Australian Government

Department of Education, Employment and Workplace Relations

MSACMT250A Monitor process capability

Revision Number: 1

INDUSTRY
SKILLS
COUNCILS
Creating Australia's Future

MSACMT250A Monitor process capability

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required for gathering of data and the interpretation of simple information to determine the compliance of the process and the taking of action as defined by the procedures where the information reveals the process is out of control parameters.

Application of the Unit

Application of the unit	In a typical scenario an organisation has adopted either *six sigma* or statistical process control/ *three sigma* as a means of determining and improving the capability of their process. The team member is involved in this in collecting specified data and performing specified manipulations to the data (typically by plotting on a chart or by entering into a specified computer program). The information is typically presented to the team member in terms of graphs/charts which they are expected to interpret at a basic level and then take action in accordance with procedures to restore the process to being under control parameters.
	This unit requires the application of skills associated with entering and monitoring production information and requires initiative, enterprise and problem solving in identifying production variations and making improvement recommendations.

Licensing/Regulatory Information

Not applicable.

Manufacturing Skills Australia

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	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. Collect and process data	1.1. Take specified measurements/readings as required
	1.2. Enter data onto log/into computer or other record
	1.3. Manipulate and/or chart data as required by *procedures*
	1.4.
2. Identify variations that are not random and take action	2.1. Examine chart and/or reliability information
	2.2. Distinguish between *random variations* and those with an identifiable cause
	2.3. Take action specified in *procedures* when a variation with an *identifiable cause* occurs
3. Assist in process improvement	3.1. Collect data for process capability improvement trials as directed
	3.2. Make recommendations for improvement as required
	3.3. Implement revised capability monitoring *procedures* as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
- problem solving   - statistical control   - planning   - communication
Required knowledge
- data collection methods   - data processing techniques required   - basic variability and normal distribution   - recognition of identifiable causes in accordance with procedures   - causes of different types of identifiable causes as defined by procedures   - actions to be taken for the different causes

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.	
Overview of assessment requirements	The person performing this unit would be expected to collect the correct data at the required frequency, perform the required manipulations on the data and then recognise assignable causes and take the required action (which may just be reporting).
What are the specific resource requirements for this unit?	Access to a work place utilising either 6 sigma or 3 sigma is required. Where it is necessary to use synthetic information for assessment purposes, then a bank of such information should be created.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence should be available of data collected and processed. There may also be evidence of assignable causes recognised and action taken. There should not be evidence of assignable causes ignored.
In what context should assessment occur?	Assessment will need to occur in a workplace implementing either 3 sigma or 6 sigma.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with a continuous improvement or a quality unit. This unit is related to: • *MSACMT450A Undertake process capability improvements*, and • *MSACMT650A Determine and improve process capability* which apply to the intermediate and highest skill levels in CM respectively. It may also be appropriate to relate this unit to *MEM15001B Perform basic statistical quality control* and possibly also *MEM15008B Perform advanced statistical quality control* where the person is required to perform statistical manipulations (i.e. where these are not done automatically for the person eg by a computer system).
What method of assessment should apply?	Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined

EVIDENCE GUIDE	
	by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.
	Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.
	The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.
	The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence of the routine collection and processing of data should be available from the workplace. Consistent interpretation of information should also be available from the workplace, although this may need to be supplemented with synthetic data as above. The interpretation of multiple assignable causes is more important that the consistent interpretation of one type of assignable cause.

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, 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.	
Six sigma	Six sigma is a process improvement methodology based on statistical process control with six sigma limits which equates to 3.4 defects per million opportunities for each product or service transaction. Six sigma is also often used as a general term covering a competitive manufacturing approach. Six sigma training typically covers several units of competency in this Training Package.
Three sigma	Three sigma includes statistical process control with three sigma limits which equates to 3 defects per thousand opportunities for each product or service transaction.
Procedures	Procedures includes all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.
Random variation	Random variation is the term used in statistical control to refer to those variations for which no cause can be found.
Identifiable cause	Also referred to as an 'assignable cause' or a 'special cause' are those variations for which a cause can be found and so the cause of the variation eliminated.

Unit Sector(s)

Unit Sector	CM Tools

Co-requisite units

Co-requisite units	

Functional area

Functional Area	