation.

Consistency in performance

Competency should be demonstrated over time in a variety of environments and tests/trials.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or in a simulated work environment, in accordance with all relevant legislation and organisational requirements.

Specific resources for assessment

Access is required to:

- appropriate survey equipment
- proof testing range.

EVIDENCE GUIDE

Method of assessment

This unit may be assessed with the following unit:

- PUADEFEO101D Work safely with explosive ordnance.

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an industry-approved simulated work environment.

Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions.

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. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Stakeholders may include	Clients or customers (internal and external) End user/s General public Industry Landowner/s Organisation's senior management Other agencies Other functional areas within the organisation Project teams Relevant interest groups Sponsor/funding bodies Steering committee members Supplier/service provider Unions
Organisations may include	Defence Defence contractors and sub-contractors Defence Materiel Organisation Defence Science and Technology Organisation International test agencies
Policies and procedures may include	Government and organisational policy, guidelines and procedures relating to: • delegation approvals • industrial agreements • procurement guidelines • resourcing • risk management • security • strategic or operational plans • technical and regulatory framework • testing and evaluation

RANGE STATEMENT**Test plans may include**

- training

Relevant commonwealth, state/territory and local laws affecting organisation's administration such as:

- financial management and accounting legislation and regulations
- occupational health and safety (OH&S) legislation
- public sector management acts

Budget and financial management strategy

Contract management

Cost estimates

Data acquisition strategies

Evaluation criteria

Expected/measurable outcomes

Facilities

Functional performance specifications

Governance strategy

Implementation strategy

Inclusions and exclusions

Information/communication strategy

Intellectual property strategies

Milestones

Objectives

Occupational concept document

People plan including human resource management and human resource development

Performance criteria/indicators

Purpose

Quality assurance

Quality control

Quality standards

Rationale

Required resources

Resource management

RANGE STATEMENT

	Risk management
	Roles and responsibilities
	Safety criteria
	Schedule/timeline
	Specific equipment, instrumentation, and/or specialised facilities and required conditions
	Survey data
	Task/WBS
	Test and evaluation master plan (TEMP) criteria
	Test concept document
	Testing control mechanisms
	Testing deliverables and their acceptance criteria
Survey equipment may include	Artillery gun laying system (gun mounted global positioning system [GPS] receiver systems)
	Electronic distance measuring equipment
	Gyroscopic orientator
	Hand held GPS receiver
	Manual distance measuring equipment
	Orienting equipment
	Station markers
	Theatre grid system
	Theodolite
	Total stations
Survey data may include	Distances
	Height differentials
	Initialisation data
	Inter-visibility
	Measurements
	Observations
	Target measurements
	Templated and/or tabulated data
Communicating survey data	Digital formats

RANGE STATEMENT**may include**

Non-military networks

Oral medium

Radios

Visual medium

Written medium

Standard procedures may include

Australian Standards

Job guides, doctrinal pamphlets and other publications

Manufacturers' handbooks, industry specifications and technical instructions

OH&S regulations

Organisational policies and procedures

Relevant local government by-laws

Relevant state/territory or federal legislation

Verbal or written orders and job instructions

Survey control points may include

Bearing picquet

Bench mark

Calibration point

Firing point

Fixed picquet

Point of change

Survey control point

Target

Trigonometrical station

Maintaining survey equipment may include

Calibration

Cleaning

Functionality checks

Lubricating

Non-technical inspection

Testing and adjusting

Unit Sector(s)

Not applicable.