



Australian Government

Department of Education, Employment and Workplace Relations

SUG02 Sugar Milling Training Package

Release: 1.0

CONTENTS

Modification History	4
Introduction.....	4
Qualifications Framework.....	9
Assessment Guidelines	12
Customisation/Contextualisation Guidelines.....	28
Competency Standards.....	29
The Sugar Milling Industry Training Package	32
Sugar Milling Industry Qualifications	33
SUG02 Units	38
SUG10102 Certificate I in Sugar Milling.....	53
SUG20102 Certificate II in Sugar Milling	55
SUG30102 Certificate III in Sugar Milling.....	57
SUGCCPA1A Collect, present and apply workplace information.....	59
SUGCLCT1A Locate cane transport system and functions	62
SUGCLIP1A Locate industry and company processes (Sugar)	66
SUGCMCH1A Manually clean and maintain housekeeping standards	69
SUGCOHS1A Follow safe work procedures	73
SUGEACW3A Analyse and convey workplace information	78
SUGEEMP3A Monitor the implementation of the environmental management program	82
SUGEFTW3A Facilitate teams.....	87
SUGEIEP2A Implement environmental procedures.....	91
SUGEOHS3A Monitor the implementation of occupational health and safety	95
SUGPARS2A Operate an ash separation system.....	100
SUGPCCE2A Chemically clean equipment	105
SUGPCPS1A Collect and prepare samples	110
SUGPCSP2A Operate a crystalliser station process.....	114
SUGPCWS2A Operate a cooling water system.....	120
SUGPFCT3A Perform factory control tests.....	125
SUGPFBS2A Operate a fuel supply system - bagasse	129
SUGPFSC2A Operate a fuel supply system - coal	134
SUGPHGF2A Operate a high grade fugal station	139
SUGPJCP2A Operate a juice clarification process	145
SUGPLGF2A Operate a low grade fugal station	150
SUGPMFP2A Operate a mud filtration process.....	155
SUGPMPH3A Monitor a powerhouse	160
SUGPOB2A Operate a boiler	165
SUGPOBA3A Operate a boiler - advanced.....	171
SUGPOBB2A Operate a boiler - basic	177
SUGPOBI3A Operate a boiler - intermediate.....	183
SUGPOEP2A Operate an evaporation process.....	189
SUGPOES2A Operate an extraction station	194
SUGPOPS2A Operate a pans station.....	200
SUGPOSS3A Operate a system (Sugar)	206
SUGPOTB2A Operate a turbine.....	211
SUGPPST2A Perform standard tests.....	216
SUGPWWT2A Operate a waste water treatment system	220
SUGSCT2A Construct turnouts	226
SUGSFBS2A Undertake forming, bending and shaping.....	230
SUGSLRT2A Lay rails.....	234

SUGSLSP2A Lay sleepers.....	238
SUGSLST2A Lay skeleton track.....	242
SUGSPGD2A Perform general drilling operations.....	246
SUGSPGL2A Perform general lathe operations.....	250
SUGSPGM2A Perform general milling operations.....	254
SUGSPPB1A Prepare pre-ballast.....	258
SUGSPPS2A Perform general planing and shaping operations.....	262
SUGSUSF2A Undertake simple fabrication.....	266
SUGTAEM1A Assess extraneous matter in cane.....	270
SUGTASD3A Adjust schedule(s) to meet daily workplace requirements.....	273
SUGTCCT3A Control cane traffic movements.....	278
SUGTCW2A Conduct cane weighbridge operations.....	283
SUGTCYM1A Control yard movements.....	287
SUGTDCL2A Drive a cane locomotive.....	292
SUGTDMS3A Drive a master-slave locomotive.....	298
SUGTOTE2A Operate tamping equipment.....	304
SUGTOTS2A Operate a tipping station.....	309
SUGTPST1A Prepare for shunting operations.....	313
SUGZPC2A Operate a process control interface.....	317
BCC1005A Use hand and power tools.....	321
BCC1006A Use small plant and equipment.....	328
BCC2001A Carry out basic site survey.....	334
BCC2003A Assist with excavation and support installation.....	339
BCC2004A Lay pipes.....	344
BCG1008A Use simple levelling devices.....	349
BCG1010A Carry out concreting to simple forms.....	355
BSZ401A Plan assessment.....	361
BSZ402A Conduct assessment.....	371
BSZ403A Review assessment.....	383
BSZ404A Train small groups.....	393
MEM18.55AA Dismantle, replace and assemble engineering components.....	401
TDTA1397B Receive goods.....	405
TDTA1497B Use product knowledge to complete work operations.....	415
TDTA1897B Organise despatch operations.....	427
TDTA2197B Despatch stock.....	437
TDTC497C Drive heavy rigid vehicle.....	447
TDTC597C Drive heavy combination vehicle.....	458
TDTD1097B Operate a forklift.....	469
TDTD397C Handle dangerous goods/hazardous substances.....	479

Modification History

Not applicable.

Introduction

Introduction

What is a Training Package?

Training Packages are a key feature of vocational education and training in Australia. They are part of the National Training Framework that aims to make training and regulatory arrangements simple, flexible and relevant to the needs of industry.

- Training Packages are developed by industry for industry
The Australian National Training Authority funds National Industry Training Advisory Bodies (ITABs) to develop Training Packages. Extensive consultation occurs during development to ensure that the Training Package is relevant and useable. And before the completed Training Package is endorsed for use, the ITAB must validate it and show that it has broad industry support.
- Training Packages encourage training at work
Training may occur at the workplace, off the job, at a training organisation, during regular work, or through work experience, work placement or work simulation. Usually it involves a combination of these methods, depending on what suits the learner and the type of learning and particular vocational outcome.
- Training Packages provide many pathways to competency
Australians can achieve vocational competency in many ways. Training Packages acknowledge this by emphasising what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the standards and gain a qualification without completing a formal training course.

Training Package Components

A Training Package comprises two components; *endorsed material* and *support materials*. The Australian National Training Authority's National Training Quality Council oversees the endorsed component.

Endorsed Materials

Endorsed components of a Training Package consist of three parts: Competency Standards, National Qualifications, and Assessment Guidelines. Each of these components is outlined below.

- **Competency Standards** provide an industry benchmark for training and assessment. They specify the scope of knowledge and skills to be covered in the Training Package. They enable enterprises to accurately define particular roles within industry, and are a useful guide when designing job classifications, workplace appraisal, and skill development. They are the basis for designing vocational education and training courses and assessment approaches for delivery both on and off the job, by registered training providers.

Key Features

- Each Unit of Competency identifies a discrete workplace requirement. Often units need to be combined to achieve a work outcome. For example the relevant OHS unit should always support an operational unit. Guidance on the relationships between units is provided within each competency standard.
- Units incorporate the knowledge and skills that underpin competency. They encompass relevant observable outcomes, knowledge, values and attitudes, language, literacy and numeracy, and occupational health and safety requirements.
- Key Competencies are identified at the qualification level.
- Units are flexible in how they can be applied, but they are sufficiently detailed to guide registered training organisations (RTOs) and assessors, and to provide consistent outcomes.
- **National Qualifications** within the Australian Qualifications Framework (AQF) are awarded when a learner (who is typically an employee) has been assessed as achieving a combination of Units of Competency that provide a meaningful outcome at an industry or enterprise level. Each qualification consists of a number of core, specialist and/or Elective units of Competency that industry representatives consider workers require to perform a particular job. Where an individual achieves one or more Units of Competency without completing a qualification, a Statement of Attainment is issued that recognises their achievement.

Key Features

- Each qualification (comprising specified Units of Competency) is aligned directly against the AQF.
- The qualifications covered within a Training Package may range from Certificate I to Advanced Diploma, and will include the national title for each qualification.
- The Qualification will list the individual units of competency attained to make up a qualification.
- New Apprenticeship pathways will be identified within the Training Package.
- The Qualification will display the Nationally Recognised Training logo.
- **3. A Statement of Attainment** is issued to individuals who have been assessed and deemed competent against a Unit of Competency. Statements of Attainment issued by one RTO must be recognised by other RTOs. Accrual of specified Statements of Attainment can eventually lead to a learner meeting all the requirements of a qualification.

Key Features

- Statements of Attainment will identify the Units of Competency for which the individual has been assessed and is deemed competent by the RTO.
- They will display the Nationally Recognised Training logo.
- They will identify the RTO.

- **Assessment Guidelines** provide a framework for accurate, reliable and valid assessment of the applicable Competency Standards. They ensure that all assessments are thorough, consistent and valid. They provide important quality assurance in the issuing of qualifications.

Endorsed components of a Training Package may be complemented and supported by the development of optional learning strategies, assessment tools and professional development materials.

Support materials

Support materials to be used in conjunction with a Training Package can be produced by RTOs, private and commercial developers, DETYA, State Training Authorities or through ANTA. They can consist of:

learning strategies that assist training providers to design specific training programs that will help trainees attain the required competencies;

assessment materials that can be used by assessors to gather sufficient evidence of competency to make reliable judgements about whether a person has met the required Competency Standard;

professional development materials that provide information, hints and resources for trainers and assessors that will help them successfully deliver the outcomes of the Training Package.

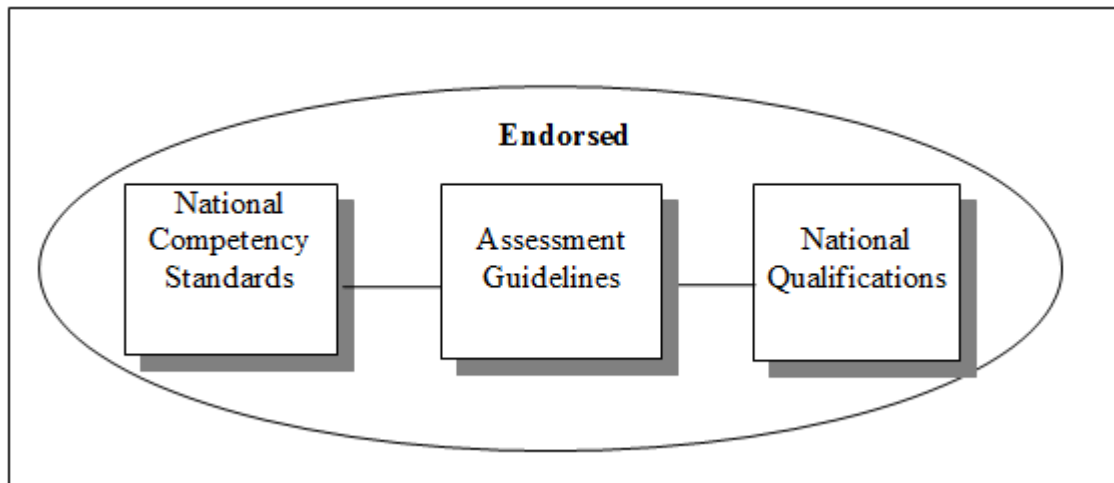
RTOs will usually develop their own supporting resources. They can also draw upon any other resources developed specifically to support the Training Package. Support materials that have passed successfully through ANTA's official "Noting" process can use the official logo to indicate that they meet specified quality criteria. The logo is depicted here.



Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on their availability and the type of product. NTIS can be located on <http://www.ntis.gov.au>

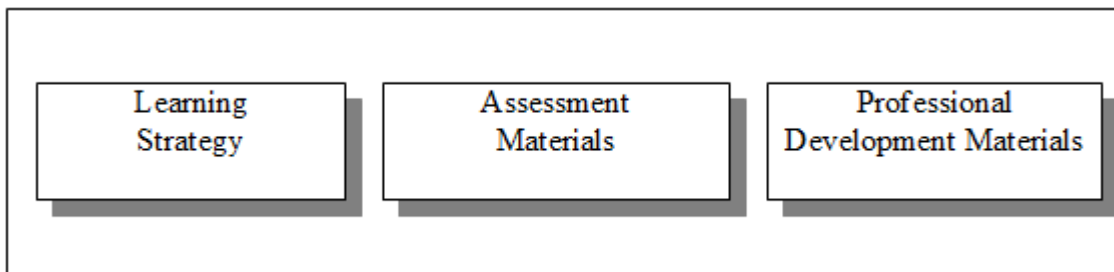
Although the noting process has been adopted as a guide to quality-assured supporting resources, it is not compulsory for RTOs to submit their support resources to ANTA. They are at liberty to use whatever resources are available to them to meet the requirements of a qualification or a Unit of Competency.

The components of an endorsed Training Package are illustrated in the following diagram:



Supporting resources are generally produced to directly relate to a single or multiple units of competency, industry sector, qualification or the total Training Package. They tend to fall into one or more of the categories illustrated below.

Supporting Resources



Version Control

ANTA has a system for tracking changes across subsequent editions of Training Packages and their constituent components. Anyone using a Training Package should follow ANTA's recommended procedure for determining the currency of the information in their edition.

Training Package Codes

Each Training Package has been assigned a unique five-character code, for example SUG02. The final two characters (the version identifier) represent the year the Training Package was initially endorsed. Units of Competency and qualifications originating in that Training Package will have their own longer codes, which will commence with the first three letters of the Training Package code (SUG in this example).

Units of Competency Codes

Whereas the first three characters of the code assigned signify the Training Package, the last character will always be a letter representing the version identifier. The code for a Unit of Competency is assigned when the initial Training Package is endorsed, or when new sectors or new units are added to an existing endorsed Training Package. A typical code consists of up to 12 characters. These characters normally consist of a mixture of capital letters and numbers. A typical style of code may be SUGSOE2A. The first three characters are always letters and are the same letters used to code the original Training Package of which the unit was part. In the example, the code for the original Training Package commenced with SUG. The last letter (A) in the Unit of Competency code is the letter used for the version control. The "A" indicates that this is the original unit.

If one lot of changes has been incorporated since the unit was first endorsed, but without any change to the unit outcomes, the version identifier will be a "B". The different version identifier usually means that minor changes have been incorporated without affecting the overall unit outcome. Typically this would mean that wording has changed in the Range Statement or the Evidence Guide, providing clearer intent. The next batch of minor changes would result in a "C", and so on throughout the life of the unit.

Any letters or numbers (this can be up to eight characters) between the first three characters and the version control letter are assigned by the developer of the unit and may relate to an industry sector, function or skill area.

Where changes are incorporated that alter the unit outcome, a new code is assigned and changes are made to the unit title.

Differences in the version identifier of Units of Competency on Statements of Attainment issued by RTOs are not significant, as outcomes of the unit have not changed significantly.

Qualifications Codes

All qualifications are assigned a unique eight-character code. The last two characters (version identifier) are always numbers and represent the year in which the qualification was endorsed. In all instances, qualifications included and endorsed in the original Training Package have an identical version identifier to those of the originating Training Package. In cases where qualifications are added after the initial endorsement of the Training Package, they are assigned a version identifier denoting the year they were endorsed.

Review Date

On the title page and in the footer of each Training Package page there is reference to a review date. This date is determined at the time of endorsement of the Training Package and indicates when the Training Package is to be reviewed in the light of changing technologies, job content, circumstances, industrial relations etc. The review date is not to be regarded as an expiry date as the Training Package and its components remain current until they are reviewed or replaced.

Qualifications Framework

Qualifications Framework

What is the Australian Qualifications Framework?

The Australian Qualifications Framework (AQF) is a national framework for all education and training qualifications in Australia. There are twelve qualifications in the AQF. Six of these are relevant to the Vocational Education and Training (VET) sector. The twelve qualifications are listed in the following table.

Schools sector	VET sector	Higher Education sector
Senior secondary certificate of education	Advanced diploma Diploma Certificate IV Certificate III Certificate II Certificate I	Doctoral degree Masters degree Graduate diploma Graduate certificate Bachelor degree Advanced diploma Diploma

This categorisation of qualifications into these three sectors is in some ways misleading. In practice it is not unusual for the Schools sector to be delivering Certificates 1 or higher, for the VET sector to deliver Graduate certificates, and for the Higher Education sector to be involved in delivery of Certificate IV.

The adoption of the AQF for all vocational education and training ensures national consistency for all trainees, students, employers and providers in the VET sector. It permits national recognition of competency based on endorsed Competency Standards. Competency is assessed in accordance with the endorsed Assessment Guidelines.

Statement of Attainment

Where competence has been achieved in accordance with the endorsed standards, but does not meet the requirements of a qualification, a Statement of Attainment can be issued for the competencies successfully achieved. These can be combined with any additional competencies achieved later. Together they will build towards the awarding of a qualification. RTOs must recognise the achievement of competencies recorded on a Statement of Attainment issued by another RTO.

AQF Level Descriptors

The following level descriptors provide a broad outline of the characteristics of functions typically performed at a given Certificate level. For more detailed advice on linking competency standards to work outcomes, refer to the section on the Sugar Milling Industry.

Certificate I

The worker will normally be engaged in a workplace in which they:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks under clear direction;
- receive and pass on messages or information.

Certificate II

The worker will normally be engaged in a workplace in which they:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for their own outputs in work and learning.

Certificate III

The worker will normally be engaged in a workplace in which they:

- demonstrate some relevant theoretical knowledge;
- apply a range of well-developed skills;
- apply known solutions to a variety of predictable problems;
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information using discretion and judgement;
- take responsibility for their own outputs in work and learning;
- take limited responsibility for the output of others.

Certificate IV

The worker will normally be engaged in a workplace in which they:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts;
- apply solutions to a defined range of unpredictable problems;
- identify and apply skill and knowledge areas to a wide variety of contexts, in some cases in depth;
- identify, analyse and evaluate information from a variety of sources;
- take responsibility for their own outputs in relation to specified quality standards;
- take limited responsibility for the quantity and quality of the output of others.

Diploma

The worker will normally be engaged in a workplace in which they:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, in some cases in substantial depth;
- analyse and plan approaches to technical problems or management requirements;
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations;
- evaluate information, using it in forecasting for planning or research purposes;
- take responsibility for their own outputs in relation to broad quantity and quality parameters;
- take some responsibility for the achievement of group outcomes.

Advanced Diploma

The worker will normally be engaged in a workplace in which they:

- demonstrate understanding of specialised knowledge with depth in some areas;
- analyse, diagnose, design and execute judgments across a broad range of technical or management functions;
- generate ideas through the analysis of information and concepts at an abstract level;
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills;
- demonstrate accountability for personal outputs within broad parameters;
- demonstrate accountability for personal and group outcomes within broad parameters.

New Apprenticeship Arrangements

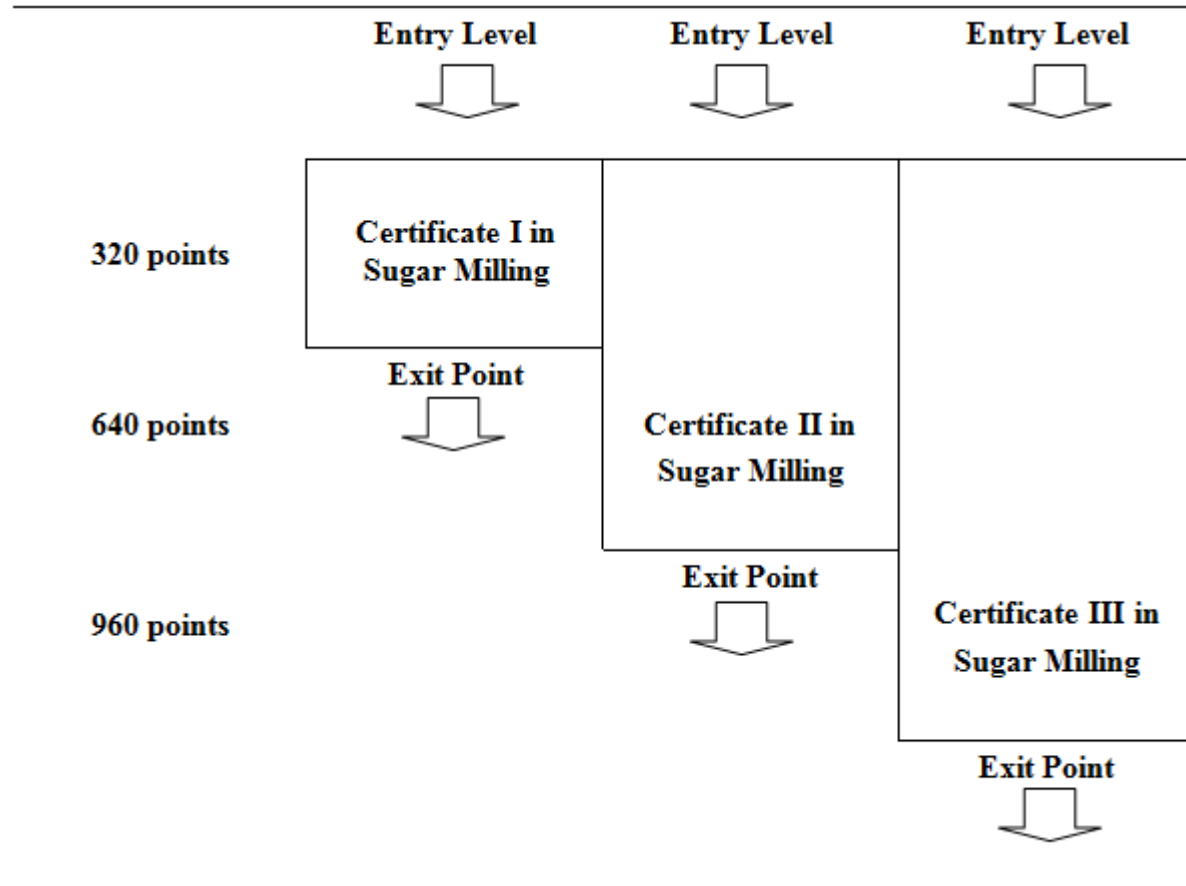
All qualifications within the Package are open to New Apprenticeship pathways. Any decision on establishing New Apprenticeship arrangements will need to be carefully considered by the industry parties.

VET in Schools Delivery

The Certificates in Sugar Milling have the potential to be used as a VET in schools program. This is conditional on local parties collaborating to agree on delivery, assessment and infrastructure arrangements. Models for these arrangements are established in the food processing industry. For information contact the National Food Industry Training Council.

Pathways

An employee/person may enter directly into a Certificate I, II or III in Sugar Milling. Credit for units completed in a lower level qualification can be counted towards a higher level qualification. Refer to diagram below.



Assessment Guidelines

Assessment Guidelines

What are assessment guidelines?

These Assessment Guidelines provide the endorsed framework for assessment of the Units of Competency in this Training Package.

They are designed to ensure that assessment activities are consistent with the *Australian Quality Training Framework Standards for Registered Training Organisations* and that the assessment processes and outcomes are valid, reliable, flexible and fair.

Assessments against the Competency Standards in this Training Package *must* be carried out in accordance with these endorsed guidelines.

The Assessment Guidelines comprise five key sections:

- assessment system overview;
- assessor requirements;
- designing assessment resources;
- conducting assessment;
- further sources.

Assessment System Overview

Benchmarks for Assessment

The Competency Standards in this Training Package are benchmarks for assessment and are the basis of the nationally recognised Australian Qualifications Framework (AQF), qualifications, and Statements of Attainment issued by Registered Training Organisations (RTOs).

Assessment within the National Training Framework is defined as the process of collecting evidence and making judgements about whether competency has been achieved. The purpose of assessment is to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the Competency Standards in the Training Package.

When conducting assessments, assessors must ensure that they are familiar with the full text of the Unit(s) of Competency being assessed. In particular, they must ensure that the assessment arrangements:

- cover all elements of the Unit of Competency being assessed. This includes all items in the Evidence Guide;
- address the four dimensions of competency: task skills, task management skills, contingency management skills and job/role environment skills. These dimensions have been taken into account in the design of the competency standard;
- are consistent with the Evidence Guide for each relevant Unit of Competency, as this specifies the context of assessment, the critical aspects of competency, the required underpinning knowledge and skills. Reference to having access to real workplace conditions and infrastructure or required conditions for simulation are also specified.

Australian Quality Training Framework Assessment Requirements for RTOs

Assessment for national recognition purposes must meet the requirements of the Australian Quality Training Framework (AQTF). Assessment must be conducted under the auspices of an RTO formally registered under *Australian Quality Training Framework Standards for Registered Training Organisations* with the specific Competency Standards or Training Package within its scope of registration. The RTO must meet the requirements of the relevant assessment standards in the *Australian Quality Training Framework Standards for Registered Training Organisations* as set out below.

The RTO's assessments for national recognition, regardless of whether this is through a training and assessment pathway or an assessment-only pathway must:

- comply with the Assessment Guidelines included in nationally endorsed Training Packages;
- lead to the issuing of a Statement of Attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed Unit(s) of Competency;
- be underpinned by an assessment process that complies with the principles of validity, reliability, fairness and flexibility;
- provide for applicants to be informed of the context and purpose of the assessment and the assessment process;
- focus on the application of knowledge and skill to the standard of performance required in the workplace and cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job/role environment skills;
- involve the evaluation of sufficient evidence to enable professional judgments to be made about whether competency has been attained;
- provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options;
- provide for reassessment on appeal, and
- be equitable for all groups or persons, taking account of cultural and linguistic needs.

Reasonable adjustments are to be made to ensure equity in assessment for people with disabilities. This means that wherever possible, 'reasonable' adjustments are to be made to meet the individual needs of a person with a disability. Adjustments are considered 'reasonable' if they do not impose an unjustifiable hardship on a training provider or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.

- Where a person enrolls in training the RTO must make Recognition of Prior Learning (RPL) available. The RPL process must:
- be designed to avoid unnecessary duplication of learning;
- be structured to minimise the time and cost to applicants;
- provide adequate information and support to enable applicants to gather reliable evidence to support their claim for recognition of prior learning, regardless of how, when or where the learning occurred.

The RTO must ensure that, in developing, adapting or delivering training and assessment products and services:

- methods used to identify learning needs, and methods for designing training and assessment materials are documented;
- language, literacy and numeracy requirements are consistent with the essential requirements for workplace performance specified in the relevant Units of Competency and that they develop the learning capacity of the individual. This means that the level of communication skills required to participate in training and/or assessment should be no higher than the communication competencies required by the work process;
- the requirements of the Training Package are met;
- core, specialist and Elective units, as appropriate, are identified; and
- customisation meets the requirements specified in the Training Package.

The RTO must document its plans for training delivery and assessment of each Training Package qualification and accredited course within its scope of registration. These plans must ensure that:

- the delivery modes and training materials meet the needs of a diverse range of clients. Where a workplace is the RTO, delivery modes must be matched to the needs and learning styles of its employees;
- assessment plans, including proposed validation processes, are developed in consultation with relevant client/workplace personnel and are documented at the point of registration and on application for extension of scope;
- where assessment or training is conducted in the workplace, the RTO negotiates the delivery and assessment plan in consultation with relevant workplace personnel who include managers, learners, trainers and assessors. Where the RTO is external to the workplace, they need to agree on how to effectively deliver job-based training and assessment, and schedule workplace visits to monitor/review the training and assessment;
- where a New Apprenticeship Training Contract is in place or being negotiated, individual Training plans encompassing both off-the-job training and structured on-the-job training are developed, documented, implemented and monitored for each apprentice or trainee.

The RTO must validate its assessment plans by:

- reviewing, comparing and evaluating the assessment processes, tools and evidence contributing to judgements made by a range of assessors against the same standards¹, at least annually; and
- documenting any action taken to improve the quality and consistency of assessment.

¹ These may be internal processes with stakeholder involvement or external validations with other providers and/or stakeholders.

The RTO must have access to the staff, facilities, equipment, training and assessment materials necessary to provide the training and/or assessment within its scope of registration, and to accommodate client numbers and client needs (including off-campus and on-line delivery and assessment requirements).

RTOs may operate in partnership with other organisations (see below) but, in doing this, are still responsible for the quality of their services and service outcomes.

In order to deliver and/or assess Units of Competency or qualifications and issue nationally recognised qualifications under the AQF, RTOs must have those Units of Competency and/or qualifications within their scope of registration.

Partnership Arrangements

Under the Australian Quality Training Framework (AQTF), RTOs may enter into partnerships with non-registered organisations, such as schools, industry organisations and enterprises, for delivery and assessment within the RTO's scope of registration.

Where this is done, the RTO must have a formal agreement with the organisation that provides the training and/or assessment under its name. The agreement must specify how all parties will discharge their responsibilities for ensuring the quality of the training and/or assessment conducted on its behalf, including the qualification requirements for delivery and assessment.

The RTO has full responsibility for the quality and outcomes of any training or assessment conducted on its behalf, and it must maintain a register of all such agreements.

Recording Assessment Outcomes

The RTO that issues the AQF Qualification or Statement of Attainment is responsible for recording, storing, retrieval and accessibility of the assessment outcomes specified in *Australian Quality Training Framework Standards for Registered Training Organisations*.

Reporting Assessment Outcomes

Statements of Attainment and qualifications issued under the AQF must comply with the relevant provisions in the current *Australian Qualifications Framework Implementation Handbook*.

AQF qualifications must be issued once the full requirements for a qualification, as specified in the Qualifications Framework of the Training Package, have been met. A Statement of Attainment is to be issued where the individual achieves a qualification or is assessed as competent against fewer Units of Competency than are required for a qualification and the individual has completed their study or assessment process. Qualifications and Statements of Attainment issued must comply with the format specified in the current *AQF Implementation Handbook*.

Quality Assurance Mechanisms

Under the provisions of the AQTF, RTOs involved in the assessment of the Units of Competency and qualifications within this Training Package are required to establish and use quality assurance mechanisms in line with their registration requirements.

It is *recommended* that RTOs include the following procedures within a quality assurance framework:

- establishment of a standard procedure for the selection of assessors;
- conduct of regular professional development for assessors;
- ongoing recording, monitoring and review of the assessment process, including the assessment plan, assessment outcomes and participant feedback;
- development of a comprehensive bank of resources for participants and assessors including:
 - information about the assessment process;
 - assessment instruments, where appropriate;
 - standardised reporting and recording forms for participants, assessors, trainers and employers;
 - guidelines for assessors on the preparation of the assessment plan, and conduct and review of the assessment process.

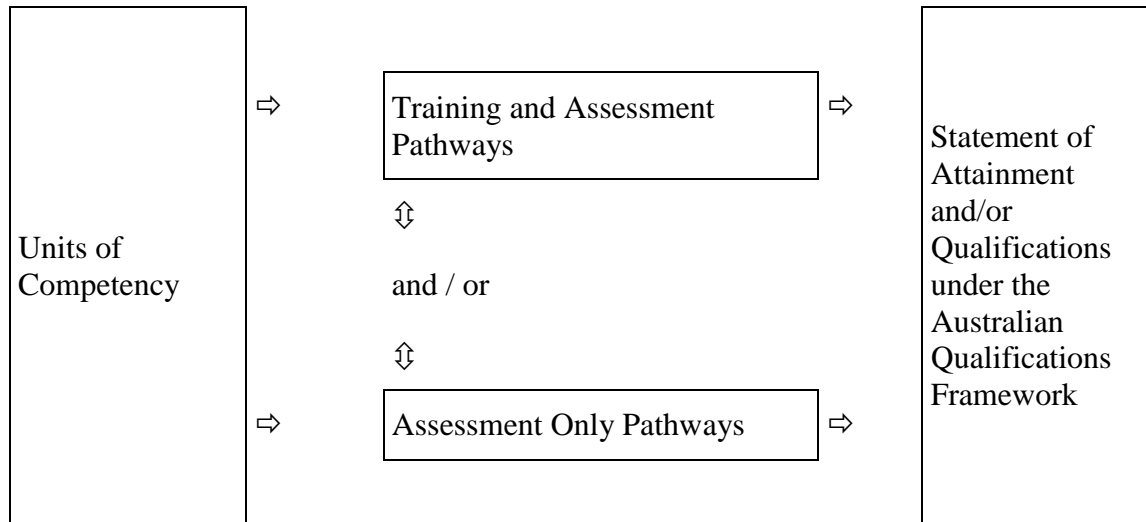
Such procedures need to be flexible to meet the assessment requirements of a given workplace at the same time as assuring the quality of the assessment process.

Licensing/Registration Requirements

Individuals conducting assessments of units that cover statutory licensing and industry registration arrangements must comply with training, experience and registration requirements additional to the minimum requirements identified in this Training Package. For information on licensing arrangements in the Sugar Milling industry, refer to the Sugar Milling Industry section.

Assessment Pathways

This Training Package incorporates a number of assessment pathways that lead to the recognition of competencies and the issuing of a Qualification or Statement of Attainment. These pathways are illustrated in the following diagram.



As indicated above, assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a training and assessment pathway, an assessment only pathway, or a combination of the two. All assessments, by any pathway, *must* comply with the AQTF assessment requirements for RTOs (see above). Each of these assessment pathways leads to full recognition under the AQF – the critical concern is that the candidate is competent, not how the competency was acquired. Each of the above pathways is detailed below.

Training and Assessment pathways

For most candidates assessment and training are integrated, with assessment evidence being collected progressively and feedback being provided to the candidate. The candidate may undertake a structured program of training and assessment while on the job, while off the job, or in a combination of on-the-job and off-the-job environments.

This pathway is particularly suited to New Apprenticeships, as trainees can be provided with a mix of formal training, structured workplace experience, and formative assessment activities. Through this combination of training and assessment the candidate can acquire and demonstrate the practical skills and knowledge identified in the relevant Competency Standards.

Assessment Only Pathway

In some circumstances an assessment only (skills recognition) pathway will be warranted. The candidate provides current, quality evidence against the relevant Units of Competency, and the outcomes of the assessment process indicate that the candidate is competent and that structured training is not required.

This pathway can operate in both on-the-job and off-the-job environments. It is likely to be most appropriate for existing workers, for individuals with overseas qualifications, for recent migrants with established work histories, for people returning to the workplace, and for people with disabilities or injuries requiring a change in career.

Candidates wishing to take this pathway present evidence that they possess the skills and knowledge identified in the relevant Competency Standards, and then an assessor judges whether the candidate is competent. In reaching this judgment the assessor must make sure that all aspects of the unit/s of competence have been met and the context in which evidence was gathered is consistent with the assessment context described in the unit. Summative approaches to assessment may be directed by the candidate (such as in the compilation of portfolios), or by the assessor (such as observation of workplace performance, requiring demonstrations of skills, and carrying out oral and written testing).

Combination of ‘Training and Assessment’ and ‘Assessment Only’ Pathways

Where candidates have gained competencies through work and life experience and gaps in their competency are identified, or where they require training in new areas, a combination of approaches may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competence using an ‘assessment only pathway’. Once current competence is identified, a structured training and assessment program may be established to ensure that the candidate acquires the required additional competencies. These would be achieved through a ‘training and assessment pathway’.

It is important to note that each of these assessment pathways leads to full recognition under the Australian Qualifications Framework. An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package.

Recognition of Prior Learning and Current Competency

The competencies in this Training Package may be attained in a number of ways:

- formal or informal training and education;
- work experience;
- general life experience, and/or;
- any combination of the above.

All assessment pathways must provide for the recognition of competencies previously attained. Competencies achieved and currently held by individuals can be formally assessed against the Units of Competency and qualifications in this Training Package, and should be recognised regardless of how, when or where they were achieved.

In assessing the competency of individual candidates, assessors must ensure that assessment processes take into account the skills and knowledge that candidates already possess. This can be done by conducting a pre-assessment where the candidate provides evidence of prior learning. In order for prior learning to be recognised, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed industry or enterprise competency standards. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, and work samples.

The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In determining whether a candidate has presented sufficient evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work);
- valid (directly related to the current version of the relevant endorsed Competency Standards);
- reliable (shows that the candidate consistently meets the Competency Standards);
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the standards)
- sufficient (covers the full range of elements in the relevant Unit of Competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).

Review and Maintenance of the Assessment System

The proponent of this Training Package is responsible for the ongoing monitoring and review of these Assessment Guidelines. This process will be incorporated in the general review and maintenance of this Training Package. Any review will ensure that these Assessment Guidelines:

- continue to meet the requirements of the industry;
- are consistent with the *Australian Quality Training Framework Standards for Registered Training Organisations*;
- promote confidence in the system and the assessment outcomes on the part of industry, employers, enterprises, unions, employees, trainees, assessors and trainers;
- ensure assessment processes and outcomes are valid, reliable, fair and flexible;
- support RTOs in effectively carrying out their responsibilities.

Assessor Requirements

The guidelines identify the mandatory minimum qualifications for those conducting assessments. They also clarify how more than one person may contribute to the assessment process where all the required competencies are not held by one person.

Assessor Qualifications

There are *mandatory* requirements that must be met by individual assessors or collectively by the members of an assessment team or panel conducting assessments against this Training Package. Collectively the assessment team *must* have the following assessment Units of Competency from the Training Package for Assessment and Workplace Training, or must have demonstrated equivalent competencies:

- BSZ401A Plan Assessment;
- BSZ402A Conduct Assessment;
- BSZ403A Review Assessment;
- The competencies being assessed, at least to the level being assessed.

In addition to the above, assessors in the Sugar Milling Industry are required to have comprehensive current knowledge of the industry and the job or role against which performance is being assessed. They must also have appropriate interpersonal and communication skills and knowledge of language, literacy and numeracy issues in the context of assessment.

These skills, knowledge and attributes may be developed and demonstrated through:

- participation in professional development;
- relevant work experience;
- participation in professional/industry networks;
- recent planning and review of assessment activities;
- participation in assessment validation processes;
- recent assessment and/or workplace training activities.

All assessors who are engaged in assessing against this Training Package must be:

- employed by an RTO, or

acting under the registration of an RTO (for example, an assessor working in an enterprise that has a partnership arrangement with the RTO).

This Training Package provides a range of options for meeting these assessor requirements. Assessments can be undertaken in a variety of workplace and institutional contexts by individual assessors, partnerships involving assessors and technical experts, and teams of assessors.

The options listed below show how the requirement to use qualified assessors can be met.

OPTIONS	ASSESSORS, TECHNICAL EXPERTS AND WORKPLACE SUPERVISORS (Includes mandated requirements and recommended attributes)
<p>Single assessor</p> <p>An individual assessor conducts the assessment</p>	<p>An assessor is required to:</p> <p>hold formal recognition of competence in the relevant units in the Training Package for Assessment and Workplace Training;</p> <p>be deemed competent and, where possible, hold formal recognition of competence in the specific Units of Competency in this Training Package, at least to the level being assessed.</p> <p>demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed;</p> <p>demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts;.</p> <p>demonstrate the necessary interpersonal and communication skills required in the assessment process.</p>
<p>Partnership arrangement</p> <ul style="list-style-type: none"> • An assessor works with a technical expert to conduct the assessment 	<p>Assessor is required to:</p> <p>hold formal recognition of competence in the relevant units in the Training Package for Assessment and Workplace Training.</p> <p>demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts;</p> <p>demonstrate the interpersonal and communication skills required in the assessment process.</p>

<ul style="list-style-type: none"> An assessor works with workplace supervisor in collecting evidence for valid assessment 	<p>A technical expert is required to:</p> <ul style="list-style-type: none"> be deemed competent and, where possible, hold formal recognition of competence in the specific Units of Competency from this Training Package, at least to the level being assessed demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed; communicate and liaise with the assessor throughout the assessment process. <p>An assessor is required to:</p> <ul style="list-style-type: none"> hold formal recognition of competence in the relevant units in the Assessment and Workplace Training, Training Package; make the assessment decision. <p>In addition, it is <i>recommended</i> that the assessor is able to:</p> <ul style="list-style-type: none"> demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts; demonstrate the interpersonal and communication skills required in the assessment process; communicate and liaise, where appropriate, with the workplace supervisor throughout the assessment process. <p>A workplace supervisor is required to be deemed competent and, where possible, is to hold formal recognition of competence in the specific Units of Competency from this Training Package, at least to the level being assessed.</p> <p>In addition, it is <i>recommended</i> that the Workplace supervisor is able to:</p> <ul style="list-style-type: none"> demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed; communicate and liaise, where appropriate, with the assessor throughout the assessment process; use agreed practices to gather and record evidence for the assessor to use in making a valid judgement on competency.
---------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Assessment team/panel</p> <p>A team working together to conduct the assessment</p>	<p>Members of an assessment team or panel that comprises assessment and industry experience and expertise works together in the collection of evidence and in making judgements about competency. The members of the team <i>must</i> include at least one person who:</p> <ul style="list-style-type: none"> holds formal recognition of competence in the relevant units in the Training Package for Assessment and Workplace Training; is deemed competent and, where possible, holds formal recognition of
----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>competence in the specific Units of Competency from this Training Package, at least to the level being assessed.</p> <p>In addition, it is <i>recommended</i> that members of the team/panel involved in the assessment are able to:</p> <p>demonstrate current knowledge of the industry, industry practices, and the job or role against which performance is being assessed;</p> <p>demonstrate current knowledge and skill in assessing against this Training Package in a range of contexts;</p> <p>demonstrate the interpersonal and communication skills required in the assessment process and liaise with other team/panel members throughout the assessment process.</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Designing Assessment Resources

Assessment resources provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency. In some cases, assessors may use prepared assessment materials, such as those specifically developed to support this Training Package. Alternatively they may develop their own assessment materials to meet the needs of their clients.

If using prepared assessment materials, assessors should ensure that the materials are benchmarked, or mapped, against the current version of the relevant Unit of Competency. This can be done by checking that the materials are listed on the National Training Information Service (<http://www.ntis.gov.au>). Materials on the list have been noted by the National Training Quality Council as meeting their quality criteria for Training Package support materials. Alternatively the assessor can confirm the alignment by obtaining the current version of the competency standard/s and mapping against the assessment tool. Assessment tools are often developed as industry models. Where this is the case the tools may need to be customised to reflect application to a specific workplace environment. When developing their own assessment materials, assessors must ensure that:

- the materials are benchmarked against the selected Unit(s) of Competency in this Training Package;
- the materials are appropriate to the assessment needs of the client/s;
- the materials are validated to ensure that assessors can gather sufficient valid and reliable information to make assessment decisions against the Competency Standards;
- the materials and processes meet the AQTF Assessment Requirements for RTOs in Section 1 of this document.

Where assessors develop their own assessment tools, they need to decide whether to base tools around individual units of competency or the requirements of a job role or task as the focus. Where the job is used to structure assessment the assessment tool/s covers multiple units. The option of multiple unit assessments is relevant where the tools are being developed for a given workplace. In this case it is possible to identify how competencies are combined and applied to work activities. These arrangements are often unique to a given workplace.

Key references for assessors engaged in developing assessment materials are the *Training Package for Assessment and Workplace Training* [BSZ98] and *Develop Assessment Tools* [BSZ507A]. There is no set format or process for the design, production or development of assessment materials.

The Role of the Workplace Assessor

Workplaces engage in assessment and training activities because they recognise that there is a relationship between the competencies of their workforce and the performance of the business. The role of the workplace assessor is to support workplaces to explore this relationship and design assessment processes that promote this objective. The workplace assessor assists workplaces to define how competencies are applied in the workplace to achieve a given work outcome and to identify opportunities to improve current practice. Unless these issues are considered at the point of identifying relevant competency standards and designing the assessment processes, it is unlikely that the outcome will meet client expectations.

Conducting Assessments

The following chart describes the industry-preferred process for conducting assessments against the Competency Standards in this Training Package. This process applies to all assessments conducted for the purposes of national recognition in both institutional and workplace contexts. As outlined earlier, the role of the assessor may be shared by an assessment team.

<p>Step 1</p> <p>Establish the assessment context</p>	<p>The assessor:</p> <ul style="list-style-type: none"> • establishes the context and purpose of the assessment; • identifies the relevant Competency Standards, assessment guidelines and qualification framework in this Training Package; • identifies any NTQC noted support materials that have been developed to facilitate the assessment process;
	<ul style="list-style-type: none"> • analyses the competency standards and identifies the evidence requirements; • identifies potential evidence collection methods.
<p>Step 2</p> <p>Prepare the candidate</p>	<p>The assessor meets with the candidate to:</p> <ul style="list-style-type: none"> • explain the context and purpose of the assessment and the assessment process; • explain the competency standards to be assessed and the evidence to be collected; • advise on self-assessment, including processes and criteria; • outline the assessment procedure, the preparation the candidate should undertake, and answer any questions; • assess the needs of the candidate and, where applicable, negotiate reasonable adjustment for assessing people with

	<p>disabilities without compromising the integrity of the competencies;</p> <ul style="list-style-type: none"> • seek feedback regarding the candidate's understanding of the Competency Standards, evidence requirements and assessment process; • determine if the candidate is ready for assessment and, in consultation with the candidate, decide on the time and place of the assessment; • develop an assessment plan.
<p>Step 3 Plan and prepare the evidence gathering process</p>	<p>The assessor must:</p> <ul style="list-style-type: none"> • establish a plan for gathering sufficient quality evidence about the candidate's performance in order to make the assessment decision (and involve industry representatives in the development of plans for the validation of assessment); • source or develop assessment materials to assist in the evidence gathering process; • organise equipment or resources required to support the evidence gathering process; • coordinate and brief other personnel involved in the evidence gathering process.

<p>Step 4 Collect the evidence and make the assessment decision</p>	<p>The assessor must:</p> <ul style="list-style-type: none"> • establish and oversee the evidence gathering process to ensure its validity, reliability, fairness and flexibility; • collect appropriate evidence and assess this against the elements, Performance Criteria, Range Statement and all items listed in the Evidence Guide in the relevant Units of Competency; • evaluate evidence in terms of the four dimensions of competency – task skills, task management skills, contingency management skills, and job/role environment skills • incorporate allowable adjustments to the assessment procedure without compromising the integrity of the competencies; • evaluate the evidence in terms of validity, consistency, currency, equity, authenticity and sufficiency; • consult and work with other staff, assessment panel members or technical experts involved in the assessment process; • record details of evidence collected; • make a judgement about the candidate's competency based on the evidence and the relevant Unit(s) of Competency.
---------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Step 5 Provide feedback on the assessment</p>	<p>The assessor must provide advice to the candidate about the outcomes of the assessment process. This includes providing the candidate with:</p> <ul style="list-style-type: none"> • clear and constructive feedback on the assessment decision; • information on ways of overcoming any identified gaps in competency revealed by the assessment; • the opportunity to discuss the assessment process and outcome; • information on reassessment and the appeals process.
<p>Step 6 Record and report the result</p>	<p>The assessor must:</p> <ul style="list-style-type: none"> • record the assessment outcome according to the policies and procedures of the RTO; • maintain records of the assessment procedure, evidence collected and the outcome according to the policies and procedures of the RTO; • maintain the confidentiality of the assessment outcome; • organise the issuing of qualifications and/or Statements of Attainment according to the policies and procedures of the RTO.
<p>Step 7 Review the assessment process</p>	<p>On completion of the assessment process, the assessor must:</p> <ul style="list-style-type: none"> • review the assessment process; • report on the positive and negative features of the assessment to those responsible for the assessment procedures; • if necessary, suggest to appropriate personnel in the RTO ways of improving the assessment procedures. •
<p>Step 8 Participate in the reassessment and appeals process</p>	<p>The assessor must:</p> <ul style="list-style-type: none"> • provide feedback and counsel the candidate, if required, regarding the assessment outcome or process, including guidance on further options; • provide the candidate with information on the reassessment and appeals process; • report any disputed assessment decision to the appropriate personnel in the RTO; • participate in the reassessment or appeal according to the policies and procedures of the RTO.

Further Information

The following list of resources and organisations is provided to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

General Resources

The key resource Training Package for Assessment and Workplace Training *is available from:*

Business Services Training Australia
Suite 11c – Level 3
Como Centre
299 Toorak Road
SOUTH YARRA, VIC 3141

Telephone: (03) 9824 0866
Fax: (03) 9824 0877

Website: <http://www.nawtb.com.au>
E-mail: assessors@nawtb.com.au

Australian Training products Ltd
Level 25
150 Lonsdale Street
MELBOURNE, VIC 3000

PO Box 5347BB
MEBOURNE VIC 3001

Telephone: (03) 9655 0600
Fax: (03) 9639 4684

Website: <http://www.atpl.net.au>
E mail: sales@atpl.net.au

Specific Assessment Resources

Assessment instrument design

Hagar, p., Athanasou, J. and Gonczi, A., 1994, *Assessment Technical Manual*, Australian Government publishing Service, Canberra.

VETASSESS and Western Australian Department of Training and Employment, 2000, *Designing Tests – Guidelines for designing knowledge based tests for Training Packages*.

Vocational Education and Assessment Centre, 1997, *Designing Workplace Assessment Tools, A self-directed learning program*, NSW TAFE.

Manufacturing Learning Australia, 2000, *Assessment solutions*, Australian Training products, Melbourne.

Assessor training

Green, M., Moritz, R., Moyle, K. and Vale, K., 1997, *Key competencies professional development Package*, Department for Education and Children's Services, South Australia.

Australian Committee on Training Curriculum (ACTRAC), 1994, *Assessor training program – learning materials*, Australian Training products, Melbourne.

Australian Training Products Ltd, *Assessment and Workplace Training, Training Package – Toolbox*.

Victorian TAFE Association, 2000, *The professional development CD: A learning tool*, VTA, Melbourne.

Australian National Training Authority, *A Guide for Professional Development*.

Australian National Training Authority, *Facilitator Packs for Certificate IV in Assessment and Workplace Training*.

Australian National Training Authority, *Facilitator's Pack for Train Small Groups and Assessment*.

Australian National Training Authority, *Facilitator's Pack for Certificate IV (BSZ405A – BSZ408A)*.

Australian National Training Authority, *Learners Packs for Certificate IV in Assessment and Workplace Training*.

Australian National Training Authority, *Learner's Pack for Assessment (BSZ401A – BSZ403A)*.

Australian National Training Authority, *Learner's Pack for Certificate IV (BSZ401A – BSZ408A)*.

Australian National Training Authority, *Learner's Pack for Assessment with Assessment Competency Standards*.

Australian National Training Authority, *Learner's Pack for Certificate IV with Certificate IV Competency Standards*.

Australian National Training Authority and also the National Assessors and Workplace Trainers Body.

Conducting assessments

Bloch, B. and Thomson, P., 1994, *Working towards best practice in assessment: A case study approach to some issues concerning competency-based assessment in the vocational education and training sector*, NCVET, Adelaide.

Docking, R., 1991, *An A–Z of assessment myths and assessment in the workplace*, Competence assessment briefing series, No. 4, Employment Department, Perth, Western Australia.

Hawke, Geof, 1996, *Integrating assessment of learning outcomes*, Assessment Centre for Vocational Education, Sydney.

Hawke, Geof, 1995, *Work-based learning: advice from literature*, Assessment Centre for Vocational Education, Sydney.

National Assessors and Workplace Trainers Body, *Putting it into practice [Training Package implementation Guide]*.

Parsloe, E., 1992, *Coaching, mentoring and assessing: A practical guide to developing competence*, Kogan Page, London.

Rumsey, David, 1993, "Practical issues in workplace assessment" in *National Assessment Research Forum: A forum for research into competency-based assessment*. [VEETAC Competency Based Training Working party Assessment Steering Group], NSW TAFE Commission, Sydney.

Rumsey, David, 1994, *Assessment practical guide*, Australian Government Publishing Service, Canberra.

Evidence gathering methods

Australian National Training Authority, 1998, *A new assessment tool*, ANTA, Melbourne.

Gonczi, A. (ed.), 1992, *Developing a competent workforce: adult learning strategies for vocational education and training*, TAFE National Centre for Research and Development, Adelaide.

Kearney, Paul, 1992, *Collaborative assessment techniques*, Artemis, Tasmania.

National Assessors and Workplace Trainers Body, *The evidence resource kit* – containing language, literacy and numeracy video and CD ROM –

National Assessors and Workplace Trainers Body, *The evidence workbooks*

Assessment system design

National Centre for Vocational Education and Research, 1996, *Integrating assessment: removing the on the job/off the job gap*, Conference papers from 4-6 June, Western Australian Department of Training.

OTFE, 1998, *Demonstrating best practice in VET project – assessment systems and processes*, Victoria.

Toop, L., Gibb, J and Worsnop, P., *Assessment system designs*, Australian Government Publishing Service, Canberra.

Wilson, P., 1993, *Integrating workplace and training system assessments*, Testing Times Conference, NCVET, Sydney.

Managing assessment systems

Western Australia Department of Training and VETASSESS, 1998, *Kit for Skills Recognition Organisations*, WADTE, Perth.

Field, I., 1995, *Managing organisational learning*, Longman, Melbourne.

Recognition of Current Competency/ Recognition of Prior Learning

Recognition and Assessment Centre, 1994, *New place: Same Skills. A guide for people from non-English speaking backgrounds*, Office of Multicultural Affairs, DEET.

Recognition and Assessment Centre, *A Flexible Approach to Recognition Practices: RPL as a Framework*, Melbourne.

Recognition and Assessment Centre, PO Box 299, Somerton, Vic 3062, Telephone (03) 9254 3000.

Customisation/Contextualisation Guidelines

Customisation/Contextualisation Guidelines

How can the Training Package be Customised/Contextualised?

Training Packages are intended to be customised to meet the requirements of the workplace while still retaining the intent of the original outcomes. For specific information on customising the Sugar Milling Industry Training Package, refer to the Sugar Milling section of this Training Package. The following describes the three levels at which Training Packages can be contextualised or customised.

Unit Contextualisation

Refers to the extent to which individual Units of Competency can be changed or contextualised to meet the needs of an enterprise, industry or sector while still retaining the intent of the original outcomes. Addition of extra Elements or changes to Performance Criteria is not recommended. This would generally change the unit outcome, and would effectively constitute a new unit.

Qualification Customisation within the Training Package

There is potential to incorporate units from other industry Training Packages as additional or substituted units. Advice to this effect is provided in the section on Sugar Milling industry qualifications.

Competency Standards

Competency Standards

What are competency standards?

The broad concept of competency is related to realistic work practices expressed as an outcome that can be understood by all people in the workplace as well as by trainers and assessors. It is important that the meaning of competency is interpreted and understood in the same way by different users, and in different situations.

Competency comprises specified knowledge and skills relevant to an industry, and the application of that knowledge and skills to the standard of performance required in the workplace.

ANTA's definition of competency encompasses several features: *"The concept of competency focuses on what is expected of an employee in the workplace rather than the learning process, and embodies the ability to transfer and apply skills and knowledge to new situations and environments"*.

Each Unit of Competency has a Title, Unit Descriptor, Elements, Performance Criteria, Range Statement and Evidence Guide.

Unit Title

The Unit Title is a succinct statement of the broad area of competency covered by the unit and is expressed in terms of the outcome.

Unit Descriptor

The Unit Descriptor expands, as necessary, on the title of the unit to accurately and clearly reflect the complete purpose and intent of the unit.

Elements of Competency

Elements of Competency are the basic building blocks of the unit. They describe, in terms of outcome, the significant functions and tasks that a person in a particular area of work is able to perform.

Performance Criteria

The Performance Criteria specify all the relevant tasks, roles, skills, and applied knowledge and understanding that demonstrate competent performance. This is expressed in terms of observable outcomes.

Range Statement

The Range Statement links the required knowledge and organisational and technical requirements to a context. It describes any contextual variables that will be used or encountered when applying the competency in work situations.

Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate competency. It addresses the specific skills and knowledge required to achieve the performance standard identified by the elements and performance criteria. The actual assessment should be conducted in the workplace and/or training environment that provides the resources required for assessment as stated in each unit of competence.

The Evidence Guide includes the following advice:

- A detailed description of the evidence that must be collected by the assessment process. To assist assessors evidence is divided into skills which can typically be observed, and knowledge which would typically involve asking questions to confirm understanding. All items in the evidence guide must be covered by the assessment process.
- Advice on the relationship with other competency standards. Units of Competency that must or should be jointly assessed are indicated. Units that are essential to underpin or support competence are listed as pre-requisite units. These must be assessed prior to or concurrent with the unit. Other related units typically depend on work and process organization. Where a number of units are required to be exercised collectively to achieve a work outcome it is recommended that these be jointly assessed.
- The Evidence Guide details the resources that must be available to demonstrate competence such as whether assessment must occur under particular workplace or simulated workplace conditions, equipment, material, infrastructure and other conditions required. This information is found under the sub-heading 'Resources required for assessment'.

Key Competencies

Key Competencies must be identified in the Competency Standard within each Unit of Competency, or at the qualification level. The Mayer Committee has defined seven Key Competencies underpinning successful activity in life and work. These are:

- collecting, analysing and organising information;
- communicating ideas and information;
- planning and organising activities;
- working with others in teams;
- solving problems;
- using mathematical ideas and techniques;
- using technology.

They have three levels of performance that should be specified when identifying where they apply in industry competencies.

Integration of the Key Competencies within Training Packages

The Key Competencies are general capabilities prepared by the Mayer Committee in *Putting Education to Work: The Key Competencies report* (Mayer 1992). They were described in the Mayer report as being fundamental to the transfer and application of learning and were defined as a set of capabilities that enable people to transfer to the workplace knowledge and skills developed in classrooms and other learning situations.

ANTA has recognised the critical role of the Key Competencies in ensuring that the Australian work force is equipped with the skills necessary to effectively participate in current and emerging forms of work organisation. ANTA specifies that all Training Packages "require the effective integration of key competencies".

The seven Key Competencies identified in the Mayer (1992) report are described below.

1. Collecting, analysing and organising information

The capacity to locate, sift and sort information in order to select what is required and to present it in a useful way, and evaluate both the information itself and the sources and methods used to collect it.

2. Communicating ideas and information

The capacity to communicate effectively with others using the range of spoken, written, graphic and other non-verbal means of expression.

3. Planning and organising activities

The capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's performance.

4. Working with others and in teams

The capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal.

5. Solving problems

The capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the solution are clearly evident and in situations requiring creative thinking and a creative approach to achieve a desired outcome.

6. Using mathematical ideas and techniques

The capacity to use mathematical ideas, such as number and space, and techniques such as estimation and approximation, for practical purposes.

7. Using technology

The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

Key Competencies are essential for effective participation in the emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic, in that they apply to work generally rather than to work in particular occupations or industries¹

¹ Mayer 1992, p. 5

The Sugar Milling Industry Training Package

The Sugar Milling Industry Training Package

The Industry

The Sugar Milling industry takes sugar cane and processes it to produce raw sugar. This is the feedstock for the refining process. There are two main by-products of milling – molasses and fibre. Molasses is used in cattle feed and fermentation processes. Fibre is used for power generation. This includes meeting site energy requirements through the use of bagasse to fire boilers. While its primary output is raw sugar, the industry's future could be increasingly shaped by its potential as a renewable energy resource supplier through its production of molasses that could be distilled into fuels and fibre that is primarily used to generate electricity.

Activities in the Sugar Milling industry can be categorised into three broad activity streams.

- **Processing:** covers milling operations from the extraction station or milling train through all processing stages to produce the milled product. This grouping includes boiler, turbines and powerhouse operation and laboratory sampling and testing.
- **Transport:** includes all forms of transport – most commonly rail and road. It also includes traffic control, operation of weighbridge stations, yard control and cane receipt activities.
- **Services:** relates primarily to rail construction and maintenance. It includes rigging, dogging, scaffolding, crane operation, warehousing and horticulture activities.

The industry is highly seasonal in nature. The milling season typically occupies up to half the year. For the remainder of the year, work is undertaken to prepare, plan, construct and maintain rail, plant and equipment. This work pattern creates a unique requirement for a hybrid qualification capable of reflecting the flexible combinations of competencies needed.

The Training Package

The Certificates in Sugar Milling in this Training Package are available at AQF levels 1, 2 and 3. The qualification structure provides the flexibility required to address seasonal variation in job content. This Training Package covers but is not limited to employees who work in an individual or any combination of process, services, maintenance and or transport roles.

Development Process

This Training Package has been developed under the auspice of the National Food Industry Training Council. The NFITC has managed a multi-level consultation process to engage industry in the development and validation of the Package.

- An industry steering committee was convened, with members representing a range of sugar mills, the Australian Sugar Milling Council, industry unions and the Queensland State Training Authority. A TAFE representative was nominated by industry to participate in the process.
- Expert panels were convened in Bundaberg, Mackay and Townsville. This was followed up with more intensive work groups formed to address specific competency areas.
- An industry-wide, national validation process was conducted involving the Australian Workers Union (Qld, NSW and National offices), Australian Sugar Milling Council, Sugar Mills in Queensland, New South Wales and Western Australia, and relevant Registered Training Organisations and State Training Authorities.

Sugar Milling Industry Qualifications

Sugar Milling Industry Qualifications

The qualifications developed for the Sugar Milling industry are for AQF levels 1, 2 and 3. Table 1 below lists the qualifications that apply in the Sugar Milling Industry and are covered by this Training Package.

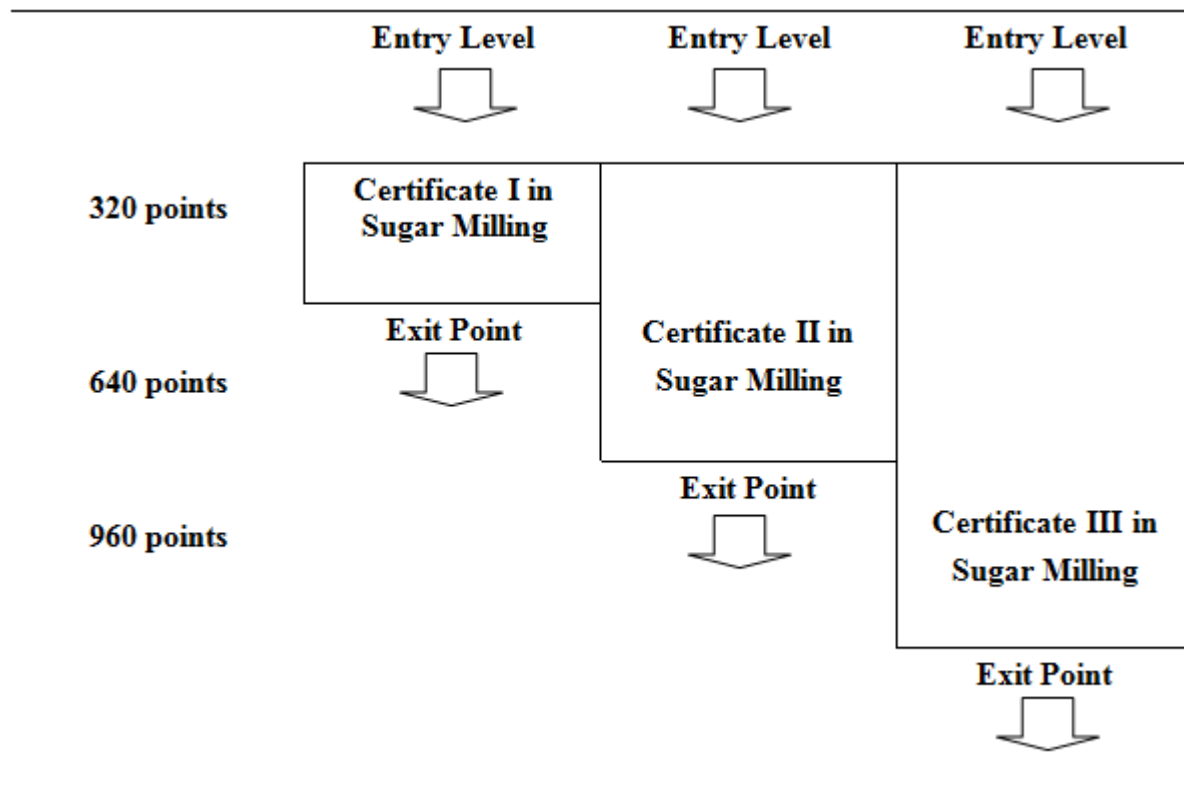
Table 1: Sugar Milling Industry Qualifications

AQF Level	Certificate	Code
3	Certificate III in Sugar Milling	SUG302SUG30102
2	Certificate II in Sugar Milling	SUG202SUG20102
1	Certificate I in Sugar Milling	SUG102SUG10102

The structure of these qualifications is outlined below.

Pathways

An employee/person may enter directly into a Certificate I, II or III in Sugar Milling. Credit for units completed in a lower level qualification can be counted towards a higher level qualification within the Packaging Rules.



Structure of the Sugar Milling Industry Qualifications

Different types of units make up these qualifications. They are coreCore, specialist Specialist and Elective units.

Core units

Core units describe skills that are an integral part of all Sugar Milling qualifications. Different Core units may apply depending on the work activities performed. Employees must have attained competence in the relevant Core units before, or concurrent with, achieving competence in any specialist or elective unit/s. . Core units are a compulsory component of each Sugar Milling qualification.

Specialist units

These are units of competency that are directly associated with the main activities undertaken in the Sugar Milling industry: to assist in organizing and locating relevant units, the standards are presented under three broad stream headings.

- Processing
- Transport
- Services

Specialist units include those developed for the Sugar Milling industry and those **imported** from external Training Packages covering civil and general construction, transport and distribution, laboratory and horticulture. Imported units retain their own codes such as **BCC**, **BCG**, **MEM**, **RUH**, **TDT** or **PML** and are listed in Table 5.

Elective units

These are units that may be used as appropriate to meet work requirements. They are broadly grouped under the headings of:

- General including Trainer and Assessor Units; and
- Maintenance

Additional Units

The units listed in this Training Package are designed to meet typical Sugar Milling industry requirements. If these units cannot meet any specific enterprise requirements, then units from any other registered Training Package may be imported. These additional imported units will need to be referred to the Sugar Industry Steering Committee (auspiced by the National Food Industry Training Council) for point allocation, Band alignment and consideration of duplication/overlap issues.

Point Value of Units

The units in this Training Package have been allocated a point value to establish relativity between units of competency. Achievement of a Certificate in Sugar Milling requires competence in the appropriate number and type of units to make up the required point value. In assigning points to each unit of competence, account was taken of:

- The amount of training needed to gain the skill required.
- The complexity of the skill and knowledge level required.
- The context in which skills and knowledge is applied in the Sugar Milling industry.
- Values previously allocated by the industry.
- Points/nominal hours allocated to units sourced from other registered Training Packages and their application to a Sugar Milling context.

In addition to the Band from which a unit is selected, the allocation of a point value to each unit guides the selection of units to form a qualification.

An individual unit of competency in isolation is not designed nor intended to be used to determine job or occupational classifications. The aggregate point value of units can only be used to determine job or classification outcomes where there is an industrial instrument in place to do so.

The allocation of points to individual units has been used in an attempt to obtain parity across units of competency for the purpose of qualification outcomes and may need to be refined over time. Any such changes will need to be agreed to by the Sugar Industry Steering Committee.

Banding of Units

Alignment of units to bands A, B and C reflect differences in the nature and complexity of skills and knowledge used within this industry. Band C units in general require a greater depth of knowledge and skill than Band B. However Elective units can be aligned to more than one band. This includes maintenance units which can apply equally to Bands A, B or C and general Elective units which can apply to Bands B and C. This is in keeping with the Metals and Engineering Industry principle that states that individual competency units should not be attached exclusively to a particular occupation or classification level. The maintenance units selected for use within the Sugar Milling Certificates, are limited to NMETB Band A units.

Whilst individual units are allocated to a Band this does not mean that an individual unit is aligned to a particular AQF level, rather it is the package of units within a qualification that determines the AQF level outcome.

Packaging Rules for Certificate I, II and III in Sugar Milling

Tables 5 – 7 outline the type of units and points required to achieve a qualification at AQF levels 1-3.

Table 8 shows how units have been aligned to Bands and lists the point values applied to each unit.

- Core units are compulsory for all qualifications.
- Points have been allocated to each unit. Each qualification requires the completion of a fixed number of points. (ie Certificate I – 320 points, Certificate II – 640 points, and Certificate III – 960 points).
- Credit from a completed Certificate automatically contributes to the higher Certificate.
- All qualifications must contain a minimum number of points derived from Specialist units.
- Qualifications may or may not contain units from the Elective area. Where Elective units are selected, a maximum point value has been applied for each qualification.
- There is no prescribed order of unit completion except to ensure pre-requisite requirements are met.
- Pre-requisites are an integral component of each Sugar Milling qualification.
- The outcomes of some units may overlap. Table 10 identifies how points have been allocated in the case of overlapping units.
- Additional units imported from external Training Packages must be referred to the Sugar Milling Steering Committee for point allocation and Band alignment.
- Specialist units are aligned within Bands A, B or C. To provide additional flexibility within each qualification, units may be selected from a higher or lower Band according to the limits indicated for each qualification in the Tables 5 – 7.

Specialist units have been drawn from external Training Packages covering civil and general construction, transport and distribution, laboratory, and horticulture and from the National Occupational Health and Safety Commission (guideline units). No more than 70 percent of the total point value of a qualification can be drawn from any one of these external Training Packages. This ratio also applies to any additional imported Specialist units. This does not apply to Elective units, which are covered by Rule 12 below or to TDT units that are covered by Rule 11 below.

- No more than 5 TDT units from within a Band can be counted towards a qualification. For example within a Certificate II qualification no more than 5 TDT units can be selected from within Band A and no more than 5 TDT units can be selected from Band B.
- Elective units fall into two categories - General and Maintenance.

Elective Maintenance units are not aligned to Bands and may be counted towards any qualification.

Elective General units are aligned to Bands B and/or C.

No more than 49 percent of the total point value of a qualification can be drawn from any one Elective category. This ratio also applies to any additional imported Elective units.

Table 2: Certificate I in Sugar Milling

Sugar Industry Units		Elective units	Total Points required for Certificate I in Sugar Milling
Core units*	Specialist units		
90 points (if operating in only one specialist area/stream) Or: 100 points** (if operating in more than one specialist area/stream)	A maximum of 40 points may be taken from Band B aligned units		
	Minimum of 40 points from Band A Specialist units.	Maximum of 150 points from any one category of Elective units	320 points

*Core units are not aligned to a Band

**If work functions span Transport and Services streams, the same Core units apply and the total value of Core units is 90 points. If moving between processing and Transport or Services streams, completion of an additional core unit is required. Where this is the case, the total value of Core units is 100 points.

Table 3: Certificate II in Sugar Milling

Sugar Industry Units		Elective units	Total Points required for Certificate II in Sugar Milling
Core units	Specialist units		
90 points (if operating in only one specialist area/stream) Or: 100 points (if operating in more than one specialist area/stream)	Minimum of 90 points from Band B Specialist units.	Maximum of 310 points from any one category of Elective units	640 points
	Minimum of 40 points and a maximum of 230 points from Band A Specialist units.		

Table 4: Certificate III in Sugar Milling

Sugar Industry Units		Total Points

Core units	Specialist units	Elective units	required for Certificate III in Sugar Milling
90 points (if operating in only one specialist area/stream)	Minimum of 60 points and a maximum of 320 points from Band C Specialist units.	Maximum of 470 points from any one category of Elective units	960 points
Or: 100 points (if operating in more than one specialist area/stream)	Minimum of 90 points from Band B Specialist units.		
	Minimum of 40 points and a maximum of 230 points from Band A Specialist units.		

Table 5 provides a list of the units grouped by stream / activity area and point value.

SUG02 Units

Table 5: Sugar Milling Qualification Units Listed by Band and Point Value

Core units

BAND	PROCESSING	TRANSPORT	SERVICES
Non-Aligned	Core – Process/Boiler/Turbine Operation	Core –General	Core
	*SUGCCPA1A Collect, present and apply workplace information	*SUGCCPA1A Collect, present and apply workplace information	*SUGCCPA1A Collect, present and apply workplace information
	* SUGCOHS1A Follow safe work procedures	* SUGCOHS1A Follow safe work procedures	* SUGCOHS1A Follow safe work procedures
	*SUGCLIP1A Locate industry and company processes (Sugar)	*SUGCLCT1A Locate cane transport system and functions	*SUGCLCT101A Locate cane transport system and functions
	*SUGCMCH1A Manually clean and maintain housekeeping standards		
	Core – Laboratory	Core – Road Transport	
		*SUGCCPA1A	

	<p>*SUGCCPA1A Collect, present and apply workplace information</p> <p>*SUGCLIP1A Locate industry and company processes (Sugar)</p> <p>*SUGCMC1A Manually clean and maintain housekeeping standards</p> <p>*PMLOHS300A Work safely in accordance with defined policies & procedures</p>	40	<p>Collect, present and apply workplace information</p> <p>* SUGCOHS1A Follow safe work procedures</p> <p>*SUGCLCT1A Locate cane transport system and functions</p>		
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----	---------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

Specialist units

BAND	PROCESSING		TRANSPORT		SERVICES									
A	<p>Laboratory</p> <p>SUGPCPS1A Collect and prepare samples</p>	30	<p>TDTC197B Drive vehicles</p> <p>SUGTAEM1A Assess extraneous matter in cane</p> <p>SUGTCYM1A Control yard movements</p> <p>SUGTPST1A Prepare for shunting operations</p>	30	<p>Construction</p> <p>SUGSPPB1A Prepare pre-ballast</p> <p>BCG1010A Carry out concreting to simple forms</p> <p>BCC2000A Read and interpret plans</p> <p>BCC1012A Spread and compact materials manually</p> <p>*BCC1005A Use hand and power tools</p> <p>BCG1008A Use simple levelling devices</p> <p>BCC1006A Use small plant and equipment</p> <p>Other</p> <p>RUHHRT113A Operate ride-on vehicles</p> <p>RUHCORE3A Use</p>	10	40	20	10	40	10	10	15	15

				hazardous substances safely	
				TDTD197B Shift materials safely using manual methods	
				TDTD297B Shift a load using manually-operated equipment	
BAND	PROCESSING		TRANSPORT	SERVICES	
B	Processing		Rail	Construction	
	SUGPCCE2A Chemically clean equipment	30	SUGTDCL2A Drive a cane locomotive	SUGSCT2A Construct turnouts	20
	SUGPCSP2A Operate a crystalliser station process	40	*MEM7.1A Operational maintenance of machines/equipment	*SUGSLRT2A Lay rails	20
	SUGPOEP2A Operate an evaporation process	60		*SUGSLST2A Lay skeleton tracks	20
	SUGPOES2A Operate an extraction station	40		*SUGSLSP2A Lay sleepers	10
	SUGPHGF2A Operate a high grade fugal station	40	Cane Receipt		20
	SUGPJCP2A Operate a juice clarification process	30	SUGTCW2A Conduct cane weighbridge operations	BCC2003A Assist with excavation and support installation	20
	SUGPLGF2A Operate a low grade fugal station	80	SUGTOTE2A Operate tamping equipment	BCC2001A Carry out basic site survey	40
	SUGPMFP2A Operate a mud filtration process	30	SUGTOTS2A Operate a tipping station	*BCG1004A Carry out measurements and calculations	20
	SUGPOPS2A Operate a pans station	60		BCC3005A Conduct front end loader operations	40
	SUGZPC2A Operate a process control interface	40	Road	BCC3008A Conduct skid steer loader operations	40
	Laboratory		TDTC297B Drive light rigid vehicles	BCC2004A Lay pipes	20
	SUGPPST2A Perform standard tests	60	TDTC397B Drive medium rigid vehicles	RUHHRT207A Operate equipment and machinery	20
	PMLDATA501A Use laboratory application software	40			20
		60			20

<p>Boiler/Turbine/Services</p> <p>SUGPARS2A Operate an ash separation system</p> <p>SUGPOB2A Operate a boiler</p> <p>SUGPCWS2A Operate a cooling water system</p> <p>*SUGPFSB2A Operate a fuel supply system – bagasse</p> <p>*SUGPFSC2A Operate a fuel supply system – coal</p> <p>SUGPOTB2A Operate a turbine</p> <p>SUGPWWT2A Operate a waste water treatment system</p> <p>SUGPOBB2A Operate a boiler –basic</p>			BCG3118A Erect and dismantle scaffolding - basic	40
			BCG3041A Undertake dogging	20
			BCG3042A Undertake rigging	40
			Other	
			SUGSPGD2A Perform general drilling operations	20
			SUGSPGL2A Perform general lathe operations	
			SUGSPGM2A Perform general milling operations	
			SUGSPPS2A Perform general planing and shaping operations	
			SUGSFBS2A Undertake forming, bending and shaping	
			SUGSUSF2A Undertake simple fabrication	
			TDTA2197B Despatch stock	
			TDTD397C Handle hazardous substances/dangerous goods (stores workers)	
			TDTD1097B Operate a forklift	
			TDTA1397B Receive goods	
TDTA1497B Use product knowledge to complete work				

					operations RUHHRT212A Apply chemicals and biological agents	
--	--	--	--	--	----------------------------------------------------------------------	--

BAND	PROCESSING		TRANSPORT		SERVICES	
C	Processing SUGPOSS3A Operate a system (sugar) 60 Boiler/Powerhouse/Services SUGPMPH3A Monitor a powerhouse 40 SUGPOSS3A Operate a system (sugar) 60 SUGPOBI3A Operate a boiler - intermediate 80 SUGPOBA3A Operate a boiler - advanced 100 Laboratory SUGPFCT3A Perform factory control tests 80		Rail SUGTDMS3A Drive a master-slave locomotive 20 TDTC2001A Operate on-track self-propelled equipment (tamper) 40 Road TDTC597C Drive heavy combination vehicles 60 TDTC497C Drive heavy rigid vehicles 80 Traffic Control SUGTASD3A Adjust schedule(s) to meet daily workplace requirements SUGTCCT3A Control cane traffic movements		Construction BCC3050A Construct substructures – bridges and wharves 60 BCC3051A Install deck 40 BCC3052A Maintain structures – bridges and marine work 40 Other TDTA1897B Organise despatch operations TDTA1997B Organise receipt operations TDTA1697B Use inventory systems to organise stock control 30	

BAND	ELECTIVE UNITS: GENERAL		BAND	ELECTIVE UNITS: MAINTENANCE	
B/C	SUGEIEP2A Implement environmental procedures	30	Non-Aligned	Maintenance *MEM2.5C11A Measure with	

BAND	ELECTIVE UNITS: GENERAL		BAND	ELECTIVE UNITS: MAINTENANCE	
	SUGEACW3A Analyse and convey workplace information	40		graduated devices	20
		40		MEM5.5AA Carry out mechanical cutting	20
	SUGEFTW3A Facilitate teams	40		MEM5.7AB Manual heating, thermal cutting and gouging	20
	SUGEEMP3A Monitor the implementation of the environmental management program	40		MEM5.8AB Advanced manual heating, thermal cutting, gouging and shaping	20
		15		MEM5.9AB Automated thermal cutting	40
	SUGEOHS3A Monitor the implementation of occupational health and safety	15		MEM5.12AB Perform routine manual arc welding	20
		5		MEM5.13AA Perform manual production welding	20
	BSZ401A Plan Assessment	30		MEM5.15AB Weld using manual metal arc welding process	40
	BSZ402A Conduct Assessment			MEM5.17AB Weld using gas metal arc welding process	30
	BSZ403A Review Assessment			*MEM7.1AA Operational maintenance of machines/equipment	
	BSZ404A Train Small Groups			MEM9.1AA Draw and interpret sketch	
				MEM9.2AA Interpret technical drawing	
				*MEM18.1AB Use hand tools	
				*MEM18.2 AA Use power tools/hand held operations	
				MEM18.3AB Use tools for precision work	
				MEM18.55AA Dismantle, replace and assemble engineering components	

Note: * Indicates units that overlap with other listed units. When selecting these units, refer to Table 7 for advice on point values.

Some core and general Elective units are either FDF (Food Processing Industry) units or are based on FDF units. This relationship is indicated in the Unit descriptor. The FDF Training Package is currently under review. Once finalized the Sugar Milling industry may replace these units with the revised FDF units.

Pre-requisite units

Pre-requisite units are identified within the individual units of competency. Where pre-requisite unit/s are specified, attainment of competence must be assessed prior to, or concurrent with, attaining competence in the relevant specialist or elective unit. Pre-requisites are essential components of Sugar Milling qualifications. Table 6 provides advice on pre-requisite units.

Table 6: Pre-requisite Units by Stream

Process Stream

Band B

Unit	Pre-requisites
SUGZPC2A Operate a process control interface	Relevant equipment unit
SUGPOES2A Operate an extraction station	SUGPOTB2A Operate a turbine

Band C

SUGPOSS3A Operate a system (sugar)	Relevant equipment units that make up the system
SUGPFCT3A Perform factory control tests	SUGPPST2A Perform standard tests
SUGPMPH3A Monitor a powerhouse	SUGPOTB2A Operate a turbine

Transport Stream

Band B

Unit	Pre-requisites
TDTC297B Drive light rigid vehicles	TDTC197B Drive vehicles
TDTC397B Drive medium rigid vehicles	TDTC197B Drive vehicles

Band C

SUGTDMS3A Drive a master-slave locomotive	SUGTDCL2A Drive a cane locomotive
-------------------------------------------	-----------------------------------

TDTC497C Drive heavy rigid vehicles	TDTC197B Drive vehicles
TDTC597C Drive heavy combination vehicles	TDTC197B Drive vehicles

Services Stream

Band B

Unit	Pre-requisites
SUGSCT2A Construct turnouts	SUGSLRT2A Lay rails
SUGSFBS2A Undertake forming, bending and shaping	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
SUGSPGD2A Perform general drilling operations	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
SUGSPGL2A Perform general lathe operations	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
SUGSPGM2A Perform general milling operations	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
SUGSPPS2A Perform general planing and shaping operations	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
SUGSUSF2A Undertake simple fabrication	BCG1004A Carry out measurements and calculations BCC1005A Use hand and power tools
BCG3042A Undertake rigging	BCG3041A Undertake dogging

Band C

BCC3052A Maintain structures – bridges and marine work	BCC3050A Construct substructures – bridges and wharves
--------------------------------------------------------	--------------------------------------------------------

	BCC3051A Install deck
--	-----------------------

Elective units

SUGECW3A Analyse and convey workplace information	SUGCCPA1A Collect, present and apply workplace information
SUGEOHS3A Monitor the implementation of occupational health and safety	SUGCOHS1A Follow safe work procedures; or PMLOHS300A Work safely in accordance with defined policies & procedures

Maintenance (MEM) Non-aligned

MEM5.5AA Carry out mechanical cutting	MEM18.1AB Use hand tools
MEM5.8AB Advanced manual heating, thermal cutting, gouging and shaping	MEM5.7AB Manual heating, thermal cutting and gouging
MEM7.1AA Operational maintenance of machines/equipment	MEM18.1AB Use hand tools
MEM18.3AB Use tools for precision work	MEM18.1AB Use hand tools
MEM18.55AA Dismantle, replace and assemble engineering components	MEM2.5C11A Measure with graduated devices MEM18.1AB Use hand tools MEM18.2AA Use power tools/ hand-held operations MEM9.1AA Draw and interpret sketch, or MEM9.2AA Interpret technical drawing

Overlapping Units

A number of units duplicate some aspects of other units. Where only one unit is required the point allocation remains as given in the Table 5. Where more than one unit is required, advice on the combined value is provided in the Table 7.

Table 7: Overlapping units

Overlapping Units			Combined Value	
Core – Process SUGCLIP1A Locate industry and company processes (Sugar) SUGCCPA1A Collect, present and apply workplace information SUGCMCH1A Manually clean and maintain housekeeping standards SUGCOHS1A Follow safe work procedures	20 20 10 40	Core – Transport/Services SUGCLCT1A Locate cane transport system and functions SUGCCPA1A Collect, present and apply workplace information SUGCOHS1A Follow safe work procedures	30 20 40	If work functions span Transport and Services streams, the same Core units apply and the total value of Core units remains at 90 points. If moving between processing and Transport or Services streams, completion of an additional core unit is required. Where this is the case, the total value of Core units is 100 points.
SUGCOHS1A Follow safe work procedures	40	PMLOHS300A Work safely in accordance with defined policies & procedures	40	For the purposes of this Training Package these units are equivalent. A maximum of 40 points can be counted for achieving competence in either or both of these units.
SUGPFSB2A Operate a fuel supply system – bagasse	60	SUGPFSC2A Operate a fuel supply system – coal	60	If already competent in one unit, an additional 20 points can be allocated to attain competence in the second unit.
SUGSLRT2A Lay rails SUGSLSP2A Lay sleepers	20 20	SUGSLST2A Lay skeleton tracks	20	When all three units are required, the total value cannot exceed 40 points.
SUGPOB2A Operate a boiler	60	SUGPOBB2A Operate a boiler - basic	60	The relevant unit should be selected according to licensing requirements. Only one set of points can be counted for operating a basic boiler.
MEM18.1AB Use hand tools MEM18.2AA Use power tools/	20 20	BCC1005A Use hand and power tools	40	For the purposes of this Training Package these units are equivalent. A maximum of 40 points can be counted for achieving competence in these

hand-held operations				units.
MEM2.5C11A Measure with graduated devices	20	BCG1004A Carry out measurements and calculations	20	For the purposes of this Training Package these units are equivalent. A maximum of 20 points can be counted for achieving competence in either or both of these units.

Coding of Competency Standards

Each Training Package is assigned a unique five character code. For the Sugar Milling Training Package it is SUG02. Each unit of competence is also assigned a code of up to 12 characters, consisting of capital letters and numbers.

The first three letters of the code are taken from the Training Package code SUG. The next letter indicates the unit type:

- C indicates that the unit is a core competency standard.
- P indicates that the unit typically applies to processing activities.
- T indicates that the unit typically applies to transport activities.
- S indicates that the unit typically applies to services activities.
- Z indicates that the unit applies to more than one activity stream.
-

The following three letters represent the title of the unit. The first number indicates the AQF level where the unit typically aligns. The final letter indicates the unit version.

For example, a unit code SUGPMFP2A can be broken down as follows. The first three letters indicate that it is part of the Sugar Milling competency standards. The 'P' indicates that it is part of the process stream. MFP relates to the unit title. In this case the unit title is Operate a mud filtration process. This unit typically aligns to AQF 2. The letter A shows that this unit is the first version.

Licensing Arrangements

Some of the activities covered by this Training Package are also covered by National Occupational Health and Safety Commission standards for operators of industrial equipment [NOHSC:1006 (2001)]. These include activities in:

- Rigging, dogging, scaffolding,
- Crane operation (still to be added)
- Turbine and boiler operation
- Forklift operation {NOHSC:7019 (1992)}

At this stage NOHSC Standards are not in a format suitable for inclusion into Training Packages. So in the interim, units have been imported from General Construction Training Package BCG98 to cover the areas of Rigging, Dogging and Scaffolding and are based on the relevant NOHSC standards. New SUG coded units have been created to cover boiler and turbine operation. Once again these have been based on the relevant NOHSC standards for basic, intermediate and advanced boiler operation. Some types of boilers are not automatically covered by the National Occupational Health and Safety Commission standards. For this reason a unit has been included to cover boiler operation where this activity is not a certificated occupation.

For further information on licensing requirements refer to the National Occupational Health and Safety Commission Standard: National Occupational Health and Safety Certification Standard for Users and Operators of Industrial Equipment [NOHSC:1006 (2001) and [NOHSC:7019 (1992)] and the National Occupational Health and Safety Commission website at www.nohsc.gov.au.

When assessing an area covered by a license, the assessment must be conducted according to the requirements of the managing authority. In the case of certificated occupations managed by National Occupational Health and Safety Commission, assessment must be carried out by a certificated assessor in accordance with NOHSC guidelines. Interpretation and implementation of these guidelines is the responsibility of the relevant state or territory health and safety authority.

The other certificated activity undertaken in this industry is the application of pesticides. Units from the Horticulture Training Package have been included in this Training Package. At the time of development this Training Package was under review. RTOs incorporating these units into a qualification should check with the Rural Training Council of Australia for current advice on licensing arrangements relating to these standards.

Customising/contextualising the Sugar Milling Training Package

Training Packages are intended to be customised to meet the requirements of the workplace while still retaining the intent of the original outcomes. This Training Package provides qualifications that allow for a combination of units from both within the Sugar Milling industry and across a range of external Training Packages. There are two options for customising units. Unit contextualisation refers to customising the content of units and qualification customisation refers to customising the choice of units available within a qualification.

Unit Contextualisation

The purpose of unit contextualisation is to directly relate the unit content to the workplace context. The first part of a unit that may need to be contextualised is the range statement. The range statement explains the context in which the skills and knowledge in the unit are applied. The range statement identifies conditions that must be met and others that may apply. The use of the term ‘may include’ indicates the typical expectations or conditions that apply. These conditions may be contextualised to suit workplace requirements and conditions. For example the range statement often includes information about the types of processes and equipment that may be used. This can be altered to suit workplace requirements.

The elements, performance criteria and evidence guide outline the skills and knowledge that must be covered to achieve competence. This information is expressed at a level of detail appropriate across industry. When using standards in a workplace contextualisation involves describing how each item applies in the given context. For example, all operators are required to recognize and control OHS hazards in the workplace. Contextualisation would involve identifying the specific hazards and control methods used. This allows the workplace to directly link the outcomes to their requirements and express this in familiar language. The essential rule when contextualising a unit/s is to make sure that the whole evidence guide is covered and the intent of the unit is retained.

In addition to describing evidence to be collected by the assessment process, the evidence guide describes the context in which assessment must occur and any conditions that apply to assessment. This information can be contextualised for a workplace by determining how these conditions apply. For example, which operating procedures or other workplace information is relevant, which equipment must be used? Where a workplace has a number of versions of the same type of equipment, is demonstration of skills on one type sufficient or must skills be demonstrated using more than one?

Qualification Customisation within the Training Package

No two Sugar Milling qualifications will be the same. Each qualification will be a unique combination of units selected to support the diverse skill needs of workers within the industry. In a sense every qualification completed presents a customised outcome.

Potential also exists for further customisation at the qualification level by the inclusion of units not specified within Table 5 – referred to as Additional Units, imported from other existing Training Packages.

Mayer Key Competencies

The Mayer Key Competencies are embedded within each Unit of Competence. The level of performance for Key competencies is aligned to the whole AQF level rather than to each individual unit. Tables 8 – 10 show this alignment by Key Competency level.

Table 8: Key competencies performance level at AQF level 1

Collect, analyse & organise information	Communicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathematical ideas & techniques	Solve problems	Use technology

1	1	1	1	1	1	1
---	---	---	---	---	---	---

Table 9: Key competencies performance levels at AQF level 2

Collect, analyse & organise information	Communicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathematical ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

Table 10: Key competencies performance levels at AQF level 3

Collect, analyse & organise information	Communicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathematical ideas & techniques	Solve problems	Use technology
3	3	2	3	2	3	3

Sugar Industry Competency Standards

Table 5 outlines the range of Core, Specialist and Elective units that form the basis of the Sugar Milling qualifications. Some of these units have been developed specifically for the Sugar Industry and carry a SUG code. Others have been imported from existing Training Packages and carry differing codes such as BCC, BCG, MEM, TDT, RUH or PML.

The Imported Units listed in Table 5 have been replicated in this Training Package. Units are reviewed from time to time and new versions of imported units can be sourced from the National ITABs listed below:

Skill Area	National ITAB	Contact Details	
Civil and general construction	Construction Training Australia	Tel: 03 9654 1333 Fax: 03 9654 1933 ray@nbcitc.com.au	PO Box 576 CARLTON SOUTH VIC 3053

Transport & Warehousing	Transport & Distribution Training Australia	Tel: 03 9320 4242 0418 802 064 Fax: 03 9320 4243 gerard@tdtaustralia.com.au	Level 3, 33 Walsh Street WEST MELBOURNE VIC 3003
Laboratory	Manufacturing Learning Australia	Tel: 02 9264 9822 Fax: 02 9264 9938 mlaust@ozemail.com.au	Suite 304 370 Pitt Street SYDNEY NSW 2000
Trainer & assessor	Business Services Training Australia	Tel: 03 9645 7555 Fax: 03 9645 7556 admin@bsitab.org	Level 7, 163 Eastern Road, South Melbourne VIC 3205
Food units/general	National Food Industry Training Council	Tel: 07 3236 1919 Fax: 07 3236 1999 nfitc@nfitc.com.au	PO Box 13025 George Street, BRISBANE QLD 4003
National Occupational Health and Safety Commission		www.nohsc.gov.au.	

Or alternatively order from ATP: www.atpl.net.au

Or download from the NTIS web site – www.ntis.gov.au

The content of units developed specifically for the Sugar Milling industry and carrying an SUG code is listed below. This is broken down into the sections listed below for ease of reference. Within each of these sections units are listed alphabetically by unit title.

- Core units
- Band A units
- Band B units
- Band C units
- Elective units
- Imported units
-

SUG10102 Certificate I in Sugar Milling

Modification History

Not applicable.

Description

Not applicable.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Sugar Industry Units		Elective units	Total Points required for Certificate I in Sugar Milling
Core units*	Specialist units		
90 points (if operating in only one specialist area/stream)	A maximum of 40 points may be taken from Band B aligned units		
Or: 100 points** (if operating in more than one specialist	Minimum of 40 points from Band A Specialist units.	Maximum of 150 points from any one category of Elective units	320 points

Sugar Industry Units		Elective units	Total Points required for Certificate I in Sugar Milling
area/stream)			

*Core units are not aligned to a Band

**If work functions span Transport and Services streams, the same Core units apply and the total value of Core units is 90 points. If moving between processing and Transport or Services streams, completion of an additional core unit is required. Where this is the case, the total value of Core units is 100 points.

SUG20102 Certificate II in Sugar Milling

Modification History

Not applicable.

Description

Not applicable.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Sugar Industry Units		Elective units	Total Points required for Certificate II in Sugar Milling
Core units	Specialist units		
90 points (if operating in only one specialist area/stream) Or: 100 points	Minimum of 90 points from Band B Specialist units.	Maximum of 310 points from any one category of Elective units	640 points

(if operating in more than one specialist area/stream)			
--------------------------------------------------------	--	--	--

SUG30102 Certificate III in Sugar Milling

Modification History

Not applicable.

Description

Not applicable.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Sugar Industry Units		Elective units	Total Points required for Certificate III in Sugar Milling
Core units	Specialist units		
90 points (if operating in only one specialist area/stream)	Minimum of 60 points and a maximum of 320 points from Band C Specialist units.	Maximum of 470 points from any one category of Elective units	960 points
Or: 100 points	Minimum of 90 points from Band B Specialist units.		

(if operating in more than one specialist area/stream)	Minimum of 40 points and a maximum of 230 points from Band A Specialist units.		
--------------------------------------------------------	--------------------------------------------------------------------------------	--	--

SUGCCPA1A Collect, present and apply workplace information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Core unit for all industry streams. It covers the skills and knowledge required to identify, collect and present information to convey meaning to others and to participate in group processes.

This unit is based on and equivalent to FDFCORCOM2A Collect, present and apply workplace information.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Select and present verbal information	1.1 Information requirements are identified 1.2 Information is collected, assessed and structured to convey meaning to others 1.3 Interactive skills are used to communicate effectively with others
2. Use and maintain workplace information	2.1 Routine workplace texts are used to obtain information required to operate in the workplace 2.2 Information is recorded in standard formats according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information relating to work responsibilities
2. Select appropriate methods to communicate with people from diverse backgrounds
3. Structure information in a logical sequence
4. Ascertain or clarify information by asking questions
5. Present information appropriate to audience and information purpose
6. Participate in group discussions and processes as required
7. Demonstrate interactive communication processes
8. Interact with others to achieve agreed outcomes
9. Respect and, where appropriate, represent the views of others
10. Record information in required format/s

Knowledge of:

11. Common colloquial and technical language
12. Sources of information and advice relating to work responsibilities
13. Methods of accessing, recording and storing workplace information including print and screen based systems
14. Formal and informal communication systems
15. Group processes. This may include basic facilitation, negotiation and conflict resolution

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Opportunities to interact with others using typical workplace communication processes
- Typical group forums which can include work groups and committees
- Typical workplace information
- Information systems and procedures
- Standard forms and equipment (as required) for recording workplace information

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Typical workplace information may include work instructions, check-sheets, tally sheets, labels and codes, Materials Safety Data Sheets (MSDSs), standard forms, production schedules and manufacturer's specifications
- Typical subjects for communication include work roles, rights and responsibilities, employment conditions and entitlements, company policies and codes of practice
- Every day workplace language is used. This may include commonly used technical terms
- Communication systems reflect the culture of the workplace and the workforce
- Information may be conveyed in verbal, written and screen-based forms appropriate to the audience and the purpose of information
- Work may require the ability to work within a team environment
- Interactive communication processes include active listening, turn taking, questioning and tolerating the views of others
-

Unit Sector(s)

Not applicable.

SUGCLCT1A Locate cane transport system and functions

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Core unit for the transport and services streams. It covers the transport system features and layout and provides a general orientation to its operations.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Identify cane transport functions and locations	1.1 Personal protective clothing and equipment is selected and used

Element	Performance criteria
	1.2 Transport system components are identified
	1.3 Communication protocols are observed
	1.4 Workplace records are maintained as required by workplace recording requirements
2. Locate, apply and convey information	2.1 Workplace information is accessed and interpreted to identify and locate bins
	2.2 Communication protocols are observed when using radio communication equipment

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Comply with OHS requirements when moving around the site. This includes awareness of how to select, fit and use appropriate personal protective clothing and/or equipment according to work responsibilities
2. Identify and components of the transport system. This may include main and branch rail lines, yards, sidings, loops, dump points and pads, road transport or other delivery points, storage areas including fuel stores and chemical stores
3. Demonstrate use of 2-way radio equipment as required
4. Maintain housekeeping standards
5. Record/communicate information in required format

Knowledge of:

6. Structure and role of cane transport department. This includes identifying key personnel
7. Transport system components and layout. This includes yard capacity
8. Purpose of major components and configuration of the cane railway system. At a minimum this includes an understanding of types of delivery points, for example roll-on, roll-off and tipper pads
9. Terminology used to describe transport system and track work components
10. Licensing requirements and codes of practice relating to work responsibilities
11. Housekeeping standards
12. Bin identification system including consignment notes and related documentation. It may also include remote electronic data transfer and capture systems used in the workplace
13. Purpose and access points for workplace documents related to work responsibilities

14. Communication protocols and requirements related to work responsibilities. This includes use of 2-way radios and hand and audible signalling to comply with workplace requirements and state authority protocols
15. Company policy relating to interacting with members of the public. This includes growers

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Cane transport system and related vehicles, signaling and control systems
- Relevant codes of practice and industry standards
- Bin consignment and trip/cut-to-crush documentation
- Operating procedures and related advice on equipment operation
- Loaded and empty bins
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and Code of Practice for Cane Railway Operations
- The cane transport system depends on the site. It typically includes main and branch rail lines, yards, sidings, loops, dump points and pads, road transport or other delivery points as relevant to the site
- The cane receipt process including, full and empty yards, weighbridge and tipping operations, is the interface point between the transport network and factory operations
- Workplace information may include Standard Operating Procedures (SOPs), log books, incident and accident report formats, bin tickets, daily schedules and employee
- Information systems may be print or screen based
- Work may require the ability to work within a team environment
- Signaling devices typically include colour aspect lights, mechanical signage
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols
-

Unit Sector(s)

Not applicable.

SUGCLIP1A Locate industry and company processes (Sugar)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Core unit for the processing stream. It provides an introduction to the sugar milling process and covers the processing methods used in the workplace.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Identify products and quality requirements	1.1 Company product range is identified 1.2 Quality requirements of final products are

Element	Performance criteria
	identified in accord with company specifications
2. Identify and locate production equipment and processes	2.1 Production stages and processes are identified 2.2 Equipment used for each stage is located

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify and materials storage areas
2. Identify and locate production equipment and processes
3. Identify the relationship between processing stages and related functions
4. Comply with OHS and environmental requirements when moving around the workplace

Knowledge of:

5. Quality requirements/specifications for final products
6. Consequences of product failing to meet quality requirements
7. Stages and processes used to manufacture products
8. Basic purpose of equipment used at each stage
9. Outputs at each stage of the process
10. Preparation of raw materials, handling and storage of finished products prior to sale
11. OHS, quality and environmental requirements relating to own work

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation
- Product specifications for final product
- Personal protective clothing and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Production processes depend on the site. Typically they include weighing and materials receipt, extraction, juice clarification, mud filtration, clarification, crystallization, fugallling (separation), drying and despatch
- Related functions depend on the site. Typically they include steam and power generation, laboratory services, effluent treatment, transport and maintenance
-

Unit Sector(s)

Not applicable.

SUGCMCH1A Manually clean and maintain housekeeping standards

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Core unit for the processing stream. It covers the skills and knowledge required to carry out manual cleaning and housekeeping procedures where there is no requirement to use tools to dismantle equipment. This unit is based on and equivalent to FDFOPTHS1A Manually clean and sanitise equipment.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare cleaning and sanitizing agents, tools and equipment for cleaning	1.1 Cleaning and sanitizing agents, equipment and services are prepared for use 1.2 Equipment is safe to clean
2. Manually clean equipment	2.1 Equipment is cleaned to meet requirements 2.2 Equipment is prepared for operation after cleaning 2.3 Cleaning data is recorded according to workplace recording requirements
3. Collect and dispose of waste	3.1 Waste is sorted and collected as required 3.2 Waste is recycled, transferred for rework or further treatment or disposal as required
4. Maintain housekeeping standards of the work area	4.1 The work area is inspected to any non-compliance with housekeeping standards 4.2 Equipment and the work area meet housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access and apply workplace information to identify cleaning requirements
2. Identify the cleaning and sanitizing agents used
3. Handle cleaning and sanitation agents safely. This includes following correct handling and preparation procedures and use of appropriate protective clothing and equipment
4. Prepare cleaning and sanitizing agents as required
5. Prepare equipment for cleaning. This includes rendering equipment safe to clean and clearing all materials, consumables and waste
6. Advise affected work areas of cleaning schedule and progress
7. Clean/sanitize equipment as required according to procedures
8. Return equipment to operating order
9. Maintain housekeeping standards
10. Contain spills and dispose of spilled material according to company procedure
11. Store cleaning agents and equipment as required
12. Record cleaning and sanitation data in required format

Knowledge of:

13. Basic purpose of cleaning/sanitizing and housekeeping
14. Safe handling and storage of requirements of cleaning agents and equipment used
15. Purpose of protective clothing and equipment related to cleaning role
16. Action required in the event of an accident when handling cleaning chemicals
17. Methods used to render equipment safe to clean including lock-out, tag-out and isolation procedures where relevant
18. Housekeeping and cleaning standards and methods relevant to equipment and the work area
19. Procedures for preparing cleaning/sanitizing agents. This includes consequences of mixing incorrectly and combining incompatible chemicals
20. Procedures for applying cleaning/sanitizing agents
21. Procedures for safe use of cleaning/sanitizing equipment and chemicals
22. Types of waste generated by both the production and the cleaning process and related collection, treatment and disposal requirements
23. Spill control procedures and recycling or disposal of spilled materials. This includes environmental responsibilities covered by environmental legislation
24. Requirements to liaise/advise related work areas

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Cleaning schedule and related procedures, including OHS advice
- Cleaning procedures including safe work procedures
- Personal protective clothing and equipment
- Material Safety Data Sheets as required
- Cleaners, sanitisers and related equipment
- Equipment to be cleaned
- Waste collection and treatment/disposal procedures
- Advice on environmental management issues relevant to work responsibilities
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), cleaning schedules and Material Safety Data Sheets (MSDS)
- Cleaning agents include cleaning and sanitizing chemicals
- Equipment used to clean and sanitise depends on specific requirements and would normally include brooms, cloths, scrapers, brushes, mops, spray packs and hoses
- Work may require the ability to work within a team environment
- Services depend on specific requirements. Examples include high-pressure water or steam
- Housekeeping standards may be defined in housekeeping audit criteria
-

Unit Sector(s)

Not applicable.

SUGCOHS1A Follow safe work procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit is a Core unit for all industry streams with the exception of laboratory workers who should select PMLOHS300A Work safely in accordance with defined policies and procedures. It covers the skills and knowledge required to apply basic occupational health and safety principles and procedures when carrying out work responsibilities.

This unit is based on and equivalent to FDFCOROHS2A Implement occupational health and safety principles and procedures.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare to work safely	1.1 Hazards associated with work tasks and related control methods are identified 1.2 Work area is checked and monitored for safety prior to commencing work to confirm that it is appropriate and safe to use 1.3 Appropriate personal protective clothing is selected and fitted 1.4 Appropriate personal protective equipment is used according to workplace procedure 1.5 Safety signs and signals are interpreted and used as required by work responsibility
2. Follow safe work procedures relating to own work	2.1 Work is carried out safely according to workplace requirements and OHS legislative requirements 2.2 OHS hazards that occur during work operations are identified, removed or controlled and reported 2.3 Duty of care for self and others is observed 2.4 Safety alarms, signs and visual and audible signals are used to communicate safety information effectively
3. Contribute to continuous improvement in OHS practice	3.1 OHS incidents are reported in required format 3.2 Procedures for investigating incidents and assessing risk are followed 3.3 Health and safety issues are considered and raised with designated personnel 3.4 OHS reports and records relating to personal work responsibilities are maintained according to workplace procedures
4. Follow emergency procedures	4.1 Emergency situations are identified and reported 4.2 Emergency procedures are followed according to company procedures 4.3 Emergency and evacuation procedures are implemented according to company procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on health and safety policies and procedures
2. Identify OHS hazards related to work responsibilities and take required action to remove or control hazards
3. Select, fit and use appropriate personal protective clothing and equipment
4. Identify isolation points for equipment or process and follow workplace procedures for lock out and tag out of equipment as required
5. Demonstrate safe work procedures
6. Contribute to review and development of advice on appropriate OHS procedures
7. Participate in site system for managing OHS. This may include participating in risk assessments, incident investigations and internal audit programs.
8. Identify and respond to typical emergency situations
9. Maintain housekeeping standards in work area
10. Use communication systems and consultative processes to consult others on OHS issues
11. Apply basic problem solving skills to investigate and identify causes of OHS incidents
12. Report OHS information according to workplace procedure

Knowledge of:

13. Location of advice on OHS issues. This includes documents such as procedures and MSDSs
14. Typical hazards relating to work responsibilities. These may include:
 - manual handling
 - handling of chemicals and dangerous goods
 - working at heights and on platforms
 - working in confined spaces
 - working with moving equipment
 - working with 240V power supply
 - working in exposed conditions
 - working with combustible materials
15. Safe work procedures relating to work responsibilities. This is dependent on work responsibilities. At a minimum it includes:
 - safe manual handling techniques
 - safe use of mechanical aids to assist lifting and moving loads
 - positioning of power leads to avoid creating a hazard
 - principles and purpose of equipment isolation
 - procedures relating to work responsibilities
16. Application of concepts of hazard identification, risk assessment and control options. This includes a basic understanding of the hierarchy of control of OHS hazards
17. Procedures and responsibilities for investigating OHS incidents and assessing risk
18. Current technical knowledge related to OHS associated with work responsibilities
19. The purpose and procedure for collecting and reporting OHS information
20. Use, care and storage requirements of personal protective clothing and equipment used
21. Emergency and evacuation procedures

22. Storage requirements for hazardous goods used in the work area
23. Impact of housekeeping on safety
24. Communication systems and consultative arrangements

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- OHS policy, system and procedures
- Standard Operating Procedures and related advice on specific safe work practices company policies and codes of practice relating to OHS
- Advice on relevant legislation and codes of practice relating to OHS
- Work area or site in which OHS procedures are to be implemented
- Personal protective clothing and equipment as required
- Relevant hazard control equipment
- Emergency and/or evacuation procedures for the potential range of hazards
- Consultative forums relating to OHS
- Storage areas for hazardous goods as required
- Manual handling equipment as required
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information includes advice on OHS which may be contained in documents such as Standard Operating Procedures, health and safety procedures and Material Safety Data Sheets (MSDSs)
- Safety requirements are typically described in work procedures or related OHS-specific procedures
- Where work is conducted in restricted or confined spaces, appropriate training/certification must be provided according to state safety requirements
- At this level a competent operator demonstrates a general awareness of hazards, near misses and control methods across the site or workplace and a detailed understanding of those relevant to own job and work area
- OHS incidents include near misses and injuries and illnesses
- OHS policies and procedures are developed by management in consultation with the workforce and are consistent with legislative requirements
- Involvement in continuous improvement can include participation in structured improvement programs and day-to-day problem solving
- Work may require the ability to work within a team environment
- Investigation responsibilities relate to own work area and are typically carried out with support
- Reporting of emergencies can include raising an alarm and/or reporting to designated personnel in appropriate format
-

Unit Sector(s)

Not applicable.

SUGEACW3A Analyse and convey workplace information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is an Elective unit. It covers the skills and knowledge required to analyse and interpret information. It also involves preparing and presenting information to others. The presentation component of this unit supports the communication requirements for delivering workplace training.

This unit is based on and equivalent to FDFCORCOM3 Analyse and convey workplace information.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Manage information	1.1 Information requirements are identified 1.2 Information systems are used to store, retrieve and update information 1.3 Consultative processes are used to collect and convey information 1.4 Methods used to collect, store, retrieve and convey information are reviewed and improved
2. Analyse information	2.1 Information is stored and collected in a format suitable for analysis and interpretation 2.2 Information collection is timely and relevant to the needs of individuals and teams 2.3 Information is collected, analysed and interpreted
3. Present information	3.1 Information is effectively communicated to individuals and groups 3.2 Communication takes into account social and cultural differences

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Facilitate consultative processes
2. Use information storage and retrieval systems to access store and update information
3. Select appropriate methods to communicate with different audiences in the workplace
4. Collect information in appropriate format
5. Analyse and interpret information
6. Select appropriate presentation methods to convey information for different purposes
7. Structure information in a logical sequence
8. Recommend improvements to information management practices

Knowledge of:

9. Information recording, storage and retrieval systems
10. Consultative and group processes
11. Data collection and analysis techniques as required

- 12. Meeting procedures
- 13. Presentation techniques

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Opportunities to interact with others using typical workplace communication processes
- Typical group forums which can include work groups and committees
- Typical workplace information
- Standard forms and equipment (as required) for recording workplace information
- Information storage and retrieval systems

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Subjects for communication may be of a general, procedural or technical nature. They can also include providing feedback to individuals on work performance and discussing issues which may be of a sensitive and/or confidential nature
- Every day workplace language is used. This may include technical terms
- Communication systems reflect the culture of the workplace and the workforce
- Information may be presented verbally, in written and screen-based forms. It can also include technical drawings, diagrams and graphs
- Data analysis can include techniques appropriate to work responsibilities such as statistical analysis, troubleshooting and problem solving and planning
- Interactive communication processes include active listening, constructive feedback, negotiation and conflict resolution
- Work may require the ability to work within a team environment
- Group processes may include formal meeting procedures and informal group processes
-

Unit Sector(s)

Not applicable.

SUGEEMP3A Monitor the implementation of the environmental management program

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is an Elective unit. It covers the skills and knowledge required to oversee the implementation of environmental management principles and procedures relating to work responsibilities.

This unit is based on and equivalent to FDFOPTEN3A Monitor the implementation of the environmental management program.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Monitor the implementation of the environmental management program	1.1 Environmental management requirements and procedures are communicated 1.2 Implementation of procedures to support environmental management requirements is monitored 1.3 Mentoring and coaching support is provided to support individuals/groups to implement the environmental responsibilities
2. Respond to hazardous situations	2.1 ACTUAL AND POTENTIAL NON-CONFORMANCE IS IDENTIFIED 2.2 Procedures for controlling environmental impacts are implemented 2.3 Environmental incidents are promptly identified and corrected 2.4 Corrective action is reported 2.5 Causes of non-conformance are identified 2.6 Control measures are implemented to prevent recurrence
3. Contribute to continuous improvement	3.1 Work practices and procedures are reviewed to identify environmental aspects and impacts 3.2 Impacts are prioritised to be addressed based on risk assessment 3.3 Options for controlling environmental impacts are identified 3.4 Environmental objectives are compared against performance to determine opportunities for improvement 3.5 Procedures for implementing improvements are followed

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Observe environmental standards when undertaking work responsibilities
2. Identify and assess environmental aspects and impacts
3. Monitor the implementation of effective environmental controls
4. Monitor correct waste handling, treatment and disposal
5. Monitor observance of safe work practices
6. Take necessary action to respond to emergency situations
7. Communicate information about environmental issues
8. Support others to implement environmental requirements
9. Maintain records in required format

Knowledge of:

10. Principles of environmental management including conservation of energy and resources and control of environmental impacts
11. Regulatory requirements
12. Pollution generated by workplace processes including noise, air, odour water and waste
13. Safe chemical handling and storing
14. Emergency procedures
15. Factors which could affect impact and risks
16. Risk assessment procedures
17. Control procedures
18. Current technical and process knowledge to determine options for addressing environmental impacts
19. Problem solving techniques to identify cause and options to remedy problem(s)
20. Communication channels for providing advice on quality system
21. Procedures for developing or modifying operating procedures
22. Reporting requirements, including auditing requirements
23. Workplace consultative arrangements

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Environmental management policy, system/program and procedures
- Advice on legislation and codes. This includes but is not limited to environmental protection and dangerous goods legislation and water regulations
- Site plans including relevant advice on drainage patterns, power sources
- Emergency plans and personnel
- Procedures for developing or modifying specifications and other advice on environmental requirements
- System of waste collection, treatment, recycling and disposal
- Procedures for developing or modifying work instructions and procedures
- Parameters for environmental performance
- Review / audit arrangements
- Reporting and related documentation procedures
- Consultative arrangements
- Relevant OHS clothing and equipment
- Communication system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Responsibility for monitoring environmental aspects and impacts relates to a whole work area or system
- Non-conformance is used to refer to any occurrence which prevents work outcomes being achieved within environmental parameters
- Involvement in monitoring the implementation of the environmental management system includes participation in structured improvement programs and day-to-day problem solving
- An environmental aspect is any activity, product or service which has the potential to affect the environment
- Work may require the ability to work within a team environment
- An environmental impact is the actual problem or consequence which results from an environmental aspect
-

Unit Sector(s)

Not applicable.

SUGEFTW3A Facilitate teams

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is an Elective unit. It covers the skills and knowledge required to facilitate teams and work groups.

This unit is based on and equivalent to FDFOPTTW3A. It covers teams facilitation.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Facilitate teams	<ul style="list-style-type: none">1.1 Team goals and performance indicators are identified and clarified1.2 Tasks required to achieve performance standards are identified1.3 Individual work tasks and roles are allocated to ensure team goals and performance standards are met1.4 Work targets and timelines are negotiated to achieve team goals and performance standards
2. Secure resources to support team performance	<ul style="list-style-type: none">2.1 Resources and support needed to complete tasks are identified and negotiated2.2 Competency requirements of team are identified and checked against competencies held by team members2.3 Workplace learning requirements are identified and addressed
3. Monitor progress towards achieving team goals	<ul style="list-style-type: none">3.1 Work progress is monitored against timelines and performance indicators3.2 Team members are informed of progress towards achieving team performance indicators3.3 Potential barriers to achieving team goals are identified and corrective action taken

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Facilitate group processes
2. Provide mentoring support to others
3. Provide feedback to individuals on work performance
4. Identify and address learning needs of team members
5. Develop plans and schedules to achieve team goals
6. Identify and negotiate resource requirements to achieve team goals
7. Monitor team outputs against objectives and make adjustments as required to achieve plan
8. Represent and advocate on behalf of the team

9. Inform the team on performance objectives and achievements

Knowledge of:

10. Company and workplace planning processes
11. Procedures for monitoring and reporting on individual and team performance
12. Group processes including basic facilitation, negotiation and conflict resolution
13. Competency identification and training arrangements
14. Stages of team development
15. Conflict resolution, negotiation and problem solving strategies

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Opportunities to facilitate team processes
- Workplace arrangements for establishing company, workplace and team goals
- Methods used to measure and report on performance against target
- Planning processes
- Resources required to achieve team outcomes
- Competency recording and workplace training arrangements

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Teams may be a feature of work organisation or formed to address a specific function or issue
- Team practices and work allocation occurs within the context of competency and licensing requirements and industrial agreements
-

Unit Sector(s)

Not applicable.

SUGEIEP2A Implement environmental procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is an Elective unit. It covers the skills and knowledge required to implement environmental management policies and procedures when carrying out operational work responsibilities.

This unit is based on and equivalent to FDFOPTEN2A Implement environmental procedures.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Monitor environmental practices in work area or sub-system	1.1 Work processes are undertaken to comply with environmental management requirements 1.2 Environmental control measures are implemented 1.3 Instances of environmental non-compliance are identified and reported 1.4 Corrective action is taken in response to environmental incidents 1.5 Environmental data is recorded in required format
2. Contribute to continuous improvement	2.1 Environmental aspects and impacts are identified 2.2 Risks are assessed according to company procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information relating to environmental management and responsibilities
2. Use necessary environmental control measures related to work responsibilities
3. Monitor environmental parameters established. Examples include relevant parameters for airborne particulates, noise, odour and water
4. Handle and store chemicals safely
5. Select, fit and use appropriate personal protective clothing and equipment
6. Observe appropriate emergency procedures in the event of non-conformance. This can include following emergency procedures, notifying relevant personnel and reporting the incident in the appropriate format
7. Record workplace information

Knowledge of:

8. Awareness of the environmental management system and procedures
9. Legal obligations and responsibilities
10. Consequences of non-compliance
11. Detailed knowledge of environmental aspects, impacts relevant to own work
12. Range of control measures relevant to own work
13. Safe work procedures
14. Environmental operating parameters

15. Procedures for responding to non-compliance
16. Emergency procedures and personnel
17. Documentation and reporting procedures
18. Waste collection, handling, treatment and disposal requirements

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- environmental management plan
- advice on relevant legislation and codes
- work process or sub-system
- specifications and other advice on environmental requirements
- work instructions and procedures, including environmental operating parameters
- waste collection, treatment, recycling and/or disposal methods
- environmental aspects and impacts relating to work processes
- monitoring system
- reporting system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Work procedures can involve handling chemicals, implementing environmental controls and collecting, handling and treating or disposing of waste, recycled materials and by-products
- Chemical storage procedures include locating chemicals in designated storage locations, storing compatible chemicals in the one location and securing chemicals against spillage, for example through the use of bunding and trays
- Responding to non-compliance includes recognising and responding to any event which occurs as part of the work process and presents an unacceptable environmental risk
- Where work is conducted in restricted or confined spaces, appropriate training/certification must be provided according to state safety requirements
- An environmental aspect is any activity, product or service which has the potential to affect the environment
- An environmental impact is the actual problem or consequence which results from an environmental aspect
- Risk assessment includes identifying the likelihood that an environmental impact will occur and the magnitude of the problem if it does occur
- A control measure is a method or procedure used to prevent or mitigate environmental impacts
- Identification of aspects, impacts and application of controls relate to own work responsibilities
- Work may require the ability to work within a team environment
- Involvement in continuous improvement can include participation in structured improvement programs and day-to-day problem solving
-

Unit Sector(s)

Not applicable.

SUGEOHS3A Monitor the implementation of occupational health and safety

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is an Elective unit. It covers the skills and knowledge required to oversee the implementation of safe work practices in the workplace.

This unit It is based on and equivalent to FDFCOROHS3A Monitor the implementation of occupational health and safety.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Monitor the implementation of safe work practices and procedures	1.1 OHS principles and procedures are demonstrated when carrying out work tasks 1.2 Hazard control and personal protective clothing and equipment is available, functional and correctly stored 1.3 Advice on OHS rights, responsibilities and procedures is communicated 1.4 Implementation of procedures to support OHS requirements is monitored 1.5 Mentoring and coaching support is provided to support individuals/groups to implement the safe work procedures
2. Contribute to continuous improvement	2.1 ACTUAL AND POTENTIAL HAZARDS ARE IDENTIFIED 2.2 Associated risks are assessed 2.3 Options for removing or controlling hazards are investigated 2.4 Procedures for controlling hazards are reviewed, developed and implemented 2.5 Resources required to support implementation are identified and secured
3. Respond to hazardous events and emergency situations	3.1 Hazardous or emergency situations are identified and reported 3.2 Emergency procedures are followed as required to ensure appropriate and timely response 3.3 Assistance requirements are determined and requested 3.4 Control measures are implemented to prevent recurrence of the hazardous event or emergency 3.5 Accident plans and emergency procedures are reviewed, developed and implemented 3.6 Workplace documentation is completed

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Maintain current, accessible workplace information on health and safety policies, procedures rights and responsibilities. This includes advice on function specific requirements and safety programs including return to work arrangements
2. Demonstrate safe work procedures to others
3. Secure necessary resources including personal protective clothing and equipment and hazard control equipment
4. Ensure that all workers have appropriate competency/licensing required by work role
5. Facilitate consultation processes on OHS issues
6. Identify hazards and emergency situations
7. Take appropriate action in response to hazardous and emergency situations. This can include requesting assistance and liaising with both internal and external emergency personnel as required
8. Apply principles of risk management and hazard control
9. Review and improve OHS procedures
10. Use communication systems and consultative processes to consult others on OHS issues
11. Participate in management of return to work arrangements in the work area

Knowledge of:

12. Location of advice on OHS issues
13. Typical hazards relating to work area
14. Safe work procedures
15. Reporting procedures
16. Legal obligations and responsibilities, including duty of care
17. Consequences of non-compliance
18. Rehabilitation options and procedures
19. Planning and resource allocation systems
20. Workplace training arrangements
21. Competency/training and licensing requirements of tasks performed in the work area
22. Emergency and evacuation procedures
23. Procedures for reviewing and updating work instructions and procedures
24. Return to work responsibilities and procedures in the workplace
25. Communication systems and consultative arrangements
26. Current technical knowledge related to OHS associated with work responsibilities
27. Problem solving techniques to identify cause and options to remedy problem(s)
28. Communication channels for providing advice on OHS requirements, rights and responsibilities
29. Procedures for developing or modifying operating procedures
30. Reporting requirements and procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Standard operating procedures and related advice on specific safe work practices company policies and codes of practice relating to OHS
- Advice on relevant legislation and codes of practice relating to OHS
- Advice on industrial awards and agreements
- Work area or system in which OHS principles and procedures are to be monitored
- Relevant personal protective clothing and equipment and hazard control equipment
- Procedures for developing or modifying work instructions and procedures
- Procedures for allocating resources such as personal protective clothing and equipment as required and hazard control equipment
- Competency records and workplace training arrangements
- Emergency and/or evacuation procedures for the potential range of hazards
- Consultative forums relating to OHS
- Consultative arrangements
- Communication system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Where work is conducted in restricted or confined spaces, appropriate training/certification must be provided according to state safety requirements
- OHS rights and responsibilities relate to all workers, including injured workers
- Responsibility for monitoring health and safety relates to a whole work area or system
- Health and safety requirements as typically described in work procedures or related OHS-specific procedures
- Hazards, near misses and injuries and illnesses typically relate to own job and work area
- OHS policies and procedures are developed by management in consultation with the workforce
- Procedures for the systematic identification, removal or control of hazards may be undertaken as part of a team
- Investigation responsibilities relate to own work area and are typically carried out with support
- Reporting of emergencies can include raising an alarm and/or reporting to designated personnel in appropriate format
-

Unit Sector(s)

Not applicable.

SUGPARS2A Operate an ash separation system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate a system to separate ash solids from boiler sluice water by use of clarifiers and filters.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the ash separation system for operation	1.1 Materials are confirmed and available to meet requirements

Element	Performance criteria
	<p>1.2 Services are confirmed as available and ready for operation</p> <p>1.3 Equipment is checked to confirm readiness for use</p> <p>1.4 The ash separation process is set to meet production requirements</p> <p>1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p>
2. Operate the ash separation process	<p>2.1 The ash separation system is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.2 The ash separation system is monitored to confirm performance is maintained within manufacturer's specifications to meet workplace requirements</p> <p>2.3 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 System operating conditions are monitored to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards and abnormal plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover ash separation operations	<p>4.1 Operating log is maintained in accordance with workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 System operators are aware of system and related equipment status at completion of handover</p>
5. Complete ash separation operations	<p>5.1 Ash is collected and disposed according to company procedures</p> <p>5.2 Maintenance requirements are identified and reported according to workplace reporting procedure</p> <p>5.3 Workplace information is recorded according to workplace recording requirements</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information ash separation requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment and that services are available
4. Conduct pre-start checks
5. Demonstrate start up procedures for preparing and operating each equipment component in the system
6. Demonstrate safe chemical preparation and handling
7. Monitor the ash separation system. This typically includes visual inspection and conducting tests to monitor characteristics such as:
 - moisture content of ash going out of the system
 - available storage capacity of ash holding area
 - filter performance and condition
8. Take corrective action in response to abnormal or unacceptable performance
9. Report and/or record corrective action as required
10. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
11. Record operating information
12. Maintain work area to meet housekeeping standards

May include ability to:

13. Use process control systems

Knowledge of:

14. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
15. Safe work procedures including awareness of health and safety hazards related to operation of the ash removal system and associated control measures. Hazards typically include working with airborne particulates containing silica, chemical handling and use of hot water
16. Purpose and limitations of protective clothing and equipment
17. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
18. Properties of ash or soot and the impact on filter operation
19. Functions and operating principles of ash separation system and related equipment
20. Relationship between vacuum, filter speed and cake permeability
21. Operating requirements and parameters
22. Test methods
23. Common causes of variation and corrective action required

24. Procedures for responding to emergency situations. This includes safe shutdown procedure
25. Handover and long term shut down and storage procedures
26. Environmental issues and controls
27. Procedures for containing and managing ash spills
28. Housekeeping standards for the work area
29. Reporting and recording systems

May include knowledge of:

30. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Ash separation system and related equipment
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Equipment may include grate cleaning system, ash and soot blowing equipment, ash removal system, pumps, weirs, tanks, belt and rotary filters, chemical addition systems and clarifier
- Ash separation may involve use of clarifiers followed by a filter, use of screens or by filter only
- Services may include general mill water supply, power and mill and instrumentation air
- Chemicals may include caustic soda and flocculants
- Typical test requirements include pH, settling tests, clarity or turbidity
- Confirming equipment status involves conducting relevant pre-start checks, confirming that housekeeping standards are met, all safety guards are in place and equipment is operational
- Operation and monitoring of equipment and processes may require the use of control panels and systems
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPCCE2A Chemically clean equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to use chemical agents to clean in-line plant and equipment. This can include evaporators, pans, heaters and filters.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for cleaning	1.1 Chemical stocks are available to meet cleaning

Element	Performance criteria
	and sanitation requirements
	1.2 Services are confirmed as available and ready for operation
	1.3 Equipment is checked to confirm readiness for use
	1.4 Equipment shutdown is planned and equipment is taken off line for cleaning
	1.5 The plant is set for the cleaning cycle
2. Operate and monitor the cleaning process	2.1 The cleaning cycle is undertaken according to company procedures
	2.2 The cleaning process is monitored to confirm cleaning meets company requirements
	2.3 Cleaning data is recorded according to workplace recording requirements
	2.4 Out-of-specification process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure
3. Dispose of waste and return plant to operating condition	3.1 Cleaning chemicals are flushed from plant and disposed of according to company procedures
	3.2 Plant is set up to meet operational requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as the cleaning schedule to identify cleaning requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Handle cleaning and sanitation agents safely. This includes following correct handling and preparation procedures and use of appropriate protective clothing and equipment
5. Prepare cleaners and sanitisers as required
6. Pace production and/or liaise with related work areas to take equipment off-line with minimal disruption to production

7. Prepare equipment for cleaning. This can include rendering equipment safe to clean, correctly positioning equipment such as valves, pipes, vents and taps, selecting appropriate cleaning cycle (CIP), removing waste and or dismantling equipment
8. Clean equipment according to cleaning process cycle and procedures. This can include starting up and operating the CIP process in both automatic and manual modes
9. Monitor the process and equipment operation to maintain the cleaning process within the required parameters
10. Return plant to operating order
11. Take corrective action in response to out-of-specification results
12. Advise affected work areas of cleaning schedule and progress
13. Maintain and store chemicals and related equipment as required
14. Carry out relevant checks and inspections to confirm effectiveness of cleaning
15. Sort, collect, treat, recycle or dispose of waste
16. Record cleaning information
17. Maintain work area to meet housekeeping standards

May include the ability to:

18. Take samples and conduct tests

Knowledge of:

19. Purpose and basic principles of cleaning in place (in-line). This includes the use and functions of caustic and acid solutions and cleaning sequence and stages as required in the workplace
20. Terminology relating to the chemicals solutions used
21. Safe work procedures including appropriate signage of cleaning activities and safe handling and storage of cleaners and sanitisers used
22. Purpose and limitations of protective clothing and equipment
23. Cleaning and sanitation requirements for work area. This includes different levels of cleaning requirements depending on the reason for cleaning
24. Methods used to render equipment safe to clean including lock-out, tag-out and isolation procedures
25. Equipment settings required for cleaning and for operating respectively
26. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
27. Inspection points for cleaning and sanitation
28. Consequences of contamination of process flows by cleaning solutions
29. Types of waste generated by both the production and the cleaning process and related collection, treatment and disposal requirements
30. Environmental consequences of incorrect waste disposal procedures
31. Requirements to liaise/advise related work areas
32. Reporting and recording systems

May include knowledge of:

33. Sampling and testing

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Cleaning procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Equipment to be cleaned and related cleaning system
- Cleaning schedule or advice and related Standard Operating Procedures
- Chemicals and/or automated chemical addition system
- Services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require access to:

- Sampling and testing schedules and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Equipment cleaned may include evaporators, pans, heaters, filters, chemical mixing and storage equipment plus pumps and pipes
- Services may include power, water, steam, compressed and instrumentation air
- Where tests are conducted as part of operation a typical requirement is measurement of pH and condensate quality
- Monitoring the process depends on cleaning requirements. It may include monitoring: condensate quality (evaporators, heaters and pans); vacuum and brix (evaporators); time; storage tank levels; chemical strength; cycle time; temperatures
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPCPS1A Collect and prepare samples

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge to collect and prepare a range of samples. It typically applies to an operator who has primary responsibility for sampling and/or testing.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare for sampling

1.1 Sampling requirements are identified

Element	Performance criteria
	1.2 Sampling method is determined to suit sampling requirement
	1.3 Confirm that sampling tools and containers are available and fit for use
2. Collect and prepare samples	2.1 Collect samples in accordance with sampling schedule
	2.2 Identify and report atypical observations made during sampling
	2.3 Store and handle samples to preserve characteristics of sample
	2.4 Prepare samples as required by sampling procedure
3. Record sampling information	3.1 Record sampling information according to workplace requirements
	3.2 Sample labeling procedures are followed according to workplace requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as the sampling plan to identify sampling requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm that necessary tools, containers and chemicals are available and fit for purpose
4. Handle chemicals safely. Typically this includes handling preservatives. Safe handling requires demonstration of correct handling and preparation procedures and use of appropriate protective clothing and equipment
5. Demonstrate correct manual handling and safe work practices
6. Demonstrate sampling collection and preparation procedures
7. Return plant to operating conditions as required
8. Identify and report any obvious non-conformance
9. Maintain and store chemicals, containers and sampling tools as required
10. Sort, collect, treat, recycle or dispose of sample material
11. Label samples as required
12. Record sampling information

13. Maintain work area to meet housekeeping standards

Knowledge of:

14. Purpose of a sampling plan. This includes a basic understanding of the nature of representative samples and importance of maintaining the integrity of samples
15. Awareness of cane analysis program requirements relating to sampling for cane payment tests
16. Terminology relating to the types of samples and related methods used
17. Safe work procedures including appropriate and safe manual handling, safe practices in accessing the sampling point, hazards associated with specific sampling requirements such as working with equipment under pressure, at high temperatures and storage of chemicals used
18. Specific sample collection and preparation methods/procedures
19. Sampling regimes implemented in response to special causes or non-conformance
20. Inspection points for sampling
21. Typical characteristics of materials sampled to and common contaminants
22. Sample disposal procedures
23. Labelling requirements
24. Reporting and recording systems

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Sampling schedule
- Sampling tools, chemicals, containers and related equipment
- Materials to be sampled
- Sampling methods and procedures
- Sample preparation equipment
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Sample labeling and recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, sampling schemes and schedules
- Equipment may include forks, shovels, scrapers, sample containers and purpose-related tools
- Sample preparation may include addition of preservatives, fibre preparation such as disintegrator, and cutter-grinders and sub-sampling to give a representative sample from given set of samples
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPCSP2A Operate a crystalliser station process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate the process from the low grade pan receiver through the crystallisers to the reheater.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare the crystalliser station for operation

1.1 Massecuite is confirmed and available to meet production requirements

Element	Performance criteria
	1.2 Services are confirmed as available and ready for operation
	1.3 Equipment is checked to confirm readiness for use
	1.4 The crystallisers are set up to meet production requirements
2. Operate and monitor crystalliser station	2.1 The crystallisation station is started up and operated according to company procedures
	2.2 Control points are monitored to confirm performance is maintained within specification
	2.3 C massecuite feed to fugals meets specification
	2.4 Equipment is monitored to confirm operating condition
	2.5 Out-of-specification process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure
	2.6 The workplace meets housekeeping standards
3. Handover the crystalliser station	3.1 Workplace records are maintained in accordance with workplace procedures
	3.2 Handover is carried out according to workplace procedure
	3.3 Crystalliser station operators are aware of system and related equipment status at completion of handover
4. Shut down the crystalliser station	4.1 The appropriate shut down procedure is identified
	4.2 The crystalliser station is shut down according to workplace procedures
	4.3 The crystalliser station is prepared for storage in shut down mode
	4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Start up from empty and start up from full
6. Maintain required levels in the crystallisers
7. Follow cooling and reheating profiles
8. Start up and operate in both automatic and manual modes
9. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves monitoring:
 - throughput
 - loads on crystalliser drives
 - sugar crystal size and distribution
 - massecuite conductivity
 - massecuite dilution rates
 - end of cooling and reheating temperatures
 - stocks of C massecuite to match pan stage throughput
 - equipment condition
10. Detect and report water leaks from crystalliser coils
11. Take corrective action in response to out-of-specification results
12. Report and/or record corrective action as required
13. Record workplace information
14. Demonstrate shift handover procedure
15. Shut down equipment in response to an emergency situation
16. Demonstrate an operational shut down procedure
17. Prepare equipment for cleaning/maintenance
18. Maintain work area to meet housekeeping standards

May include the ability to:

19. Use process control systems
20. Clean and sanitise equipment
21. Take samples and conduct tests

Knowledge of:

22. Purpose and basic principles of crystallisation. This includes a basic understanding of crystal growth and super saturation of solutions
23. The effect of C molasses dilution on C massecuite viscosity
24. The effect on C molasses purity of variation in:
 - end of cooling and reheating temperatures
 - residence time
25. The effect of C massecuite conditioning on low grade fugal performance

- the circuit flow of this process and relationship to related processes
 - equipment purpose and basic operating principles of crystallization equipment
 - the risks and consequences of pipe failure related to massecuite decomposition
26. Services used
 27. Operating requirements and parameters
 - requirements when starting up full crystallisers containing cold massecuite
 - requirements when shutting down full crystallisers containing hot massecuite
 28. Significance and method of monitoring control points within the process
 29. Common causes of variation and corrective action required
 30. Hazards and controls
 31. Lock out and tag out procedures
 32. shut down sequence including massecuite pumps and reheaters
 33. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
 34. Procedures and responsibility for reporting problems
 35. Environmental issues and controls
 36. Waste handling requirements and procedures
 37. Recording requirements and procedures

May include knowledge of:

38. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
39. Cleaning and sanitation procedures
40. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Crystalliser station equipment
- Materials including C massecuite and services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require access to:

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- The crystalliser station may include low grade pan receiver, massecuite pumps, batch and continuous crystallisers, reheater, molasses lubrication system and hot and cold water systems
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring instrumentation
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, water, compressed and instrumentation air
- Where tests are conducted as part of operation a typical requirement is observation using a microscope
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPCWS2A Operate a cooling water system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate cooling towers or spray ponds to supply treated, cool water for factory requirements.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the cooling tower/s for operation	1.1 Tower cleaning procedures are followed and cleaning records completed

Element	Performance criteria
	1.2 Chemicals are available and delivery systems are ready for operation 1.3 Make up water supply is available and meets quality requirements 1.4 Pre-operational checks are conducted 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Start and monitor cooling tower	2.1 The cooling tower system is started according to workplace procedures and manufacturer's recommendations 2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements 2.3 Equipment is monitored to confirm operating condition and cleanliness 2.4 Water quality is monitored, tested and adjusted as required 2.5 The workplace meets housekeeping standards
3. Analyse and respond to abnormal performance	3.1 Water condition and plant operating conditions are analysed to identify causes of abnormal performance 3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or abnormal plant performance 3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations
4. Shutdown and clean the cooling water system	4.1 The cooling water system is cleaned according to workplace cleaning schedule and to meet legal requirements 4.2 The timing and sequencing of cooling water system shut down meets production requirements 4.3 Maintenance requirements are identified and reported according to workplace reporting procedure
5. Record information	5.1 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on cooling water requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that it is clean ready for operation and services are available
4. Prepare and handle chemicals safely. This includes following correct preparation, handling and storage procedures and use of appropriate protective clothing and equipment
5. Conduct pre-start checks. This typically include checking:
 - raw water supply
 - tower condition and cleanliness
 - spray and pond condition
 - all safety guards and covers are in place and operational
 - drains are closed
 - chemicals are available
6. Liaise with other work areas to advise of users of cooling system status
7. Demonstrate set up and start up procedures in both manual and automatic modes
8. Monitor cooling water system operation. This typically includes visual inspections and conducting tests to monitor characteristics such as:
 - chemical addition rates and residuals
 - water quality
 - blow down rate
 - temperatures
 - water distribution
 - signs of fouling and corrosion
 - equipment condition including fans, sprays and pumps
 - water level and make-up flow
9. Take corrective action in response to out-of-specification results
10. Report and/or record corrective action as required
11. Demonstrate procedure to clean and shut down cooling water system
12. Demonstrate use of emergency cooling water supply system
13. Maintain workplace records including cleaning records and chemical usage
14. Maintain work area to meet housekeeping standards

May include ability to:

15. Use process control systems

Knowledge of:

16. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities

17. Purpose and basic principles of evaporative cooling and water treatment in order to prevent corrosion and microbiological fouling
18. Cooling water system layout
19. The effect of make up water quality on blow down rates and fouling rates
20. The impact of variables including cooling water failure and high water temperature and plant operation
21. Purpose of chemicals used
22. Consequences of system fouling and typical causes
23. Safe work procedures including awareness of health and safety hazards related to cooling water system operation and associated control measures. Hazards typically include handling chemicals, manual handling, risks of working with warm water systems (Legionella)
24. Hierarchy of hazard control measures
25. Purpose and limitations of protective clothing and equipment
26. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
27. Water quality test procedures
28. Typical causes of water contamination and corrective action required
29. Equipment purpose and basic operating principles of cooling water system and related equipment. This includes pumps, valves, tower and fans. It may also include the dosing system
30. Operating requirements and parameters
31. Cleaning methods and procedures
32. Procedures for operating emergency cooling water system
33. Environmental issues and controls. Includes those relating to chemical and/or container disposal and any overflow of the system to waters of the state
34. Requirements to liaise/advise related work areas
35. Housekeeping standards for the work area
36. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

37. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Cooling water system and related equipment
- Chemicals
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, licensing requirements, codes of practice, legislative requirements, industrial awards and agreements and Australian Standard AS3666, parts I, II and III. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Equipment may include the tower, spray ponds supply pump and return pump, chemical addition systems and blow down system. Typically a number of cooling towers would be located on site. They may be integrated or stand-alone
- Operation and monitoring of equipment and processes may require the use of control panels and systems
- Typical tests may include pH, total dissolved solids (TDS), conductivity, standard plate count (SPC), Legionella and tests specific to chemicals used
- Work may require the ability to work within a team environment
- Information systems may be equipment-based or remote from the cooling tower
-

Unit Sector(s)

Not applicable.

SUGPFCT3A Perform factory control tests

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to perform tests for factory control. These tests are typically complex and/or non-routine and require interpretation of results within broad guidelines.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for testing	1.1 Testing requirements and methods are identified

Element	Performance criteria
	1.2 Calibration of test equipment is managed to maintain accurate equipment
	1.3 Standard graphs are prepared
	1.4 Test chemicals and reagents are prepared and labeled as required for laboratory requirements
	1.5 Samples are prepared as required by test method
	1.6 Pre-test checks are conducted and recorded according to workplace recording requirements
2. Conduct test	2.1 Conduct test in accordance with test method and test schedule
	2.2 Identify and report atypical test results
	2.3 Record and communicate test results as required
	2.4 Follow procedures to repeat or validate results
	2.5 Clean, care for and store equipment as required
	2.6 Dispose of waste materials according to workplace procedure
3. Record test data in laboratory information system	3.1 Results are entered into laboratory information systems according to workplace procedure
	3.2 Correct data entry errors
	3.3 Store and retrieve data in the laboratory information system
	3.4 Produce standard and non-standard reports from laboratory information system

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as the test regime to identify test requirements and methods
2. Select, fit and use personal protective clothing and/or equipment
3. Prepare standard graphs and standard chemicals for laboratory use
4. Manage calibration of test equipment
5. Handle chemicals safely. This includes following correct handling and preparation procedures and use of appropriate protective clothing and equipment

6. Demonstrate test procedures according to test schedule and test method
7. Identify and report any out-of-specification results
8. Communicate test results to relevant personnel
9. Maintain stocks of laboratory chemicals and materials
10. Sort, collect, treat, recycle or dispose of tested materials
11. Record information in the laboratory information system. This includes ability to enter and edit data, generate standard reports and store information
12. Maintain work area to meet housekeeping standards

Knowledge of:

13. Purpose of the test procedure. This includes a basic knowledge of chemistry and physics principles relating to the tests performed and operating principles of equipment used
14. Apply knowledge of mill operations to interpret test results. This includes identifying implications of results for mill performance
15. Awareness of legislative requirements relating to cane payment tests
16. Terminology relating to the types of tests and related methods used
17. Safe work procedures including hazards associated with specific test procedures requirements such as working with chemicals and test equipment
18. Specific test methods/procedures
19. Typical causes of out-of-specification results and procedure for repeating the analysis
20. Methods used to plot, analyse and present test data. This includes production of both standard and non-standard reports
21. Laboratory information system recording and reporting requirements. These meet legislative record keeping requirements and workplace requirements

Relationship with other standards

Pre-requisite units

The pre-requisite for this competency standard is:

- SUGPPST2A Perform standard tests

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Test equipment, chemicals and reagents and related equipment
- Materials to be tested
- Test methods and procedures
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Sample labeling and recording systems, requirements and procedures
- Laboratory recording and reporting system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice may include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, test methods and procedures
- Equipment is defined by test method and legislative requirements
- Confirming equipment condition may include conducting calibration procedures. Calibration procedures are routine, documented procedures
- The types of tests conducted depends on the test equipment and methods used and may include but are not limited to:
- Sugar - ash, colour, dextran, filterability, reducing sugars, starch, phosphate, grist/grain size
- Molasses/massecuite/syryp - true purity by dry substance and sucrose, HPLC
- Cane/bagasse - POC, pol and brix by disintegrator method, fibre by prepared cane method
- Clarified juice or ESJ - phosphate, starch
- Mud - fibre, insolubles
- Boiler water - caustic alkalinity, phosphate, sulphate, hardness, total dissolved solids, sulphate
- Effluent - sucrose, BOD, suspended solids
- Caustic - concentration
- EDTA - concentration and activity
- Lime - sucrose soluble alkali
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPFSB2A Operate a fuel supply system - bagasse

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge to operate a bagasse fuel system and related auxillary fuel system to supply a boiler.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the fuel supply system for operation	1.1 Pre-operational checks are conducted 1.2 Health and safety hazards are identified and

Element	Performance criteria
	<p>controlled</p> <p>1.3 Maintenance requirements are identified and reported according to workplace reporting procedure</p> <p>1.4 Primary and auxiliary fuel is available to meet combustion requirements</p> <p>1.5 Services are confirmed as available and ready for operation</p>
2. Start and monitor operation of the fuel supply system	<p>2.1 The fuel supply system is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.2 The fuel supply system is monitored to confirm performance is maintained within manufacturer's specifications to meet workplace requirements</p> <p>2.3 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 System operating conditions are monitored to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards and abnormal plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover fuel system operations	<p>4.1 Workplace records are maintained in accordance with workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Fuel system operators are aware of system and related equipment status at completion of handover</p>
5. Shutdown the fuel supply system	<p>5.1 The fuel supply system is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 The fuel supply system is prepared for storage in shut down mode</p> <p>5.3 Maintenance requirements are identified and reported according to workplace reporting procedure</p> <p>5.4 Fuel is stored to meet fuel requirements and workplace standards</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information fuel supply requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of fuel supply system and related services. This may include confirming availability of auxiliary fuel
4. Conduct pre-start checks
5. Demonstrate set up and start up procedures in both manual and automatic modes and starting for normal operation and after emergency stops
6. Monitor fuel supply system operation. This typically includes monitoring:
 - fuel levels
 - bagasse belt height
 - temperature
 - fuel oil pressure (on auxiliary system)
 - speed
 - vibration
 - smell
 - noise
7. Take corrective action in response to abnormal or unacceptable performance
8. Demonstrate procedure for test firing burners
9. Demonstrate procedure for removing, inspecting, cleaning and replacing oil burners. This involves use of go/no go gauges on atomising tips
10. Demonstrate procedure for clearing fuel blockages or chokes throughout the system
11. Report and/or record corrective action as required
12. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
13. Demonstrate procedure to take fuel supply system off-line
14. Demonstrate emergency procedures including operation of auxiliary/emergency fuel supply system
15. Demonstrate fuel storage and/or reclamation procedures as required in the workplace
16. Record operating information
17. Maintain work area to meet housekeeping standards

May include ability to:

18. Use process control systems

Knowledge of:

19. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities

20. Safe work procedures including awareness of health and safety hazards related to operation of fuel supply system and associated control measures. Hazards typically include working with moving equipment, working on platforms, risk of bagasse forming an explosive dust and related risks of fire associated with hot work and spontaneous combustion
21. Hierarchy of hazard control measures
22. Purpose and limitations of protective clothing and equipment
23. Properties of bagasse and bagacillo and impact of variation on combustion
24. Impact of bagasse belt levels on system capacity to supply
25. Principles of flame management systems. This includes understanding of when and how to purge boiler before relighting in a flame out situation
26. Purpose and operation of auxiliary fuel supply
27. Functions and basic operating principles of fuel supply system, components and auxiliary equipment
28. Operating requirements and parameters
29. Supply system layout
30. The effect of fuel quality and supply on boiler operation
31. Relationship between viscosity and temperature for burner operation
32. Purpose of atomising steam and/or air
33. Purpose of purge cycle for the burner
34. Relationship between fuel supply system and other processes
35. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
36. Procedures for responding to emergency situations. This includes emergency shutdown procedure
37. Handover and long term shut down and storage procedures
38. Fuel storage requirements
39. Fuel reclamation options and procedures as appropriate for the workplace and fuel type
40. Environmental issues and controls
41. Requirements to liaise/advise related work areas
42. Housekeeping standards for the work area
43. Reporting and recording systems

May include knowledge of:

44. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Where the operator is required to operate a boiler, select the appropriate boiler operation unit. Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Bagasse fuel supply system and related equipment
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Auxiliary fuel supply system is typically an oil system
- Equipment components and auxiliary equipment may include fuel supply storage, conveyor systems, fines separation
- This unit applies to both continuous and short term operation and requires demonstration of start up and shut down procedures after a prolonged break
- Services may include instrumentation and mill air and power
- Reclamation procedures refer to reclamation of bagasse stockpiles
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Confirming equipment status involves conducting relevant pre-start checks, confirming that housekeeping standards are met, all safety guards are in place and equipment is operational
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPFSC2A Operate a fuel supply system - coal

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It refers to the operation of a coal fuel system and related auxillary fuel system to supply a boiler.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the fuel supply system for operation	1.1 Pre-operational checks are conducted 1.2 Health and safety hazards are identified and

Element	Performance criteria
	<p>controlled</p> <p>1.3 Maintenance requirements are identified and reported according to workplace reporting procedure</p> <p>1.4 Primary and auxiliary fuel is available to meet combustion requirements</p> <p>1.5 Services are confirmed as available and ready for operation</p>
2. Start and monitor operation of the fuel supply system	<p>2.1 The fuel supply system is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.2 The fuel supply system is monitored to confirm performance is maintained within manufacturer's specifications to meet workplace requirements</p> <p>2.3 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 System operating conditions are monitored to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards and abnormal plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover fuel system operations	<p>4.1 Workplace records are maintained in accordance with workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Fuel system operators are aware of system and related equipment status at completion of handover</p>
5. Shutdown the fuel supply system	<p>5.1 The fuel supply system is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 The fuel supply system is prepared for storage in shut down mode</p> <p>5.3 Maintenance requirements are identified and reported according to workplace reporting procedure</p> <p>5.4 Fuel is stored to meet fuel requirements and workplace standards</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information fuel supply requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of fuel supply system and related services. This may include confirming availability of auxiliary fuel
4. Conduct pre-start checks
5. Demonstrate set up and start up procedures in both manual and automatic modes and starting for normal operation and after emergency stops
6. Monitor fuel supply system operation. This typically includes monitoring:
 - fuel levels
 - temperature
 - coal system - may include shake times, blow pressure and fuel moisture levels
 - ash systems
 - fuel oil pressure (on auxiliary system)
7. Take corrective action in response to abnormal or unacceptable performance
8. Demonstrate procedure for test firing burners
9. Demonstrate procedure for removing, inspecting, cleaning and replacing oil burners. This involves use of go/no go gauges on atomising tips
10. Demonstrate procedure for clearing fuel blockages or chokes throughout the system
11. Report and/or record corrective action as required
12. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
13. Demonstrate procedure to take fuel supply system off-line
14. Demonstrate emergency procedures including operation of auxiliary/emergency fuel supply system
15. Record operating information
16. Maintain work area to meet housekeeping standards

May include ability to:

17. Use process control systems

Knowledge of:

18. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
19. Safe work procedures including awareness of health and safety hazards related to operation of fuel supply system and associated control measures. Hazards typically include working with moving equipment, working on platforms, risk of fire associated with hot work and spontaneous combustion
20. Hierarchy of hazard control measures

21. Purpose and limitations of protective clothing and equipment
22. Principles of flame management systems. This includes understanding of when and how to purge boiler before relighting in a flame out situation
23. The amount of caustic addition for each ton of coal burnt
24. Purpose and operation of auxiliary fuel supply
25. Functions and basic operating principles of fuel supply system, components and auxiliary equipment
26. Operating requirements and parameters
27. Supply system layout
28. The effect of fuel quality and supply on boiler operation
29. Relationship between fuel supply system and other processes
30. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
31. Procedures for responding to emergency situations. This includes emergency shutdown procedure
32. Handover and long term shut down and storage procedures
33. Fuel storage requirements
34. Fuel reclamation options and procedures as appropriate for the workplace and fuel type
35. Environmental issues and controls
36. Requirements to liaise/advise related work areas
37. Housekeeping standards for the work area
38. Reporting and recording systems

May include knowledge of:

39. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Where the operator is required to operate a boiler, select the appropriate boiler operation unit. Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Coal fuel supply system and related equipment
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Auxiliary fuel supply system is typically an oil system
- Equipment components and auxiliary equipment may include fuel supply storage, conveyor systems, fines separation
- This unit applies to both continuous and short term operation and requires demonstration of start up and shut down procedures after a prolonged break
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Confirming equipment status involves conducting relevant pre-start checks, confirming that housekeeping standards are met, all safety guards are in place and equipment is operational
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPHGF2A Operate a high grade fugal station

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate the high grade fugal process from the high-grade fugal distributor to the sugar bin and the A and B molasses storage tanks.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare the high grade fugal 1.1 Massecuite is available to meet production

Element	Performance criteria
station for operation	<p>requirements</p> <p>1.2 Services are confirmed as available and ready for operation</p> <p>1.3 Equipment is checked to confirm readiness for use</p> <p>1.4 The high grade fugal station is set up to meet production requirements</p>
2. Operate and monitor high grade fugal station	<p>2.1 The high grade fugal station is started up and operated according to company procedures</p> <p>2.2 Control points are monitored to confirm performance is maintained within specification</p> <p>2.3 Output meets specification</p> <p>2.4 Equipment is monitored to confirm operating condition</p> <p>2.5 Out-of-specification process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure</p> <p>2.6 The workplace meets housekeeping standards</p>
3. Handover the high grade fugal station	<p>3.1 Workplace records are maintained in accordance with workplace procedures</p> <p>3.2 Handover is carried out according to workplace procedure</p> <p>3.3 High grade fugal station operators are aware of system and related equipment status at completion of handover</p>
4. Shut down the high grade fugal station	<p>4.1 The appropriate shut down procedure is identified</p> <p>4.2 The high grade fugal station is shut down according to workplace procedures</p> <p>4.3 The high grade fugal station is prepared for storage in shut down mode</p> <p>4.4 Maintenance requirements are identified and reported according to workplace reporting procedure</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Follow start up procedure
6. Start up and operate in both automatic and manual modes
7. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves visual inspections and conducting tests to monitor characteristics such as:
 - fugal load
 - sugar and molasses quality
 - crystal in A B molasses
 - A B molasses purity
 - A B molasses density
 - molasses stock level
 - sugar temperature, pol and moisture
 - fugal speed
 - atmospheric conditions
 - cycle times including spin and wash times
 - wash water temperature
 - basket charge
 - dry air and sugar flows
 - sugar dust levels
 - equipment condition including drip gate operation
8. Control station throughput and A B balance to meet pan stage throughput. Take corrective action in response to out-of-specification results
9. Shut down and clean fugals according to schedule or as indicated by equipment monitoring
10. Control drier airflows to achieve target sugar temperature and moisture
11. Report and/or record corrective action as required
12. Record workplace information
13. Demonstrate shift handover procedure
14. Shut down equipment in response to an emergency situation
15. Prepare equipment for cleaning/maintenance
16. Maintain work area to meet housekeeping standards

May include the ability to:

17. Use process control systems
18. Clean and sanitise equipment
19. Take samples and conduct tests

Knowledge of:

20. Purpose and basic principles of high grade fugal station operation. This includes sugar drying and operation of batch and continuous fugals as required in the workplace
21. Terminology relating to sugar and molasses quality
22. Sugar industry quality standards for each brand of sugar
23. The circuit flow of this process and relationship to related processes
24. Factors that affect throughput and recovery. This includes the relationship between sugar pol and throughput and the balance between A and B fugals
25. The effect of massecuite quality on fugal operation and the effect of variation in operating parameters on the fugal output
26. Equipment purpose and basic operating principles of high grade fugal equipment
27. Services used
28. Operating requirements and parameters
29. Significance and method of monitoring control points within the process
30. Common causes of variation and corrective action required
31. Hazards and controls
32. Purpose and limitations of protective clothing and equipment
33. Lock out and tag out procedures
34. Shut down sequence including massecuite feed pumps and reheaters
35. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
36. Procedures and responsibility for reporting problems
37. Environmental issues and controls
38. Waste handling requirements and procedures
39. Recording requirements and procedures

May include knowledge of:

40. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
41. Cleaning and sanitation procedures
42. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- High grade fugal station equipment
- Materials including massecuite and services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require access to:

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- High grade fugal equipment may include high grade fugals (batch and/or continuous), molasses pipes, tanks and pumps, massecuite feed pump, distributor, fugal water and steam system, sugar screw or belt, sugar conveyor system, drier and fans and air conditioners, sugar scrubber and sugar bin
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring instrumentation
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, water, compressed and instrumentation air
- Where tests are conducted as part of operation a typical requirement is pol and moisture by near infra-red. Molasses density may also be required.
- Sugar industry quality standards are determined at state level
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPJCP2A Operate a juice clarification process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the operation of the juice clarification process from the juice tanks through to the clarifiers.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the clarification process for operation	1.1 Raw juice is and available to meet production requirements

Element	Performance criteria
2. Operate and monitor the clarification process	1.2 Services are confirmed as available and ready for operation 1.3 Equipment is checked to confirm readiness for use 1.4 The clarification process is set to meet production requirements 2.1 The clarification process is started up and operated according to company procedures 2.2 Control points are monitored to confirm performance is maintained within specification 2.3 Clarified product meets specifications 2.4 Equipment is monitored to confirm operating condition 2.5 Out-of-specification product, process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure 2.6 The workplace meets housekeeping standards 2.7 Workplace information is recorded according to workplace recording requirements
3. Handover the clarification process	3.1 Workplace records are maintained in accordance with workplace procedures 3.2 Handover is carried out according to workplace procedure 3.3 Clarification operators are aware of system and related equipment status at completion of handover
4. Shut down the clarification process	4.1 The appropriate shut down procedure is identified 4.2 The clarification system is shut down according to workplace procedures 4.3 The clarification system is prepared for storage in shut down mode 4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Prepare lime, flocculant and saccharate for addition
5. Liaise with other work areas
6. Confirm equipment status and condition
7. Set up and start up the process in both automatic and manual modes
8. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves visual inspections and conducting tests to monitor characteristics such as:
 - juice temperatures
 - steam pressure
 - condensate flow and quality
 - throughput
 - juice pH
 - ESJ turbidity
 - addition rates
 - raw juice quality
 - clarifier mud levels and quality
 - equipment condition
9. Monitor supply and flow of materials to and from the process
10. Take corrective action in response to out-of-specification results
11. Record workplace information
12. Demonstrate shift handover procedure
13. Shut down equipment in response to an emergency situation
14. Demonstrate an operational shut down procedure
15. Prepare equipment for cleaning/maintenance
16. Maintain work area to meet housekeeping standards

May include the ability to:

17. Use process control systems
18. Clean and sanitise equipment
19. Take samples and conduct tests

Knowledge of:

20. Purpose and basic principles of clarification. This includes heating, liming, juice degasification and flocculant addition
21. The circuit flow of this process and relationship to related processes. This includes the consequences of poor clarification on downstream processes
22. The effect of recycle streams on the clarification process
23. The purpose and role of materials added
24. Effect of faulty preparation of materials
25. Quality characteristics of raw juice and of clarified product

26. The impact of dextran on sugar quality
27. The function of the incubation tank and starch removal
28. The effect of addition rates on the process
29. The effect of variation in process parameters
30. Conditions that can cause deterioration in juice
31. Significance and method of monitoring control points within the process
32. Equipment purpose and basic operating principles of juice clarification equipment
33. Operating requirements and parameters
34. Services used
35. Common causes of variation and corrective action required
36. Hazards and controls
37. Purpose and limitations of protective clothing and equipment
38. Lock out and tag out procedures
39. Procedures and responsibility for reporting problems
40. Environmental issues and controls
41. Waste handling requirements and procedures
42. Recording requirements and procedures

May include knowledge of:

43. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
44. Cleaning and sanitation procedures
45. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Juice clarification equipment
- Materials including raw juice to be clarified
- Services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Clarification equipment may include tanks, juice pumps, juice heaters, flash tank, lime storage and mixing plant, saccharate tank, flocculant addition system, clarifier
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring instrumentation
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, steam, water, compressed and instrumentation air
- Materials can include lime, flocculants, enzymes, phosphoric acid, saccharate and preservatives
- Where tests are conducted as part of operation, typical requirements are for pH and thymol testing
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPLGF2A Operate a low grade fugal station

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate the low grade fugal process from the reheater to the magma pump and molasses cooler.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

- | | |
|------------------------------------------------------|---------------------------------------------------------------|
| 1. Prepare the low grade fugal station for operation | 1.1 Massequite is conditioned to meet production requirements |
|------------------------------------------------------|---------------------------------------------------------------|

Element	Performance criteria
	1.2 Services are confirmed as available and ready for operation
	1.3 Equipment is checked to confirm readiness for use
	1.4 The low grade fugal station is set up to meet production requirements
2. Operate and monitor low grade fugal station	2.1 The low grade fugal station is started up and operated according to company procedures
	2.2 Control points are monitored to confirm performance is maintained within specification
	2.3 C sugar and C molasses meet specification
	2.4 Equipment is monitored to confirm operating condition
	2.5 Out-of-specification process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure
	2.6 The workplace meets housekeeping standards
3. Handover the low grade fugal station	3.1 Workplace records are maintained in accordance with workplace procedures
	3.2 Handover is carried out according to workplace procedure
	3.3 Low grade fugal station operators are aware of system and related equipment status at completion of handover
4. Shut down the low grade fugal station	4.1 The appropriate shut down procedure is identified
	4.2 The low grade fugal station is shut down according to workplace procedures
	4.3 The low grade fugal station is prepared for storage in shut down mode
	4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Follow start up procedure
6. Start up and operate in both automatic and manual modes
7. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves monitoring:
 - fugal load
 - magma and molasses quality
 - crystal formation in C molasses
 - massecuite feed temperatures
 - equipment condition including screen condition and vibration
 - magma and molasses purity
 - molasses temperature and brix
 - magma tank stock level and remelt rates
8. Control station throughput to meet factory throughput
9. Take corrective action in response to out-of-specification results
10. Shut down and clean fugals according to schedule or as indicated by equipment monitoring
11. Report and/or record corrective action as required
12. Record workplace information
13. Demonstrate shift handover procedure
14. Shut down equipment in response to an emergency situation
15. Demonstrate an operational shut down procedure
16. Prepare equipment for cleaning/maintenance
17. Maintain work area to meet housekeeping standards

May include the ability to:

18. Use process control systems
19. Clean and sanitise equipment
20. Take samples and conduct tests
21. Perform pressure filter on C massecuite

Knowledge of:

22. Purpose and basic principles of low grade fugal operation. This includes C molasses cooling and storage and operating efficiencies for low grade fugals
23. Terminology such as brix and purity
24. The effect of C molasses dilution and temperature on C massecuite viscosity
25. The effect of C massecuite conditioning on low grade fugal performance
26. The circuit flow of this process and relationship to related processes
27. Factors that affect throughput and recovery. This includes the relationship between crystalliser throughput, magma stock and remelt rate

28. Equipment purpose and basic operating principles of low grade fugal equipment
29. Services used
30. Operating requirements and parameters
31. Significance and method of monitoring control points within the process
32. Common causes of variation and corrective action required
33. Hazards and controls
34. Purpose and limitations of protective clothing and equipment
35. Lock out and tag out procedures
36. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
37. Procedures and responsibility for reporting problems
38. Environmental issues and controls
39. Waste handling requirements and procedures
40. Recording requirements and procedures

May include knowledge of:

41. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
42. Cleaning and sanitation procedures
43. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Low grade fugal station equipment
- Materials including massecuite and services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Low grade fugal equipment may include low grade fugals, massecuite feed pump, distributor, fugal water and steam system, magma screw and pump, molasses pump and cooler, magma remelt system and molasses tank
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring instrumentation
- Services may include power, water, steam, compressed and instrumentation air
- Where tests are conducted as part of operation typical requirements are observation using a microscope and product density
- Monitoring the process may involve the use of production data such as performance control charts
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPMFP2A Operate a mud filtration process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate the mud filtration process from the clarifiers to mud disposal.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the mud filtration process for operation	1.1 Mud is assessed and conditioned to meet filtration requirements

Element	Performance criteria
	1.2 Services are confirmed as available and ready for operation
	1.3 Equipment is checked to confirm readiness for use
	1.4 The mud filtration process is set to meet production requirements
2. Operate and monitor the mud filtration process	2.1 The mud filtration process is started up and operated according to company procedures
	2.2 Control points are monitored to confirm performance is maintained within specification
	2.3 Mud meets specification for pol and moisture
	2.4 Equipment is monitored to confirm operating condition
	2.5 Out-of-specification mud, process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure
	2.6 The workplace meets housekeeping standards
3. Handover the mud filtration process	3.1 Workplace records are maintained in accordance with workplace procedures
	3.2 Handover is carried out according to workplace procedure
	3.3 Mud filtration operators are aware of system and related equipment status at completion of handover
4. Shut down the mud filtration process	4.1 The appropriate shut down procedure is identified
	4.2 The mud filtration system is shut down according to workplace procedures
	4.3 The mud filtration system is prepared for storage in shut down mode
	4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Draw mud from the clarifier and assess mud quality
5. Confirm equipment status and condition
6. Set up filters and start up the process
7. Assess requirement for mud conditioning and add materials as required
8. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves visual inspections and conducting tests to monitor characteristics such as:
 - throughput
 - clarifier mud levels and quality
 - filter speed and cake thickness
 - filtrate clarity and pH
 - mud pol and moisture
 - equipment condition including filter vacuum and scraper and screen condition
 - wash water flow and temperature
9. Take corrective action in response to out-of-specification results
10. Report and/or record corrective action as required
11. Record workplace information
12. Demonstrate shift handover procedure
13. Shut down equipment in response to an emergency situation
14. Demonstrate an operational shut down procedure
15. Prepare equipment for cleaning/maintenance
16. Maintain work area to meet housekeeping standards

May include the ability to:

17. Use process control systems
18. Clean and sanitise equipment
19. Take samples and conduct tests

Knowledge of:

20. Purpose and basic principles of mud filtration
21. The purpose and role of materials added and their effect on filter operation
22. The effect of recycle streams on the mud filtration process
23. The effect of addition rates on the process
24. The effect of variation in process parameters
25. The effect of mud age on filter performance
26. The circuit flow of this process and relationship to related processes including mud output, filter speed, water addition and cake permeability
27. Equipment purpose and basic operating principles of mud filtration equipment including vacuum pumps and condensers
28. Services used

29. Operating requirements and parameters
30. Significance and method of monitoring control points within the process
31. Common causes of variation and corrective action required
32. Hazards and controls
33. Purpose and limitations of protective clothing and equipment
34. Lock out and tag out procedures
35. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
36. Procedures and responsibility for reporting problems
37. Environmental issues and controls
38. Waste handling requirements and procedures
39. Recording requirements and procedures

May include knowledge of:

40. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
41. Cleaning and sanitation procedures
42. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Mud filtration equipment
- Mud to be filtered
- Services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Mud filtration equipment may include clarifier mud removal, mud tank/mud mixer, bagacillo system, filtrate receivers and pump, vacuum pumps, mud filter, mud conveying system and storage, filter wash water supply, lime, flocculant and filtrate recycle to mud system
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring instrumentation
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, water, compressed and instrumentation air
- Materials can include lime, flocculants, saccharate and preservatives
- Where tests are conducted as part of operation, typical requirements are for pH and thymol testing
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPMPH3A Monitor a powerhouse

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate and monitor one or more turbines with attached alternators, supplying factory power.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare to operate the powerhouse	1.1 Personal protective clothing and equipment is selected and used

Element	Performance criteria
	1.2 Run warm up sequence of turbines and alternator/s in preparation for handover from local powerhouse to powerhouse consul
2. Monitor powerhouse operation	2.1 Powerhouse output is monitored against site requirements 2.2 Equipment is monitored to confirm operating condition 2.3 The workplace meets housekeeping standards
3. Analyse and respond to abnormal performance	3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance 3.2 Corrective action is taken in accordance with workplace procedures in response to OHS hazards and abnormal plant performance 3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations
4. Handover powerhouse operation	4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures 4.2 Handover is carried out according to workplace procedure 4.3 Powerhouse operators are aware of powerhouse status and related equipment at completion of handover
5. Shutdown the powerhouse	5.1 The powerhouse is shut down according to workplace procedures and manufacturer's recommendations 5.2 The powerhouse is prepared for storage in shut down mode 5.3 Maintenance requirements are identified and reported

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on power requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm that turbine/s and alternator/s are ready for warm up/operation
4. Conduct warm up sequence
5. Liaise with electrician as required to synchronise with external power supply
6. Handover control to operating consul
7. Liaise with other work areas to advise of powerhouse status
8. Demonstrate run up procedures in both manual and automatic modes
9. Monitor powerhouse operation. This typically includes monitoring:
 - bearing temperature
 - steam pressure
 - speeds
 - oil flows
 - power factor
 - voltage
 - power frequency
 - equipment condition including noise and vibration
10. Take corrective action in response to abnormal or unacceptable performance
11. Report and/or record corrective action as required
12. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
13. Demonstrate emergency trip procedure and related re-start
14. Record operating information
15. Maintain work area to meet housekeeping standards

Knowledge of:

16. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
17. Safe work procedures including awareness of health and safety hazards related to powerhouse operation and associated control measures. Hazards typically include working around hot surfaces, manual handling, fuel and steam leaks
18. Hierarchy of hazard control measures
19. Purpose and limitations of protective clothing and equipment
20. Purpose and basic principles of power generation. This includes the impact of out of range frequency voltage on equipment operation
21. Site procedures for the import and export of power
22. Operating principles of powerhouse and instrumentation components, purpose and operation. This includes the requirement to bar over alternators on start up, shut down and emergency stops
23. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
24. Layout of powerhouse including location of overload protection equipment/switches
25. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
26. Operating requirements and parameters

27. Procedures for responding to emergency situations. This includes safe shutdown procedure
28. Handover and long term shut down and storage procedures
29. Environmental issues and controls. This can include controlling oil spillages
30. Housekeeping standards for the work area
31. Reporting and recording systems. This includes both statutory and workplace requirements

May include:

32. Cleaning procedures

Relationship with other standards

Pre-requisite units

The pre-requisite for this competency standard is:

- SUGPOTB2A Operate a turbine

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Turbine with an attached alternator
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice may include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- This role is typically carried out in liaison with an electrician
- This unit applies to both continuous and short term operation and requires demonstration of start up and shut down procedures after a prolonged break
- Equipment includes turbines with attached alternators
- Services may include steam, water, mill and instrumentation air and power
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Work may require the ability to work within a team environment
- Information systems may be print or instrumentation based
-

Unit Sector(s)

Not applicable.

SUGPOB2A Operate a boiler

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to for continuous and short term operation of a boiler and for start up and shut down after a prolonged break.

This unit should only be selected where boiler operation is not a certificated occupation.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the boiler for operation	<p>1.1 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.2 The boiler is purged according to workplace procedure</p> <p>1.3 Services are confirmed and available</p> <p>1.4 Pre-operational checks are conducted to confirm operational status of boiler and related equipment</p>
2. Start and monitor boiler operation	<p>2.1 The boiler is started and brought on line safely according to workplace procedures and manufacturer's specifications</p> <p>2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.3 Equipment is monitored to confirm operating condition</p> <p>2.4 Water quality is tested and adjusted as required</p> <p>2.5 Sluice water is circulated to remove ash from boiler according to specification</p> <p>2.6 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover boiler operations	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Boiler operators are aware of boiler status and related equipment at completion of handover</p>
5. Carry out an operational shutdown	<p>5.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 Maintenance requirements are identified and</p>

Element	Performance criteria
	reported according to workplace reporting procedure
6. Shutdown the boiler and prepare for an internal inspection	6.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations 6.2 The boiler is cleaned internally and externally according to workplace procedures and manufacturer's recommendations 6.3 Valves and fittings are removed in preparation for maintenance
7. Store boiler in shutdown mode	7.1 The boiler is stored in the appropriate storage mode according to workplace procedures and manufacturer's recommendations
8. Record information	8.1 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on combustion and operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Identify and report hazards and potential hazards in the work area
4. Confirm status of boiler and related equipment including the fuel supply system, ash removal and services
5. Demonstrate purge procedure
6. Conduct pre-start checks. This typically include checking:
 - feed water supply and system
 - fuel supply system
 - fans and dampers
 - inspection doors
 - boiler valves - operation and position
 - combustion air supply system
 - boiler water level
7. Liaise with other work areas to advise of boiler status
8. Demonstrate set up and start up procedures in both manual and automatic modes
9. Monitor boiler operation. This typically includes monitoring:

- steam reticulation line pressure
 - boiler steam pressure
 - steam supply/usage
 - condensate tank level
 - bagasse levels
 - feedwater levels and pressure
 - fuel levels
 - boiler load
 - water quality
 - furnace pressure
 - ash pit level and removal system
 - balance draft system
 - superheater temperature
 - drum levels
 - equipment condition
10. Conduct water quality test
 11. Take corrective action in response to out-of-specification results
 12. Report and/or record corrective action as required
 13. Demonstrate shift handover procedure and confirm that replacement operators are aware of all relevant issues prior to completing handover
 14. Demonstrate procedure to take boiler off line
 15. Demonstrate procedure to shut down and clean the boiler
 16. Demonstrate removal of valves and fittings to prepare the boiler for inspection
 17. Demonstrate procedure to store boiler
 18. Demonstrate emergency procedures and related re-start. This includes use of emergency fuel supply
 19. Maintain workplace records
 20. Maintain work area to meet housekeeping standards

May include ability to:

21. Use process control systems

Knowledge of:

22. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
23. Safe work procedures including awareness of health and safety hazards related to boiler operation and associated control measures. Hazards typically include working around hot surfaces, manual handling, fuel and steam leaks
24. Purpose and limitations of protective clothing and equipment
25. Hierarchy of hazard control measures
26. Duty of care of the boiler operator
27. Purpose and basic principles of combustion and boiler operation. This includes principles of heat transfer and properties of steam
28. Boiler system layout and steam cycle
29. The purpose of purging a boiler
30. The effect of fuel quality on boiler operation
31. Impact of ash removal on efficient boiler operation and impact of sluice water flow

32. Relationship to other processes. This includes an understanding of the impact of sudden load changes on boiler pressure and plant operation
33. Purpose and limitations of protective clothing and equipment
34. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
35. Water quality test procedures
36. Typical causes of water/condensate contamination and corrective action required
37. Equipment purpose and basic operating principles. This includes high pressure feed pumps, fuel supply system and dual fuel systems as required by boiler type
38. Operating requirements and parameters
39. Procedures for responding to emergency situations. This includes safe shutdown procedure
40. Handover and long term shut down and storage procedures
41. Cleaning procedures and grate dumping
42. Environmental issues and controls. This includes an understanding of sluice water usage.
43. Requirements to liaise/advise related work areas
44. Housekeeping standards for the work area
45. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

46. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Boiler and related equipment. This includes fuel supply, grate cleaning and ash removal systems
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For assessment advice where the boiler operation is not a certified occupation, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Boiler and related equipment may be fully or partly attended, include turbines and fans, modulating combustion air supply, modulating heat source. Intermediate boilers are those incorporating superheaters and economizers. Advanced boilers are those using multiple fuel types that may be fired simultaneously during normal operation, (not including boilers which change fuel type during start sequence)
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services can include fuel supply of bagasse, coal, gas, oil or other fuel types, steam, mill and instrumentation air, cooling water, general mill water supply and cooling water
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards and manholes are in place and equipment is operational
- Internal cleaning is carried out in accordance with statutory requirements regarding confined space entry and does not typically include chemical cleaning
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOBA3A Operate a boiler - advanced

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to for continuous and short term operation of an **advanced boiler** and for start up and shut down after a prolonged break.

This unit is based on the boiler competency standards from the Worksafe Australia Standards for Users and Operators of Industrial Equipment NOHSC 1006 (2001). It should be selected where boiler operation is a certificated occupation.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the boiler for operation	1.1 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures 1.2 The boiler is purged according to workplace procedure 1.3 Services are confirmed and available 1.4 Pre-operational checks are conducted to confirm operational status of boiler and related equipment
2. Start and monitor boiler operation	2.1 The boiler is started and brought on line safely according to workplace procedures and manufacturer's specifications 2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements 2.3 Equipment is monitored to confirm operating condition 2.4 Water quality is tested and adjusted as required 2.5 Sluice water is circulated to remove ash from boiler according to specification 2.6 The workplace meets housekeeping standards
3. Analyse and respond to abnormal performance	3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance 3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or plant performance 3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations
4. Handover boiler operations	4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures 4.2 Handover is carried out according to workplace procedure 4.3 Boiler operators are aware of boiler status and related equipment at completion of handover
5. Carry out an operational shutdown	5.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations 5.2 Maintenance requirements are identified and

Element	Performance criteria
	reported according to workplace reporting procedure
6. Shutdown the boiler and prepare for an internal inspection	6.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations 6.2 The boiler is cleaned internally and externally according to workplace procedures and manufacturer's recommendations 6.3 Valves and fittings are removed in preparation for maintenance
7. Store boiler in shutdown mode	7.1 The boiler is stored in the appropriate storage mode according to workplace procedures and manufacturer's recommendations
8. Record information	8.1 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on combustion and operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Identify and report hazards and potential hazards in the work area
4. Confirm status of boiler and related equipment including the fuel supply system, ash removal and services
5. Demonstrate purge procedure
6. Conduct pre-start checks. This typically include checking:
 - feed water supply and system
 - fuel supply system
 - fans and dampers
 - inspection doors
 - boiler valves - operation and position
 - combustion air supply system
 - boiler water level
7. Liaise with other work areas to advise of boiler status
8. Demonstrate set up and start up procedures in both manual and automatic modes
9. Monitor boiler operation. This typically includes monitoring:

- steam reticulation line pressure
 - boiler steam pressure
 - steam supply/usage
 - condensate tank level
 - bagasse levels
 - feedwater levels and pressure
 - fuel levels
 - boiler load
 - water quality
 - furnace pressure
 - ash pit level and removal system
 - balance draft system
 - superheater temperature
 - drum levels
 - equipment condition
10. Conduct water quality test
 11. Take corrective action in response to out-of-specification results
 12. Report and/or record corrective action as required
 13. Demonstrate shift handover procedure and confirm that replacement operators are aware of all relevant issues prior to completing handover
 14. Demonstrate procedure to take boiler off line
 15. Demonstrate procedure to shut down and clean the boiler
 16. Demonstrate removal of valves and fittings to prepare the boiler for inspection
 17. Demonstrate procedure to store boiler
 18. Demonstrate emergency procedures and related re-start. This includes use of emergency fuel supply
 19. Maintain workplace records
 20. Maintain work area to meet housekeeping standards

May include ability to:

21. Use process control systems

Knowledge of:

22. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
23. Safe work procedures including awareness of health and safety hazards related to boiler operation and associated control measures. Hazards typically include working around hot surfaces, manual handling, fuel and steam leaks
24. Purpose and limitations of protective clothing and equipment
25. Hierarchy of hazard control measures
26. Duty of care of the boiler operator
27. Purpose and basic principles of combustion and boiler operation. This includes principles of heat transfer and properties of steam
28. Boiler system layout and steam cycle
29. The purpose of purging a boiler
30. The effect of fuel quality on boiler operation
31. Impact of ash removal on efficient boiler operation and impact of sluice water flow

32. Relationship to other processes. This includes an understanding of the impact of sudden load changes on boiler pressure and plant operation
33. Purpose and limitations of protective clothing and equipment
34. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
35. Water quality test procedures
36. Typical causes of water/condensate contamination and corrective action required
37. Equipment purpose and basic operating principles. This includes high pressure feed pumps, fuel supply system and dual fuel systems as required by boiler type
38. Operating requirements and parameters
39. Procedures for responding to emergency situations. This includes safe shutdown procedure
40. Handover and long term shut down and storage procedures
41. Cleaning procedures and grate dumping
42. Environmental issues and controls. This includes an understanding of sluice water usage.
43. Requirements to liaise/advise related work areas
44. Housekeeping standards for the work area
45. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

46. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Boiler and related equipment. This includes fuel supply, grate cleaning and ash removal systems
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

Boiler operators holding a ticket in Advance Boiler Operation from the relevant state regulatory authority will be granted equivalence in this unit SUGPOBA3A Operate a boiler - advanced for the purpose of issuing a qualification.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Boiler (advanced) covers boilers with the same features as Intermediate Boilers - that is they may have any or all of the following features: - modulating combustion air supply, modulating heat source, superheaters, and economisers. However Advanced boilers must also have multiple fuel types which may be fired simultaneously during normal operation. This does not include boilers that change fuel type during start sequence.
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services can include fuel supply of bagasse, coal, gas, oil or other fuel types, steam, mill and instrumentation air, cooling water, general mill water supply and cooling water
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards and manholes are in place and equipment is operational
- Internal cleaning is carried out in accordance with statutory requirements regarding confined space entry and does not typically include chemical cleaning
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOBB2A Operate a boiler - basic

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to for continuous and short term operation of a **basic boiler** and for start up and shut down after a prolonged break.

This unit is based on the boiler competency standards from the Worksafe Australia Standards for Users and Operators of Industrial Equipment NOHSC 1006 (2001). It should be selected where boiler operation is a certificated occupation.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the boiler for operation	<p>1.1 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.2 The boiler is purged according to workplace procedure</p> <p>1.3 Services are confirmed and available</p> <p>1.4 Pre-operational checks are conducted to confirm operational status of boiler and related equipment</p>
2. Start and monitor boiler operation	<p>2.1 The boiler is started and brought on line safely according to workplace procedures and manufacturer's specifications</p> <p>2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.3 Equipment is monitored to confirm operating condition</p> <p>2.4 Water quality is tested and adjusted as required</p> <p>2.5 Sluice water is circulated to remove ash from boiler according to specification</p> <p>2.6 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover boiler operations	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Boiler operators are aware of boiler status and related equipment at completion of handover</p>
5. Carry out an operational shutdown	<p>5.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 Maintenance requirements are identified and</p>

Element	Performance criteria
	reported according to workplace reporting procedure
6. Shutdown the boiler and prepare for an internal inspection	<p>6.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations</p> <p>6.2 The boiler is cleaned internally and externally according to workplace procedures and manufacturer's recommendations</p> <p>6.3 Valves and fittings are removed in preparation for maintenance</p>
7. Store boiler in shutdown mode	7.1 The boiler is stored in the appropriate storage mode according to workplace procedures and manufacturer's recommendations
8. Record information	8.1 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on combustion and operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Identify and report hazards and potential hazards in the work area
4. Confirm status of boiler and related equipment including the fuel supply system, ash removal and services
5. Demonstrate purge procedure
6. Conduct pre-start checks. This typically include checking:
 - feed water supply and system
 - fuel supply system
 - fans and dampers
 - inspection doors
 - boiler valves - operation and position
 - combustion air supply system
 - boiler water level
7. Liaise with other work areas to advise of boiler status
8. Demonstrate set up and start up procedures in both manual and automatic modes
9. Monitor boiler operation. This typically includes monitoring:

- steam reticulation line pressure
 - boiler steam pressure
 - steam supply/usage
 - condensate tank level
 - bagasse levels
 - feedwater levels and pressure
 - fuel levels
 - boiler load
 - water quality
 - furnace pressure
 - ash pit level and removal system
 - balance draft system
 - superheater temperature
 - drum levels
 - equipment condition
10. Conduct water quality test
 11. Take corrective action in response to out-of-specification results
 12. Report and/or record corrective action as required
 13. Demonstrate shift handover procedure and confirm that replacement operators are aware of all relevant issues prior to completing handover
 14. Demonstrate procedure to take boiler off line
 15. Demonstrate procedure to shut down and clean the boiler
 16. Demonstrate removal of valves and fittings to prepare the boiler for inspection
 17. Demonstrate procedure to store boiler
 18. Demonstrate emergency procedures and related re-start. This includes use of emergency fuel supply
 19. Maintain workplace records
 20. Maintain work area to meet housekeeping standards

May include ability to:

21. Use process control systems

Knowledge of:

22. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
23. Safe work procedures including awareness of health and safety hazards related to boiler operation and associated control measures. Hazards typically include working around hot surfaces, manual handling, fuel and steam leaks
24. Purpose and limitations of protective clothing and equipment
25. Hierarchy of hazard control measures
26. Duty of care of the boiler operator
27. Purpose and basic principles of combustion and boiler operation. This includes principles of heat transfer and properties of steam
28. Boiler system layout and steam cycle
29. The purpose of purging a boiler
30. The effect of fuel quality on boiler operation
31. Impact of ash removal on efficient boiler operation and impact of sluice water flow

32. Relationship to other processes. This includes an understanding of the impact of sudden load changes on boiler pressure and plant operation
33. Purpose and limitations of protective clothing and equipment
34. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
35. Water quality test procedures
36. Typical causes of water/condensate contamination and corrective action required
37. Equipment purpose and basic operating principles. This includes high pressure feed pumps, fuel supply system and dual fuel systems as required by boiler type
38. Operating requirements and parameters
39. Procedures for responding to emergency situations. This includes safe shutdown procedure
40. Handover and long term shut down and storage procedures
41. Cleaning procedures and grate dumping
42. Environmental issues and controls. This includes an understanding of sluice water usage.
43. Requirements to liaise/advise related work areas
44. Housekeeping standards for the work area
45. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

46. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Boiler and related equipment. This includes fuel supply, grate cleaning and ash removal systems
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

Boiler operators holding a ticket in Basic Boiler Operation from the relevant state regulatory authority will be granted equivalence in this unit SUGPOBB2A Operate a boiler- basic for the purpose of issuing a qualification.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Boiler (basic) and related equipment may be fully or partly attended, and include single fixed combustion air supply, non modulating single heat source and fixed firing rate.
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services can include fuel supply of bagasse, coal, gas, oil or other fuel types, steam, mill and instrumentation air, cooling water, general mill water supply and cooling water
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards and manholes are in place and equipment is operational
- Internal cleaning is carried out in accordance with statutory requirements regarding confined space entry and does not typically include chemical cleaning
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOBI3A Operate a boiler - intermediate

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to for continuous and short term operation of an **intermediate boiler** and for start up and shut down after a prolonged break.

This unit is based on the boiler competency standards from the Worksafe Australia Standards for Users and Operators of Industrial Equipment NOHSC 1006 (2001). It should be selected where boiler operation is a certificated occupation.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the boiler for operation	<p>1.1 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.2 The boiler is purged according to workplace procedure</p> <p>1.3 Services are confirmed and available</p> <p>1.4 Pre-operational checks are conducted to confirm operational status of boiler and related equipment</p>
2. Start and monitor boiler operation	<p>2.1 The boiler is started and brought on line safely according to workplace procedures and manufacturer's specifications</p> <p>2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.3 Equipment is monitored to confirm operating condition</p> <p>2.4 Water quality is tested and adjusted as required</p> <p>2.5 Sluice water is circulated to remove ash from boiler according to specification</p> <p>2.6 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover boiler operations	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Boiler operators are aware of boiler status and related equipment at completion of handover</p>
5. Carry out an operational shutdown	<p>5.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 Maintenance requirements are identified and</p>

Element	Performance criteria
	reported according to workplace reporting procedure
6. Shutdown the boiler and prepare for an internal inspection	<p>6.1 The boiler is shut down according to workplace procedures and manufacturer's recommendations</p> <p>6.2 The boiler is cleaned internally and externally according to workplace procedures and manufacturer's recommendations</p> <p>6.3 Valves and fittings are removed in preparation for maintenance</p>
7. Store boiler in shutdown mode	7.1 The boiler is stored in the appropriate storage mode according to workplace procedures and manufacturer's recommendations
8. Record information	8.1 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on combustion and operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Identify and report hazards and potential hazards in the work area
4. Confirm status of boiler and related equipment including the fuel supply system, ash removal and services
5. Demonstrate purge procedure
6. Conduct pre-start checks. This typically include checking:
 - feed water supply and system
 - fuel supply system
 - fans and dampers
 - inspection doors
 - boiler valves - operation and position
 - combustion air supply system
 - boiler water level
7. Liaise with other work areas to advise of boiler status
8. Demonstrate set up and start up procedures in both manual and automatic modes
9. Monitor boiler operation. This typically includes monitoring:

- steam reticulation line pressure
 - boiler steam pressure
 - steam supply/usage
 - condensate tank level
 - bagasse levels
 - feedwater levels and pressure
 - fuel levels
 - boiler load
 - water quality
 - furnace pressure
 - ash pit level and removal system
 - balance draft system
 - superheater temperature
 - drum levels
 - equipment condition
10. Conduct water quality test
 11. Take corrective action in response to out-of-specification results
 12. Report and/or record corrective action as required
 13. Demonstrate shift handover procedure and confirm that replacement operators are aware of all relevant issues prior to completing handover
 14. Demonstrate procedure to take boiler off line
 15. Demonstrate procedure to shut down and clean the boiler
 16. Demonstrate removal of valves and fittings to prepare the boiler for inspection
 17. Demonstrate procedure to store boiler
 18. Demonstrate emergency procedures and related re-start. This includes use of emergency fuel supply
 19. Maintain workplace records
 20. Maintain work area to meet housekeeping standards

May include ability to:

21. Use process control systems

Knowledge of:

22. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
23. Safe work procedures including awareness of health and safety hazards related to boiler operation and associated control measures. Hazards typically include working around hot surfaces, manual handling, fuel and steam leaks
24. Purpose and limitations of protective clothing and equipment
25. Hierarchy of hazard control measures
26. Duty of care of the boiler operator
27. Purpose and basic principles of combustion and boiler operation. This includes principles of heat transfer and properties of steam
28. Boiler system layout and steam cycle
29. The purpose of purging a boiler
30. The effect of fuel quality on boiler operation
31. Impact of ash removal on efficient boiler operation and impact of sluice water flow

32. Relationship to other processes. This includes an understanding of the impact of sudden load changes on boiler pressure and plant operation
33. Purpose and limitations of protective clothing and equipment
34. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
35. Water quality test procedures
36. Typical causes of water/condensate contamination and corrective action required
37. Equipment purpose and basic operating principles. This includes high pressure feed pumps, fuel supply system and dual fuel systems as required by boiler type
38. Operating requirements and parameters
39. Procedures for responding to emergency situations. This includes safe shutdown procedure
40. Handover and long term shut down and storage procedures
41. Cleaning procedures and grate dumping
42. Environmental issues and controls. This includes an understanding of sluice water usage.
43. Requirements to liaise/advise related work areas
44. Housekeeping standards for the work area
45. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

46. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Boiler and related equipment. This includes fuel supply, grate cleaning and ash removal systems
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

Boiler operators holding a ticket in Intermediate Boiler Operation from the relevant state regulatory authority will be granted equivalence in this unit SUGPOBI3A Operate a boiler - intermediate for the purpose of issuing a qualification.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Boiler (intermediate) with any or all of the following features: - modulating combustion air supply, modulating heat source, superheaters, and economisers
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services can include fuel supply of bagasse, coal, gas, oil or other fuel types, steam, mill and instrumentation air, cooling water, general mill water supply and cooling water
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards and manholes are in place and equipment is operational
- Internal cleaning is carried out in accordance with statutory requirements regarding confined space entry and does not typically include chemical cleaning
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOEP2A Operate an evaporation process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to prepare and operate an evaporation process.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the evaporation process for operation	1.1 Materials are confirmed and available to meet production requirements

Element	Performance criteria
	1.2 Services are confirmed as available and ready for operation
	1.3 Equipment is checked to confirm readiness for use
	1.4 The evaporation process is set to meet production requirements
2. Operate and monitor the evaporation process	2.1 The evaporation process is started up and operated according to company procedures
	2.2 Control points are monitored to confirm performance is maintained within specification
	2.3 Evaporated product meets specifications
	2.4 Equipment is monitored to confirm operating condition
	2.5 Out-of-specification product, process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure
	2.6 The workplace meets housekeeping standards
3. Handover the evaporation process	3.1 Workplace records are maintained in accordance with workplace procedures
	3.2 Handover is carried out according to workplace procedure
	3.3 Evaporator operators are aware of system and related equipment status at completion of handover
4. Shut down the evaporation process	4.1 The appropriate shut down procedure is identified
	4.2 The evaporator is shut down according to workplace procedures
	4.3 The evaporator is prepared for storage in shut down mode
	4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Set up and start up the process
6. Start up and operate in both automatic and manual modes
7. Monitor the process and equipment operation to maintain the process within the required parameters. This can involve monitoring:
 - temperatures
 - vacuum and pressure
 - condensate flow and quality
 - steam flow and pressure
 - throughput
 - juice level of evaporators
 - heat transfer coefficients
 - evaporated product characteristics
 - equipment condition
8. Monitor supply and flow of materials to and from the process
9. Take corrective action in response to out-of-specification results
10. Report and/or record corrective action as required
11. Record workplace information
12. Demonstrate shift handover procedure
13. Shut down equipment in response to an emergency situation
14. Demonstrate an operational shut down procedure
15. Prepare equipment for cleaning/maintenance
16. Maintain work area to meet housekeeping standards

May include the ability to:

17. Use process control systems
18. Take samples and conduct tests

Knowledge of:

19. Purpose and basic principles of evaporation including multiple-effect evaporation, entrainment and the properties of steam
20. The circuit flow of this process and the effect of product output on downstream processes
21. Effect of raw materials and additives on process outcomes
22. The effect of high and low brix materials on evaporator performance
23. Quality characteristics and uses of evaporated product
24. Relationship between boiling point and pressure in the evaporation process
25. Equipment purpose and basic operating principles of evaporation equipment. This includes vacuum pumps and condensers
26. Services used
27. Operating requirements and parameters

28. Significance and method of monitoring control points within the process
29. Common causes of variation and corrective action required
30. Hazards and controls
31. Purpose and limitations of protective clothing and equipment
32. Lock out and tag out procedures
33. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
34. Procedures and responsibility for reporting problems
35. Environmental issues and controls
36. Waste handling requirements and procedures
37. Recording requirements and procedures

May include knowledge of:

38. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
39. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Evaporator and related equipment
- Materials to be evaporated
- Services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require

- Sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Evaporation equipment may include heat exchangers, vapour separators, vapour condensers, vacuum and condensate pumps. Evaporators may have single or multiple stages and effects
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, steam, water, vacuum, compressed and instrumentation air
- Materials can include anti-scalants and enzymes
- Where tests are conducted as part of operation, typical requirements are for brix and thymol testing
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOES2A Operate an extraction station

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the preparation and operation of an extraction station. In order to demonstrate competence in this unit the operator also be competent to operate turbines and reciprocating engines where required.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare the extraction

1.1 Cane is confirmed and available to meet

Element	Performance criteria
process for operation	<ul style="list-style-type: none"> production requirements 1.2 Services are confirmed as available and ready for operation 1.3 Equipment is checked to confirm readiness for use 1.4 The extraction process is set to meet production requirements
2. Operate and monitor the extraction process	<ul style="list-style-type: none"> 2.1 The extraction process is started up and operated according to company procedures 2.2 Control points are monitored to confirm performance is maintained within specification 2.3 Bagasse meets specifications 2.4 Equipment is monitored to confirm operating condition 2.5 Out-of-specification bagasse, process and equipment performance is identified, rectified and/or reported according to workplace reporting procedure 2.6 The workplace meets housekeeping standards
3. Handover the extraction station	<ul style="list-style-type: none"> 3.1 Workplace records are maintained in accordance with workplace procedures 3.2 Handover is carried out according to workplace procedure 3.3 Extraction station operators are aware of system and related equipment status at completion of handover
4. Shut down the extraction system	<ul style="list-style-type: none"> 4.1 The appropriate shut down procedure is identified 4.2 The extraction system is shut down according to workplace procedures 4.3 The extraction system is prepared for storage in shut down mode 4.4 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Liaise with other work areas - specifically boilers and evaporator station
6. Demonstrate start up procedures after an extended stop and after a short stop
7. Start up and operate in both automatic and manual modes
8. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves monitoring:
 - temperatures
 - steam pressure
 - throughput
 - chute height
 - torques/mill loads
 - added water flows
 - feeding characteristics of cane
 - equipment condition including lubrication systems and vibration levels
9. Monitor supply and flow of cane to the process and bagasse and juice from the process
10. Take corrective action in response to out-of-specification results
11. Report and/or record corrective action as required
12. Record workplace information
13. Demonstrate shift handover procedure
14. Shut down equipment in response to an emergency situation
15. Demonstrate an operational shut down procedure
16. Prepare equipment for cleaning/maintenance
17. Maintain work area to meet housekeeping standards

May include the ability to:

18. Use process control systems
19. Clean equipment
20. Take samples and conduct tests

Knowledge of:

21. Purpose and basic principles of extraction including shredder operation, mills and diffusers as required in the workplace
22. The circuit flow of this process and relationship between extraction, boilers and evaporation
23. Effect on extraction of:
 - cane quality
 - added water
 - mill operation
24. Consequences of poor lubrication

25. Role of cooling water for equipment operation
26. Quality characteristics of bagasse and their effect on boiler operation
27. Equipment purpose and basic operating principles of extraction equipment
28. Services used
29. Operating requirements and parameters
30. Significance and method of monitoring control points within the process
31. Common causes of variation and corrective action required
32. Hazards and controls
33. Purpose and limitations of protective clothing and equipment
34. Lock out and tag out procedures
35. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
36. Procedures and responsibility for reporting problems
37. Environmental issues and controls
38. Waste handling requirements and procedures
39. Recording requirements and procedures

May include knowledge of:

40. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
41. Cleaning procedures
42. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- SUGPOTB2A Operate a turbine

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Extraction station equipment
- Materials and services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require access to:

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Extraction equipment may include shredder, cane carriers, mills, diffuser, juice pumps, juice screen, lubrication systems, cooling water system, maceration system, steam turbines and hydraulic drives
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational
- Services may include power, steam, water, compressed and instrumentation air
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, water, compressed and instrumentation air
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOPS2A Operate a pans station

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate the panning process from the Liquor and A/B molasses tanks to the high-grade fugal distributor and low grade pan receiver.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare the pans station for 1.1 Liquor and molasses are available to meet

Element	Performance criteria
operation	<ul style="list-style-type: none"> production requirements 1.2 Services are confirmed as available and ready for operation 1.3 Equipment is checked to confirm readiness for use 1.4 The pans station is set up to meet production requirements
2. Operate and monitor pans station	<ul style="list-style-type: none"> 2.1 The pans station is started up and operated according to company procedures 2.2 Control points are monitored to confirm performance is maintained within specification 2.3 C sugar and C molasses meet specification 2.4 Equipment is monitored to confirm operating condition 2.5 Out-of-specification process and equipment performance is identified, rectified and/or reported 2.6 The workplace meets housekeeping standards
3. Handover the pans station	<ul style="list-style-type: none"> 3.1 Workplace records are maintained in accordance with workplace procedures 3.2 Handover is carried out according to workplace procedure 3.3 Pans station operators are aware of system and related equipment status at completion of handover
4. Shut down the pans station	<ul style="list-style-type: none"> 4.1 The appropriate shut down procedure is identified 4.2 The pans station is shut down according to workplace procedures 4.3 The pans station is prepared for storage in shut down mode 4.4 Maintenance requirements are identified and reported

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify production requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm supply of necessary materials and services
4. Confirm equipment status and condition
5. Start up and operate in both automatic and manual modes
6. Monitor the process and equipment operation to maintain the process within the required parameters. This typically involves visual inspection and conducting tests to monitor characteristics such as:
 - stirrer load
 - pan vacuum
 - sugar crystal size and distribution
 - pan station product purities
 - pan station stock levels including receiver stocks
 - high grade fugal times including spin and wash times
 - steam pressure
 - boiling formula
 - pan circulation
 - supersaturation
 - equipment condition
7. Control station throughput and A B balance to meet factory throughput through pan scheduling
8. Prepare magma and grain for high/low grade seed production
9. Shut down and clean pans according to schedule or as indicated by equipment monitoring
10. Prepare slurry for seed production
11. Add process additives as required by pan performance
12. Take corrective action in response to out-of-specification results
13. Report and/or record corrective action as required
14. Record workplace information
15. Demonstrate shift handover procedure
16. Shut down equipment in response to an emergency situation
17. Maintain work area to meet housekeeping standards

May include the ability to:

18. Use process control systems
19. Clean and sanitise equipment
20. Take samples and conduct tests

Knowledge of:

21. Purpose and basic principles of pans station operation. This includes the basic principles of crystallisation and may relate to operation of batch and continuous pans as required in the workplace
22. Terminology relating to sugar and molasses quality
23. Sugar industry quality standards for each brand of sugar

24. The circuit flow of this process and relationship to related processes
25. Factors that affect throughput and recovery. This includes the relationship between sugar pol and throughput; the balance between A B and C pans and the effect of cane quality and boiling formula
26. Factors that affect flow of massecuite through the system
27. The effect of massecuite quality on fugal operation
28. Relationship between boiling point and pressure in the pans station
29. Equipment purpose and basic operating principles of pans station equipment including vacuum pumps and condensers
30. Operating requirements and parameters
31. Services used
32. Significance and method of monitoring control points within the process
33. Common causes of variation and corrective action required
34. Shut down sequence including massecuite pumps and stock management
35. OHS hazards and controls
36. Purpose and limitations of protective clothing and equipment
37. Lock out and tag out procedures
38. Procedures and responsibility for reporting problems
39. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
40. Environmental issues and controls
41. Waste handling requirements and procedures
42. Recording requirements and procedures

May include knowledge of:

43. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment
44. Cleaning and sanitation procedures
45. Sampling and testing procedures

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGPCPS2A Collect and prepare samples
- SUGPPST2A Conduct standard tests
- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Product and process specifications and operating parameters
- Pans station equipment
- Materials including molasses and liquor, and services as required
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

They may also require

- Cleaning procedures, sampling schedule and procedures and maintenance procedures and tools depending on the work requirements.

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), specifications, production schedules and manufacturer's specifications
- Pans equipment may include pans (batch and/or continuous), molasses pipes, tanks and pumps, massecuite pump, water and steam system, receivers, vacuum pumps and remelt systems
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational. It may also involve checking operation/calibration of measuring
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include power, water, steam, compressed and instrumentation air
- Where tests are conducted as part of operation a typical requirement is observation by microscope and product density
- Sugar industry quality standards are determined at state level
- Monitoring the process may involve the use of production data such as performance control charts
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOSS3A Operate a system (Sugar)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the preparation and operation of a production system.

A system describes the operation of an integrated group of sub-systems or unit operations. Examples of typical unit operations for a sugar mill are: cane receivals, weighing and feeding, preparation, crushing, boilers, ash system, power generation, waste water treatment, services (water and air), juice circuit, clarification, mud filters, evaporators, high grade pans, low grade pans, crystallisers, sugar driers and storage, high grade fugals, low grade fugals.

Typical systems consist of at least three connected unit operations. Examples of systems are preparation, crushing and power generation.

System operation requires higher level planning and problem solving skills than are necessary when operating an individual unit operation or multiple pieces of the same equipment. Skills are applied across the whole system. It can also involve facilitating the work of others.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the system for operation	1.1 Supply of materials is confirmed to meet production requirements 1.2 Work area is prepared for operation 1.3 Services are confirmed as available and ready for operation 1.4 Equipment is checked to confirm readiness for use
2. Operate and monitor the system	2.1 The system is started up according to company procedures 2.2 Control points are monitored to confirm performance is maintained within specification 2.3 System is operated to optimise performance for the current factory conditions 2.4 Equipment is monitored to confirm operating condition 2.5 System outputs meet specification
3. Handover the system	3.1 Workplace records are maintained in accordance with workplace procedures 3.2 Handover is carried out according to workplace procedure 3.3 System operators are aware of system and related equipment status at completion of handover
4. Shut down the system	4.1 The appropriate shut down procedure is identified 4.2 Waste generated by both the process and cleaning procedures is collected, treated and disposed or recycled according to company procedures 4.3 The system is shut down according to workplace procedures 4.4 The system is prepared for storage in shut down mode 4.5 Maintenance requirements are identified and addressed
5. Contribute to continuous	5.1 Opportunities for improvement are identified and investigated

Element	Performance criteria
improvement of the system	5.2 Proposals for improvements are developed and implemented within company planning arrangements and according to company procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Liaise with relevant work areas to confirm or secure necessary materials, services, equipment and labour to meet production requirements
2. Confirm that all equipment within the system meets operating standards, all safety guards are in place and equipment is ready for operation
3. Confirm that materials have been cleared for use
4. Monitor implementation of set-up and start up procedures. This may involve monitoring the use of checksheets by others
5. Monitor observance of work procedures and systems
6. Monitor materials flow and work-in-progress through the system
7. Confirm that the system operates within specified parameters and control points are monitored
8. Determine responses to out-of-specification results or non-conformance within level of responsibility
9. Co-ordinate batch/product changeovers
10. Communicate information effectively
11. Plan maintenance and cleaning procedures to minimise disruption
12. Monitor operating efficiencies of the system and investigate, resolve and/or report problems
13. Review and maintain procedures to support system improvements

Knowledge of:

14. Purpose and principles of the system including optimisation
15. Equipment purpose and operation including an understanding of process control systems where used
16. Technical knowledge of product characteristics and processing requirements for varying inputs.
17. Codes and legislation relating to product and packaging requirements
18. Equipment calibration schedule and responsibilities
19. Type and purpose of sampling and testing conducted

20. Related work areas and departments
21. Relevant procedures, specifications and operating parameters for the system and the individual units
22. Relevant systems and legislative responsibilities in areas such as human resources, quality, occupational health and safety and environmental management
23. Industrial awards and agreements relating to system operation
24. Hazards, risks, controls and methods for monitoring processes within the system
25. Maintenance and cleaning requirements of equipment in system
26. Process improvement procedures and related consultative arrangements
27. Troubleshooting procedures and problem solving techniques
28. Recording requirements and procedures

Relationship with other standards

Pre-requisite units

The person being assessed in this unit of competence must be competent in the relevant technical units that form the system.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Operating procedures and related advice on equipment operation including advice on safe work practices and environmental requirements
- Personal protective clothing and equipment
- Company policies and workplace systems including human resources, OHS, quality, food safety and environmental management
- Product and process specifications and operating parameters
- System processes and related equipment
- Materials and services as required
- Related work areas and communication system
- Planning, resources management and training arrangements
- Troubleshooting advice where available
- Material Safety Data Sheets where appropriate
- Housekeeping standards and procedures
- Advice on environmental management issues relevant to work responsibilities
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice may include the Sugar Milling Operations Industry Code of Practice
- System operation involves planning, co-ordination, troubleshooting and optimisation within the operator's level of authority
- Control points refer to those key points in a work process, which must be monitored and controlled. This includes safety, quality and regulatory control points as well as inspection points
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Co-ordination, planning and troubleshooting is undertaken with assistance from others
- Workplace systems are in place to support production processes. These include occupational health and safety, product quality, factory throughput, recovery, maintenance and environmental management
- Control points refer to those key points in a work process which must be monitored and controlled
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPOTB2A Operate a turbine

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to for continuous and short term operation of a turbine and for start up and shut down after a prolonged break.

This unit is based on the following Worksafe Australia Standards for Users and Operators of Industrial Equipment - NOHSC 1006 (2001):- Start steam turbine, Operate and monitor turbine, and Shut down turbine. Turbine operators holding a ticket from the relevant state regulatory authority will be granted equivalence in this unit SUGPOTB2A Operate a turbine for the purpose of issuing a qualification.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the turbine for operation	<p>1.1 Pre-operational checks are conducted</p> <p>1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p>
2. Start and monitor turbine operation	<p>2.1 The turbine is started and brought on line safely according to workplace procedures and manufacturer's recommendations</p> <p>2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.3 Equipment is monitored to confirm operating condition</p> <p>2.4 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards and abnormal plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover turbine operations	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Turbine operators are aware of turbine status and related equipment at completion of handover</p>
5. Shutdown the turbine	<p>5.1 The turbine is operationally shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 Valves and fittings are removed in preparation for maintenance as required</p> <p>5.3 The turbine is stored in shut down mode</p> <p>5.4 Maintenance requirements are identified and reported according to workplace reporting procedure</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Handle chemicals safely. This includes following correct handling and storage procedures and use of appropriate protective clothing and equipment
4. Identify and report hazards and potential hazards in the work area
5. Confirm status of turbine and related services including availability of steam
6. Conduct pre-start checks. This typically include checking:
 - cooling water supply
 - overspeed trip
 - emergency stop
 - operation and position of valves, fittings, steam traps and steam line purge systems
 - lubrication system
 - drainage system
 - steam quality and pressure
 - heat input
 - free rotation of turbine
 - reticulation line pressure and system warm up
7. Liaise with other work areas to advise of turbine status
8. Demonstrate set up and start up procedures in both manual and automatic modes and for both a hot start and cold start
9. Monitor turbine operation. This typically includes monitoring:
 - bearing temperature
 - pressures
 - speeds
 - glands
 - water filters
 - oil levels
 - equipment condition including noise and vibration
 - steam reticulation line pressure
 - lubrication system
 - condenser operation (where fitted)
10. Take corrective action in response to abnormal or unacceptable performance
11. Report and/or record corrective action as required
12. Demonstrate shift handover procedure and confirm that replacement operators are aware of equipment status and operating requirements prior to completing handover
13. Demonstrate procedure to take turbine off line
14. Demonstrate procedure to prepare the turbine for a prolonged shut down. This includes removal of valves and fittings

15. Demonstrate emergency trip procedure and related re-start
16. Record operating information
17. Maintain work area to meet housekeeping standards

May include ability to:

18. Use process control systems

Knowledge of:

19. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
20. Safety features of the turbines. These include relief and over-speed trip valves
21. Safe work procedures including awareness of health and safety hazards related to turbine operation and associated control measures. Hazards typically include handling chemicals, working around hot surfaces, working around moving equipment, manual handling, fuel and steam leaks.
22. Hierarchy of hazard control measures
23. Duty of care of the turbine operator
24. Purpose and limitations of protective clothing and equipment
25. Purpose and basic principles of turbines. This includes properties of steam
26. Turbine system layout and steam cycle
27. Relationship to other processes. This includes suppliers and users of steam across the site
28. The effect of steam quality on turbine operation
29. The effect of low steam pressure on turbine operation
30. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
31. Equipment purpose and basic operating principles of turbine and related equipment
32. Operating requirements and parameters
33. Procedures for responding to emergency situations. This includes safe operational shutdown procedure
34. Handover and long term shut down and storage procedures
35. Environmental issues and controls
36. Housekeeping standards for the work area
37. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

38. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Turbine and related equipment
- Relevant codes and standards
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For assessment advice where the turbine operation is not a certified occupation, refer to the Assessment Guidelines for this Training Package. Where turbine operation is a certificated occupation, refer to the appropriate NOHSC competency standards, available from National Occupational Health and Safety Commission.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards and manholes are in place and equipment is operational
- Turbines and related equipment may include turbines and pass-out turbines, condensers, oil coolers, vacuum pumps and filters
- Operation and monitoring of equipment and processes typically requires the use of control panels and systems
- Services may include steam, water, mill and instrumentation air and power
- Tests may include trip tests
- Work may require the ability to work within a team environment
- Information systems may be print or instrumentation based
-

Unit Sector(s)

Not applicable.

SUGPPST2A Perform standard tests

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to analyse samples for cane payment and routine factory control. Tests are typically routine, repetitive procedures based on defined methods and require interpretation of results within clearly defined guidelines.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare for testing	<ul style="list-style-type: none">1.1 Testing requirements and methods are identified1.2 Testing equipment is confirmed as available and fit for use1.3 Test chemicals and reagents are prepared and labeled as required by test method1.4 Samples are prepared as required by test method1.5 Pre-test checks are conducted and recorded according to workplace recording requirements
2. Conduct test	<ul style="list-style-type: none">2.1 Conduct test in accordance with test method and test schedule2.2 Identify and report atypical test results2.3 Record and communicate test results as required2.4 Follow procedures to repeat or validate results2.5 Clean, care for and store equipment as required2.6 Dispose of waste materials according to workplace procedure
3. Record test data in laboratory information system	<ul style="list-style-type: none">3.1 Results are entered into laboratory information systems according to workplace procedure3.2 Correct data entry errors3.3 Store and retrieve data in the laboratory information system3.4 Produce standard reports from laboratory information system

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as the test regime to identify test requirements and methods
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm that necessary test equipment, chemicals and reagents are available and fit for purpose

4. Confirm or conduct routine equipment calibration according to workplace procedures, methods and legislative requirements
5. Handle chemicals safely. This includes following correct handling and preparation procedures and use of appropriate protective clothing and equipment
6. Demonstrate test procedures according to test schedule and test method
7. Identify and report any out-of-specification results
8. Communicate test results to relevant personnel
9. Maintain and store chemicals, reagents and test equipment required
10. Sort, collect, treat, recycle or dispose of tested materials
11. Record information in the laboratory information system. This includes ability to retrieve, enter and edit data, generate standard reports and store information
12. Maintain work area to meet housekeeping standards

Knowledge of:

13. Purpose of the test procedure. This includes a basic understanding of the principles of the test method and of equipment used
14. Awareness of legislative requirements relating to cane payment tests
15. Terminology relating to the types of tests and related methods used
16. Safe work procedures including hazards associated with specific test procedures requirements such as working with chemicals and test equipment
17. Specific test methods/procedures
18. Requirements to communicate out-of-specification results
19. Typical causes of out-of-specification results and procedure for repeating the analysis
20. Laboratory information system recording and reporting requirements. These meet legislative record keeping requirements and workplace requirements.

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Test equipment, chemicals and reagents and related equipment
- Materials to be tested
- Test methods and procedures
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Sample labeling and recording systems, requirements and procedures
- Laboratory recording and reporting system

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Workplace information can include Standard Operating Procedures (SOPs), specifications, test methods and procedures
- Equipment is defined by test method and legislative requirements
- Confirming equipment condition may include conducting calibration procedures. Calibration procedures are routine, documented procedures
- Tests are typically routine, repetitive procedures based on defined methods and requiring interpretation of results within clearly defined guidelines
- The types of tests conducted depends on the test equipment and methods used and may include but are not limited to:
 - bagasse analysis - pol by disintegrator method and moisture
 - sugar analysis - pol and moisture
 - juice analysis - clarified juice, first expressed juice and mixed juice - pH, turbidity, brix and pol
 - mud analysis - pol and moisture
 - molasses massecuite syrup - brix, pol, apparent purity
 - drain water analysis - sugar presence by an industry-recognised method
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGPWWT2A Operate a waste water treatment system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate waste water treatment systems to comply with workplace requirements, trade waste agreements and site environmental authority.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Prepare the waste water

1.1 Chemicals and test equipment are available and

Element	Performance criteria
treatment process for operation	<p>ready for use</p> <p>1.2 Services are confirmed as available and ready for operation</p> <p>1.3 Pre-operational checks are conducted</p> <p>1.4 Instrumentation and test equipment is calibrated to manufacturer's specifications to meet workplace requirements</p> <p>1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p>
2. Operate and monitor the waste water treatment process	<p>2.1 The waste water system is started up according to company procedures</p> <p>2.2 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.3 Equipment is monitored to confirm operating condition</p> <p>2.4 Waste water quality is monitored, tested and adjusted as required to meet water standards as defined by site licence</p> <p>2.5 First flush systems are operated during rainfall events</p> <p>2.6 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Water condition and plant operating conditions are analysed to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace procedures in response to Hazards, out-of-specification test results and/or plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Handover waste water treatment system	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Waste water treatment operators are aware of system status and related equipment at completion of handover</p>
5. Shutdown the waste water	<p>5.1 The waste water treatment system is shut down</p>

Element	Performance criteria
treatment system	according to workplace procedures 5.2 The waste water treatment system is prepared for storage in shut down mode 5.3 Maintenance requirements are identified and reported according to workplace reporting procedure

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify waste treatment requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm services are available and equipment is clean and ready for operation
4. Handle chemicals safely. This includes following correct preparation, handling and storage procedures and use of appropriate protective clothing and equipment
5. Conduct pre-start checks
6. Liaise with other work areas as required
7. Demonstrate wastewater system operating procedures in both manual and automatic modes
8. Demonstrate first flush system operating procedures in both manual and automatic modes
9. Monitor waste water system operation. This typically includes monitoring:
 - chemical addition rates and residuals
 - temperatures
 - flow rates
 - equipment condition including calibration of instruments.
 - tests as required
 - dissolved oxygen levels
 - pH
 - levels
10. Conduct water quality tests
11. Take corrective action in response to out-of-specification results or non-compliance
12. Monitor supply and quality of waste water to and from the process
13. Report and/or record corrective action as required
14. Demonstrate emergency procedures to control chemical spills or other major incidents relevant to the workplace
15. Demonstrate shift handover procedure

16. Demonstrate an operational shut down procedure
17. Maintain workplace records to meet the requirements of the workplace and site environmental authority
18. Maintain work area to meet housekeeping standards

May include ability to:

19. Use process control systems

Knowledge of:

20. Relevant state OHS legislation, environmental acts and policies, standards and codes of practice relating to work responsibilities. This includes awareness of standards set out in site license arrangements
21. Safe work procedures including awareness of health and safety hazards related to waste water system operation and associated control measures. Hazards typically include handling chemicals, manual handling and flammable gases
22. Hierarchy of hazard control measures
23. Purpose and limitations of protective clothing and equipment
24. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
25. Water cycles for trade waste, storm water and sewerage including sources and flow patterns
26. Purpose and standards required by environmental agreements and responsibilities
27. Company policy relating to environmental performance
28. Consequences of non-conformance
29. Waste characteristics and treatment methods
30. Sampling and test procedures as appropriate
31. Purpose of chemicals used
32. Purpose of first flush systems and their relationship with the wastewater treatment system
33. Operating requirements and parameters
34. Water quality sampling and test procedures. This includes purpose of test and safe use, care and storage of relevant test equipment, interpretation and recording of results
35. Typical causes of non-conforming water quality and corrective action required
36. Equipment purpose and basic operating principles of waste water treatment equipment and methods
37. Requirements of both operational and long term shut down conditions to ensure the equipment is left in a safe state for the period of the shutdown and to minimise any delays in future start up
38. Housekeeping standards for the work area
39. Reporting and recording systems. This includes both statutory and workplace requirements

May include knowledge of:

40. Basic operating principles of process control where relevant. This includes the relationship between control panels and systems and the physical equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Waste water treatment systems and related chemicals
- Test equipment
- Relevant advice on environmental agreements
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, site licenses and trade waste service agreements and industrial awards and agreements. Legislation refers to environmental acts and regulations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Equipment may include screens, pH correction, oil/grease skimmers, settling and treatment ponds, aeration units, lagoons, first flush systems and wetlands, pumps and valves
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning and calibration standards are met, all safety guards are in place and equipment is operational
- Operation and monitoring of equipment and processes may require the use of control panels and systems
- Typical tests may include pH, solids, colour/turbidity, flow rate, settling rate, settled volume, DO and BOD/COD levels
- Work may require the ability to work within a team environment
- Information systems may be equipment-based or remote from the treatment plant
-

Unit Sector(s)

Not applicable.

SUGSCT2A Construct turnouts

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to construct turnouts. It can apply to both construction of new turnouts and repair of existing turnouts.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Plan and prepare work	1.1 The location and scope of work are identified

Element	Performance criteria
	1.2 Materials required to complete the work are confirmed and available
	1.3 Equipment status is confirmed and pre-operational checks are carried out
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Construct turnouts	2.1 Sleepers for turnouts are placed in required position for track junctions
	2.2 Base plates for switching are fixed to sleepers in specified locations
	2.3 Switch rails are positioned and fitted to specification
	2.4 Switching gear is installed to specification
3. Complete work	3.1 The construction area is cleared of debris
	3.2 Unused materials are stored as required
	3.3 Tools, plant and equipment is cleaned and stored as required
	3.4 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Estimate materials required for a given project
3. Assess operational status of equipment and carry out pre-operational checks
4. Construct turnouts to meet design and construction specifications
5. Confirm that switching gear is operational

6. Identify faulty operation of equipment
7. Identify unacceptable work outcomes
8. Take corrective action in response to abnormal or unacceptable performance
9. Use appropriate communication methods and equipment
10. Report and/or record corrective action as required
11. Maintain work area to meet housekeeping standards

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Overview of cane transport system
14. Track system layout and characteristics of each section
15. Understanding of the steps involved in laying/repairing track
16. Functions and basic operating principles of equipment
17. The impact of turnout construction on related track laying operations
18. Factors that can affect turnout construction
19. Traffic control signage, communication and procedures
20. Safe work procedures including awareness of health and safety hazards related to track laying and associated control measures. This includes safe manual handling procedures
21. Purpose and limitations of protective clothing and equipment
22. Environmental issues and controls
23. Requirements to liaise/advise related work areas
24. Housekeeping standards for the work area
25. Reporting and recording systems

Relationship with other standards

Pre-requisite units

The pre-requisite for this competency standard is:

- SUGSLRT201A Lay rails.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Turnout construction equipment
- Materials handling equipment and relevant hand and power tools
- Operating procedures and related advice on equipment operation
- Track work
- Switching gear
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings and plans, Standard Operating Procedures (SOPs) and manufacturer's specifications
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points (where relevant)
- Information systems may be print or screen based
- Equipment and materials may include track laying equipment and related attachments, hand tools, pneumatic tools, base plates, fish plates, clips, dog spikes, anchors, screws, insulating biscuits and camber plates
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGSFBS2A Undertake forming, bending and shaping

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out forming, bending and shaping operations. It achieves part of the outcomes of MEM 5.10AA Undertake fabrication, forming, bending and shaping. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for forming, bending and shaping to meet specifications	1.1 Forming, bending and shaping requirements are identified 1.2 The equipment is set up and adjusted to achieve required outcomes 1.3 Simple templates are prepared to meet outcome specifications 1.4 Pre-operational equipment checks are conducted 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate forming, bending and shaping equipment to achieve required outcome	2.1 Equipment is started, operated and shut down according to operating procedures and manufacturer's specification 2.2 Materials are accurately positioned in the machine/equipment 2.3 Equipment is adjusted as required to achieve required outcomes 2.4 The workplace meets housekeeping standards
3. Form, bend and shape material	3.1 Material is levelled, straightened, rolled, pressed or bent to achieve required outcomes 3.2 Material is formed and shaped to size to meet specifications 3.3 Final form/shape is checked for compliance to specification 3.4 Non-conforming shapes are identified and corrected as required

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify forming, bending and shaping requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Mark out and produce simple templates. This involves producing sheet metal templates developed and cut to the required size
5. Position or feed material according to equipment requirements
6. Set up, adjust, operate and shut down equipment according to workplace procedures
7. Produce formed and/or shaped material to meet job specification
8. Confirm that the formed and/or shaped material meets specification. This may involve the use of templates and simple measuring instruments
9. Take corrective action in response to out-of-tolerance results
10. Maintain work area to meet housekeeping standards

May include ability to:

11. Use process control systems

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Relevant site operating procedures and practices
14. Purpose and basic operating principles of forming, bending and shaping equipment. This includes awareness of equipment operating capacities
15. The effect of heating materials on the forming and bending process
16. Scope to adjust equipment parameters and related effect on outcome
17. Safe work procedures including awareness of health and safety hazards related to the operation of forming, bending and shaping equipment
18. Housekeeping standards for the work area

May include knowledge of:

19. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCC1004A Carry out measurement and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Where heating or thermal cutting is required, select unit MEM5.7A Manual heating, thermal cutting and gouging.

Where mark off/out skills are required, select MEM12.7A Mark off/out structural fabrications and shapes.

Where simple assembly/fabrication by welding is required, select the appropriate welding unit.

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Forming, bending and shaping equipment
- Relevant measuring instrumentation
- Materials to be formed, bent and/or shaped
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- The range of shapes and products formed may include pipes, cylinders, cones, angles, ductwork and tubular shapes including hand rails and pipes
- Materials may include ferrous, non ferrous and non-metallic substances
- Forming processes may be hot or cold
- Tools and equipment may include presses, shapers, benders and drop hammers
- Measuring instrumentation may include dividers, trammels and rulers
- Pre-operational checks include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGSLRT2A Lay rails

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to lay rails. It can apply to both construction of new track and repair of existing track.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Plan and prepare work	1.1 The location and scope of work are identified 1.2 Materials required to complete the work are

Element	Performance criteria
	confirmed and available
	1.3 Equipment status is confirmed and pre-operational checks are carried out
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Lay rails	2.1 Rail lengths are positioned and fixed to meet construction specifications
3. Complete work	3.1 Unused materials are stored as required
	3.2 Tools, plant and equipment is cleaned and stored as required
	3.3 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Estimate material requirements for a given project
3. Assess operational status of equipment and carry out pre-operational checks
4. Confirm that rail lengths meet design and construction specifications
5. Position rails to meet specification. This includes positioning and fixing base plates where used and positioning and fixing rail lengths
6. Monitor track laying. This includes confirming that the following meet construction specifications:

- Alignment of the first rail
 - Joints between rail lengths
 - Spike holes are bored to required pattern
 - Clips/dog spikes are fitted and fixed to secure rail to each sleeper
 - Rail anchors are positioned firmly against sleepers to prevent slippage
 - Second rail is positioned to the correct gauge prior to fixing
 - Rails are fixed in position
 - Circuit plans are maintained in jointing processes to switching/signalling requirements
7. Identify faulty operation of equipment
 8. Identify unacceptable work outcomes
 9. Take corrective action in response to abnormal or unacceptable performance
 10. Use appropriate communication methods and equipment
 11. Report and/or record corrective action as required
 12. Maintain work area to meet housekeeping standards

May include ability to:

13. Operate track handling equipment such as front end loaders

Knowledge of:

14. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
15. Site operating procedures and practices
16. Understanding of the steps involved in laying/repairing track
17. Functions and basic operating principles of track laying equipment
18. The impact of the positioning and alignment of rails on related track laying operations
19. The quality requirements of rails
20. Common problems related to laying rails and corrective action required
21. Traffic control signage, communication and procedures
22. Safe work procedures including awareness of health and safety hazards related to track laying and associated control measures. This includes safe manual handling procedures
23. Purpose and limitations of protective clothing and equipment
24. Requirements to liaise/advise related work areas
25. Housekeeping standards for the work area
26. Reporting and recording systems

May include knowledge of:

27. Operating procedures for materials handling equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGSLSP2A Lay sleepers
- BCC3005A Conduct front end loader operations

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Materials handling equipment and relevant hand and power tools
- Operating procedures and related advice on equipment operation
- Rails - pre-welded to meet track design and construction specifications and related materials
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings and plans, Standard Operating Procedures (SOPs) and manufacturer's specifications
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Information systems may be print or screen based
- Equipment and materials may include hand tools, pneumatic tools, base plates, fish plates, clips, dog spikes, anchors, screws, insulating biscuits and camber plates
- Track has been pre-welded to meet track design and construction specifications
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGSLSP2A Lay sleepers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to lay sleepers. It can apply to both construction of new track and repair of existing track.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Plan and prepare work	1.1 The location and scope of work are identified 1.2 Materials required to complete the work are

Element	Performance criteria
	confirmed and available
	1.3 Equipment status is confirmed and pre-operational checks are carried out
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Lay sleepers	2.1 Sleepers are positioned to meet track laying specifications
	2.2 Sleepers are spaced and aligned as required for track construction
3. Complete work	3.1 The construction area is cleared of debris
	3.2 Unused materials are stored as required
	3.3 Tools, plant and equipment is cleaned and stored as required
	3.4 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Estimate material requirements for a given project
3. Assess operational status of equipment and carry out pre-operational checks
4. Position and align sleepers to meet specifications
5. Identify faulty operation of equipment
6. Identify unacceptable work outcomes
7. Take corrective action in response to abnormal or unacceptable performance
8. Use appropriate communication methods and equipment
9. Report and/or record corrective action as required

10. Maintain work area to meet housekeeping standards

May include ability to:

11. Operate sleeper handling equipment such as front end loaders

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Site operating procedures and practices
14. Understanding of the steps involved in laying/repairing sleepers
15. Functions and basic operating principles of equipment used
16. The impact of the positioning and alignment of sleepers on related track laying operations
17. The quality requirements of sleepers
18. Common problems related to laying sleepers and corrective action required
19. Traffic control signage, communication and procedures
20. Safe work procedures including awareness of health and safety hazards related to track laying and associated control measures. This includes safe manual handling procedures
21. Purpose and limitations of protective clothing and equipment
22. Environmental issues and controls
23. Requirements to liaise/advise related work areas
24. Housekeeping standards for the work area
25. Reporting and recording systems

May include knowledge of:

26. Operating procedures for materials handling equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGSLRT2A Lay rails; and/or
- SUGSLST2A Lay skeleton track
- BCC3005A Conduct front end loader operations

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Materials handling equipment and relevant hand and power tools
- Operating procedures and related advice on equipment operation
- Sleepers and related materials
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings and plans, Standard Operating Procedures (SOPs) and manufacturer's specifications
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Equipment and materials may include materials handling equipment such as front end loaders and cranes, hand tools, pneumatic tools, base plates, clips, dog spikes, anchors, screws, insulating biscuits and camber plates
- Information systems may be print or screen based
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGSLST2A Lay skeleton track

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to lay pre-fabricated rails.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Plan and prepare work	1.1 The location and scope of work are identified 1.2 Materials required to complete the work are

Element	Performance criteria
	confirmed and available
	1.3 Equipment status is confirmed and pre-operational checks are carried out
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Lay skeleton tracks	2.1 Skeleton track section is placed on base foundation and aligned to meet construction specifications
3. Complete work	3.1 The construction area is cleared of debris
	3.2 Unused materials are stored as required
	3.3 Tools, plant and equipment is cleaned and stored as required
	3.4 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Confirm that pre-fabricated skeleton track is available to meet the requirements of a given project
3. Assess operational status of equipment and carry out pre-operational checks
4. Lay skeleton track to meet design and construction specifications. This includes checking track position and alignment and fixing track to sleepers
5. Identify faulty operation of equipment
6. Identify unacceptable work outcomes
7. Take corrective action in response to abnormal or unacceptable performance
8. Use appropriate communication methods and equipment
9. Report and/or record corrective action as required

10. Maintain work area to meet housekeeping standards

May include ability to:

11. Operate track handling equipment such as front end loaders

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Site operating procedures and practices
14. Understanding of the steps involved in laying skeleton track
15. Functions and basic operating principles of equipment used
16. The importance of rail positioning and alignment on track quality and performance
17. The quality requirements of skeleton tracks
18. Common problems related to laying skeleton tracks and corrective action required
19. Traffic control signage, communication and procedures
20. Safe work procedures including awareness of health and safety hazards related to track laying and associated control measures. This includes safe manual handling procedures
21. Purpose and limitations of protective clothing and equipment
22. Requirements to liaise/advise related work areas
23. Housekeeping standards for the work area
24. Reporting and recording systems

May include knowledge of:

25. Operating procedures for materials handling equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGSLSP2A Lay sleepers
- BCC3005A Conduct front end loader operations

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Materials handling equipment and relevant hand and power tools
- Operating procedures and related advice on equipment operation
- Skeleton tracks - pre-fabricated to meet track design and construction specifications and related materials
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings and plans, Standard Operating Procedures (SOPs) and manufacturer's specifications
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Information systems may be print or screen based
- Equipment and materials may include materials handling equipment such as front end loaders and cranes, hand tools, pneumatic tools, base plates, fish plates, clips, dog spikes, anchors, screws, insulating biscuits and camber plates
- Track has been pre-fabricated
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGSPGD2A Perform general drilling operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out general drilling operations using a radial arm drill. Drilling operations using pedestal, magnetic and hand held drills are covered by BCC1005A Use hand and power tools.

This unit achieves part of the outcomes of MEM 7.5AA Perform general machining. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for drilling operations	<ul style="list-style-type: none">1.1 Drilling requirements are identified1.2 Materials to be drilled are collected1.3 Drilling equipment is set up for operation1.4 Pre-operational equipment checks are conducted1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate drill to achieve specifications	<ul style="list-style-type: none">2.1 Machining parameters are set to meet job requirements2.2 Materials are positioned for drilling operation2.3 The drill is started, operated and shut down according to operating procedures and manufacturer's specification2.4 Work are checked against specification2.5 Non-conforming components are identified and corrected as required2.6 Basic routine maintenance is carried out as required2.7 The workplace meets housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify drilling requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Collect and prepare materials according to job and equipment requirements. This may involve basic marking out
4. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
5. Set up, operate and shut down drilling equipment according to workplace procedures to meet job specification

6. Monitor and adjust process and equipment during operation to stay within specification
7. Confirm that components meet specification. This may involve the use of measuring instruments
8. Maintain work area to meet housekeeping standards

May include ability to:

9. Use process control systems

Knowledge of:

10. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
11. Relevant site operating procedures and practices
12. Purpose and basic operating principles of drilling and accessory equipment. This includes awareness of equipment operating capacities
13. Care, maintenance and storage of drill parts and accessories
14. Scope to adjust machining parameters and related effect on outcome
15. The impact of machining parameters and materials used on tool life
16. Safe work procedures including awareness of health and safety hazards related to the operation of the drill and related equipment
17. Housekeeping standards for the work area

May include knowledge of:

18. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment
19. Basic marking out techniques. This may involve the use of templates and/or charts

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCG1004A Carry out measurements and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Drill and related equipment
- Relevant measuring instrumentation
- Materials to be drilled
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Work is undertaken to predetermined specifications
- Drills are not CNC (Computer Numerical Control) machines
- Typical drilling operations include drilling and tapping
- Machining parameters are typically given and include speeds, feeds, stops, coolant and cutting lubricants
- Measuring instrumentation may include callipers, dividers, verniers and micrometers
- Pre-operational checks may include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGSPGL2A Perform general lathe operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out general lathe operations. It achieves part of the outcomes of MEM 7.5AA Perform general machining. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare for lathe operations	<ul style="list-style-type: none">1.1 Machining requirements are identified1.2 Materials are to be machined collected1.3 Lathe equipment is set up for operation1.4 Pre-operational equipment checks are conducted1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate lathe to achieve specifications	<ul style="list-style-type: none">2.1 Machining parameters are set to meet job requirements2.2 Materials are accurately positioned for lathe operation2.3 The lathe is started, operated and shut down according to operating procedures and manufacturer's specification2.4 Work is checked against specification2.5 Non-conforming components are identified and corrected as required2.6 Basic routine maintenance is carried out as required2.7 The workplace meets housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify lathe requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Collect and position materials according to job and equipment requirements. This may require locating datum
5. Set up, operate and shut down equipment according to workplace procedures to meet job specification

6. Monitor and adjust process and equipment during operation to stay within specification
7. Confirm that components meet specification. This may involve the use of measuring instruments
8. Maintain work area to meet housekeeping standards

May include ability to:

9. Use process control systems

Knowledge of:

10. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
11. Relevant site operating procedures and practices
12. Purpose and basic operating principles of lathe and accessory equipment. This includes awareness of equipment operating capacities
13. Care, maintenance and storage of tool parts and accessories
14. Scope to adjust machining parameters and related effect on outcome
15. The impact of machining parameters and materials used on tool life
16. Safe work procedures including awareness of health and safety hazards related to the operation of the lathe and related equipment
17. Housekeeping standards for the work area

May include knowledge of:

18. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment
19. Method used to determine datum

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCG1004A Carry out measurements and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Lathe and related equipment
- Relevant measuring instrumentation
- Materials for lathing
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Work is undertaken to predetermined specifications
- Lathes are not CNC (Computer Numerical Control) machines and may be fitted with three or four jaw chucks
- Typical operations include parallel cutting, parting off, drilling and knurling
- Machining parameters are typically given and include speeds, feeds, stops, coolant and cutting lubricants
- Measuring instrumentation may include callipers, verniers, micrometers and rulers
- Pre-operational checks may include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Basic routine maintenance includes cleaning and lubrication
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGSPGM2A Perform general milling operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out general milling operations. This unit does not cover set up of dividing heads

This unit achieves part of the outcomes of MEM 7.5AA Perform general machining. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for milling operations	1.1 Milling requirements are identified 1.2 Materials are collected 1.3 Milling equipment is set up for operation 1.4 Pre-operational equipment checks are conducted 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate milling equipment to achieve specifications	2.1 Machining parameters are set to meet job requirements 2.2 Materials are accurately positioned for milling operation 2.3 Milling equipment is started, operated and shut down according to operating procedures and manufacturer's specification 2.4 Work is checked against specification 2.5 Non-conforming components are identified and corrected as required 2.6 Basic routine maintenance is carried out as required 2.7 The workplace meets housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify milling requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Collect and position materials according to job and equipment requirements
5. Set up, operate and shut down equipment according to workplace procedures to meet job specification

6. Monitor and adjust process and equipment during operation to stay within specification
7. Confirm that components meet specification. This may involve the use of measuring instruments
8. Maintain work area to meet housekeeping standards

May include ability to:

9. Use process control systems

Knowledge of:

10. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
11. Relevant site operating procedures and practices
12. Purpose and basic operating principles of milling equipment and accessories. This includes awareness of equipment operating capacities
13. Care, maintenance and storage of tool parts and accessories
14. Scope to adjust machining parameters and related effect on outcome
15. The impact of machining parameters and materials used on tool life
16. Safe work procedures including awareness of health and safety hazards related to the operation of the mill and related equipment
17. Housekeeping standards for the work area

May include knowledge of:

18. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCG1004A Carry out measurements and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPCI2A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Mill and equipment
- Relevant measuring instrumentation
- Materials to be milled
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Work is undertaken to predetermined specifications
- Mills are not CNC (Computer Numerical Control)
- Typical operations include slotting and cutting flats
- Machining parameters are typically given and include speeds, feeds, stops, coolant and cutting lubricants
- Measuring instrumentation may include callipers, verniers, micrometers, dividers and rulers
- Pre-operational checks may include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Basic routine maintenance includes cleaning and lubrication
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGSPPB1A Prepare pre-ballast

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to lay pre-ballast in preparation for laying railway track.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Plan and prepare work	1.1 The location and scope of work are identified 1.2 Materials required to complete the work are

Element	Performance criteria
	confirmed and available
	1.3 Equipment status is confirmed
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Set out base and run pre-ballast	2.1 Base/foundation is set out from off-set pegs to centerline and width for ballast according to track design and specifications
	2.2 Pre-ballast is applied evenly to meet specified thickness
	2.3 Pre-ballast is compacted to meet specifications
3. Complete work	3.1 The construction area is cleared of debris
	3.2 Unused materials are stored as required
	3.3 Tools, plant and equipment is cleaned and stored as required

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Estimate material requirements for a given project
3. Assess operational status of pre-ballast laying equipment
4. Operate pre-ballast equipment to lay and compact materials to the required location and thickness
5. Identify faulty operation of equipment
6. Identify unacceptable work outcomes
7. Take corrective action in response to abnormal or unacceptable performance
8. Use appropriate communication methods and equipment
9. Report and/or record corrective action as required

10. Maintain work area to meet housekeeping standards

Knowledge of:

11. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
12. Understanding of the steps involved in constructing/repairing track
13. Functions and basic operating principles of pre-ballast laying equipment
14. The impact of the pre-ballast base on related track laying operations
15. The quality requirements of the foundation. This includes the materials used, thickness and compactness of foundation
16. Common problems related to laying pre-ballast and corrective action required
17. Traffic control signage, communication and procedures
18. Safe work procedures including awareness of health and safety hazards related to pre-ballast laying and associated control measures. This includes safe manual handling procedures
19. Purpose and limitations of protective clothing and equipment
20. Environmental issues and controls
21. Requirements to liaise/advise related work areas
22. Housekeeping standards for the work area
23. Reporting and recording systems

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Spreader, roller and related equipment
- Materials handling equipment as required
- Operating procedures and related advice on equipment operation
- Base materials - typically gravel and stone
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings and plans, Standard Operating Procedures (SOPs) and manufacturer's specifications
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Information systems may be print or screen based
- Equipment may include materials handling equipment such loaders and jacks, spreader, roller and compacting equipment
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGSPPS2A Perform general planing and shaping operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out general planing and shaping operations. It achieves part of the outcomes of MEM 7.5AA Perform general machining. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare for planing and shaping operations	1.1 Machining requirements are identified 1.2 Materials to be planed and/or shaped are collected 1.3 Planing and shaping equipment is set up for operation 1.4 Pre-operational equipment checks are conducted 1.5 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
2. Operate planing and shaping equipment to achieve specifications	2.1 Machining parameters are set to meet job requirements 2.2 Materials are accurately positioned for planing and shaping operation 2.3 Planing and shaping equipment is started, operated and shut down according to operating procedures and manufacturer's specification 2.4 Work is checked against specification 2.5 Non-conforming components are identified and corrected as required 2.6 Basic routine maintenance is carried out as required 2.7 The workplace meets housekeeping standards

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify planing and shaping requirements. This may require interpretation of technical drawings or sketches
2. Select, fit and use personal protective clothing and/or equipment
3. Confirm status of equipment, that safety guards are in place, equipment is fit for operation and required services are available
4. Collect and position materials according to job and equipment requirements
5. Set up, operate and shut down equipment according to workplace procedures to meet job specification

6. Monitor and adjust process and equipment during operation to stay within specification
7. Confirm that components meet specification. This may involve the use of measuring instruments
8. Maintain work area to meet housekeeping standards

Knowledge of:

9. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
10. Relevant site operating procedures and practices
11. Purpose and basic operating principles of planing and shaping equipment and accessories. This includes awareness of equipment operating capacities
12. Care, maintenance and storage of tool parts and accessories
13. Scope to adjust machining parameters and related effect on outcome
14. The impact of machining parameters and materials used on tool life
15. Safe work procedures including awareness of health and safety hazards related to the operation of the planing and shaping equipment
16. Housekeeping standards for the work area

May include knowledge of:

17. Basic operating principles of process control where relevant. This includes the relationship between control panels and the physical equipment

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCG1004A Carry out measurements and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This may include:

- SUGZPC12A Operate a process control interface

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Planing and shaping equipment
- Relevant measuring instrumentation
- Materials for planing and/or shaping
- Drawings, templates and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Work is undertaken to predetermined specifications
- Planes and shapers are not CNC (Computer Numerical Control) machines
- Typical operations include slotting, planing and cutting flats
- Machining parameters are typically given and include speeds, feeds, stops, coolant and cutting lubricants
- Measuring instrumentation may include dividers, callipers, verniers, micrometers and rulers
- Pre-operational checks may include confirming that safety guards are in place, equipment is operational and other pre-start checks as required by workplace procedure
- Basic routine maintenance includes cleaning and lubrication
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGSUSF2A Undertake simple fabrication

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out fabrication associated general jobbing work. It achieves part of the outcomes of MEM 5.11AA Assemble fabricated components. A person who has achieved competence in this MEM unit is recognised as competent in this sugar milling unit.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare for assembly of parts	1.1 Fabrication requirements are identified 1.2 Appropriate fabrication method is selected 1.3 Required materials and equipment are identified and collected 1.4 Materials are prepared for fabrication
2. Assemble fabricated components	2.1 Components are correctly positioned 2.2 Component positioning is checked against specification 2.3 Components are fixed using appropriate fixing method 2.4 Assembly is checked to confirm conformance to specification

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Identify fabrication requirements. This may involve interpretation of technical drawings and sketches or be based on measurements
2. Select, fit and use personal protective clothing and/or equipment
3. Identify and obtain the required components, equipment and measuring instrumentation
4. Use appropriate equipment to position components ready for joining
5. Check accuracy of component position using measuring instruments as required
6. Prepare ends for joining
7. Identify and correct unacceptable component assembly where appropriate
8. Maintain work area to meet housekeeping standards

Knowledge of:

9. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
10. Purpose and basic principles of fabrication. This includes knowledge of methods used to assemble and fix components and basic understanding of the effects of distortion on fabricated components
11. Safe work procedures including awareness of health and safety hazards
12. Use of equipment to position components to meet assembly requirements
13. Use of instrumentation to achieve accurate measures

14. Methods used to prepare ends for joining
15. Appropriate joining method
16. Typical defects that can occur given the assembly and fabrication methods used
17. Options for correcting out-of-tolerance fabrication
18. Housekeeping standards for the work area

Relationship with other standards

Pre-requisite units

The pre-requisites for this competency standard are:

- BCC1004A Carry out measurement and calculations
- BCC1005A Use hand and power tools

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Where welding is the fixing method to be used, select the appropriate welding unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Fabrication equipment
- Relevant measuring instrumentation
- Components to be fabricated
- Drawings, sketches and specifications as required
- Operating procedures and related advice on equipment/instrumentation operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice.
- Components may include general fabricated components in plate, pipe and section or sheet to form 90(or 45(angles or angles formed using pre-constructed jigs
- Typical applications apply to general jobbing work such as fabrication of simple pump bases, signs and brackets
- Typical fixing/joining methods are by welding or screwing
- Materials may include ferrous, non ferrous and non-metallic substances
- Measuring instrumentation may include squares, line levels, rulers and spirit levels
- Work may require the ability to work within a team environment
-

Unit Sector(s)

Not applicable.

SUGTAEM1A Assess extraneous matter in cane

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to carry out a visual and physical assessment of extraneous matter in cane samples.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for assessment of cane	1.1 Personal protective clothing and equipment is selected and used

Element	Performance criteria
	1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures
	1.3 Cane sample is collected according to workplace procedure
	1.4 Weighing equipment is prepared for operation
2. Assess extraneous matter in cane	2.1 Cane sample is inspected and sorted according to workplace procedure
	2.2 Extraneous matter in cane is assessed according to workplace procedure
	2.3 Results of assessment are recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information on operating requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Collect cane samples for testing according to workplace procedure
4. Confirm that scales are tared or zeroed and operating correctly
5. Conduct visual and physical assessment of cane
6. Record results
7. Identify and report cane assessments that are not within specification
8. Follow procedures to repeat or validate results as required
9. Maintain work area to meet housekeeping standards
10. Maintain workplace records

Knowledge of:

11. Purpose of extraneous matter test and nature of extraneous matter typically found in cane
12. Conditions and practices that affect the level of extraneous matter found in cane
13. The effect of high levels of extraneous matter on downstream operations
14. Safe work procedures including awareness of health and safety hazards related to turbine operation and associated control measures. Hazards typically include those associated with manual handling
15. Methods used to sort and calculate extraneous matter in a sample

16. Method and purpose of taring or zeroing weighing equipment
17. Procedure for reporting faulty weighing equipment

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Sampling plan
- Extraneous matter/quality specifications
- Weighing equipment
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice may include the Sugar Milling Operations Industry Code of Practice. Codes of practice may include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs), sampling plans and cane extraneous matter/quality specifications
- Cane inspection and assessment may be visual and/or by weight
- Preparation of weighing equipment typically includes taring or zeroing scales and confirming calibration using check weights
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGTASD3A Adjust schedule(s) to meet daily workplace requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to adjust schedules to meet daily sugar mill operational requirements.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

- | | |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Identify daily factory requirements for cane supply | 1.1 Workplace information are accessed
1.2 Factors that impact on cane supply are identified |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------|

Element	Performance criteria
2. Calculate zero hour	<p>2.1 Zero hour is calculated to take account of daily variables</p> <p>2.2 Relevant personnel are informed of zero hour</p>
3. Amend daily bin allotment and bin allocations	<p>3.1 Bin allotment requirements are determined</p> <p>3.2 Daily bin allotment and bin allocations are calculated based on amended requirements</p> <p>3.3 Schedule for bin allocation and loco runs to harvest groups is amended to meet requirements</p> <p>3.4 Amended schedule is documented and submitted for approval in accordance with workplace procedures</p>
4. Monitor supply and demand to maintain and adjust schedule	<p>4.1 Transport departures and arrivals are co-ordinated and adjusted to meet schedule requirements</p> <p>4.2 Regular two-way communication with locomotive drivers and harvester operators is used to maintain schedules and safe operations</p> <p>4.3 Cane stock and deliveries (supply) are monitored against schedule</p> <p>4.4 Variations between supply and schedule are identified and corrective action is taken</p> <p>4.5 Resource implications of amended schedules are identified and resources are accessed to meet requirements</p> <p>4.6 Progress against schedule is monitored</p>
5. Communicate details of amended daily schedule and changes to supply	<p>5.1 Personnel/contractors are informed of amended daily bin allotments, bin allocations and loco runs</p> <p>5.2 Drivers are advised of amended cane bin delivery and pick-up requirements</p> <p>5.3 Potential disruptions to supply are identified and communicated as required by workplace operating procedures</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information to identify status of mill schedule and harvest rosters
2. Apply workplace information to calculate zero hour according to workplace procedure
3. Communicate zero hour to affected personnel
4. Amend daily schedule bin allotments and bin allocations to take account of variables affecting achievement of schedule
5. Monitor work progress and respond to update schedule as required
6. Respond to unplanned events to minimise disruption and optimise efficiency
7. Use communication systems and equipment to inform affected personnel of changes to schedule
8. Confirm that resources and personnel are available to meet amended schedule and if not, take action to secure requirements
9. Demonstrate workplace procedures for co-ordinating transport departures and arrivals to meet schedule requirements
10. Demonstrate workplace procedures for reallocating cane bin deliveries to harvesters in cases of factory/harvester breakdowns
11. Maintain workplace records and submit amendments for approval as required by workplace procedures

Knowledge of:

12. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
13. Safe work procedures including awareness of health and safety hazards related to work responsibilities and associated control measures
14. Factors taken into account in planning the schedule including the inter-relationships between factors. Factors typically include but are not limited to:
 - planned crushing rate
 - current stocks (yards and sidings)
 - yard and siding capacities
 - average bin weights
 - harvesting rosters
 - cut-to-crush delays
 - loco loads and performance
 - bin fleet size and availability
 - rail network capacity
 - labour requirements and availability
15. Purpose and procedure for calculating zero hour
16. Purpose and use of a computerized traffic systems
17. Factors that can affect the calculation of zero hour including:

- factory performance. This includes planned and unplanned mill stops
 - weather
 - transport system delays including locomotive/motor truck breakdown
 - availability of empty bins, taking into account mixed bin fleet if appropriate
 - availability of full-yard space
 - availability of empty-yard space
 - siding status
 - track infrastructure condition
 - harvester failure
18. Relevant personnel and factory departments to be notified of zero hour and related amendments to schedule. This includes an understanding of the information relevant to each group/person
19. Standard allocation of bins to a group and procedure for adjusting allocations
20. Communication systems, protocols and standards when using 2-way radios
21. Awareness of conditions that are unusual or unplanned and related options for response. This includes an understanding of implications of different options for maintaining the continuous and efficient supply of cane
22. Factors that impact on efficient performance. These include:
- labour
 - crib breaks
 - holding locos
 - waiting time (last bin)
 - fuel use
 - loads
 - scheduled cleaning and programmed maintenance.
23. Relevant OH&S and environmental requirements
24. Procedures for responding to emergency situations

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Transport system and associated information and communication systems and equipment
- Relevant codes of practice and industry standards
- Workplace information required to assess, adjust and monitor work progress against schedule
- Operating procedures related to work responsibilities
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include master schedule, bin allotments, mill crushing rates and schedules and harvesting rosters
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols
-

Unit Sector(s)

Not applicable.

SUGTCCT3A Control cane traffic movements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to control movements on the cane railway network to ensure safe train separation, efficient running of the traffic system and continuous, fresh supply of cane to the mill. It may also include controlling truck movements.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
----------------	-----------------------------

Element	Performance criteria
1. Prepare for operation	<p>1.1 Participate in shift handover process to identify status and occurrences affecting traffic control</p> <p>1.2 Confirm status of traffic activities on the cane railway network and in the empty and full yards</p> <p>1.3 Establish communication with drivers, crews and other relevant personnel</p> <p>1.4 Housekeeping standards are maintained</p>
2. Implement schedule	<p>2.1 Train movement instructions are issued to maintain safe operations</p> <p>2.2 The communication system is used to provide timely information to relevant personnel</p>
3. Issue train clearances to maintain train separation	<p>3.1 Clearance instructions are issued</p> <p>3.2 Point-to-point clearances are issued</p>
4. Maintain train separation	<p>4.1 Access to the rail network is controlled, including access by drivers, navvies, contractors, harvesting crews and other third parties</p> <p>4.2 Train passing is arranged and co-ordinated in accordance with workplace procedures</p> <p>4.3 Transportation movements are managed using rail network procedures and systems</p>
5. Maintain efficient running	<p>5.1 Transport departures and arrivals are co-ordinated and adjusted</p> <p>5.2 Train running times are monitored and opportunities to improve efficiency are identified and acted upon</p> <p>5.3 Train loads are maximized within load limits</p> <p>5.4 Train passing is managed to minimize delays and maintain safe operations</p> <p>5.5 Overall operating efficiencies are monitored and optimised</p>
6. Complete traffic control operations	<p>6.1 Train movements and related workplace information is recorded according to workplace recording requirements</p> <p>6.2 Recording systems and advice reflects accurate information at the time of handover</p> <p>6.3 Handover is carried out according to workplace procedure</p> <p>6.4 Traffic controllers are aware of system and related equipment status at completion of handover</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Receive information on status of all traffic movements and occurrences on the cane rail network. This is done at commencement of shift and may include use of verbal advice, log books, incident reports, mimic boards and related documentation
2. Confirm status of traffic movements including location of all trains and maintenance crews
3. Operate communication system to provide relevant, timely instructions and advice to all relevant personnel including factory, transportation personnel, farmers and harvester operators. Information provided includes instructions, running information including schedule changes for pick ups and deliveries, maintenance status including location of non-operational locomotives and damaged bins and other hazards and all other information affecting cane transportation operations
4. Demonstrate procedures for controlling train movements including issuing clearances, arranging and co-ordinating train crossings, arrivals and departures
5. Apply procedure to calculate efficient loads within equipment capacities and rail system tolerances
6. Use systems and tools such as mimic boards, control sheets and train graphs to monitor and maintain safe operations and schedules
7. Maintain workplace records in a timely manner so they reflect up-to-date information. This may require use of mimic boards
8. Prepare for and conduct handover. This includes ensuring that all records are accurate and updated and that incoming traffic controllers are aware of traffic system status including hazards or incidents

Knowledge of:

9. Relevant state OHS legislation, standards and industry codes of practice relating to work responsibilities
10. Safe work procedures including awareness of health and safety hazards related to work responsibilities and associated control measures
11. Factors that impact on the scheduling of traffic movements including an understanding of the relationship between these factors. Factors can include:

- mill status and current crush rate
 - next planned mill stop
 - timing of crib breaks
 - availability of empty bins, taking into account mixed bin fleet if appropriate
 - availability of full-yard space
 - availability of empty-yard space
 - contractor/harvester rates
 - siding status
 - track infrastructure condition
 - rolling stock condition
 - transport schedule amendments
12. Procedures for co-ordinating locomotive and/or truck departures/arrivals and train crossings
 13. Procedures for recording information. This includes operating procedures for using mimic boards and physical records such as control sheets
 14. Relevant personnel and factory departments to be notified of traffic movement instructions and advice. This includes an understanding of the information relevant to each group/person
 15. Communication systems, protocols and standards when using 2-way radios and handheld transceivers
 16. Detailed information on maintaining mimic board information
 17. Awareness of conditions that are unusual or unplanned and related options for response. This includes an understanding of implications of different options for maintaining safe and efficient traffic movement
 18. Factors that impact on efficient performance. These include:
 - labour
 - crib breaks
 - holding locos
 - waiting time (last bin)
 - fuel use
 - loads
 - scheduled cleaning and programmed maintenance.

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Transport system and associated information and communication systems and equipment
- Relevant codes of practice and industry standards
- Workplace information required to determine and monitor safe traffic movements on the cane transport network. This includes provision of a traffic schedule against which to assess, adjust and monitor work progress against schedule
- Operating procedures related to work responsibilities
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include master schedule, daily schedule, bin allotments, mill crushing rate, harvesting roster, train running slips, maintenance advice
- Network systems can include block sections and check points, multiple trains in block, mimic board, train graphs and control sheets
- Instructions may be written or verbal
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols
-

Unit Sector(s)

Not applicable.

SUGTCW2A Conduct cane weighbridge operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate a weighbridge to weigh and record incoming cane deliveries.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Set up weighbridge operations	1.1 Weighbridge systems, including equipment, computer and recording arrangements are

Element	Performance criteria
	checked for operational status
	1.2 Tests to confirm accuracy of weighbridge operations and related functions are conducted in accordance with enterprise procedures, manufacturers instructions and relevant legislation
	1.3 Accurate reporting of the results of the inspection and testing is kept in accordance with statutory requirements, enterprise policy and industry guidelines
	1.4 Faults/discrepancies in weighbridge operation and Hazards are identified and action undertaken in accordance with enterprise procedures
2. Weigh loaded vehicles/bins	2.1 Bins exceeding weight limit are rejected
	2.2 Weight of loaded bins\vehicles is registered against bin identification
	2.3 Net weight of bins\vehicles is calculated
	2.4 Bins\vehicles and cane type are recorded according to workplace recording requirements
	2.5 The workplace meets housekeeping standards
3. Prepare for shift changeover	3.1 Weighbridge systems, including equipment, computer and recording arrangements are secured or made ready for the next shift
	3.2 Records of operations are maintained and filed in accordance with enterprise procedures and statutory requirements
	3.3 Shift changeover is carried out according to workplace procedure
	3.4 Incoming weighbridge operators are aware of weighbridge and related equipment status procedures and manufacturer's recommendations

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Confirm status of weighbridge and related equipment at start up
2. Select, fit and use personal protective clothing and/or equipment
3. Demonstrate manual and automatic modes of operation as appropriate to workplace equipment
4. Demonstrate load weighing procedure. This includes confirming accuracy of weighbridge
5. Monitor weighbridge operation. This typically includes:
 - confirming correct bins are tipped
 - bin weights
 - zero of the bridge or within tolerance range
 - bin contents and fill height
 - bin delivery pushers and spotters as appropriate for equipment
6. Identify faults or non-conformance in operation
7. Take corrective action in response to abnormal or unacceptable performance
8. Use appropriate communication methods and equipment
9. Liaise with pushers and pin-pullers as required
10. Report and/or record corrective action as required
11. Complete weighbridge operation records
12. Maintain work area to meet housekeeping standards

May include the ability to:

13. Control yard movements of bins
14. Operate a tipping process

Knowledge of:

15. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities, legislation relating to cane payment as it affects requirements weighing and sampling and weights and measures legislation
16. Functions and basic operating principles of weighbridge and related equipment components
17. Cut to crush sequence
18. The relationship between the weighbridge and downstream operations
19. Purpose and procedures for testing accuracy of weighbridge using test weights
20. Safe work procedures including awareness of health and safety hazards related to weighbridge operation and associated control measures
21. Purpose and limitations of protective clothing and equipment
22. Procedures for responding to emergency situations
23. Method to calculate net bin weight
24. Requirements to liaise/advise related work areas
25. Housekeeping standards for the work area
26. Reporting and recording systems

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. Where the weighbridge operator conducts yard control and/or tipping operations, the following related units are to be co-assessed with this unit.

- Operate a tipping process
- Control yard movements

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Weighbridge and related equipment
- Relevant codes of practice and industry standards
- Operating procedures and related advice on equipment operation
- Loaded cane bins
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Calibration of weighbridges are determined using test weights
- Information systems may be print or screen based
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGTCYM1A Control yard movements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to control cane movements in mill storage and marshalling yards to ensure efficient cane supply operations and removal of empty bins.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Control full yard cane	1.1 Personal protective clothing and equipment is

Element	Performance criteria
movements	<p>selected and used</p> <p>1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.3 Continuity of cane supply to mill is managed to meet cut to crush sequence</p> <p>1.4 Cane bins are connected to the weighbridge system in accordance with workplace procedures</p> <p>1.5 Yard control systems are operated to potential</p> <p>1.6 Bins are un-coupled in accordance with OHS requirements and workplace procedures</p>
2. Control empty yard bin movements	<p>2.1 Bin supply to empty yard is managed to meet traffic schedule requirements</p> <p>2.2 Bins are re-coupled/pinned in accordance with OHS requirements and workplace procedures</p> <p>2.3 Yard control systems are operated to potential</p>
3. Analyse and respond to unacceptable performance	<p>3.1 System operating conditions are monitored to identify causes of unacceptable performance</p> <p>3.2 Yard derailments are reported and rectified in accordance with workplace procedures</p> <p>3.3 Bins requiring repair are identified and removed to bin repair line</p> <p>3.4 System error messages are responded to and appropriate corrective action is taken</p>
4. Prepare for shift changeover	<p>4.1 Workplace information is recorded according to workplace recording requirements</p> <p>4.2 Shift changeover is carried out according to workplace procedure</p> <p>4.3 Incoming yard control operators are aware of yard and related equipment status</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Confirm yard control status at start up
2. Select, fit and use personal protective clothing and/or equipment
3. Monitor yard capacity to direct cane bins to appropriate yard location
4. Operate systems (either automated or manual) to locate bins in required location. This may include operation of a control interface
5. Sequence supply of full bins to the weighbridge system to meet cut-to-crush sequence
6. Connect rake to weighbridge system
7. Coupling and uncouple cane bins safely and meet traffic schedule requirements (required length)
8. Receive and report derailments
9. Divert damaged bins for repair
10. Monitor yard. This may require manual monitoring and/or use of a control interface and typically includes monitoring:
 - bins are recoupled to meet requirements of traffic schedule
 - bin identifiers match the actual bins
 - position of locos in the yard
11. Liaise with loco and equipment drivers
12. Use communication systems. This typically includes use of a 2-way radio and hand and audible signalling
13. Complete yard control records and prepare for changeover
14. Take corrective action in response to abnormal equipment and/or system performance, including derailments

May include the ability to:

15. Operate a tipping process
16. Conduct rail weighbridge operations

Knowledge of:

17. Relevant state OHS legislation, standards and industry codes of practice relating to work responsibilities
18. Safe work procedures including awareness of health and safety hazards related to yard control and associated control measures
19. Workplace documentation including consignment notes and trip/cut-to-crush documentation
20. Functions and basic operating principles of equipment and systems used
21. Function and location of signalling devices used to monitor cane bin movements in the yard
22. Cane yard system layout and line holding capacities
23. Implications of sub-optimal cut to crush times for mill performance and of disrupted supply
24. Operating requirements and controls
25. Communication system protocols
26. Procedures for responding to emergency situations
27. Reporting and recording systems

May include knowledge of:

28. Tipping process operation

29. Weighbridge operations

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Where the yard controller conducts tipping process operation and/or weighbridge operations, the related units *Conduct rail weighbridge operations* and *Operate a tipping process* are to be co-assessed with this unit. Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Cane yards and related signaling and control systems
- Cane locos (does not include operation)
- Relevant codes of practice and industry standards
- Bin consignment and trip/cut-to-crush documentation
- Operating procedures and related advice on equipment operation
- Loaded and empty bins
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include standard operating procedures (SOPs), traffic schedules, and manufacturer's specifications
- Information systems may be print or screen based
- Equipment may include 2-way communication system, mimic or computer board, process control interface and related control system
- Signaling devices typically include colour aspect lights, mechanical signage
- Movement of rakes may be automated, done using a dedicated loco, tractors or using winch equipment
- Empty and full yards may be a combined yard
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols and hand and audible signalling
-

Unit Sector(s)

Not applicable.

SUGTDCL2A Drive a cane locomotive

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to prepare, start up, operate and shut down a locomotive.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare for locomotive operation	1.1 Health and safety hazards / maintenance requirements are identified and reported to

Element	Performance criteria
	<p>appropriate personnel according to workplace reporting procedures</p> <p>1.2 Workplace records are checked to confirm operational status</p> <p>1.3 Locomotive and related equipment is inspected to confirm status and pre-start checks and warm up procedures are conducted</p> <p>1.4 Pre-departure checks are conducted to confirm locomotive and related equipment meets operating standard</p> <p>1.5 Appropriate end of train tail flags and brake vans are fitted as required</p>
<p>2. Start, operate and monitor locomotive</p>	<p>2.1 Authority to move locomotive is obtained</p> <p>2.2 Locomotive is operated in accordance workplace procedures and manufacturer's specifications to meet transport requirements</p> <p>2.3 Locomotive, rake and related equipment are monitored to maintain optimum operating condition and identify faults or defects</p> <p>2.4 Operation is monitored against schedule and communicated as required</p> <p>2.5 Housekeeping standards are maintained</p>
<p>3. Analyse and respond to abnormal conditions and performance</p>	<p>3.1 Hazardous situations and conditions are recognized and appropriate action taken to maintain safety of personnel and equipment</p> <p>3.2 Faults are assessed to determine risk of injury to personnel or damage to equipment</p> <p>3.3 Corrective action is taken in accordance with workplace procedures in response to Hazards, abnormal or unacceptable equipment condition or performance</p> <p>3.4 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
<p>4. Prepare for shift handover</p>	<p>4.1 Workplace records are maintained in accordance with statutory requirements and workplace procedures</p> <p>4.2 Handover is carried out according to workplace procedure</p> <p>4.3 Changeover drivers are aware of locomotive and related equipment status, track conditions and incidents at completion of handover</p>

Element	Performance criteria
5. Shut down locomotive	5.1 Locomotive is parked in the appropriate location 5.2 Locomotive is shut down and secured in accordance with workplace procedures
6. Complete work	6.1 Workplace information is recorded according to workplace recording requirements 6.2 Tools, plant and equipment are cleaned and stored/parked as required 6.3 Defects and faults are identified and reported according to workplace procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as running slips to identify driving requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Prepare the locomotive and related equipment such as brake vans for operation. This includes conducting visual inspection of equipment, pre-start checks and warm up procedures and pre-departure checks. Visual inspection may include checking:
 - wheels and braking equipment, hoses and fittings for signs of wear or damage
 - fuel, oil, water and coolant levels
 - emergency and safety equipment
 - condition of the rake

Pre-departure checks may include checking:

- lubrication system
 - water and oil leaks
 - brake testing
 - communications equipment
 - traction systems
 - battery charging
 - sand boxes
 - gear changes
4. Operate the locomotive and associated equipment such as brake vans according to work procedure to achieve work requirements. This includes demonstrating manual and automatic control procedures

5. Monitor locomotive and equipment condition. This includes monitoring operating status of the locomotive and related equipment and monitoring condition of bins in the rake
6. Take corrective action in response to abnormal or unacceptable quality of bins, rolling stock or equipment performance
7. Assess equipment faults to determine appropriate corrective action
8. Follow procedures to drop off and tag damaged bins. This includes identifying an appropriate location, shunting bins and notifying appropriate personnel
9. Follow procedure to notify a locomotive breakdown
10. Communicate with the traffic officer and rail personnel as required
11. Use appropriate communication methods and equipment
12. Maintain workplace records
13. Maintain work area to meet housekeeping standards

May include ability to:

14. Prepare, start up, operate, monitor and shut down brake vans

Knowledge of:

15. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
16. Safe work procedures including awareness of health and safety hazards related to driving a locomotive and associated control measures. Typical hazards include working with moving machinery, manual handling and working in exposed conditions
17. Purpose and limitations of protective clothing and equipment
18. Functions and basic operating principles of a locomotive and related equipment such as brake vans. This includes layout and purpose of the principal mechanical, pneumatic and electrical systems, purpose and of all equipment components
19. Function of all instruments and controls
20. Safe operating capacities of equipment
21. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
22. Cane rail system layout to identify the location of points, signals and crossings including cross over of non-company rail lines
23. Options for responding to unplanned events such as derailments, breakdowns, accidents or track damage. This includes an understanding of the impact of different options on efficient performance and safety issues when parking/dropping off damaged bins or locomotives
24. Safe operating conditions and speeds. This includes awareness of typical conditions and situations that are hazardous and appropriate preventative action
25. Typical faults to be able to assess severity and risk in order to determine appropriate corrective action
26. Acceptable bin and rake condition
27. Communication procedures, methods and equipment. This includes an understanding of warning devices and signals
28. Meaning of hand and audible signals, including use of lights
29. Procedures for responding to emergency situations. This includes use of two-way radio system to report emergencies
30. Environmental issues and controls
31. Requirements to liaise/advise related work areas and personnel

- 32. Housekeeping standards
- 33. Reporting and recording systems and responsibilities

May include knowledge of:

- 34. Compressors, where brake vans are operated, including safe operation

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Locomotive and related equipment such as brake vans
- Cane railway system
- Relevant services and equipment required to carry out inspections, checks and monitoring
- Workplace information including running slips and daily schedule, to advise of driving requirements
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Documentation and recording requirements may include marshalling strategy, documentation relating to the traffic schedule such as run slips and loco running sheets and log books, tags to identify damaged bins and maintenance request forms
- Cane transport network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads
- Information systems may be print or screen based
- Locos may or may not be fitted with break vans and may be single or double-headed. They do not include locomotives in a master-slave configuration
- Equipment may include control systems, braking systems, manual and remote control systems, communication systems
- Confirming equipment status involves conducting relevant pre-start checks, and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols and hand and audible signaling
-

Unit Sector(s)

Not applicable.

SUGTDMS3A Drive a master-slave locomotive

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to prepare, start up, operate and shut down a master-slave locomotive.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare and connect the slave locomotive for	1.1 Personal protective clothing and equipment is selected and used

Element	Performance criteria
operation	<p>1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.3 Workplace records are checked to confirm operational status</p> <p>1.4 The remote control system is set in accordance with workplace procedures and manufacturer's specifications</p> <p>1.5 Slave locomotives are prepared and required operating mode is selected</p> <p>1.6 Pre-start checks are conducted</p>
2. Prepare and connect the master locomotive	<p>2.1 Confirm that system is in link mode</p> <p>2.2 Check control system and conduct system self-test to confirm that the system is operating effectively</p> <p>2.3 Confirm braking system is operating effectively</p> <p>2.4 Total control of the system is established and confirmed</p> <p>2.5 Pre-departure tests are conducted to confirm control system and locomotive equipment meets operating standard</p> <p>2.6 Front and rear train consists are coupled safely to form one train</p>
3. Start, operate and monitor locomotive	<p>3.1 Master-slave locomotives are operated in accordance with workplace procedures and manufacturer's specifications to meet transport requirements</p> <p>3.2 Condition of locomotive equipment is monitored to maintain optimum operating condition and identify faults or defects</p> <p>3.3 Faults are assessed to determine risk of injury to personnel or damage to equipment</p> <p>3.4 Corrective action is taken in accordance with workplace procedures in response to OHS hazards, abnormal or unacceptable equipment condition or performance</p> <p>3.5 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p> <p>3.6 Housekeeping standards are maintained</p>
4. Prepare for shift handover	<p>4.1 Workplace records are maintained in accordance</p>

Element	Performance criteria
	with statutory requirements and workplace procedures
	4.2 Handover is carried out according to workplace procedure
	4.3 Changeover drivers are aware of locomotive and related equipment status, track conditions and incidents at completion of handover
5. Shut down locomotive	5.1 Shutdown procedures for master and slave locomotives are followed according workplace procedures
	5.2 Shut down sequence is confirmed and complete and locomotives are secured in accordance with workplace procedures
6. Complete work	6.1 Workplace information is recorded according to workplace recording requirements
	6.2 Plant and equipment are cleaned and stored/parked as required
	6.3 Defects and faults are identified and reported according to workplace procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Access workplace information such as running slips to identify driving requirements
2. Select, fit and use personal protective clothing and/or equipment
3. Prepare the master and slave locomotive systems and operating settings. This includes following procedures to prepare each unit, conducting visual inspections of equipment, pre-start checks and warm up procedures, and pre-departure checks and coupling of train components
4. Operate the master-slave locomotive and associated equipment according to work procedure to achieve work requirements. This includes demonstrating full control of both locomotives
5. Monitor locomotive and equipment condition. This includes monitoring operating status of both locomotives and related equipment and monitoring condition of bins in the rake

6. Take corrective action in response to abnormal or unacceptable performance of control systems or operating equipment
7. Assess equipment faults to determine appropriate corrective action
8. Follow procedure to notify a locomotive breakdown
9. Communicate with the traffic officer and rail personnel as required
10. Use appropriate communication methods and equipment
11. Maintain workplace records
12. Maintain work area to meet housekeeping standards

Knowledge of:

13. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
14. Safe work procedures including awareness of health and safety hazards related to driving a locomotive and associated control measures. Typical hazards include working with moving machinery, manual handling and working in exposed conditions
15. Purpose and limitations of protective clothing and equipment
16. Functions and basic operating principles of master and slave locomotive operating equipment
17. Purpose of the master and slave locomotives in controlling the train and operating principles of all instruments and controls
18. Safe operating capacities of equipment
19. Typical faults that can occur when operating a locomotive in a master-slave configuration. This includes the ability to assess severity and risk in order to determine appropriate corrective action
20. Communication procedures, methods and equipment. This includes an understanding of warning devices and signals
21. Procedures for responding to emergency situations. This includes use of two-way radio system to report emergencies
22. Environmental issues and controls
23. Requirements to liaise/advise related work areas and personnel
24. Housekeeping standards
25. Reporting and recording systems and responsibilities

Relationship with other standards

Pre-requisite units

The person being assessed in this unit of competence must be competent in the relevant core units. They must also be competent in:

- SUGTDCL2A Drive a cane locomotive

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Master and slave locomotives and related equipment such as brake vans
- Cane railway system
- Relevant services and equipment required to carry out inspections, checks and monitoring
- Workplace information including running slips and daily schedule, to advise of driving requirements
- Operating procedures and related advice on equipment operation
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Documentation and recording requirements may include marshalling strategy, documentation relating to the traffic schedule such as run slips and loco running sheets and log books
- Cane transport network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads
- Information systems may be print or screen based
- A master-slave configuration describes any mechanism and operating system that allows control of one motive power unit by another motive power unit, which forms part of the same train. The slave or remote unit is not operated freely, unattached from the master or lead locomotive
- Master-slave locomotives may be used within a yard for the purpose of marshalling and shunting and on running lines
- Equipment may include diesel and electric locomotives, rail cars and multiple units including electric, diesel and hydraulic
- Confirming equipment status involves conducting relevant pre-start checks and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols and hand and audible signalling
-

Unit Sector(s)

Not applicable.

SUGTOTE2A Operate tamping equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate tamping equipment used to lift and pack track. It can apply to both construction of new track and repair of existing track.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Plan and prepare work

1.1 The location and scope of work are identified

Element	Performance criteria
	1.2 Materials required to complete the work are confirmed and available
	1.3 Equipment status is confirmed and pre-operational checks are carried out
	1.4 Personal protective equipment is selected, correctly fitted and used
	1.5 Safety procedures are followed to confirm that work is clearly signed and relevant authorities are advised that work is in progress
	1.6 Site is inspected prior to commencing work to identify and remove potential hazards
2. Operate tamping equipment	2.1 Ballast hopper is operated to supply an even flow of ballast to the specified thickness
	2.2 Tamper equipment is operated to lift, line track and pack ballast to specification
	2.3 Track is dressed by final ballast spread and trimmed to meet the specified profile
	2.4 Track is inspected to confirm that design and construction specifications are met
3. Analyse and respond to abnormal performance	3.1 Operating data and plant operating conditions are analysed to identify causes of abnormal performance
	3.2 Hazards are identified and reported as required according to workplace reporting procedure
	3.3 Corrective action is taken in accordance with workplace in response to Hazards and abnormal or unacceptable equipment performance
	3.4 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations
4. Complete work	4.1 The construction area is cleared of debris
	4.2 Unused materials are stored as required
	4.3 Equipment is shut down and parked according to workplace requirements
	4.4 Tools, plant and equipment is cleaned and stored as required
	4.5 Workplace information is recorded according to workplace recording requirements

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret workplace information such as drawings and related instructions to identify the project requirements
2. Estimate material requirements for a given project
3. Assess operational status of tamper and carry out pre-operational checks
4. Operate tamper to apply and compact ballast and lift and align track to meet design and construction specifications
5. Monitor track laying. This includes confirming that the following meet construction specifications:
 - Spread and depth of ballast
 - Compaction
 - Track line
 - Final dressing application and trim
6. Identify faults in operation of equipment
7. Take corrective action in response to abnormal or unacceptable performance
8. Use appropriate communication methods and equipment
9. Report and/or record corrective action as required
10. Maintain work area to meet housekeeping standards

Knowledge of:

11. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
12. Understanding of the steps involved in constructing/repairing track
13. Functions and basic operating principles of tamper equipment. This includes the layout and purpose of major air, hydraulic, mechanical and electrical systems as relevant to equipment. It also includes an understanding of operational checks and operating capacity of equipment
14. Track construction specifications
15. The impact of tamper operation on related track laying operations
16. Factors that can affect the tamper operation
17. Common problems related to tamping and corrective action required
18. Traffic control signage, communication and procedures
19. Safe work procedures including awareness of health and safety hazards related to track laying and associated control measures. This includes safe manual handling procedures
20. Purpose and limitations of protective clothing and equipment
21. Environmental issues and controls
22. Requirements to liaise/advise related work areas
23. Housekeeping standards for the work area
24. Reporting and recording systems

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

A tamper operator may also require competence in:

- Operate on-track self-propelled equipment
- Operate a process control interface (where tamper is computer controlled)

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Site and related project information
- Relevant codes of practice and industry standards
- Tamper and related equipment
- Materials handling equipment and relevant hand and power tools
- Operating procedures and related advice on equipment operation
- Ballast
- Track work
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include drawings, plans and Standard Operating Procedures (SOPs)
- Cane railway network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Information systems may be print or screen based
- Equipment may include tamper and related attachments
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods may include use of two-way radios
-

Unit Sector(s)

Not applicable.

SUGTOTS2A Operate a tipping station

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to unload cane bins into a sugar mill feeding station.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element	Performance criteria
1. Prepare the tipping station for operation	1.1 Pre-operational checks are conducted 1.2 Health and safety hazards / maintenance

Element	Performance criteria
2. Start and monitor tipping	<p>requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>2.1 Bin contents are visually inspected and obvious signs of contamination are reported as required according to workplace reporting procedure</p> <p>2.2 Cane is tipped according to workplace procedure to maintain supply of cane to the mill</p> <p>2.3 Plant is operated within limits of manufacturer's specifications to meet workplace requirements</p> <p>2.4 Equipment is monitored to confirm operating condition</p> <p>2.5 The workplace meets housekeeping standards</p>
3. Analyse and respond to abnormal performance	<p>3.1 Plant operating conditions are monitored to identify causes of abnormal performance</p> <p>3.2 Corrective action is taken in accordance with workplace in response to Hazards and abnormal plant performance</p> <p>3.3 Emergency procedures are implemented as required according to workplace procedures and manufacturer's recommendations</p>
4. Prepare for shift changeover	<p>4.1 Workplace information is recorded according to workplace recording requirements</p> <p>4.2 Shift changeover is carried out according to workplace procedure</p> <p>4.3 Incoming yard control operators are aware of yard and related equipment status</p>
5. Shutdown the tipping station	<p>5.1 The tipping station is shut down according to workplace procedures and manufacturer's recommendations</p> <p>5.2 Waste is collected, treated and disposed or recycled according to company procedures</p> <p>5.3 Maintenance requirements are identified and reported according to workplace reporting procedure</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Confirm status of tipping process at start up
2. Select, fit and use personal protective clothing and/or equipment
3. Demonstrate manual and automatic modes of operation as appropriate to workplace equipment
4. Monitor tipping process to maintain a full carrier. This typically includes monitoring:
 - rate of tipping to maintain full carrier
 - bin and equipment condition
5. Identify faulty bins and/or equipment and arrange transfer for repair
6. Take corrective action in response to abnormal or unacceptable performance
7. Use appropriate communication methods and equipment. This includes 2-way radios
8. Complete tipping operation records and hand over tipping process
9. Maintain work area to meet housekeeping standards. This includes clearing cane spillages

May include the ability to:

10. Control yard movements
11. Conduct weighbridge operations

Knowledge of:

12. Relevant state OHS legislation, standards and industry codes of practice relating to work responsibilities
13. Safe work procedures including awareness of health and safety hazards related to tipping operation and associated control measures. Typical hazards include working with moving machinery - pinch points.
14. Functions and basic operating principles of tipping process and related control system and equipment components
15. The relationship between the tipping process and mill operation
16. Consequences of tipping contaminated cane
17. Typical faults in cane bins which affect haulage and tipping operations
18. Acceptable bin and rake condition and procedure for tagging and reporting bins requiring repair
19. Procedures for responding to emergency situations
20. Requirements to liaise/advise related work areas
21. Housekeeping standards for the work area
22. Reporting and recording systems

May include knowledge of:

23. Yard control
24. Weighbridge operations

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Where the tipping operator conducts weighbridge operations and/or yard control, the following related units are to be co-assessed with this unit.

- Conduct rail weighbridge operations
- Control yard movements

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Tipping process, milling train and related equipment
- Relevant codes of practice and industry standards
- Operating procedures and related advice on equipment operation
- Loaded cane bins
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating procedures (SOPs) and manufacturer's specifications
- Confirming equipment status involves conducting relevant pre-start checks, confirming that cleaning standards are met, all safety guards are in place and equipment is operational
- Equipment may include 2-way communication system, process control interface and related control system, tipping unit or tippler, pushers, points and indexers
- Work may require the ability to work within a team environment
- Information systems may be print or screen based
-

Unit Sector(s)

Not applicable.

SUGTPST1A Prepare for shunting operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to prepare and direct the physical movement of rolling stock to meet requirements of the marshalling strategy.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

1. Plan and prepare for

1.1 Personal protective clothing and equipment is

Element	Performance criteria
shunting operation	<p>selected and used</p> <p>1.2 Health and safety hazards / maintenance requirements are identified and reported to appropriate personnel according to workplace reporting procedures</p> <p>1.3 Shunting requirements are interpreted from the marshalling strategy</p> <p>1.4 Vehicles and equipment are located and prepared in accordance with marshalling strategy</p> <p>1.5 Rolling stock movements, availability and locations are established in order to determine appropriate siding and/or track locations for vehicle placement</p>
2. Carry out shunting control procedures	<p>2.1 Points, levers, switches, signals and line of sight communications are used to assist the control of rolling stock movement</p> <p>2.2 Hand, light and radio shunting commands conform with operational and statutory requirements</p> <p>2.3 Consignment notes/tickets are checked and bins are located and sorted to comply with marshalling requirements</p> <p>2.4 Coupling and uncoupling procedures are carried out to attach and detach rolling stock</p>
3. Complete work	<p>3.1 Workplace information is recorded according to workplace recording requirements</p> <p>3.2 Tools, plant and equipment are cleaned and stored as required</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Interpret the marshalling strategy
2. Select, fit and use personal protective clothing and/or equipment

3. Identify equipment requirements and carry out pre-start checks
4. Plan shunting operations to meet requirements of the marshalling plan
5. Use electronic data transfer and capture systems for mobile data collection as required
6. Demonstrate hand signals. This includes use of lighting
7. Communicate with the locomotive operator to direct the positioning of rolling stock as required
8. Identify faults in bins and/or equipment
9. Take corrective action in response to abnormal or unacceptable quality of bins or rolling stock or equipment performance
10. Use appropriate communication methods and equipment
11. Report and/or record corrective action as required
12. Maintain workplace records
13. Maintain work area to meet housekeeping standards

May include ability to:

14. Conduct pre-start checks and start up brake vans

Knowledge of:

15. Relevant state OHS legislation, standards and codes of practice relating to work responsibilities
16. Safe work procedures including awareness of health and safety hazards related to work responsibilities and associated control measures. Typical hazards include working with moving machinery, manual handling and working in exposed conditions
17. Methods used to render equipment safe to inspect, maintain and/or clean including lock-out, tag-out and isolation procedures
18. Purpose and limitations of protective clothing and equipment
19. Functions and basic operating principles of equipment
20. The requirements of cut to crush sequencing of cane rakes
21. Acceptable locomotive, bin and rake condition and procedure for tagging and reporting bins requiring repair
22. Communication procedures, methods and equipment. This includes the meaning of hand and audible signals
23. Procedures for responding to emergency situations. This includes use of two-way radio system to report emergencies
24. Environmental issues and controls
25. Requirements to liaise/advise related work areas
26. Housekeeping standards for the work area
27. Reporting and recording systems

May include knowledge of:

28. Operating knowledge of compressors where brake vans are operated, including safe operation

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Marshalling strategy
- Operating procedures and related advice on equipment operation
- Cane railway system
- Personal protective clothing and equipment
- Communication systems and equipment
- Housekeeping standards and procedures
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, licensing requirements, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice and sugar industry codes of practice related to cane railway and transport operations
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Documentation and recording requirements may include marshalling strategy, documentation relating to the traffic schedule such as run slips and loco running sheets, log books and employee time sheets/records
- Cane transport network features and their characteristics may include main and branch lines, yards, sidings, loops, dump points and pads; and road transport delivery points where relevant
- Information systems may be print or screen based
- Locos may or may not be fitted with brake vans
- Confirming equipment status involves conducting relevant pre-start checks, confirming that all safety guards and equipment is ready and safe to operate
- Work may require the ability to work within a team environment
- Communication methods include use of two-way radios used in accordance with workplace requirements and state authority protocols
-

Unit Sector(s)

Not applicable.

SUGZPC2A Operate a process control interface

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This is a Specialist unit. It covers the skills and knowledge required to operate a computer-based interface to modify and/or interrogate a control system.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Element

Performance criteria

- | | |
|-------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Navigate the process control interface | 1.1 Confirm that the control interface and related components are ready for operation |
|-------------------------------------------|---------------------------------------------------------------------------------------|

Element	Performance criteria
	1.2 Use hardware provided to operate the interface
	1.3 Use page links to move between screens
	1.4 Acknowledge messages and alarms
	1.5 Access required information from screen displays
	1.6 Record and report interface system malfunctions in accordance with workplace procedures
2. Use interface system to operate and maintain a process within required parameters	2.1 Start up, monitor and shut-down individual items of equipment and/or processes using the control interface
	2.2 Select equipment and alter equipment status, set points or settings to meet operating requirements
	2.3 Activate sequences to initiate process operation
	2.4 Recognise equipment giving a bad signal or bad measurement and take responsive action
3. Analyse data to predict and control performance	3.1 Select and analyse trends to identify performance patterns
	3.2 Identify causes of abnormal or unacceptable performance and take corrective action
	3.3 Record information as required

Required Skills and Knowledge

Not applicable.

Evidence Guide

Evidence guide

The assessment process must address all of the following items of evidence.

Ability to:

1. Use all hardware components to operate the control interface
2. Navigate the system to locate and use information required. This includes moving between screens and locating relevant performance data
3. Operate the control system using the interface. This includes ability to start up and shut down equipment components and change set points as required
4. Locate sensors and instrumentation providing input signals to the control system and confirm operating order within level of responsibility
5. Recognise and respond to error messages and alarms as required
6. Access relevant performance data using the control system. This includes locating and interpreting performance trend information

May include the ability to:

7. Record log information using the interface system

Knowledge of:

8. Processes and equipment being controlled. This includes required processing sequences
9. Operating principles of process control and interface system. This includes the relationship between control panels and systems and the physical equipment. It also includes understanding of operating conditions required for accurate information input from sensors and related instrumentation
10. Action required to respond to error messages and alarms
11. Typical faults that can occur when operating a process control interface and corrective action required
12. Performance data collected by the control interface system and its application to troubleshoot performance. This includes the ability to identify and investigate related trend data to track cause and effect
13. Recording requirements and responsibilities

Relationship with other standards

Pre-requisite units

There are no pre-requisite units for this competency standard.

Co-assessment of related units

Other units of competency relevant to the work role should be assessed in conjunction with this unit. This includes the relevant operational unit/s for the process being controlled.

Resources required for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- Process control interface hardware and software
- Work station or equipment to be controlled
- Operating procedures and related advice on equipment operation
- Process to be controlled
- Communication systems and equipment
- Workplace information recording systems, requirements and procedures

Assessment requirements

For information on how to assess this competency standard and who can assess, refer to the Assessment Guidelines for this Training Package.

Range Statement

Range statement

The range statement indicates the context for demonstrating competence. This statement is a guide and unless otherwise indicated, items may or may not apply as required by the work context.

- Work is carried out in accordance with company policies and procedures, manufacturer's recommendations, legislative requirements, codes of practice and industrial awards and agreements. Codes of practice include the Sugar Milling Operations Industry Code of Practice
- Workplace information can include Standard Operating Procedures (SOPs) and manufacturer's specifications
- Information accessed may include graphics, trends, parameter settings, alarms and individual plant item status
- Work may require the ability to work within a team environment
- A computer-based interface may consist of computer processor, monitor, keyboards, track ball, mouse, storage devices and printers. It is linked to the process control system
-

Unit Sector(s)

Not applicable.

BCC1005A Use hand and power tools

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify hand and power tools	1.1 Regular power tools appropriate to construction activities recognised.
	1.2 Types of hand and power tools and their functions, identified.
	1.3 Sources of power supply recognised.

- 1.4 OH&S requirements with the use of power tools recognised and adhered to.
 - 1.5 Quality Assurance requirements recognised and adhered to.
 - 1.6 Personal protective equipment selected, correctly fitted and used.
- 2 Select hand tools
 - 2.1 Hand tools selected consistent with needs of job.
 - 2.2 Tools checked for serviceability and safety, faults reported.
 - 2.3 Equipment selected to hold or support material for power tools application, where applicable.
- 3 Use hand tools
 - 3.1 Materials located and held in position.
 - 3.2 Hand tools safely and effectively used according to their intended use.
 - 3.3 Hand tools safely located when not in immediate use.
- 4 Select power tools
 - 4.1 Power tools, leads and hoses selected consistent with needs of job in accordance with standard work practice; faults reported.
 - 4.2 Power leads/hoses visually checked for serviceability/safety in accordance with OH&S requirements.
- 5 Establish power supply to work location
 - 5.1 Route identified for safe placement of leads/hoses clear of hazards.
 - 5.2 Electrical power leads run out to power supply and supported overhead so they are clear of traffic or covered where possible.
 - 5.3 Electric power leads connected to either supply and power board or direct to power tool.
 - 5.4 Air hoses run out to compressed air supply and covered where potential trip hazard exists.
 - 5.5 Hose connected to power tool and air supply.
- 6 Use power tools
 - 6.1 Material located and held into position for power

tool application, where applicable.

- 6.2 Power tools safely and effectively used in application processes.
- 6.3 Power tools safely located when not in use.
- 7 Clean up
 - 7.1 Power tools cleaned, maintained and stored.
 - 7.2 Power leads/hoses cleaned, visually checked and stored.
 - 7.3 Equipment cleaned, maintained and stored.
 - 7.4 Work area cleared and waste removed.

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe and effective operation of the particular hand and power tools listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations.

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures carried out prior to and during the application of construction process.

safe and effective operational use of tools, plant and equipment, and effective communication.

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements and relevant OH&S legislation

portable power tools

hand tools and equipment

materials

materials handling whilst operating tools

Quality Assurance

Skills

The ability to:

work safely to instructions
apply appropriate hand eye coordination in the use of tools
handle material during operation of tools
select material

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials appropriate to the construction process

plant and equipment appropriate to the construction process

suitable work area appropriate to the construction process

appropriate OH&S resources

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency of this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Competency is to be demonstrated by the safe and effective operation of the particular hand and power tools listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations.

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures carried out prior to and during the application of construction process.

safe and effective operational use of tools, plant and equipment, and effective communication.

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements and relevant OH&S legislation

portable power tools

hand tools and equipment

materials

materials handling whilst operating tools

Quality Assurance

Skills

The ability to:

work safely to instructions

apply appropriate hand eye coordination in the use of tools

handle material during operation of tools

select material

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials appropriate to the construction process

plant and equipment appropriate to the construction process

suitable work area appropriate to the construction process

appropriate OH&S resources

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency of this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Range Statement

Hand tools include:

adjustable spanners

bars (crow and pinch)

bolt cutters

brooms

chisels

hacksaws

handsaws

hammers

measuring tapes
nips
picks/mattocks
pliers
sealant gun
shovels/spades
sledge hammer
spanners and wrenches
spirit level
straight edge
string lines
trowels and floats
wire cutters
paint brushes/rollers
spatula/putty knives
Reports may be written or verbal.
Power supply to include:
electric
pneumatic
Power Tools include
kanga hammer
cut off saw
drills
nail guns
staplers
screwdrivers
sanders
angle grinders
pneumatic wrenches
circular saws
jig saws
planers
routers
hammers
spades
tamper
Hand tools include:
adjustable spanners
bars (crow and pinch)
bolt cutters
brooms
chisels
hacksaws
handsaws
hammers
measuring tapes
nips
picks/mattocks

pliers
sealant gun
shovels/spades
sledge hammer
spanners and wrenches
spirit level
straight edge
string lines
trowels and floats
wire cutters
paint brushes/rollers
spatula/putty knives
Reports may be written or verbal.
Power supply to include:
electric
pneumatic
Power Tools include
kanga hammer
cut off saw
drills
nail guns
staplers
screwdrivers
sanders
angle grinders
pneumatic wrenches
circular saws
jig saws
planers
routers
hammers
spades
tampers

Unit Sector(s)

Not applicable.

BCC1006A Use small plant and equipment

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify plant and equipment operations and safety requirements	1.1 Types and function of plant/equipment used in the construction process identified. 1.2 Quality Assurance requirements recognised and adhered to. 1.3 Method of operation of plant/equipment identified

- and understood, relevant to manufacturer's recommendations.
- 1.4 OH&S requirements for guarding and cut off switchings identified.
 - 1.5 OH&S requirements identified for personal protective equipment associated with using machines.
 - 1.6 Personal protective equipment selected, correctly fitted and used.
- 2 Select plant and equipment
 - 2.1 Plant and equipment selected consistent with needs of job.
 - 2.2 Plant and equipment checked for serviceability/safety and faults reported.
 - 3 Select fuel, lubricants, tools and equipment
 - 3.1 Appropriate fuel and lubricants selected according to manufacturer's specifications.
 - 3.2 Tools and equipment selected in accordance with required machinery checks.
 - 4 Carry out basic machinery checks
 - 4.1 Fuel, oil, hydraulic fluid and water levels checked and adjusted according to manufacturer's manual.
 - 4.2 Bolts, nuts and attachment couplings tightened and maintained to manufacturer's manual.
 - 4.3 Function of controls and gauges checked and adjusted where necessary to comply with manufacturer's manual.
 - 5 Carry out machine start-up/shut-down procedures
 - 5.1 Standard start-up procedures conducted to requirements of operator's manual.
 - 5.2 Standard shut-down procedures conducted to requirements of operator's manual.
 - 6 Use plant and equipment
 - 6.1 Plant and equipment safely and effectively used.
 - 6.2 Site hazards identified in use of plant and equipment.
 - 6.3 Plant and equipment safely located when not in immediate use.
 - 7 Carry out periodic
 - 7.1 Periodic maintenance carried out to requirements

- maintenance of operator's manual.
- 8 Clean up
- 8.1 Waste material disposed of safely.
- 8.2 Surplus fuel and lubricants returned to store.
- 8.3 Plant, tools and equipment cleared, maintained and stored.

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe and effective operation of particular small plant listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health&Safety regulations and State/Territory legislation applicable to workplace operations

compliance with organisational policies and procedures including Quality Assurance requirements

correct procedures carried out prior to and during the application of construction process

safe and effective operational use of tools, plant and equipment and effective communication

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements

portable power tools applicable to the construction process

hand tools and a range of small plant and equipment

materials

materials handling relative to small plant and equipment

Quality Assurance

workplace communication processes

Skills

The ability to:

work safely to instructions

use power tools and hand tools relevant to the construction process

handle material

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials appropriate to the construction process

hand and power tools appropriate to the construction process

small plant and equipment appropriate to the construction process

suitable work area appropriate to the construction process

appropriate OH&S resources

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity, against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Competency is to be demonstrated by the safe and effective operation of particular small plant listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health&Safety regulations and State/Territory legislation applicable to workplace operations

compliance with organisational policies and procedures including Quality Assurance requirements

correct procedures carried out prior to and during the application of construction process

safe and effective operational use of tools, plant and equipment and effective communication

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements

portable power tools applicable to the construction process

hand tools and a range of small plant and equipment

materials

materials handling relative to small plant and equipment

Quality Assurance

workplace communication processes

Skills

The ability to:
work safely to instructions
use power tools and hand tools relevant to the construction process
handle material
apply Quality Assurance
communicate effectively

(4) Resource Implications

The following resources should be made available:
general construction materials appropriate to the construction process
hand and power tools appropriate to the construction process
small plant and equipment appropriate to the construction process
suitable work area appropriate to the construction process
appropriate OH&S resources

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.
Competency in this unit may be determined concurrently, based upon project work.
Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity, against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.
Assessment shall include those aspects that are consistent with the work environment of this unit.
Competency shall be assessed while work is undertaken autonomously, within a team environment.
Assessment may be intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of the process.
Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Range Statement

Plant and equipment include:
?? all small mechanical construction equipment including
compressor
concrete mixer
industrial wet and dry vacuum cleaner
pallet trolley
elevated work platforms
rollers
compaction equipment
pumps and wheelbarrow
brick/masonry saw
terrazzo grinders
hoists
Reports and/or instruction may be written or verbal.

Plant and equipment include:

?? all small mechanical construction equipment including

compressor

concrete mixer

industrial wet and dry vacuum cleaner

pallet trolley

elevated work platforms

rollers

compaction equipment

pumps and wheelbarrow

brick/masonry saw

terrazzo grinders

hoists

Reports and/or instruction may be written or verbal.

Unit Sector(s)

Not applicable.

BCC2001A Carry out basic site survey

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

- | | |
|-------------------------|---------------------------------------------------------------------------|
| 1 Plan and prepare work | 1.1 Requirements of job are determined. |
| | 1.2 Relative reduced levels are obtained. |
| | 1.3 Personal protective equipment is selected, correctly fitted and used. |

- | | | |
|---|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 1.4 | Tools and equipment are selected consistent with needs of jobs. |
| | 1.5 | Quality Assurance requirements recognised and adhered to. |
| 2 | Maintain given level or specified slope with boning rods | <p>2.1 Heights of each end of line to be boned are established.</p> <p>2.2 End boning rods are securely fixed to required heights.</p> <p>2.3 Heights of intermediate points are sighted with boning rods to +10mm.</p> |
| 3 | Set up and use dumpy level | <p>3.1 Heights to be transferred/established are identified.</p> <p>3.2 Dumpy level is correctly set up.</p> <p>3.3 Levels are shot and heights marked/recorded to job requirements of >3 mm misclose.</p> |
| 4 | Set up and use horizontal laser level | <p>4.1 Heights to be transferred/established are identified.</p> <p>4.2 Horizontal laser is correctly set up with clear sight lines.</p> <p>4.3 Levels are shot and height marked/recorded to job requirements of >3mm misclose.</p> |
| 5 | Clean up | 5.1 All equipment and tools are cleaned, maintained and returned to store. |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe and effective use of levelling equipment for any of the purposes listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:
 compliance with Occupational Health&Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures undertaken during construction process activities

safe and effective operational use of tools, plant and equipment and communication relative to site survey work

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements.

hand tools and equipment

materials

measurement and calculations

interpreting plans

Quality Assurance

Skills

The ability to:

work safely to instructions

handle material

select material

measure

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction equipment relative to surveying

plant and equipment appropriate to the civil construction process

suitable work area appropriate to the civil construction process

suitable plans/specifications relative to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Competency is to be demonstrated by the safe and effective use of levelling equipment for any of the purposes listed within the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health&Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures undertaken during construction process activities

safe and effective operational use of tools, plant and equipment and communication relative to site survey work

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements.

hand tools and equipment

materials

measurement and calculations

interpreting plans

Quality Assurance

Skills

The ability to:

work safely to instructions

handle material

select material

measure

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction equipment relative to surveying

plant and equipment appropriate to the civil construction process

suitable work area appropriate to the civil construction process

suitable plans/specifications relative to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Range Statement

Work to include simple levelling tasks such as shooting levels for concrete slabs, civil construction works, carpark, housepads and basic drainage levels.

Work to include simple levelling tasks such as shooting levels for concrete slabs, civil construction works, carpark, housepads and basic drainage levels

Unit Sector(s)

Not applicable.

BCC2003A Assist with excavation and support installation

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

1 Plan and prepare work

1.1 Quality Assurance requirements recognised and adhered to.

1.2 OH&S requirements adhered to.

1.3 Personal protective equipment selected, correctly fitted and used.

- | | | |
|---|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 1.4 | Tools and equipment selected consistent with needs of job and checked for serviceability. |
| 2 | Set out excavation and erect safety equipment | <p>2.1 Safety barricades, signs and lights erected in position as required by OH&S requirements.</p> <p>2.2 Excavation located, site pegs installed, service markers identified and excavation limits marked for instruction or job drawing.</p> |
| 3 | Assist machine excavation operations | <p>3.1 Machine operator assisted with excavation ensuring it is to line and depth.</p> <p>3.2 Excavation cleaned out by hand to job requirements.</p> |
| 4 | Install excavation support | <p>4.1 Excavation works carried out in accordance with regulatory authorities requirements.</p> <p>4.2 Trench/excavation support installed to instruction.</p> |
| 5 | Clean up | <p>5.1 Site cleaned and cleared of unwanted excavated material.</p> <p>5.2 Tools, cleaned, maintained and stored.</p> |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe and effective excavation and installation of support for different types of excavations listed in the range of variables statement.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures during construction

safe and effective operational use of tools, plant and equipment and communications to enable safe excavation and support installation

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements including relevant legislation regulations and codes

measurements

hand tools and equipment

materials and handling methods

Quality Assurance

workplace communication

Skills

The ability to:

work safely to instructions

use hand tools

handle material

select material

measure

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials relative to civil construction works

hand and power tools, plant and equipment appropriate to the civil construction activity

plant and equipment appropriate to the relative construction activity

suitable work area appropriate to the construction activity

suitable plan/specifications relative to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Competency is to be demonstrated by the safe and effective excavation and installation of support for different types of excavations listed in the range of variables statement.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements.

correct procedures during construction

safe and effective operational use of tools, plant and equipment and communications to enable safe excavation and support installation

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements including relevant legislation regulations and codes

measurements

hand tools and equipment

materials and handling methods

Quality Assurance

workplace communication

Skills

The ability to:

work safely to instructions

use hand tools

handle material

select material

measure

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials relative to civil construction works

hand and power tools, plant and equipment appropriate to the civil construction activity

plant and equipment appropriate to the relative construction activity

suitable work area appropriate to the construction activity

suitable plan/specifications relative to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Range Statement

Work carried out in a team situation under direct supervision. Installation of excavation support applies to trench/excavation depth in excess of 1.5m.

Excavation includes:

wells

pits

trenches

Instructions may include:

verbal

written

Work carried out in a team situation under direct supervision. Installation of excavation support applies to trench/excavation depth in excess of 1.5m.

Excavation includes:

wells

pits

trenches

Instructions may include:

verbal

written

Unit Sector(s)

Not applicable.

BCC2004A Lay pipes

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

1 Plan and prepare job

1.1 OH&S requirements adhered to.

1.2 Quality Assurance requirements recognised and adhered to.

1.3 Personal protective equipment selected, correctly fitted and used.

- 1.4 Tools and equipment selected consistent with requirements of job.
 - 1.5 Materials required for job transported to location and stacked in a safe position.
- 2 Set out and excavate trenches
 - 2.1 Location and depths of trenches determined from job drawings.
 - 2.2 Trench location set out with pegs and string line and clearly marked with appropriate marking material.
 - 2.3 Manual support provided to machine operator with excavation of trenches, shoring or battering.
 - 2.4 Trenches cleaned out by hand and corners left square.
 - 2.5 Trench depths and grades checked for conformity to job requirements.
- 3 Install bedding materials
 - 3.1 Bedding materials laid and consolidated to specified depths and grades.
- 4 Lower and position pipes
 - 4.1 Pipes installed/lowered into position and in line with appropriate mechanical equipment.
 - 4.2 Pipe joints constructed to job specification.
 - 4.3 Pipe installed to specifications.
 - 4.4 Pipe back filled to specifications and cover left level with surrounding ground.
- 5 Clean up
 - 5.1 Site cleared and excess soil, debris and unwanted materials removed.
 - 5.2 Tools and equipment cleaned, maintained and stored.

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe and effective preparation and installation of the various pipe types as listed in the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements

correct procedures during construction

safe and effective operational use of tools, plant and equipment and communications to undertake safe pipelaying

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements including relevant legislation regulations and codes.

competence equipment.

hand tools and equipment.

materials and handling methods.

measurements

levelling

hand signals

Quality Assurance

workplace communication

Skills

The ability to:

work safely to instructions

use power tools and hand tools

handle material

select material

measure

level

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials relevant to civil construction works

hand and power tools, plant and equipment appropriate to the civil construction process

suitable work area appropriate to the civil construction process

suitable plan/specifications relevant to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work. Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Competency is to be demonstrated by the safe and effective preparation and installation of the various pipe types as listed in the range of variables statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

compliance with Occupational Health and Safety regulations and State/Territory legislation applicable to work place operations

compliance with organisational policies and procedures including Quality Assurance requirements

correct procedures during construction

safe and effective operational use of tools, plant and equipment and communications to undertake safe pipelaying

(2) Pre-requisite Relationship of Units

This unit of competency is dependent upon acquiring the relevant pre-requisite competencies in basic industry and basic stream skills.

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements including relevant legislation regulations and codes.

competence equipment.

hand tools and equipment.

materials and handling methods.

measurements

levelling

hand signals

Quality Assurance

workplace communication

Skills

The ability to:

work safely to instructions

use power tools and hand tools

handle material

select material

measure

level

apply Quality Assurance

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials relevant to civil construction works

hand and power tools, plant and equipment appropriate to the civil construction process

suitable work area appropriate to the civil construction process

suitable plan/specifications relevant to the work orientation

(5) Method of Assessment

Competency should be assessed through direct observation and questions related to underpinning knowledge.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is undertaken under general guidance, checking at various stages of the process and at the completion of the activity against the performance criteria and specifications.

(6) Context of Assessment

Competency shall be assessed in the normal or simulated workplace environment and in accordance with safe work procedures.

Assessment shall include those aspects that are consistent with the work environment of this unit.

Competency shall be assessed while work is undertaken autonomously, within a team environment.

Assessment may be intermittent checking at various stages of the job application with the performance criteria, or may be at the completion of the process.

Guidelines will be in line with statutory requirements, enterprise specific policies and procedures and codes of practice.

Range Statement

This unit applies to the preparation and installation of pipes in civil works.

Pipes include:

concrete

steel

PVC.

This unit applies to the preparation and installation of pipes in civil works.

Pipes include:

concrete

steel

PVC.

Unit Sector(s)

Not applicable.

BCG1008A Use simple levelling devices

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

1 Plan and prepare work

1.1 OH&S requirements recognised and adhered to in accordance with application tasks and workplace environment.

1.2 Requirements of job identified from drawings or instructions.

- | | | |
|---|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| | 1.3 | Appropriate personal protective equipment selected, correctly fitted and used. |
| | 1.4 | Tools and equipment selected consistent with job requirements, checked for serviceability and any faults reported to supervisor. |
| | 1.5 | Quality Assurance requirements recognised and adhered to in accordance with company's construction operations. |
| 2 | Set up and use levelling device | |
| | 2.1 | Heights to be transferred, identified from given instructions or drawings. |
| | 2.2 | Work assembled and filled with water to required level with air bubbles removed. |
| | 2.3 | Height transferred to required locations to a tolerance of + or - 5mm over 3 metres. |
| 3 | Transfer heights with straight edge and spirit level | |
| | 3.1 | Heights to be transferred identified from given instructions/drawings/given marked level. |
| | 3.2 | Height transferred to required location to + or - 5mm over 3 metres. |
| 4 | Maintain given level or specified slope with boning rods | |
| | 4.1 | Heights of each end of line to be boned established to given levels. |
| | 4.2 | End of boning rods securely fixed to required heights. |
| | 4.3 | Heights of intermediate points sighted and marked with boning rods to a tolerance of + 10mm. |
| 5 | Clean up | |
| | 5.1 | Tools and equipment cleaned, maintained and stored. |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by carrying out the effective application of the different types of levelling devices listed within the range statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations

indicate compliance with organisational policies and procedures including Quality Assurance requirements

carry out correct procedures prior to and during application of levelling and boning processes

demonstrate safe and effective handling and operational use of levelling device

indicate care in accurately transferring levels to other locations

interactive communication with others to ensure safe and effective levelling operations.

(2) Pre-requisite Relationship of Units

Nil

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements

hand tools

measurement and calculation

Quality Assurance

range of levelling devices

horizontal/vertical concepts

Skills

The ability to:

work safely to instructions

measure

use hand tools

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials appropriate to levelling

hand tools appropriate to levelling and lining

equipment appropriate to the activity processes

suitable work area appropriate to the activities

suitable plans/drawings and specification

(5) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit should be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

(6) Context of Assessment

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

Competency is to be demonstrated by carrying out the effective application of the different types of levelling devices listed within the range statement relative to the work orientation.

(1) Critical Aspects of Evidence

It is essential that competence is observed in the following aspects:

demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
indicate compliance with organisational policies and procedures including Quality Assurance requirements
carry out correct procedures prior to and during application of levelling and boning processes
demonstrate safe and effective handling and operational use of levelling device
indicate care in accurately transferring levels to other locations
interactive communication with others to ensure safe and effective levelling operations.

(2) Pre-requisite Relationship of Units

Nil

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

workplace and equipment safety requirements

hand tools

measurement and calculation

Quality Assurance

range of levelling devices

horizontal/vertical concepts

Skills

The ability to:

work safely to instructions

measure

use hand tools

communicate effectively

(4) Resource Implications

The following resources should be made available:

general construction materials appropriate to levelling

hand tools appropriate to levelling and lining

equipment appropriate to the activity processes

suitable work area appropriate to the activities

suitable plans/drawings and specification

(5) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit should be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria, or may be at the completion of each process.

(6) Context of Assessment

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

Range Statement

This unit applies to using simple levelling devices to carry out basic exercises in transferring levels and/or maintaining a line of a slope.

Levelling and lining devices include:

water level

spirit level

boning rods

Heights or levels may be given by:

drawing/sketch indicating mark

verbal or written instruction indicating level or mark

datum/survey peg fixed into ground

chalk or nail mark on paved/concrete surface

mark on vertical surface

Associated tools and equipment include:

string line

wooden/steel pegs

straight edge

hammer

chalk line

Personal protective equipment may include:

overalls

boots

hard hat/cap

safety glasses

dust jacket

masks/respirators

Work may be carried out under supervision and in a team situation or individually.

Reporting of faults may be verbal or written.

This unit applies to using simple levelling devices to carry out basic exercises in transferring levels and/or maintaining a line of a slope.

Levelling and lining devices include:

water level

spirit level

boning rods

Heights or levels may be given by:

drawing/sketch indicating mark

verbal or written instruction indicating level or mark

datum/survey peg fixed into ground

chalk or nail mark on paved/concrete surface

mark on vertical surface

Associated tools and equipment include:

string line

wooden/steel pegs

straight edge

hammer

chalk line

Personal protective equipment may include:

overalls

boots

hard hat/cap

safety glasses

dust jacket

masks/respirators

Work may be carried out under supervision and in a team situation or individually.
Reporting of faults may be verbal or written.

Unit Sector(s)

Not applicable.

BCG1010A Carry out concreting to simple forms

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Select tools and equipment	1.1 Metadata only. Please contact NTIS/DEEWR
2 Erect and strip simple formwork	2.1 Metadata only. Please contact NTIS/DEEWR
3 Place and tie reinforcement	3.1 Metadata only. Please contact NTIS/DEEWR

- | | | | |
|---|----------------|-----|------------------------------------------|
| 4 | Place concrete | 4.1 | Metadata only. Please contact NTIS/DEEWR |
| 5 | Clean up | 5.1 | Metadata only. Please contact NTIS/DEEWR |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Competency is to be demonstrated by the safe installation of formwork, reinforcement and concrete using any two of the simple forms listed within the range of variables statement relevant to the work orientation.

(1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations

- indicate compliance with organisational policies and procedures including Quality Assurance requirements

- carry out correct procedures prior to and during construction processes

- demonstrate safe and effective operational use of tools, plant and equipment

- interactively communicate with others to ensure safe and effective operations

(2) Pre-requisite Relationship of Units

Pre-requisites in this unit are:

- BCG1001A Carry out OH&S requirements

- BCG1005A Use hand and power tools

- BCG1006A Use small plant and equipment

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

- workplace and equipment safety requirements

- hand tools and equipment

- materials

- materials handling

- measurement

- transporting, placing concrete

- levelling equipment

- simple formwork and reinforcement componentry

- select and handle materials appropriate to concreting processes

Skills

The ability to:

- work safely to instructions

- measure relative to the concreting process

- use power tools and hand tools

- use simple levelling equipment

- communicate effectively
- select and handle materials appropriate to concreting processes

(4) Resource Implications

The following resources should be made available:

- general construction materials relevant to forming, reinforcing and placement of concrete
- hand tools and power tools appropriate to construction process
- tools and equipment appropriate to construction process
- suitable work area appropriate to concreting process
- information relevant to OH&S requirements

(5) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work. Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

(6) Context of Assessment

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

Competency is to be demonstrated by the safe installation of formwork, reinforcement and concrete using any two of the simple forms listed within the range of variables statement relevant to the work orientation.

(1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

- demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations
- indicate compliance with organisational policies and procedures including Quality Assurance requirements
- carry out correct procedures prior to and during construction processes
- demonstrate safe and effective operational use of tools, plant and equipment
- interactively communicate with others to ensure safe and effective operations

(2) Pre-requisite Relationship of Units

Pre-requisites in this unit are:

- BCG1001A Carry out OH&S requirements
- BCG1005A Use hand and power tools
- BCG1006A Use small plant and equipment

(3) Underpinning Knowledge and Skills

Knowledge

A knowledge of:

- workplace and equipment safety requirements
- hand tools and equipment
- materials
- materials handling
- measurement
- transporting, placing concrete
- levelling equipment
- simple formwork and reinforcement componentry
- select and handle materials appropriate to concreting processes

Skills

The ability to:

- work safely to instructions
- measure relative to the concreting process
- use power tools and hand tools
- use simple levelling equipment
- communicate effectively
- select and handle materials appropriate to concreting processes

(4) Resource Implications

The following resources should be made available:

- general construction materials relevant to forming, reinforcing and placement of concrete
- hand tools and power tools appropriate to construction process
- tools and equipment appropriate to construction process
- suitable work area appropriate to concreting process
- information relevant to OH&S requirements

(5) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competency in this unit may be determined concurrently, based on integrated project work.

Assessment may be by intermittent checking at the various stages of the job application in accordance with the performance criteria.

(6) Context of Assessment

Competency shall be assessed in the workplace or simulated workplace environment in accordance with work practices and safety procedures.

Range Statement

This unit applies to placing concrete to simple forms and excavations which includes:

- post holes
- trench foundations
- pad foundations
- slabs
- pathways
- simple concrete aprons
- channels
- garden edges

Concrete placement methods include:

- shovel
- wheelbarrow
- shute
- pump line

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses/goggles
- gum boots
- face masks
- waterproof pants and jacket

Concrete finishes include:

- wood floated
- steel floated
- broom brushed

Formwork in this unit applies to edging forms where structural components would include:

- edge boards
- pegs
- struts
- bracing

Work is to be undertaken in a team situation or individually under supervision.

Reporting of faults may be verbal or written.

Excess material and debris includes:

- excavated loose soil
- off cut timber
- paper
- rags
- sticks
- nails

OH&S requirements are in accordance with State/Territory legislation.

This unit applies to placing concrete to simple forms and excavations which includes:

- post holes
- trench foundations
- pad foundations
- slabs
- pathways
- simple concrete aprons
- channels
- garden edges

Concrete placement methods include:

- shovel
- wheelbarrow
- shute
- pump line

Personal protective equipment may include:

- overalls
- boots
- hard hat/cap
- safety glasses/goggles
- gum boots
- face masks
- waterproof pants and jacket

Concrete finishes include:

- wood floated
- steel floated
- broom brushed

Formwork in this unit applies to edging forms where structural components would include:

- edge boards
- pegs

struts
bracing

Work is to be undertaken in a team situation or individually under supervision.

Reporting of faults maybe verbal or written.

Excess material and debris includes:

excavated loose soil
off cut timber
paper
rags
sticks
nails

OH&S requirements are in accordance with State/Territory legislation.

Unit Sector(s)

Not applicable.

BSZ401A Plan assessment

Modification History

Not applicable.

Unit Descriptor

This unit covers the requirements for planning an assessment in a specific context. The unit details the requirements for determining evidence requirements, selecting appropriate assessment methods and developing an assessment tool in a specific context.

This unit covers the requirements for planning an assessment in a specific context. The unit details the requirements for determining evidence requirements, selecting appropriate assessment methods and developing an assessment tool in a specific context

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

- | | | | |
|---|-----------------------------|-----|-------------------------------------------------------------------------------------------------|
| 1 | Establish evidence required | 1.1 | The evidence required to infer competency from the industry/enterprise competency standards, or |
|---|-----------------------------|-----|-------------------------------------------------------------------------------------------------|

- | | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| for a specific context | <p>other standards of performance, is established for a specified context</p> <p>1.2 Relevant unit(s) of competency is read and interpreted accurately to identify the evidence required</p> <p>1.3 Specified evidence requirements: , assure valid and reliable inferences of competency, authenticate the performance of the person being assessed and confirm that competency is current</p> <p>1.4 Sufficient evidence is specified to show consistent achievement of the specified standards</p> <p>1.5 The cost of gathering the required evidence is established</p> |
| 2 Establish suitable assessment method(s) | <p>2.1 Assessment methods are selected which are appropriate for gathering the type and amount of evidence required</p> <p>2.2 Opportunities to consolidate evidence gathering activities are identified</p> <p>2.3 Allowable adjustments in the assessment method are proposed to cater for the characteristics of the person(s) being assessed</p> |
| 3 Develop assessment tools appropriate to a specific assessment context | <p>3.1 An assessment tool is developed to gather valid, reliable and sufficient evidence for a specific assessment context</p> <p>3.2 The assessment tool is designed to mirror the language used to demonstrate the competency in a specific context</p> <p>3.3 Clear instructions (spoken or written) are prepared including any adjustments which may be made to address the characteristics of the person(s) being assessed</p> <p>3.4 The assessment tool is checked to ensure flexible, fair, safe and cost-effective assessment to occur</p> |
| 4 Trial assessment procedure | <p>4.1 Assessment methods and tools are trialed with an appropriate sample of people to be assessed</p> <p>4.2 Evaluation of the methods and tools used in the trial provides evidence of clarity, reliability,</p> |

validity, fairness, cost effectiveness and ease of administration

- 4.3 Appropriate adjustments are made to improve the assessment method and tools in light of the trial
- 4.4 Assessment procedures, including evidence requirements, assessment methods and tools, are ratified with appropriate personnel in the industry/enterprise and/or training organisation where applicable

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Documentation in relation to:

- specific assessment context, including the purpose of assessment
- features of the assessment system
- characteristics of the person being assessed
- evidence of competency required
- plan of opportunities for gathering the evidence required
- assessment methods selected including any allowable adjustments to meet characteristics of person(s) being assessed

An assessment tool(s) for the specific assessment context which ensures valid, reliable, flexible and fair assessment including any allowable adjustments.

An assessment procedure for the specific context.

Assessment requires evidence of the following processes to be provided:

How the context of assessment was specified

How the characteristics of the person(s) being assessed were identified

Why a particular assessment method was selected

How the assessment was planned to ensure that language, literacy and numeracy issues were taken into consideration

How evidence was evaluated in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standard

How the assessment tool was developed for the specified context

How the assessment tool was validated and ratified by appropriate personnel.

Interdependent assessment of units

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills

Knowledge of standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements relevant to the specified context

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Knowledge of the Assessment Guidelines of the Training Package Assessment and Workplace Training

Skills in the application of various assessment methods, relevant to workplace context

Planning of own work including predicting consequences and identifying improvements

Language, literacy and numeracy skills required to:

- read and interpret relevant information to plan assessment
- give clear and precise information / instructions in spoken or written form
- adjust spoken and written language to suit target audience
- write assessment tools using language which mirrors the language used to demonstrate the competency in the specific context
- prepare required documentation using clear and comprehensible language and layout
- calculate and estimate costs

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications

Access to relevant competencies, sources of information on assessment methods, assessment tools and assessment procedures

Access to person(s) wishing to be assessed, any relevant workplace equipment, information and appropriate personnel.

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions, involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment should occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their area of technical expertise.

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Documentation in relation to:

- specific assessment context, including the purpose of assessment
- features of the assessment system
- characteristics of the person being assessed
- evidence of competency required
- plan of opportunities for gathering the evidence required
- assessment methods selected including any allowable adjustments to meet characteristics of person(s) being assessed

An assessment tool(s) for the specific assessment context which ensures valid, reliable, flexible and fair assessment including any allowable adjustments.

An assessment procedure for the specific context.

Assessment requires evidence of the following processes to be provided:

How the context of assessment was specified

How the characteristics of the person(s) being assessed were identified

Why a particular assessment method was selected

How the assessment was planned to ensure that language, literacy and numeracy issues were taken into consideration

How evidence was evaluated in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standard

How the assessment tool was developed for the specified context

How the assessment tool was validated and ratified by appropriate personnel.

Interdependent assessment of units

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills

Knowledge of standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements relevant to the specified context

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Knowledge of the Assessment Guidelines of the Training Package Assessment and Workplace Training

Skills in the application of various assessment methods, relevant to workplace context

Planning of own work including predicting consequences and identifying improvements

Language, literacy and numeracy skills required to:

- read and interpret relevant information to plan assessment

- give clear and precise information / instructions in spoken or written form

- adjust spoken and written language to suit target audience

- write assessment tools using language which mirrors the language used to demonstrate the competency in the specific context

- prepare required documentation using clear and comprehensible language and layout

- calculate and estimate costs

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications

Access to relevant competencies, sources of information on assessment methods, assessment tools and assessment procedures

Access to person(s) wishing to be assessed, any relevant workplace equipment, information and appropriate personnel.

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions, involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment should occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their area of technical expertise.

Range Statement

Assessment system may be developed by:

the industry through the endorsed component of Training Packages Assessment Guidelines

the enterprise
a Registered Training Organisation
a combination of the above.

The assessment system should specify the following:

the purpose of assessment
competencies required of assessors
record keeping procedures and policies
any allowable adjustments to the assessment method which may be made
the appeal/review mechanisms and procedures
the review and evaluation of the assessment process
the linkages between assessment and training qualifications/awards
employee classification
remuneration
progression
relevant policies
quality assurance mechanisms
apportionment of costs/fees (if applicable)
marketing/promotion of assessment
verification arrangements
auspicing arrangements, if applicable
partnership arrangements, if applicable.

Specific assessment context may be determined by:

purpose of the assessment such as
to gain a particular qualification or a licence
to determine employee classification
to recognise prior learning/current competencies
to identify training needs or progress.
location of the assessment such as:
on the job or off the job
combination of both.

Assessment Guidelines of Training Package or other assessment requirements

Characteristics of persons being assessed may include:

language, literacy and numeracy needs
cultural, language and educational background
gender
physical ability
level of confidence, nervousness or anxiety
age
experience in training and assessment
previous experience with the topic.

Appropriate Personnel many include:

Assessors
person(s) being assessed
employee/union representatives
consultative committees
users of assessment information such as training providers, employers, human resource departments
State/Territory Training/Recognition Authorities

training and assessment coordinators
relevant managers/supervisors team leaders
technical specialists.

Appropriate procedure:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

- recording procedure
- appeal/review mechanism
- assessment methods to be used
- instructions/materials to be provided to the person(s) being assessed
- criteria for making decisions of competent, or not yet competent
- number of assessors
- assessment tools
- evidence required
- location of assessment
- timing of assessment
- assessment group size
- allowable adjustments to the assessment procedure depending on the characteristics of the person being assessed.

Assessment methods may include:

direct observation of performance, products, practical tasks, projects and simulation exercises
review of log books/or and portfolios of evidence
consideration of third party reports and authenticated prior achievements
written, oral or computer managed questioning

These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises
specific instructions to be given in relation to the production of projects and exercises
sets of verbal/written/computer based questions to be asked
performance checklists
log books
descriptions of competent performance.

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Assessment environment and resources to be considered include:

time
location
personnel
finances/costs
equipment
materials

OHS requirements

enterprise/industry standard operating procedures.

Allowable adjustments may include:

provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)

use of adaptive technology or special equipment (eg word processor or lifting gear)

design of shorter assessment sessions to allow for fatigue or medication

use of large print version of any papers.

Assessment system may be developed by:

the industry through the endorsed component of Training Packages Assessment Guidelines
the enterprise

a Registered Training Organisation

a combination of the above.

The assessment system should specify the following:

the purpose of assessment

competencies required of assessors

record keeping procedures and policies

any allowable adjustments to the assessment method which may be made

the appeal/review mechanisms and procedures

the review and evaluation of the assessment process

the linkages between assessment and training qualifications/awards

employee classification

remuneration

progression

relevant policies

quality assurance mechanisms

apportionment of costs/fees (if applicable)

marketing/promotion of assessment

verification arrangements

auspicing arrangements, if applicable

partnership arrangements, if applicable.

Specific assessment context may be determined by:

purpose of the assessment such as

to gain a particular qualification or a licence

to determine employee classification

to recognise prior learning/current competencies

to identify training needs or progress.

location of the assessment such as:

on the job or off the job

combination of both.

Assessment Guidelines of Training Package or other assessment requirements

Characteristics of persons being assessed may include:

language, literacy and numeracy needs

cultural, language and educational background

gender

physical ability

level of confidence, nervousness or anxiety

age

experience in training and assessment
previous experience with the topic.

Appropriate Personnel may include:

Assessors
person(s) being assessed
employee/union representatives
consultative committees
users of assessment information such as training providers, employers, human resource departments
State/Territory Training/Recognition Authorities
training and assessment coordinators
relevant managers/supervisors team leaders
technical specialists.

Appropriate procedure:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

- recording procedure
- appeal/review mechanism
- assessment methods to be used
- instructions/materials to be provided to the person(s) being assessed
- criteria for making decisions of competent, or not yet competent
- number of assessors
- assessment tools
- evidence required
- location of assessment
- timing of assessment
- assessment group size
- allowable adjustments to the assessment procedure depending on the characteristics of the person being assessed.

Assessment methods may include:

direct observation of performance, products, practical tasks, projects and simulation exercises
review of log books/or and portfolios of evidence
consideration of third party reports and authenticated prior achievements
written, oral or computer managed questioning
These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises
specific instructions to be given in relation to the production of projects and exercises
sets of verbal/written/computer based questions to be asked
performance checklists
log books

descriptions of competent performance.

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Assessment environment and resources to be considered include:

time

location

personnel

finances/costs

equipment

materials

OHS requirements

enterprise/industry standard operating procedures.

Allowable adjustments may include:

provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)

use of adaptive technology or special equipment (eg word processor or lifting gear)

design of shorter assessment sessions to allow for fatigue or medication

use of large print version of any papers.

Unit Sector(s)

Not applicable.

BSZ402A Conduct assessment

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

- | | |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Identify and explain the context of assessment | 1.1 The context and purpose of assessment are discussed and confirmed with the person(s) being assessed |
| | 1.2 The relevant performance standards to be used in the assessment (eg. current endorsed competency standards for the specific industry) are clearly |

- explained to the person being assessed
- 1.3 The assessment procedure is clarified and expectations of assessor and candidate are agreed
 - 1.4 Any legal and ethical responsibilities associated with the assessment are explained to the person(s) being assessed
 - 1.5 The needs of the person being assessed are determined to establish any allowable adjustments in the assessment procedure
 - 1.6 Information is conveyed using language and interactive strategies and techniques to communicate effectively with the person(s) being assessed
- 2 Plan evidence gathering opportunities
 - 2.1 Opportunities to gather evidence of competency, which occurs as part of workplace or training activities, are identified covering the dimensions of competency
 - 2.2 The need to gather additional evidence which may not occur as part of the workplace or training activities are identified
 - 2.3 Evidence gathering activities are planned to provide sufficient, reliable, valid and fair evidence of competency in accordance with the assessment procedure
- 3 Organise assessment
 - 3.1 The resources specified in the assessment procedure are obtained and arranged within a safe and accessible assessment environment
 - 3.2 Appropriate personnel are informed of the assessment
 - 3.3 Spoken interactions and any written documents employ language and strategies and techniques to ensure the assessment arrangements are understood by all person(s) being assessed and appropriate personnel
- 4 Gather evidence
 - 4.1 Verbal and non-verbal language is adjusted and strategies are employed to promote a supportive assessment environment to gather evidence

- 4.2 The evidence specified in the assessment procedure is gathered, using the assessment methods and tools
 - 4.3 Evidence is gathered in accordance with specified allowable adjustments where applicable
 - 4.4 The evidence gathered is documented in accordance with the assessment procedure
- 5 Make the assessment decision
 - 5.1 The evidence is evaluated in terms of: , validity , authenticity , sufficiency , currency , consistent achievement of the specified standard
 - 5.2 The evidence is evaluated according to the dimensions of competency: , task skills , task management skills , contingency management skills , job/role environment skill , transfer and application of knowledge and skills to new contexts
 - 5.3 Guidance is sought, when in doubt, from a more experienced assessor(s)
 - 5.4 The assessment decision is made in accordance with the criteria specified in the assessment procedure
- 6 Record assessment results
 - 6.1 Assessment results are recorded accurately in accordance with the specified record keeping requirements
 - 6.2 Confidentiality of assessment outcome is maintained and access to the assessment records is provided only to authorised personnel.
- 7 Provide feedback to persons being assessed
 - 7.1 Clear and constructive feedback in relation to performance is given to the person(s) being assessed using language and strategies to suit the person(s) including guidance on further goals/training opportunities is provided to the person(s) being assessed
 - 7.2 Opportunities for overcoming any gaps in competency, as revealed by the assessment, are explored with the person(s) being assessed
 - 7.3 The person(s) being assessed is advised of available reassessment opportunities and/or review appeal mechanisms where the assessment decision

is challenged

- | | | | |
|---|-----------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8 | Report on the conduct of the assessment | 8.1 | Positive and negative features experienced in conducting the assessment are reported to those responsible for the assessment procedure |
| | | 8.2 | Any assessment decision disputed by the person(s) being assessed is recorded and reported promptly to those responsible for the assessment procedure |
| | | 8.3 | Suggestions for improving any aspect of the assessment process are made to appropriate personnel |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Description of the assessment context, including the purpose of assessment,

The relevant competency or other performance standard and assessment procedure used

Description of how evidence gathered is valid, authentic, sufficient, fair and reliable to ensure competency

Conduct of assessment in accordance with competency requirements

Recording of the assessment results in accordance with the specified assessment procedure and record keeping requirements

Report on the conduct of the assessment, including positive and negative features and suggestions for improving any aspect of the assessment process.

Assessment requires evidence of the following processes to be provided:

How agreement was sought with the person(s) being assessed on the conduct of the assessment

How opportunities to gather evidence were identified as part of workplace or training activities

How evidence was gathered in accordance with the assessment procedure

How evidence gathering activity covered the dimensions of competency

How resources were arranged according to the assessment procedure

How appropriate personnel were consulted

How evidence was gathered in accordance with allowable adjustments to the assessment method where applicable

How evidence was evaluated in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standard

How the assessment was conducted to ensure that :

all arrangements and activities were understood by all parties

the person was put at ease and the supportive assessment environment was created
language, literacy and numeracy issues were taken into consideration
How constructive feedback was provided to the person(s) being assessed including instances of not yet competent

How guidance was provided to person(s) being assessed on how to overcome gaps in competency revealed.

Interdependent assessment of units

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required skills and knowledge

Knowledge of workplace application of relevant standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements relevant to the specified context

Understanding of policies and procedures of the workplace and/or job role together with any related legislation or regulatory requirements

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Assessment guidelines of the Training Package Assessment and Workplace Training

Planning of own work including predicting consequences and identifying improvements

Skills in the application of various assessment methods/tools, relevant to workplace context

Language, literacy and numeracy skills required to:

- give clear and precise instructions and information in spoken or written form
- seek confirmation of understanding from the person(s) being assessed
- adjust language to suit target audience
- prepare required documentation using clear and comprehensible language and layout
- ask probing questions and listen strategically to understand responses of the person being assessed

- seek additional information for clarification purposes

- use verbal and non-verbal language to promote a supportive assessment environment

- use language of negotiation and conflict resolution to minimise conflict

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications:

Access to relevant competencies, sources of information on assessment methods, assessment tools and assessment procedures

Access to person(s) wishing to be assessed, relevant workplace equipment, information and appropriate personnel.

Consistency of performance:

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Assessment context:

Assessment should occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their technical expertise.

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Description of the assessment context, including the purpose of assessment,

The relevant competency or other performance standard and assessment procedure used
Description of how evidence gathered is valid, authentic, sufficient, fair and reliable to ensure competency

Conduct of assessment in accordance with competency requirements

Recording of the assessment results in accordance with the specified assessment procedure and record keeping requirements

Report on the conduct of the assessment, including positive and negative features and suggestions for improving any aspect of the assessment process.

Assessment requires evidence of the following processes to be provided:

How agreement was sought with the person(s) being assessed on the conduct of the assessment

How opportunities to gather evidence were identified as part of workplace or training activities

How evidence was gathered in accordance with the assessment procedure

How evidence gathering activity covered the dimensions of competency

How resources were arranged according to the assessment procedure

How appropriate personnel were consulted

How evidence was gathered in accordance with allowable adjustments to the assessment method where applicable

How evidence was evaluated in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standard

How the assessment was conducted to ensure that :

- all arrangements and activities were understood by all parties

- the person was put at ease and the supportive assessment environment was created

- language, literacy and numeracy issues were taken into consideration

How constructive feedback was provided to the person(s) being assessed including instances of not yet competent

How guidance was provided to person(s) being assessed on how to overcome gaps in competency revealed.

Interdependent assessment of units

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required skills and knowledge

Knowledge of workplace application of relevant standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements relevant to the specified context

Understanding of policies and procedures of the workplace and/or job role together with any related legislation or regulatory requirements

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Assessment guidelines of the Training Package Assessment and Workplace Training

Planning of own work including predicting consequences and identifying improvements

Skills in the application of various assessment methods/tools, relevant to workplace context

Language, literacy and numeracy skills required to:

- give clear and precise instructions and information in spoken or written form

- seek confirmation of understanding from the person(s) being assessed

- adjust language to suit target audience
- prepare required documentation using clear and comprehensible language and layout
- ask probing questions and listen strategically to understand responses of the person being assessed

- seek additional information for clarification purposes
- use verbal and non-verbal language to promote a supportive assessment environment
- use language of negotiation and conflict resolution to minimise conflict

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications:

Access to relevant competencies, sources of information on assessment methods, assessment tools and assessment procedures

Access to person(s) wishing to be assessed, relevant workplace equipment, information and appropriate personnel.

Consistency of performance:

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Assessment context:

Assessment should occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their technical expertise.

Range Statement

Assessment system may be developed by:

- the industry
- the enterprise
- a Registered Training Organisation
- a combination of the above.

The assessment system should specify the following:

- the purpose of assessment
- competencies required of assessors
- record keeping procedures and policies
- any allowable adjustments to the assessment method which may be made
- the appeal/review mechanisms and procedures
- the review and evaluation of the assessment process
- the linkages between assessment and training qualifications/awards, employee classification, remuneration, progression
- relevant policies
- quality assurance mechanisms
- apportionment of costs/fees (if applicable)
- marketing/promotion of assessment
- verification arrangements
- auspicing arrangements, if applicable
- partnership arrangements, if applicable.

Specific assessment context may be determined by:

- purpose of the assessment, such as
 - to gain a particular qualification or a licence
 - to determine employee classification

- to identify training needs or progress
- to recognise prior learning/current competencies.

location of the assessment, such as

- on the job or off the job
- combination of both.

Assessment Guidelines of the relevant Training Package or other assessment requirements
features of assessment system.

Characteristics of persons being assessed may include:

- language, literacy and numeracy needs
- cultural, language and educational background
- gender
- physical ability
- level of confidence, nervousness or anxiety
- age
- experience in training and assessment
- previous experience with the topic.

Appropriate personnel may include:

- assessors
- person(s) being assessed
- employee/union representatives
- consultative committees
- users of assessment information such as training providers, employers, human resource departments
- State/Territory Training/Recognition Authorities
- training and assessment coordinators
- relevant managers/supervisors/team leaders
- technical specialists.

Assessment procedure may include:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

- recording procedure
- appeal/review mechanism
- assessment methods to be used
- instructions/materials to be provided to the person(s) being assessed
- criteria for making decisions of competent, or not yet competent
- number of assessors
- assessment tools
- evidence required
- location of assessment
- timing of assessment
- assessment group size
- allowable adjustments to the assessment procedure depending on the characteristics of the person(s) being assessed.

Assessment methods may include:

work samples and /or simulations
direct observation of performance, products, practical tasks, projects and simulation exercises
review of logbooks and portfolios
questioning
consideration of third party reports and authenticated prior achievements
written, oral or computer managed questioning
These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises
specific instructions to be given in relation to projects and exercises
sets of oral/written/computer based questions to be asked
performance checklists
log books
marking guides
descriptions of competent performance.

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Allowable adjustments may include:

provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)
use of adaptive technology or special equipment (eg work processor or lifting gear)
design of shorter assessment sessions to allow for fatigue or medication
use of large print version of any papers.

Assessment environment and resources to be considered may include:

time
location
personnel
finances/costs
equipment
materials
OHS requirements
enterprise/industry standard operating procedures.

Recording procedures may include:

forms designed for the specific assessment result (paper or electronic)
checklists for recording observations/process used (paper or electronic)
combination of the above.

Assessment reporting:

Final assessments will record the unit(s) of competency in terms of code, title and endorsement date

Summative assessment reports, where issued, will indicate units of competency where additional learning is required

NB: Statutory and legislative requirements for maintaining records may vary in States/Territories.

Assessment system may be developed by:

the industry

the enterprise
a Registered Training Organisation
a combination of the above.

The assessment system should specify the following:

the purpose of assessment
competencies required of assessors
record keeping procedures and policies
any allowable adjustments to the assessment method which may be made
the appeal/review mechanisms and procedures
the review and evaluation of the assessment process
the linkages between assessment and training qualifications/awards, employee classification, remuneration, progression
relevant policies
quality assurance mechanisms
apportionment of costs/fees (if applicable)
marketing/promotion of assessment
verification arrangements
auspicing arrangements, if applicable
partnership arrangements, if applicable.

Specific assessment context may be determined by:

purpose of the assessment, such as
to gain a particular qualification or a licence
to determine employee classification
to identify training needs or progress
to recognise prior learning/current competencies.
location of the assessment, such as
on the job or off the job
combination of both.

Assessment Guidelines of the relevant Training Package or other assessment requirements
features of assessment system.

Characteristics of persons being assessed may include:

language, literacy and numeracy needs
cultural, language and educational background
gender
physical ability
level of confidence, nervousness or anxiety
age
experience in training and assessment
previous experience with the topic.

Appropriate personnel may include:

assessors
person(s) being assessed
employee/union representatives
consultative committees
users of assessment information such as training providers, employers, human resource departments
State/Territory Training/Recognition Authorities
training and assessment coordinators

relevant managers/supervisors/team leaders
technical specialists.

Assessment procedure may include:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

- recording procedure
- appeal/review mechanism
- assessment methods to be used
- instructions/materials to be provided to the person(s) being assessed
- criteria for making decisions of competent, or not yet competent
- number of assessors
- assessment tools
- evidence required
- location of assessment
- timing of assessment
- assessment group size
- allowable adjustments to the assessment procedure depending on the characteristics of the person(s) being assessed.

Assessment methods may include:

- work samples and /or simulations
- direct observation of performance, products, practical tasks, projects and simulation exercises
- review of logbooks and portfolios
- questioning
- consideration of third party reports and authenticated prior achievements
- written, oral or computer managed questioning

These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

- specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises
- specific instructions to be given in relation to projects and exercises
- sets of oral/written/computer based questions to be asked
- performance checklists
- log books
- marking guides
- descriptions of competent performance.

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Allowable adjustments may include:

- provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)
- use of adaptive technology or special equipment (eg work processor or lifting gear)
- design of shorter assessment sessions to allow for fatigue or medication

use of large print version of any papers.

Assessment environment and resources to be considered may include:

time

location

personnel

finances/costs

equipment

materials

OHS requirements

enterprise/industry standard operating procedures.

Recording procedures may include:

forms designed for the specific assessment result (paper or electronic)

checklists for recording observations/process used (paper or electronic)

combination of the above.

Assessment reporting:

Final assessments will record the unit(s) of competency in terms of code, title and endorsement date

Summative assessment reports, where issued, will indicate units of competency where additional learning is required

NB: Statutory and legislative requirements for maintaining records may vary in States/Territories.

Unit Sector(s)

Not applicable.

BSZ403A Review assessment

Modification History

Not applicable.

Unit Descriptor

This unit covers requirements to review assessment procedures in a specific context.
This unit covers requirements to review assessment procedures in a specific context

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Review the assessment procedure(s)	1.1 Appropriate personnel are given the opportunity to review the assessment outcomes and procedure using agreed evaluation criteria 1.2 The review process established by the enterprise, industry or registered training organisation is

- followed
- 1.3 The assessment procedure(s) is reviewed at a specified site in cooperation with person(s) being assessed, and any appropriate personnel in the industry/enterprise/training establishment and/or any agency identified under legislation
 - 1.4 Review activities are documented, findings are substantiated and the review approach evaluated.
- 2 Check consistency of assessment decision
 - 2.1 Evidence from a range of assessments is checked for consistency across the dimensions of competency
 - 2.2 Evidence is checked against the key competencies
 - 2.3 Consistency of assessment decisions with defined performance standards are reviewed and discrepancies and inconsistencies are noted and acted upon
 - 3 Report review findings
 - 3.1 Recommendations are made to appropriate personnel for modifications to the assessment procedure(s) in light of the review outcomes
 - 3.2 Records are evaluated to determine whether the needs of appropriate personnel have been met
 - 3.3 Effective contributions are made to system-wide reviews of the assessment process and feedback procedures and are reviewed

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Documented process for the review of the assessment procedure(s)

A report on the review of the operations and outcomes of the assessment procedure(s) including substantiation of findings and any recommendations for modifications.

Assessment requires evidence of the following processes to be provided:

How the review process for evaluating the assessments in the enterprise, industry or organisation was implemented

Why particular review/evaluation methodologies were chosen

How cooperation and input from the person(s) assessed and appropriate personnel was sought as part of the review.

Interdependent assessment of units:

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills

Knowledge of the review process established by the industry, enterprise or training organisation

Knowledge of evaluation methodologies relevant to the assessment context

Relevant standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements

Knowledge of relevant organisational policies and procedures of the workplace and/or job roll

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Skills in the application of various assessment methods/tools in a relevant workplace context

Planning own work including predicting consequences and identifying improvements

Language, literacy and numeracy skills required to:

- read and interpret review procedures

- participate in discussions and listen strategically to evaluate information critically

- gather, select and organise findings from a number of sources

- document findings in summary form, graphs or tables

- present findings in a short report to relevant personnel

- make recommendations based on findings

- determine cost effectiveness

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications:

Access to relevant competencies, sources of information on assessment methods, assessment tools, assessment procedures and assessment review mechanisms.

Access to assessment decisions, relevant workplace equipment, appropriate personnel.

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment may occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their technical expertise.

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Documented process for the review of the assessment procedure(s)

A report on the review of the operations and outcomes of the assessment procedure(s) including substantiation of findings and any recommendations for modifications.

Assessment requires evidence of the following processes to be provided:

How the review process for evaluating the assessments in the enterprise, industry or organisation was implemented

Why particular review/evaluation methodologies were chosen

How cooperation and input from the person(s) assessed and appropriate personnel was sought as part of the review.

Interdependent assessment of units:

This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills

Knowledge of the review process established by the industry, enterprise or training organisation

Knowledge of evaluation methodologies relevant to the assessment context

Relevant standards of performance including industry or enterprise competency standards and assessment guidelines

Knowledge of legal and ethical responsibilities including occupational health and safety regulations and procedures, equal employment and anti-discrimination requirements

Knowledge of relevant organisational policies and procedures of the workplace and/or job roll

Understanding of the assessment principles of reliability, validity, fairness, flexibility, authenticity, sufficiency and consistency

Skills in the application of various assessment methods/tools in a relevant workplace context

Planning own work including predicting consequences and identifying improvements

Language, literacy and numeracy skills required to:

- read and interpret review procedures

- participate in discussions and listen strategically to evaluate information critically

- gather, select and organise findings from a number of sources

- document findings in summary form, graphs or tables

- present findings in a short report to relevant personnel

- make recommendations based on findings

- determine cost effectiveness

Communication skills appropriate to the culture of the workplace and the individual(s).

Resource implications:

Access to relevant competencies, sources of information on assessment methods, assessment tools, assessment procedures and assessment review mechanisms.

Access to assessment decisions, relevant workplace equipment, appropriate personnel.

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment may occur on the job or in a simulated workplace. The candidate assessor should use competencies relevant to their technical expertise.

Range Statement

Assessment system may be developed by:

the industry

the enterprise

the Registered Training Organisation

a combination of the above.

The assessment system should specify the following:

- the purpose of assessment
- competencies required of assessors
- record keeping procedures and policies
- any allowable adjustments to the assessment method which may be made for the person being assessed who have special needs
- the appeal/review mechanisms and procedures
- the review and evaluation of the assessment process
- the linkages between assessment and training qualifications/awards, employee classification, remuneration, progression
- relevant policies
- quality assurance mechanisms
- apportionment of costs/fees (if applicable)
- marketing/promotion of assessment
- verification arrangements
- auspicing arrangements, if applicable
- partnership arrangements, if applicable.

Specific assessment context may be determined by:

- purpose of the assessment such as
 - to gain a particular qualification or a licence
 - to determine employee classification
 - to identify training needs or progress
 - to recognise prior learning/current competencies
- location of the assessment such as
 - on the job or off the job
 - combination of both

Assessment Guidelines of Training Package or other assessment requirements
features of assessment system.

Evaluation criteria in review process should include:

- number of persons being assessed
- duration of the assessment procedure
- organisational constraints within which assessors must operate
- occupational health and safety factors
- relationship of the assessor to other appropriate personnel in the assessment process
- frequency of assessment procedure
- budgetary restraints
- information needs of government and other regulatory bodies
- support needs and professional development needs of assessors
- characteristics of persons being assessed
- human resource management implications
- consistency of assessment decisions
- levels of flexibility in the assessment procedure
- fairness of the assessment procedure
- efficiency and effectiveness of the assessment procedure
- competencies achieved by the person(s) being assessed
- difficulties encountered during the planning and conduct of the assessment
- motivation of the person(s) being assessed

location and resource suitability
reliability, validity, fairness and flexibility of the assessment tool(s)
relevance of assessment to specified context
grievances/challenges to the assessment decision by the person(s) being assessed or their supervisor/manager/employer
ease of administration
access and equity considerations
practicability.

Characteristics of persons being assessed may include:

language, literacy and numeracy needs
cultural and language background
educational background or general knowledge
gender
age
physical ability
previous experience with the topic
experience in training and assessment
level of confidence, nervousness or anxiety
work organisation or roster.

Appropriate personnel may include:

assessors
person(s) being assessed
employee/union representatives
consultative committees
users of assessment information such as training providers, employers, human resource departments
State/Territory Training/Recognition Authorities
training and assessment coordinators
relevant managers/supervisor/team leaders
technical specialists.

Assessment procedure:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

recording procedure
appeal/review mechanism
assessment methods to be used
instructions/materials to be provided to the person(s) being assessed
criteria for making decisions of competent, or not yet competent
number of assessors
assessment tools
evidence required
location of assessment
timing of assessment

assessment group size
allowable adjustments to the assessment procedure depending on characteristics of person(s) being assessed.

Assessment methods may include a combination of:

work samples and or simulations
direct observation of performance, products, practical tasks, projects and simulation exercises
review of logbooks and portfolios
questioning
consideration of third party reports and authenticated prior achievements
written, oral or computer managed questioning

These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises
specific instructions to be given in relations to the production projects and exercises
sets of oral/written/computer based questions to be asked
performance checklists
log books
marking guides
descriptions of competent performance

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Allowable adjustments may include:

provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)
use of adaptive technology or special equipment (eg work processor or lifting gear)
design of shorter assessment sessions to allow for fatigue or medication
use of large print version of any papers.

Assessment environment and resources to be considered

time
location
personnel
finances/costs
equipment
materials
OHS requirements
enterprise/industry standard operating procedures.

Assessment system may be developed by:

the industry
the enterprise
the Registered Training Organisation
a combination of the above.

The assessment system should specify the following:

the purpose of assessment
competencies required of assessors
record keeping procedures and policies

any allowable adjustments to the assessment method which may be made for the person being assessed who have special needs
the appeal/review mechanisms and procedures
the review and evaluation of the assessment process
the linkages between assessment and training qualifications/awards, employee classification, remuneration, progression
relevant policies
quality assurance mechanisms
apportionment of costs/fees (if applicable)
marketing/promotion of assessment
verification arrangements
auspicing arrangements, if applicable
partnership arrangements, if applicable.

Specific assessment context may be determined by:

purpose of the assessment such as
to gain a particular qualification or a licence
to determine employee classification
to identify training needs or progress
to recognise prior learning/current competencies

location of the assessment such as

on the job or off the job
combination of both

Assessment Guidelines of Training Package or other assessment requirements
features of assessment system.

Evaluation criteria in review process should include:

number of persons being assessed
duration of the assessment procedure
organisational constraints within which assessors must operate
occupational health and safety factors
relationship of the assessor to other appropriate personnel in the assessment process
frequency of assessment procedure
budgetary restraints
information needs of government and other regulatory bodies
support needs and professional development needs of assessors
characteristics of persons being assessed
human resource management implications
consistency of assessment decisions
levels of flexibility in the assessment procedure
fairness of the assessment procedure
efficiency and effectiveness of the assessment procedure
competencies achieved by the person(s) being assessed
difficulties encountered during the planning and conduct of the assessment
motivation of the person(s) being assessed
location and resource suitability
reliability, validity, fairness and flexibility of the assessment tool(s)
relevance of assessment to specified context
grievances/challenges to the assessment decision by the person(s) being assessed or their supervisor/manager/employer

ease of administration
access and equity considerations
practicability.

Characteristics of persons being assessed may include:

language, literacy and numeracy needs
cultural and language background
educational background or general knowledge
gender
age
physical ability
previous experience with the topic
experience in training and assessment
level of confidence, nervousness or anxiety
work organisation or roster.

Appropriate personnel may include:

assessors
person(s) being assessed
employee/union representatives
consultative committees
users of assessment information such as training providers, employers, human resource departments
State/Territory Training/Recognition Authorities
training and assessment coordinators
relevant managers/supervisor/team leaders
technical specialists.

Assessment procedure:

The assessment procedure is developed (and endorsed) by person(s) responsible for the implementation of the assessment process in:

- the industry
- the enterprise
- the training organisation
- a combination of the above.

The assessment procedure should specify the following:

recording procedure
appeal/review mechanism
assessment methods to be used
instructions/materials to be provided to the person(s) being assessed
criteria for making decisions of competent, or not yet competent
number of assessors
assessment tools
evidence required
location of assessment
timing of assessment
assessment group size
allowable adjustments to the assessment procedure depending on characteristics of person(s) being assessed.

Assessment methods may include a combination of:

work samples and or simulations

direct observation of performance, products, practical tasks, projects and simulation exercises
review of logbooks and portfolios

questioning

consideration of third party reports and authenticated prior achievements

written, oral or computer managed questioning

These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment tools may include:

specific instructions to be given relating to the performance of practical tasks or processes or simulation exercises

specific instructions to be given in relations to the production projects and exercises

sets of oral/written/computer based questions to be asked

performance checklists

log books

marking guides

descriptions of competent performance

A number of these tools may be used in combination in order to provide enough evidence to make judgments.

Allowable adjustments may include:

provision of personal support services (eg Auslan interpreter, reader, interpreter, attendant carer, scribe)

use of adaptive technology or special equipment (eg work processor or lifting gear)

design of shorter assessment sessions to allow for fatigue or medication

use of large print version of any papers.

Assessment environment and resources to be considered

time

location

personnel

finances/costs

equipment

materials

OHS requirements

enterprise/industry standard operating procedures.

Unit Sector(s)

Not applicable.

BSZ404A Train small groups

Modification History

Not applicable.

Unit Descriptor

This unit covers the requirements for planning, delivering and reviewing training provided for the purposes of developing competency on a one-to-one or small group basis.

This unit covers the requirements for planning, delivering and reviewing training provided for the purposes of developing competency on a one-to-one or small group basis

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element

Performance Criteria

1 Prepare for training

1.1 Specific needs for training are identified and confirmed through consultation with appropriate personnel

- 1.2 Training objectives are matched to identified competency development needs
- 1.3 Training approaches are planned and documented
- 2 Deliver training
 - 2.1 Training is conducted in a safe and accessible environment
 - 2.2 Training delivery methods are selected appropriate to training participant(s) needs, trainer availability, location and resources
 - 2.3 Strategies and techniques are employed which facilitate the learning process
 - 2.4 Objectives of the training, sequence of activities and assessment processes are discussed with training participant(s)
 - 2.5 A systematic approach is taken to training and the approach is revised and modified to meet specific needs of training participant(s)
- 3 Provide opportunities for practices
 - 3.1 Practice opportunities are provided to ensure that the participant achieves the components of competency
 - 3.2 Various methods for encouraging learning are implemented to provide diverse approaches to meet the individual needs of participants
- 4 Review training
 - 4.1 Participants are encouraged to self evaluate performance and identify areas for improvement
 - 4.2 Participants' readiness for assessment is monitored and assistance provided in the collection of evidence of satisfactory performance
 - 4.3 Training is evaluated in the context of self-assessment, participant feedback, supervisor comments and measurements against objectives
 - 4.4 Training details are recorded according to enterprise and legislative requirements
 - 4.5 Results of evaluation are used to guide further training

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

Description of the specific training need and required competency outcomes

Outline of the training approach and steps to be followed

Description of training participant(s) and delivery method(s) to be used

Specific resources required

Outline of the evidence to be collected for monitoring training participant progress

Trainer's self assessment of training delivery

Participant evaluation of training delivery

Evaluation of review comments against plan of training

Records/documentation for monitoring progress of training participant(s).

May be collected using proformas or template

Assessment requires evidence of the following processes to be provided:

How the specific training need was determined

How the sequence of the training was determined

How appropriate personnel were identified

Why particular delivery method(s) were selected

How the characteristics of training participant(s) as identified

How the resource requirements were established

How participant progress was monitored

Why and how the training resources were selected

How appropriate personnel confirmed training arrangements

How participant(s) were informed of:

- intended training outcomes

- competencies to be achieved

- on and/or off the job practice opportunities

- benefits of practices

- learning activities and tasks

- assessment tasks and requirements

How constructive feedback was provided to training participant about progress toward competency to be acquired

How training participant readiness for assessment was determined and confirmed

How records were maintained to ensure confidentiality, accuracy and security.

Evidence may be provided verbally or in written form

Interdependent assessment of units

This unit may be assessed in conjunction with other units that form part of a job function.

Required knowledge and skills:

Competency in the units being taught

Workplace application of the relevant competencies

Identification of evidence of competency

Planning of own work including predicting consequences and identifying improvements

Application of relevant workplace policies (eg OHS and EEO) and any relevant legislative or regulatory requirements

Correct use of equipment, and any other processes and procedures appropriate for the training

Ethical handling of performance issues

Language, literacy and numeracy required skills to:

- conduct discussions and ask probing questions to review the training

- gather information (in spoken or written form) for review purposes

- make verbal recommendations for delivery of future training

- adjust language to suit target audience (training participant/appropriate personnel)

- complete records on training

- provide verbal feedback&report on training outcomes

- follow and model examples of written texts

- promote training in verbal or written form

Communication skills appropriate to the culture of the workplace, appropriate personnel and training participants.

Resource implications

Access to records system for training, information, and training participants and supervisory staff (where appropriate).

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment may occur on the job or in a simulated workplace. Candidate workplace trainers should use competencies relevant to their area of technical expertise.

Critical aspects of evidence

Assessment requires evidence of the following products to be collected:

- Description of the specific training need and required competency outcomes

- Outline of the training approach and steps to be followed

- Description of training participant(s) and delivery method(s) to be used

- Specific resources required

- Outline of the evidence to be collected for monitoring training participant progress

- Trainer's self assessment of training delivery

- Participant evaluation of training delivery

- Evaluation of review comments against plan of training

- Records/documentation for monitoring progress of training participant(s).

- May be collected using proformas or template

Assessment requires evidence of the following processes to be provided:

- How the specific training need was determined

- How the sequence of the training was determined

- How appropriate personnel were identified

- Why particular delivery method(s) were selected

- How the characteristics of training participant(s) as identified

- How the resource requirements were established

- How participant progress was monitored

- Why and how the training resources were selected

- How appropriate personnel confirmed training arrangements

- How participant(s) were informed of:

intended training outcomes
competencies to be achieved
on and/or off the job practice opportunities
benefits of practices
learning activities and tasks
assessment tasks and requirements

How constructive feedback was provided to training participant about progress toward competency to be acquired

How training participant readiness for assessment was determined and confirmed

How records were maintained to ensure confidentiality, accuracy and security.

Evidence may be provided verbally or in written form

Interdependent assessment of units

This unit may be assessed in conjunction with other units that form part of a job function.

Required knowledge and skills:

Competency in the units being taught

Workplace application of the relevant competencies

Identification of evidence of competency

Planning of own work including predicting consequences and identifying improvements

Application of relevant workplace policies (eg OHS and EEO) and any relevant legislative or regulatory requirements

Correct use of equipment, and any other processes and procedures appropriate for the training

Ethical handling of performance issues

Language, literacy and numeracy required skills to:

conduct discussions and ask probing questions to review the training

gather information (in spoken or written form) for review purposes

make verbal recommendations for delivery of future training

adjust language to suit target audience (training participant/appropriate personnel)

complete records on training

provide verbal feedback&report on training outcomes

follow and model examples of written texts

promote training in verbal or written form

Communication skills appropriate to the culture of the workplace, appropriate personnel and training participants.

Resource implications

Access to records system for training, information, and training participants and supervisory staff (where appropriate).

Consistency in performance

Competency in this unit needs to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence.

Context for assessment

Assessment may occur on the job or in a simulated workplace. Candidate workplace trainers should use competencies relevant to their area of technical expertise.

Range Statement

Relevant information to identify training needs includes:

industry/enterprise or other performance competency standards

endorsed components of relevant industry training package
industry/workplace training practices
job descriptions
results of training needs analyses
business plans of the organisation which identify skill development requirements
standard operating and/or other workplace procedures.

Appropriate personnel may include:

team leaders/supervisors/ technical experts
managers/employers
training and assessment coordinators
training participants
representative government regulatory bodies
union/employee representatives
consultative committees
assessors.

Training delivery methods and opportunities for practice may include:

presentations
demonstrations
explanations
problem solving
mentoring
experiential learning
group work
on the job coaching
job rotation
a combination of the above.

Components of competency include:

task skills
task management skills
contingency management skills
job/role environment skills
transfer and application of skills and knowledge of new contents.

Characteristics of training participant may include information in relation to:

language, literacy and numeracy needs
cultural, language, and educational background
gender
physical ability
level of confidence, nervousness or anxiety
age
previous experience with the topic
experience in training and assessment.

Training sessions may include:

one to one demonstration
small group demonstration (2 to 5 persons).

Resources may include:

time
location
personnel

materials and equipment
OHS and other workplace requirements
enterprise/industry standard operating procedures
finances/costs.

Strategies and techniques may include:

active listening
targeted questioning
points of clarification
group discussions.

Relevant information to identify training needs includes:

industry/enterprise or other performance competency standards
endorsed components of relevant industry training package
industry/workplace training practices
job descriptions
results of training needs analyses
business plans of the organisation which identify skill development requirements
standard operating and/or other workplace procedures.

Appropriate personnel may include:

team leaders/supervisors/ technical experts
managers/employers
training and assessment coordinators
training participants
representative government regulatory bodies
union/employee representatives
consultative committees
assessors.

Training delivery methods and opportunities for practice may include:

presentations
demonstrations
explanations
problem solving
mentoring
experiential learning
group work
on the job coaching
job rotation
a combination of the above.

Components of competency include:

task skills
task management skills
contingency management skills
job/role environment skills
transfer and application of skills and knowledge of new contents.

Characteristics of training participant may include information in relation to:

language, literacy and numeracy needs
cultural, language, and educational background
gender
physical ability

level of confidence, nervousness or anxiety
age
previous experience with the topic
experience in training and assessment.

Training sessions may include:

one to one demonstration
small group demonstration (2 to 5 persons).

Resources may include:

time
location
personnel
materials and equipment
OHS and other workplace requirements
enterprise/industry standard operating procedures
finances/costs.

Strategies and techniques may include:

active listening
targeted questioning
points of clarification
group discussions.

Unit Sector(s)

Not applicable.

MEM18.55AA Dismantle, replace and assemble engineering components

Modification History

Not applicable.

Unit Descriptor

Not applicable.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Dismantle engineering components	1.1 Engineering components are inspected and task requirements analysed
	1.2 Component dismantled using standard operating procedures, tools and equipment.
	1.3 Engineering components are clearly marked to aid

- reassembly.
- 2 Identify faulty components
 - 2.1 Specifications for components obtained from appropriate source and interpreted and understood.
 - 2.2 Damaged or faulty components assessed against specifications.
 - 2.3 Faulty components are identified for repair, replacement or adjustment.
 - 3 Select replacement components
 - 3.1 Where applicable, replacement and/or repaired parts are selected for reassembly.
 - 4 Assemble engineering components into assemblies or sub-assemblies
 - 4.1 Appropriate techniques are applied in the preparation, assembly and adjustment of components using fastening equipment and methods which ensure conformance to specifications, operational performance, quality and safety of the completed assembly.
 - 4.2 Correct lubrication, packing, sealing materials selected and applied correctly in conformance to job specifications.
 - 4.3 Final component assembly inspected, tested and adjusted as necessary for compliance with operational specifications and returned to use according to standard operating procedure.

Required Skills and Knowledge

Not applicable.

Evidence Guide

Assessment context

This unit may be assessed on the job, off the job or a combination of both on and off the job. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

Critical aspects

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with the dismantling, replacement and assembly of engineering components or other units requiring the exercise of the skills and knowledge covered by this unit. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Assessment conditions

The candidate will have access to: - All tools, equipment, materials and documentation required. The candidate will be permitted to refer to the following documents: - Any relevant workplace procedures. - Any relevant product and manufacturing specifications. - Any relevant codes, standards, manuals and reference materials. The candidate will be required to: - Orally, or by other methods of communication, answer questions put by the assessor. - Identify colleagues who can be approached for the collection of competency evidence where appropriate. - Present evidence of credit for any off-job training related to this unit. Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge.

Special notes

During assessment the individual will: - demonstrate safe working practices at all times; - communicate information about processes, events or tasks being undertaken to ensure a safe and efficient working environment; - take responsibility for the quality of their own work; - plan tasks in all situations and review task requirements as appropriate; - perform all tasks in accordance with standard operating procedures; - perform all tasks to specification; - use accepted engineering techniques, practices, processes and workplace procedures. Tasks involved will be completed within reasonable timeframes relating to typical workplace activities.

Assessment context

This unit may be assessed on the job, off the job or a combination of both on and off the job. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

Critical aspects

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with the dismantling, replacement and assembly of engineering components or other units requiring the exercise of the skills and knowledge covered by this unit. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Assessment conditions

The candidate will have access to: - All tools, equipment, materials and documentation required. The candidate will be permitted to refer to the following documents: - Any relevant workplace procedures. - Any relevant product and manufacturing specifications. - Any relevant codes, standards, manuals and reference materials. The candidate will be required to: - Orally, or by other methods of communication, answer questions put by the assessor. - Identify colleagues who can be approached for the collection of competency evidence where appropriate. - Present evidence of credit for any off-job training related to this unit. Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge.

Special notes

During assessment the individual will: - demonstrate safe working practices at all times; - communicate information about processes, events or tasks being undertaken to ensure a safe and efficient working environment; - take responsibility for the quality of their own work; - plan tasks in all situations and review task requirements as appropriate; - perform all tasks in accordance with standard operating procedures; - perform all tasks to specification; - use accepted engineering techniques, practices, processes and workplace procedures. Tasks involved will be completed within reasonable timeframes relating to typical workplace activities.

Range Statement

Work undertaken autonomously or in a team environment using predetermined standards of quality, safety and workshop procedures. This unit involves the dismantling, inspection, replacement, assembling of engineering components. All specifications interpreted from manufacturers' manuals, engineering drawings, detailed/technical sketches and associated data sheets. Tasks are undertaken utilising engineering principles, designated procedures, appropriate tools, equipment and safe workshop practices. Replacement parts are selected from manufacturers' catalogues, etc. Appropriate techniques utilised in the assembly of component parts using fastening equipment and methods which ensure conformance to specifications, operational performance, quality and safety; this may include the straightforward removal and replacement of pre-manufactured bearings and seals.

Appropriate lubrication, packing, sealing materials are selected and applied in conformance to standard operating procedure. Where precision mechanical measurement is required, then Unit 12.3A (Precision mechanical measurement) must also be selected.

Work undertaken autonomously or in a team environment using predetermined standards of quality, safety and workshop procedures. This unit involves the dismantling, inspection, replacement, assembling of engineering components. All specifications interpreted from manufacturers' manuals, engineering drawings, detailed/technical sketches and associated data sheets. Tasks are undertaken utilising engineering principles, designated procedures, appropriate tools, equipment and safe workshop practices. Replacement parts are selected from manufacturers' catalogues, etc. Appropriate techniques utilised in the assembly of component parts using fastening equipment and methods which ensure conformance to specifications, operational performance, quality and safety; this may include the straightforward removal and replacement of pre-manufactured bearings and seals.

Appropriate lubrication, packing, sealing materials are selected and applied in conformance to standard operating procedure. Where precision mechanical measurement is required, then Unit 12.3A (Precision mechanical measurement) must also be selected

Unit Sector(s)

Not applicable.

TDTA1397B Receive goods

Modification History

Not applicable.

Unit Descriptor

Field A Handling cargo/stock

This unit involves the skills and knowledge required to receive goods in accordance with regulatory and workplace requirements, including identifying workplace procedures and documentation requirements for the receipt of goods; checking and inspecting goods on arrival and completing workplace documentation; and unloading, packing and storing stock.

Field A Handling cargo/stock

This unit involves the skills and knowledge required to receive goods in accordance with regulatory and workplace requirements, including identifying workplace procedures and documentation requirements for the receipt of goods; checking and inspecting goods on arrival and completing workplace documentation; and unloading, packing and storing stock.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify workplace procedures and documentation requirements for the receipt of goods	1.1 Workplace procedures for receipt of goods are identified 1.2 Purpose of documents associated with the receipt of goods is interpreted 1.3 Workplace documentation requirements for the receipt of goods and reporting of damage are identified
2 Check and inspect goods on arrival and complete workplace documentation	2.1 Procedures for checking of goods in comparison with orders or manifests are identified and followed 2.2 Discrepancies and/or damaged goods are reported 2.3 Non-conforming goods are appropriately documented and despatched or stored in accordance with company procedures
3 Unload, unpack and store stock	3.1 Appropriate manual handling techniques and equipment are identified 3.2 Safe work procedures are used when unloading, unpacking and storing stock 3.3 Advice on appropriate storage locations and requirements for particular products is sought 3.4 Goods are unloaded and unpacked in accordance with workplace procedures 3.5 Assistance from others is sought when required to maintain safe and effective work 3.6 Directions are followed to store stock in appropriate areas

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. identify workplace procedures and documentation requirements for the receipt of goods
 - a.2. check and inspect goods and packaging on arrival and complete workplace documentation
 - a.3. unload, unpack and store stock
 - a.4. provide customer/client service and work effectively with others
 - a.5. convey information in written and oral form
 - a.6. maintain workplace records
 - a.7. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Australian and international codes and regulations relevant to the receiving of goods including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the receiving of goods
- d. Focus of operation of work systems, equipment, management and site operating systems for the receiving of goods
- e. Problems that may occur when receiving goods and appropriate action that can be taken to resolve the problems
- f. Specifications and standards for the checking and inspection of received goods
- g. Documentation requirements for the receiving of goods
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Ability to select and use relevant load handling equipment and personal protection equipment when receiving goods
- k. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- l. Ability to read and comprehend simple statements in English
- m. Ability to read and interpret instructions, procedures and labels relevant to the receiving of goods
- n. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- o. Ability to identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels
- p. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to package goods in accordance with regulatory requirements, and/or
 - a.2. package goods in accordance with relevant regulatory requirements in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. identifying workplace procedures and documentation requirements for the receipt of goods
 - a.2. checking and inspecting goods and packaging on arrival and completing workplace documentation
 - a.3. unloading, unpacking and storing stock
 - a.4. providing customer/client service and working effectively with others
 - a.5. conveying information in written and oral form
 - a.6. maintaining required workplace records
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice and legislative requirements including local and international regulations pertaining to the receiving of goods
 - b.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods, explosives and hazardous substances
 - b.3. OHS regulations and hazard prevention policies and procedures
 - b.4. workplace procedures and work instructions concerning the receiving of goods (including housekeeping and security procedures)
 - b.5. manufacturer's instructions for the use of equipment
 - b.6. procedures for the use of personal protection equipment
 - b.7. obtaining assistance from other team members when required
 - b.8. customer service and quality assurance procedures and policies
 - b.9. environmental protection procedures
- c. Action is taken promptly to report and/or rectify any safety incidents or difficulties in the receiving of goods in accordance with regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. identify workplace procedures and documentation requirements for the receipt of goods
 - a.2. check and inspect goods and packaging on arrival and complete workplace documentation
 - a.3. unload, unpack and store stock
 - a.4. provide customer/client service and work effectively with others
 - a.5. convey information in written and oral form
 - a.6. maintain workplace records

a.7. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Australian and international codes and regulations relevant to the receiving of goods including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the receiving of goods
- d. Focus of operation of work systems, equipment, management and site operating systems for the receiving of goods
- e. Problems that may occur when receiving goods and appropriate action that can be taken to resolve the problems
- f. Specifications and standards for the checking and inspection of received goods
- g. Documentation requirements for the receiving of goods
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Ability to select and use relevant load handling equipment and personal protection equipment when receiving goods
- k. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- l. Ability to read and comprehend simple statements in English
- m. Ability to read and interpret instructions, procedures and labels relevant to the receiving of goods
- n. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- o. Ability to identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels
- p. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

a. Access is required to opportunities to:

- a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to package goods in accordance with regulatory requirements, and/or
- a.2. package goods in accordance with relevant regulatory requirements in an appropriate range of operational situations

Consistency in performance

a. Applies underpinning knowledge and skills when:

- a.1. identifying workplace procedures and documentation requirements for the receipt of goods
 - a.2. checking and inspecting goods and packaging on arrival and completing workplace documentation
 - a.3. unloading, unpacking and storing stock
 - a.4. providing customer/client service and working effectively with others
 - a.5. conveying information in written and oral form
 - a.6. maintaining required workplace records
- b. Shows evidence of application of relevant workplace procedures including:

- b.1. relevant codes of practice and legislative requirements including local and international regulations pertaining to the receiving of goods
- b.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods, explosives and hazardous substances
- b.3. OHS regulations and hazard prevention policies and procedures
- b.4. workplace procedures and work instructions concerning the receiving of goods (including housekeeping and security procedures)
- b.5. manufacturer's instructions for the use of equipment
- b.6. procedures for the use of personal protection equipment
- b.7. obtaining assistance from other team members when required
- b.8. customer service and quality assurance procedures and policies
- b.9. environmental protection procedures
- c. Action is taken promptly to report and/or rectify any safety incidents or difficulties in the receiving of goods in accordance with regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the receiving of goods
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of workplace procedures and regulatory requirements to the receiving of goods as part of work activities in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Received goods may involve special handling and storage requirements, including temperature controlled goods and dangerous goods
- f. Problems that may occur when receiving goods may include:

- f.1. damaged stock
- f.2. damaged pallets or packaging
- f.3. wrong stock
- f.4. error in paperwork
- f.5. poorly stacked stock
- f.6. incorrect quantity
- g. Aspects of goods to be checked when receiving goods may include:
 - g.1. correct type
 - g.2. number
 - g.3. condition
 - g.4. quality
 - g.5. packaging
 - g.6. labelling
 - g.7. dangerous goods declarations and markings (where applicable)
- h. Hazards in the work area may include exposure to:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances
 - h.3. movements of equipment, goods and materials
 - h.4. oil or water on floor
 - h.5. a fire or explosion
 - h.6. damaged packaging or pallets
 - h.7. debris on floor
 - h.8. poorly stacked pallets
 - h.9. faulty equipment
- i. Consultative processes may involve:
 - i.1. other employees and supervisors
 - i.2. suppliers, customers and clients
 - i.3. drivers and agents
 - i.4. relevant authorities and institutions
 - i.5. management and union representatives
 - i.6. industrial relations and OHS specialists
 - i.7. other maintenance, professional or technical staff
- j. Communication in the work area may include:
 - j.1. phone
 - j.2. electronic data interchange (EDI)
 - j.3. fax
 - j.4. e-mail
 - j.5. Internet
 - j.6. RF systems
 - j.7. oral, aural or signed communications
- k. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - k.1. company procedures
 - k.2. enterprise procedures
 - k.3. organisational procedures
 - k.4. established procedures
- l. Personal protection equipment may include:
 - l.1. gloves

- 1.2. safety headwear and footwear
- 1.3. safety glasses
- 1.4. two-way radios
- 1.5. high visibility clothing

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. codes of practice and regulations relevant to the receiving of goods
 - a.4. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
 - a.5. operations manuals, job specifications and induction documentation
 - a.6. manufacturer's specifications for equipment
 - a.7. workplace procedures and policies
 - a.8. supplier and/or client instructions
 - a.9. dangerous goods declarations and material safety data sheets (where applicable)
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. relevant Australian standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations for the receiving of goods
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. licence, patent or copyright arrangements
 - a.4. water and road use and licence arrangements
 - a.5. export/import/quarantine/bond requirements
 - a.6. marine orders
 - a.7. relevant State/Territory OHS and environmental protection legislation
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

General context

- a. Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the receiving of goods
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of workplace procedures and regulatory requirements to the receiving of goods as part of work activities in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:

- d.1. limited or restricted spaces
- d.2. exposed conditions
- d.3. controlled or open environments
- e. Received goods may involve special handling and storage requirements, including temperature controlled goods and dangerous goods
- f. Problems that may occur when receiving goods may include:
 - f.1. damaged stock
 - f.2. damaged pallets or packaging
 - f.3. wrong stock
 - f.4. error in paperwork
 - f.5. poorly stacked stock
 - f.6. incorrect quantity
- g. Aspects of goods to be checked when receiving goods may include:
 - g.1. correct type
 - g.2. number
 - g.3. condition
 - g.4. quality
 - g.5. packaging
 - g.6. labelling
 - g.7. dangerous goods declarations and markings (where applicable)
- h. Hazards in the work area may include exposure to:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances
 - h.3. movements of equipment, goods and materials
 - h.4. oil or water on floor
 - h.5. a fire or explosion
 - h.6. damaged packaging or pallets
 - h.7. debris on floor
 - h.8. poorly stacked pallets
 - h.9. faulty equipment
- i. Consultative processes may involve:
 - i.1. other employees and supervisors
 - i.2. suppliers, customers and clients
 - i.3. drivers and agents
 - i.4. relevant authorities and institutions
 - i.5. management and union representatives
 - i.6. industrial relations and OHS specialists
 - i.7. other maintenance, professional or technical staff
- j. Communication in the work area may include:
 - j.1. phone
 - j.2. electronic data interchange (EDI)
 - j.3. fax
 - j.4. e-mail
 - j.5. Internet
 - j.6. RF systems
 - j.7. oral, aural or signed communications
- k. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- k.1. company procedures
- k.2. enterprise procedures
- k.3. organisational procedures
- k.4. established procedures
- l. Personal protection equipment may include:

- l.1. gloves
- l.2. safety headwear and footwear
- l.3. safety glasses
- l.4. two-way radios
- l.5. high visibility clothing

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. codes of practice and regulations relevant to the receiving of goods
 - a.4. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
 - a.5. operations manuals, job specifications and induction documentation
 - a.6. manufacturer's specifications for equipment
 - a.7. workplace procedures and policies
 - a.8. supplier and/or client instructions
 - a.9. dangerous goods declarations and material safety data sheets (where applicable)
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. relevant Australian standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations for the receiving of goods
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. licence, patent or copyright arrangements
 - a.4. water and road use and licence arrangements
 - a.5. export/import/quarantine/bond requirements
 - a.6. marine orders
 - a.7. relevant State/Territory OHS and environmental protection legislation
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

Unit Sector(s)

Not applicable.

TDTA1497B Use product knowledge to complete work operations

Modification History

Not applicable.

Unit Descriptor

Field A Handling cargo/stock

This unit involves the skills and knowledge required to use product knowledge to complete work operations in accordance with workplace requirements including identifying products in a subsection of a warehouse or other storage area, examining quality and reporting on products, and using inventory and labelling systems to identify and locate products.

Field A Handling cargo/stock

This unit involves the skills and knowledge required to use product knowledge to complete work operations in accordance with workplace requirements including identifying products in a subsection of a warehouse or other storage area, examining quality and reporting on products, and using inventory and labelling systems to identify and locate products.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify products in a subsection of a warehouse or other storage area	<p>1.1 Products are identified against specified criteria in accordance with workplace procedures</p> <p>1.2 Storage and handling characteristics are identified and applied consistently</p> <p>1.3 Products are described to internal customers identifying features which may affect location, safety or storage requirements</p>
2 Examine quality and report on products	<p>2.1 Products are inspected in accordance with workplace quality assurance procedures</p> <p>2.2 Workplace procedures are followed to replace, return or dispose of stock/products which are not useable</p> <p>2.3 Non-conforming products are recorded/reported in accordance with workplace procedures</p>
3 Use inventory and labelling systems to identify and locate products	<p>3.1 Inventory and labelling systems are used to locate products within the workplace</p> <p>3.2 Goods are physically located and identified</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

a. Assessment must confirm appropriate knowledge and skills to:

- a.1. locate, interpret and apply relevant information
- a.2. identify products/stock stored in the subsection of the workplace
- a.3. identify properties and purposes of specific categories of goods
- a.4. explain the characteristics of stock in relation to specific handling and storage requirements
- a.5. interpret and use workplace policies, procedures and practices in relation to product location and condition
- a.6. use workplace maps and location guides with inventory systems to physically locate goods in an efficient manner
- a.7. provide customer/client service and work effectively with others
- a.8. convey information in written and oral form

a.9. maintain workplace records

a.10. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

a. Australian codes and regulations relevant to the products being identified, handled, transported, stacked and/or stored as part of work operations

b. Relevant OHS and environmental protection procedures and guidelines

c. Workplace procedures and policies for the identification, handling, stacking and storage of particular categories of products

d. Focus of operation of work systems, equipment, management and site operating systems for the packaging of goods

e. Categories or groups of products and the special handling, stacking and storage requirements for each

f. Purpose and use of cataloguing and labelling systems

g. Strategies to seek out sources of knowledge of products and use this information to inform work

h. Types of equipment and storage areas appropriate for different types of goods including perishable, fragile, dangerous, composition/state goods

i. Documentation requirements including reports and records concerning damaged or contaminated goods

j. Housekeeping standards procedures required in the workplace

k. Site layout and obstacles

l. Ability to select and use relevant communications, computing and load handling equipment

m. Ability to modify activities depending on differing workplace contexts, risk situations and environments

n. Ability to read and comprehend simple statements in English

o. Ability to read and interpret instructions, procedures and labels relevant to the handling and storage of goods

p. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards

q. Ability to identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels

r. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

a. Access is required to opportunities to:

a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to use product knowledge to complete work operations, and/or

a.2. use product knowledge to complete work operations in an appropriate range of operational situations

Consistency in performance

a. Applies underpinning knowledge and skills when:

a.1. locating, interpreting and applying relevant product information

a.2. identifying products/stock

a.3. identifying properties and purposes of specific categories of goods

- a.4. interpreting and using workplace policies, procedures and practices in relation to product location, and condition
- a.5. using workplace maps and location guides with inventory systems to physically locate goods in an efficient manner
- a.6. providing customer/client service and working effectively with others
- a.7. conveying information in written and oral form
- a.8. maintaining workplace records
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice, regulations and legislative requirements
 - b.2. Australian regulations and codes of practice for the handling and storage of dangerous goods, explosives and hazardous substances
 - b.3. workplace procedures and work instructions concerning the identification, handling and storage of various categories of products (including housekeeping and security procedures)
 - b.4. obtaining assistance from other team members when required
 - b.5. customer service and quality assurance procedures and policies
 - b.6. OHS regulations and hazard prevention policies and procedures
 - b.7. environmental protection procedures
- c. Action is taken promptly to report and/or rectify any potential difficulties in the identification, handling and storage of goods in accordance with relevant regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. locate, interpret and apply relevant information
 - a.2. identify products/stock stored in the subsection of the workplace
 - a.3. identify properties and purposes of specific categories of goods
 - a.4. explain the characteristics of stock in relation to specific handling and storage requirements
 - a.5. interpret and use workplace policies, procedures and practices in relation to product location and condition
 - a.6. use workplace maps and location guides with inventory systems to physically locate goods in an efficient manner
 - a.7. provide customer/client service and work effectively with others
 - a.8. convey information in written and oral form
 - a.9. maintain workplace records

a.10.select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Australian codes and regulations relevant to the products being identified, handled, transported, stacked and/or stored as part of work operations
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the identification, handling, stacking and storage of particular categories of products
- d. Focus of operation of work systems, equipment, management and site operating systems for the packaging of goods
- e. Categories or groups of products and the special handling, stacking and storage requirements for each
- f. Purpose and use of cataloguing and labelling systems
- g. Strategies to seek out sources of knowledge of products and use this information to inform work
- h. Types of equipment and storage areas appropriate for different types of goods including perishable, fragile, dangerous, composition/state goods
- I. Documentation requirements including reports and records concerning damaged or contaminated goods
- j. Housekeeping standards procedures required in the workplace
- k. Site layout and obstacles
- l. Ability to select and use relevant communications, computing and load handling equipment
- m. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- n. Ability to read and comprehend simple statements in English
- o. Ability to read and interpret instructions, procedures and labels relevant to the handling and storage of goods
- p. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- q. Ability to identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels
- r. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

a. Access is required to opportunities to:

- a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to use product knowledge to complete work operations, and/or
- a.2. use product knowledge to complete work operations in an appropriate range of operational situations

Consistency in performance

a. Applies underpinning knowledge and skills when:

- a.1. locating, interpreting and applying relevant product information
- a.2. identifying products/stock
- a.3. identifying properties and purposes of specific categories of goods

- a.4. interpreting and using workplace policies, procedures and practices in relation to product location, and condition
- a.5. using workplace maps and location guides with inventory systems to physically locate goods in an efficient manner
- a.6. providing customer/client service and working effectively with others
- a.7. conveying information in written and oral form
- a.8. maintaining workplace records
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice, regulations and legislative requirements
 - b.2. Australian regulations and codes of practice for the handling and storage of dangerous goods, explosives and hazardous substances
 - b.3. workplace procedures and work instructions concerning the identification, handling and storage of various categories of products (including housekeeping and security procedures)
 - b.4. obtaining assistance from other team members when required
 - b.5. customer service and quality assurance procedures and policies
 - b.6. OHS regulations and hazard prevention policies and procedures
 - b.7. environmental protection procedures
- c. Action is taken promptly to report and/or rectify any potential difficulties in the identification, handling and storage of goods in accordance with relevant regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the identification, handling and storage of various categories of products/stock
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of product knowledge and an understanding of relevant regulatory requirements to the handling and storage of various types of products/stock as part of work activities in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites

- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods and dangerous goods
- f. Inventory systems may be:
 - f.1. automated
 - f.2. manual
 - f.3. paper-based
 - f.4. computerised
 - f.5. microfiche
- g. Categories or groups of products/stock may include:
 - g.1. small parts
 - g.2. perishable goods
 - g.3. overseas export
 - g.4. dangerous goods
 - g.5. refrigerated products
 - g.6 temperature controlled stock
 - g.7. fragile goods
- h. Distinguishing identification criteria for products may include:
 - h.1. shape
 - h.2. size
 - h.3. colour
 - h.4. distinguishing features
 - h.5. codes and product identification/serial numbers
 - h.6. labels
 - h.7. signs or other documentation
 - h.8. locations
- i. The characteristics of products/stock may include:
 - i.1. small parts
 - i.2. toxicity
 - i.3. flammability
 - i.4. form
 - i.5. weight
 - i.6. size
 - i.7. state
 - i.8. perishability
 - i.9. fragility
 - i.10. security risk
- j. Labelling systems may include:
 - j.1. batch code
 - j.2. bar code
 - j.3. identification numbering systems
 - j.4. serial numbers
 - j.5. symbols for safe handling
 - j.6. ADG and HAZCHEM Codes
- k. Communication in the work area may include:

- k.1. phone
- k.2. electronic data interchange (EDI)
- k.3. fax
- k.4. e-mail
- k.5. Internet
- k.6. RF systems
- k.7. oral, aural or signed communications
- l. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - l.1. company procedures
 - l.2. enterprise procedures
 - l.3. organisational procedures
 - l.4. established procedures
- m. Personal protection equipment may include:
 - m.1. gloves
 - m.2. safety headwear and footwear
 - m.3. safety glasses
 - m.4. two-way radios
 - m.5. high visibility clothing
- n. Consultative processes may involve:
 - n.1. other employees and supervisors
 - n.2. suppliers, customers and clients
 - n.3. relevant authorities and institutions
 - n.4. management and union representatives
 - n.5. industrial relations and OHS specialists
 - n.6. other maintenance, professional or technical staff
- o. Hazards in the work area may include:
 - o.1. chemicals
 - o.2. dangerous or hazardous substances
 - o.3. movements of equipment, goods and materials
 - o.4. oil or water on floor
 - o.5. a fire or explosion
 - o.6. damaged packaging or pallets
 - o.7. debris on floor
 - o.8. faulty racking
 - o.9. poorly stacked pallets
 - o.10. faulty equipment

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. codes of practice and regulations relevant to the identification, handling and stacking of goods
 - a.4. Australian and international regulations and codes of practice for the handling, stacking and transport of dangerous goods and hazardous substances
 - a.5. operations manuals, job specifications and induction documentation
 - a.6. manufacturer's specifications for equipment
 - a.7. workplace procedures and policies

- a.8. supplier and/or client instructions
- a.9. dangerous goods declarations and material safety data sheets (where applicable)
- a.10. award, enterprise bargaining agreement, other industrial arrangements
- a.11. relevant Australian standards and certification requirements
- a.12. quality assurance procedures
- a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations for the packaging of goods
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian and International Explosives Codes
 - a.3. licence, patent or copyright arrangements
 - a.4. water and road use and licence arrangements
 - a.5. export/import/quarantine/bond requirements
 - a.6. marine orders
 - a.7. relevant State/Territory OHS and environmental protection legislation
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

General context

- a. Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the identification, handling and storage of various categories of products/stock
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of product knowledge and an understanding of relevant regulatory requirements to the handling and storage of various types of products/stock as part of work activities in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods and dangerous goods
- f. Inventory systems may be:
 - f.1. automated
 - f.2. manual
 - f.3. paper-based
 - f.4. computerised
 - f.5. microfiche
- g. Categories or groups of products/stock may include:
 - g.1. small parts
 - g.2. perishable goods
 - g.3. overseas export

- g.4. dangerous goods
- g.5. refrigerated products
- g.6. temperature controlled stock
- g.7. fragile goods
- h. Distinguishing identification criteria for products may include:
 - h.1. shape
 - h.2. size
 - h.3. colour
 - h.4. distinguishing features
 - h.5. codes and product identification/serial numbers
 - h.6. labels
 - h.7. signs or other documentation
 - h.8. locations
- i. The characteristics of products/stock may include:
 - i.1. small parts
 - i.2. toxicity
 - i.3. flammability
 - i.4. form
 - i.5. weight
 - i.6. size
 - i.7. state
 - i.8. perishability
 - i.9. fragility
 - i.10. security risk
- j. Labelling systems may include:
 - j.1. batch code
 - j.2. bar code
 - j.3. identification numbering systems
 - j.4. serial numbers
 - j.5. symbols for safe handling
 - j.6. ADG and HAZCHEM Codes
- k. Communication in the work area may include:
 - k.1. phone
 - k.2. electronic data interchange (EDI)
 - k.3. fax
 - k.4. e-mail
 - k.5. Internet
 - k.6. RF systems
 - k.7. oral, aural or signed communications
- l. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - l.1. company procedures
 - l.2. enterprise procedures
 - l.3. organisational procedures
 - l.4. established procedures
- m. Personal protection equipment may include:
 - m.1. gloves
 - m.2. safety headwear and footwear

- m.3. safety glasses
- m.4. two-way radios
- m.5. high visibility clothing
- n. Consultative processes may involve:
 - n.1. other employees and supervisors
 - n.2. suppliers, customers and clients
 - n.3. relevant authorities and institutions
 - n.4. management and union representatives
 - n.5. industrial relations and OHS specialists
 - n.6. other maintenance, professional or technical staff
- o. Hazards in the work area may include:
 - o.1. chemicals
 - o.2. dangerous or hazardous substances
 - o.3. movements of equipment, goods and materials
 - o.4. oil or water on floor
 - o.5. a fire or explosion
 - o.6. damaged packaging or pallets
 - o.7. debris on floor
 - o.8. faulty racking
 - o.9. poorly stacked pallets
 - o.10. faulty equipment

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. codes of practice and regulations relevant to the identification, handling and stacking of goods
 - a.4. Australian and international regulations and codes of practice for the handling, stacking and transport of dangerous goods and hazardous substances
 - a.5. operations manuals, job specifications and induction documentation
 - a.6. manufacturer's specifications for equipment
 - a.7. workplace procedures and policies
 - a.8. supplier and/or client instructions
 - a.9. dangerous goods declarations and material safety data sheets (where applicable)
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. relevant Australian standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations for the packaging of goods
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian and International Explosives Codes
 - a.3. licence, patent or copyright arrangements
 - a.4. water and road use and licence arrangements
 - a.5. export/import/quarantine/bond requirements

- a.6. marine orders
- a.7. relevant State/Territory OHS and environmental protection legislation
- a.8. workplace relations regulations
- a.9. workers compensation regulations

Unit Sector(s)

Not applicable.

TDTA1897B Organise despatch operations

Modification History

Not applicable.

Unit Descriptor

Field A Handling cargo/stock

This unit involves the skills and knowledge required to organise despatch operations in accordance with workplace requirements including planning and organising despatch operations, organising the storage and despatch of stock, and completing all required documentation and records.

Field A Handling cargo/stock

This unit involves the skills and knowledge required to organise despatch operations in accordance with workplace requirements including planning and organising despatch operations, organising the storage and despatch of stock, and completing all required documentation and records.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Plan and organise despatch operations	<p>1.1 Knowledge of product characteristics and workplace procedures are applied to the analysis of the stock</p> <p>1.2 Resources including manual handling equipment, employee competencies, storage areas and goods management equipment are identified to match stock characteristics</p> <p>1.3 Deadlines are scheduled to meet order requirements</p> <p>1.4 Work processes are planned to meet deadlines</p>
2 Organise the storage and despatch of stock	<p>2.1 Employees, equipment and storage areas are allocated and supervised</p> <p>2.2 Individuals are informed of work requirements and deadlines</p> <p>2.3 Work processes are monitored to ensure that resources, both human and equipment, are maintained at productive levels and in accordance with workplace procedures and OHS requirements</p> <p>2.4 Discrepancies in stocks are noted and reported in accordance with company procedures</p>
3 Complete documentation	<p>3.1 Required despatch documentation and records are completed in accordance with workplace procedures</p>

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
- a.1. locate, interpret and apply information relevant to despatch operations
 - a.2. plan and organise despatch operations
 - a.3. organise the storage and despatch of stock
 - a.4. provide customer/client service and work effectively with others

- a.5. convey information in written and oral form
- a.6. maintain workplace records and documentation
- a.7. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Regulations relevant to the organising of despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the organising of despatch operations
- d. Focus of operation of work systems, equipment, management and site operating systems for the organising of despatch operations
- e. Problems that may occur when organising despatch operations and appropriate action that can be taken to resolve the problems
- f. Documentation and record requirements for despatch operations
- g. Equipment used during the organisation of despatch operations and the precautions and procedures that should be followed in its use
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Focus of operation of work system for orders and the relationships and requirements in respect of related systems
- k. Ability to select and use relevant equipment and communications technology when organising despatch operations
- l. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- n. Ability to read and comprehend simple statements in English
- o. Ability to read and interpret instructions, procedures and labels relevant to the organising of despatch operations
- p. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- q. Ability to identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- r. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to organise despatch operations, and/or
 - a.2. organise despatch operations in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. locating, interpreting and applying relevant information
 - a.2. planning and organising despatch operations
 - a.3. organising the storage and despatch of stock
 - a.4. providing customer/client service and working effectively with others
 - a.5. conveying information in written and oral form

- a.6. maintaining workplace records and documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice and regulations, including ADG Code
 - b.2. OHS regulations and hazard prevention policies and procedures
 - b.3. workplace procedures and work instructions concerning the organising of despatch operations (including security procedures)
 - b.4. manufacturer's instructions for the use of equipment
 - b.5. procedures for the use of personal protection equipment
 - b.6. customer service and quality assurance procedures and policies
 - b.7. environmental protection procedures
- c. Action is taken promptly to report any accidents, incidents or difficulties in the organising of despatch operations in accordance with OHS and regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. locate, interpret and apply information relevant to despatch operations
 - a.2. plan and organise despatch operations
 - a.3. organise the storage and despatch of stock
 - a.4. provide customer/client service and work effectively with others
 - a.5. convey information in written and oral form
 - a.6. maintain workplace records and documentation
 - a.7. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Regulations relevant to the organising of despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the organising of despatch operations
- d. Focus of operation of work systems, equipment, management and site operating systems for the organising of despatch operations
- e. Problems that may occur when organising despatch operations and appropriate action that can be taken to resolve the problems

- f. Documentation and record requirements for despatch operations
- g. Equipment used during the organisation of despatch operations and the precautions and procedures that should be followed in its use
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Focus of operation of work system for orders and the relationships and requirements in respect of related systems
- k. Ability to select and use relevant equipment and communications technology when organising despatch operations
- l. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- n. Ability to read and comprehend simple statements in English
- o. Ability to read and interpret instructions, procedures and labels relevant to the organising of despatch operations
- p. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- q. Ability to identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- r. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to organise despatch operations, and/or
 - a.2. organise despatch operations in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. locating, interpreting and applying relevant information
 - a.2. planning and organising despatch operations
 - a.3. organising the storage and despatch of stock
 - a.4. providing customer/client service and working effectively with others
 - a.5. conveying information in written and oral form
 - a.6. maintaining workplace records and documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice and regulations, including ADG Code
 - b.2. OHS regulations and hazard prevention policies and procedures
 - b.3. workplace procedures and work instructions concerning the organising of despatch operations (including security procedures)
 - b.4. manufacturer's instructions for the use of equipment
 - b.5. procedures for the use of personal protection equipment
 - b.6. customer service and quality assurance procedures and policies
 - b.7. environmental protection procedures
- c. Action is taken promptly to report any accidents, incidents or difficulties in the organising of despatch operations in accordance with OHS and regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts

- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the organisation of despatch operations
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of regulatory requirements and workplace procedures to the organisation of despatch operations in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods to be despatched may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
- f. Problems that may occur when despatching an order include:
 - f.1. wrong stock is despatched
 - f.2. wrong carton for order
 - f.3. incorrect location
 - f.4. damaged stock
 - f.5. no stock at location
 - f.6. incorrect quantity
 - f.7. failing to meet a special order requirement
 - f.8. failing to meet customer's delivery requirements
- g. Special order requirements may include:
 - g.1. pricing
 - g.2. special packing
 - g.3. specific size of carton
 - g.4. special categories of stock
- h. Hazards in the work area may include exposure to:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances

- h.3. movements of equipment, goods and materials
- h.4. oil or water on floor
- h.5. a fire or explosion
- h.6. damaged packaging or pallets
- h.7. debris on floor
- h.8. faulty racking
- h.9. poorly stacked pallets
- h.10. faulty equipment
- i. Communication in the work area may include:
 - i.1. phone
 - i.2. electronic data interchange (EDI)
 - i.3. fax
 - i.4. e-mail
 - i.5. Internet
 - i.6. RF communications
 - i.7. barcode readers
 - i.8. oral, aural or signed communications
- j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
- k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. two-way radios
 - k.5. high visibility clothing
- l. Consultative processes may involve:
 - l.1. workplace personnel
 - l.2. supervisors and managers
 - l.3. customers/clients
 - l.4. drivers and agents
 - l.5. contractors
 - l.6. official representatives

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. manufacturer's specifications for equipment/tools
 - a.4. workplace procedures and policies
 - a.5. supplier and/or client instructions
 - a.6. dangerous goods declarations and material safety data sheets (where applicable)
 - a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
 - a.8. relevant legislation, regulations and related documentation including the ADG Code
 - a.9. award, enterprise bargaining agreement, other industrial arrangements

- a.10. standards and certification requirements
- a.11. quality assurance procedures
- a.12. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations pertaining to the organising of despatch operations
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. relevant State/Territory OHS legislation
 - a.4. relevant State/Territory environmental protection legislation
 - a.5. licence, patent or copyright arrangements
 - a.6. water and road use and licence arrangements
 - a.7. export/import/quarantine/bond requirements
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

General context

- a. Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the organisation of despatch operations
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of regulatory requirements and workplace procedures to the organisation of despatch operations in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods to be despatched may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
- f. Problems that may occur when despatching an order include:
 - f.1. wrong stock is despatched
 - f.2. wrong carton for order
 - f.3. incorrect location
 - f.4. damaged stock
 - f.5. no stock at location
 - f.6. incorrect quantity
 - f.7. failing to meet a special order requirement
 - f.8. failing to meet customer's delivery requirements
- g. Special order requirements may include:
 - g.1. pricing
 - g.2. special packing

- g.3. specific size of carton
 - g.4. special categories of stock
 - h. Hazards in the work area may include exposure to:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances
 - h.3. movements of equipment, goods and materials
 - h.4. oil or water on floor
 - h.5. a fire or explosion
 - h.6. damaged packaging or pallets
 - h.7. debris on floor
 - h.8. faulty racking
 - h.9. poorly stacked pallets
 - h.10. faulty equipment
 - i. Communication in the work area may include:
 - i.1. phone
 - i.2. electronic data interchange (EDI)
 - i.3. fax
 - i.4. e-mail
 - i.5. Internet
 - i.6. RF communications
 - i.7. barcode readers
 - i.8. oral, aural or signed communications
 - j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
 - k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. two-way radios
 - k.5. high visibility clothing
 - l. Consultative processes may involve:
 - l.1. workplace personnel
 - l.2. supervisors and managers
 - l.3. customers/clients
 - l.4. drivers and agents
 - l.5. contractors
 - l.6. official representatives
- Sources of information/documents**
- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. manufacturer's specifications for equipment/tools
 - a.4. workplace procedures and policies
 - a.5. supplier and/or client instructions

- a.6. dangerous goods declarations and material safety data sheets (where applicable)
- a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- a.8. relevant legislation, regulations and related documentation including the ADG Code
- a.9. award, enterprise bargaining agreement, other industrial arrangements
- a.10. standards and certification requirements
- a.11. quality assurance procedures
- a.12. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations pertaining to the organising of despatch operations
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. relevant State/Territory OHS legislation
 - a.4. relevant State/Territory environmental protection legislation
 - a.5. licence, patent or copyright arrangements
 - a.6. water and road use and licence arrangements
 - a.7. export/import/quarantine/bond requirements
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

Unit Sector(s)

Not applicable.

TDTA2197B Despatch stock

Modification History

Not applicable.

Unit Descriptor

Field A Handling cargo/stock

This unit involves the skills and knowledge required to despatch stock in accordance with workplace requirements including analysing orders to identify work requirements, following workplace order picking processes to prepare goods for despatch, and completing despatch tasks in accordance with workplace procedures and schedules.

Field A Handling cargo/stock

This unit involves the skills and knowledge required to despatch stock in accordance with workplace requirements including analysing orders to identify work requirements, following workplace order picking processes to prepare goods for despatch, and completing despatch tasks in accordance with workplace procedures and schedules.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Analyse order to identify work requirements	1.1 Order request and consignment note documentation is interpreted 1.2 Required schedules for despatch are identified 1.3 Product(s) in order are identified 1.4 Workplace and product knowledge is used to plan sequence of work 1.5 Appropriate materials handling equipment is selected within required OHS regulations and timeframe for the despatch
2 Follow workplace order picking processes to prepare goods for despatch	2.1 Goods for despatch are selected, checking against product knowledge, labels and other identification systems 2.2 Products are sorted, assembled and consolidated 2.3 Orders are secured and placed in storage/despatch zones, in accordance with schedule 2.4 Order is checked against despatch schedule and order form
3 Complete despatch following workplace procedures and schedules	3.1 Workplace records are completed, and labels and appropriate documentation attached 3.2 Load labels and documentation are checked and loading organised in accordance with workplace procedures and ADG Code (where applicable) 3.3 Final check of load labels and documentation is completed in accordance with requirements 3.4 Transportation requirements are described to driver where appropriate

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. locate, interpret and apply information relevant to despatch operations
 - a.2. identify purpose of component parts of order forms
 - a.3. identify products and relevant handling requirements
 - a.4. organise own despatch operations
 - a.5. provide customer/client service and work effectively with others
 - a.6. convey information in written and oral form
 - a.7. maintain workplace records and documentation
 - a.8. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Regulations relevant to despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the organising of despatch operations
- d. Focus of operation of work systems, equipment, management and site operating systems for despatching goods
- e. Problems that may occur when despatching goods and appropriate action that can be taken to resolve the problems
- f. Documentation and record requirements for despatch operations
- g. Equipment used during despatch operations and the precautions and procedures that should be followed in its use
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Focus of operation of work system for orders and the relationships and requirements in respect of related systems
- k. Ability to select and use relevant equipment and communications technology when organising despatch operations
- l. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- m. Ability to read and comprehend simple statements in English
- n. Ability to read and interpret instructions, procedures and labels relevant to the organising of despatch operations
- o. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- p. Ability to identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- q. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to despatch goods, and/or

a.2. despatch goods in an appropriate range of operational situations

Consistency in performance

a. Applies underpinning knowledge and skills when:

a.1. locating, interpreting and applying relevant information

a.2. identifying the purpose of the component parts of order forms

a.3. identifying products and relevant handling requirements

a.4. organising own despatch operations

a.5. providing customer/client service and working effectively with others

a.6. conveying information in written and oral form

a.7. maintaining workplace records and documentation

b. Shows evidence of application of relevant workplace procedures including:

b.1. relevant codes of practice and regulations, including ADG Code

b.2. OHS regulations and hazard prevention policies and procedures

b.3. workplace procedures and work instructions for the despatch of goods (including housekeeping and security procedures)

b.4. manufacturer's instructions for the use of equipment

b.5. procedures for the use of personal protection equipment

b.6. customer service and quality assurance procedures and policies

b.7. environmental protection procedures

c. Action is taken promptly to report any accidents, incidents or difficulties in the despatch of goods in accordance with OHS and regulatory requirements and workplace procedures

d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts

e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others

f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

a. Assessment of this unit must be undertaken by a Registered Training Organisation:

a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning

a.2. Appropriate practical assessment must occur:

a.2.1. at the Registered Training Organisation, and/or

a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

a. Assessment must confirm appropriate knowledge and skills to:

a.1. locate, interpret and apply information relevant to despatch operations

a.2. identify purpose of component parts of order forms

a.3. identify products and relevant handling requirements

a.4. organise own despatch operations

a.5. provide customer/client service and work effectively with others

a.6. convey information in written and oral form

a.7. maintain workplace records and documentation

a.8. select and use appropriate workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Regulations relevant to despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements
- b. Relevant OHS and environmental protection procedures and guidelines
- c. Workplace procedures and policies for the organising of despatch operations
- d. Focus of operation of work systems, equipment, management and site operating systems for despatching goods
- e. Problems that may occur when despatching goods and appropriate action that can be taken to resolve the problems
- f. Documentation and record requirements for despatch operations
- g. Equipment used during despatch operations and the precautions and procedures that should be followed in its use
- h. Housekeeping standards procedures required in the workplace
- i. Site layout and obstacles
- j. Focus of operation of work system for orders and the relationships and requirements in respect of related systems
- k. Ability to select and use relevant equipment and communications technology when organising despatch operations
- l. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- m. Ability to read and comprehend simple statements in English
- n. Ability to read and interpret instructions, procedures and labels relevant to the organising of despatch operations
- o. Ability to use required personal protective clothing and equipment conforming to industry and OHS standards
- p. Ability to identify relevant stock and goods coding and labelling, including ADG and IMDG markings
- q. Ability to estimate the size, shape and special requirements of goods/loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to despatch goods, and/or
 - a.2. despatch goods in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. locating, interpreting and applying relevant information
 - a.2. identifying the purpose of the component parts of order forms
 - a.3. identifying products and relevant handling requirements
 - a.4. organising own despatch operations
 - a.5. providing customer/client service and working effectively with others
 - a.6. conveying information in written and oral form
 - a.7. maintaining workplace records and documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant codes of practice and regulations, including ADG Code
 - b.2. OHS regulations and hazard prevention policies and procedures
 - b.3. workplace procedures and work instructions for the despatch of goods (including housekeeping and security procedures)
 - b.4. manufacturer's instructions for the use of equipment

- b.5. procedures for the use of personal protection equipment
- b.6. customer service and quality assurance procedures and policies
- b.7. environmental protection procedures
- c. Action is taken promptly to report any accidents, incidents or difficulties in the despatch of goods in accordance with OHS and regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
- f. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the despatch of goods
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of regulatory requirements and workplace procedures to despatch operations in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods to be despatched may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
- f. Problems that may occur when despatching an order include:
 - f.1. wrong stock is despatched
 - f.2. wrong carton for order
 - f.3. incorrect location
 - f.4. damaged stock
 - f.5. no stock at location
 - f.6. incorrect quantity
 - f.7. failing to meet a special order requirement
 - f.8. failing to meet customer's delivery requirements
- g. Special order requirements may include:

- g.1. pricing
 - g.2. special packing
 - g.3. specific size of carton
 - g.4. special categories of stock
 - h. Hazards in the work area may include:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances
 - h.3. movements of equipment, goods and materials
 - h.4. oil or water on floor
 - h.5. a fire or explosion
 - h.6. damaged packaging or pallets
 - h.7. debris on floor
 - h.8. faulty racking
 - h.9. poorly stacked pallets
 - h.10. faulty equipment
 - i. Communication in the work area may include:
 - i.1. phone
 - i.2. electronic data interchange (EDI)
 - i.3. fax
 - i.4. e-mail
 - i.5. Internet
 - i.6. RF communications
 - i.7. barcode readers
 - i.8. oral, aural or signed communications
 - j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
 - k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. two-way radios
 - k.5. high visibility clothing
 - l. Consultative processes may involve:
 - l.1. workplace personnel
 - l.2. supervisors and managers
 - l.3. customers/clients
 - l.3. drivers and agents
 - l.4. contractors
 - l.5. official representatives
- Sources of information/documents**
- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
 - a.3. manufacturer's specifications for equipment/tools

- a.4. workplace procedures and policies
- a.5. supplier and/or client instructions
- a.6. dangerous goods declarations and material safety data sheets (where applicable)
- a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- a.8. relevant legislation, regulations and related documentation including the ADG Code
- a.9. award, enterprise bargaining agreement, other industrial arrangements
- a.10. standards and certification requirements
- a.11. quality assurance procedures
- a.12. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant codes and regulations pertaining to the organising of despatch operations
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. relevant State/Territory OHS legislation
 - a.4. relevant State/Territory environmental protection legislation
 - a.5. licence, patent or copyright arrangements
 - a.6. water and road use and licence arrangements
 - a.7. export/import/quarantine/bond requirements
 - a.8. workplace relations regulations
 - a.9. workers compensation regulations

General context

- a. Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the despatch of goods
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of regulatory requirements and workplace procedures to despatch operations in the warehousing, distribution and/or storage industries

Worksite environment

- a. Work may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. limited or restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Goods to be despatched may involve special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
- f. Problems that may occur when despatching an order include:
 - f.1. wrong stock is despatched
 - f.2. wrong carton for order
 - f.3. incorrect location
 - f.4. damaged stock

- f.5. no stock at location
- f.6. incorrect quantity
- f.7. failing to meet a special order requirement
- f.8. failing to meet customer's delivery requirements
- g. Special order requirements may include:
 - g.1. pricing
 - g.2. special packing
 - g.3. specific size of carton
 - g.4. special categories of stock
- h. Hazards in the work area may include:
 - h.1. chemicals
 - h.2. dangerous or hazardous substances
 - h.3. movements of equipment, goods and materials
 - h.4. oil or water on floor
 - h.5. a fire or explosion
 - h.6. damaged packaging or pallets
 - h.7. debris on floor
 - h.8. faulty racking
 - h.9. poorly stacked pallets
 - h.10. faulty equipment
- i. Communication in the work area may include:
 - i.1. phone
 - i.2. electronic data interchange (EDI)
 - i.3. fax
 - i.4. e-mail
 - i.5. Internet
 - i.6. RF communications
 - i.7. barcode readers
 - i.8. oral, aural or signed communications
- j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
- k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. two-way radios
 - k.5. high visibility clothing
- l. Consultative processes may involve:
 - l.1. workplace personnel
 - l.2. supervisors and managers
 - l.3. customers/clients
 - l.3. drivers and agents
 - l.4. contractors
 - l.5. official representatives

Sources of information/documents

a. Information/documents may include:

- a.1. goods identification numbers and codes
- a.2. manifests, picking slips, merchandise transfers, stock requisitions and bar codes
- a.3. manufacturer's specifications for equipment/tools
- a.4. workplace procedures and policies
- a.5. supplier and/or client instructions
- a.6. dangerous goods declarations and material safety data sheets (where applicable)
- a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- a.8. relevant legislation, regulations and related documentation including the ADG Code
- a.9. award, enterprise bargaining agreement, other industrial arrangements
- a.10. standards and certification requirements
- a.11. quality assurance procedures
- a.12. emergency procedures

Applicable regulations and legislation

a. Applicable regulations and legislation may include:

- a.1. relevant codes and regulations pertaining to the organising of despatch operations
- a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
- a.3. relevant State/Territory OHS legislation
- a.4. relevant State/Territory environmental protection legislation
- a.5. licence, patent or copyright arrangements
- a.6. water and road use and licence arrangements
- a.7. export/import/quarantine/bond requirements
- a.8. workplace relations regulations
- a.9. workers compensation regulations

Unit Sector(s)

Not applicable.

TDTC497C Drive heavy rigid vehicle

Modification History

Not applicable.

Unit Descriptor

Field C Driving vehicle

This unit involves the skills and knowledge required to drive a heavy rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, and effective management of hazardous situations. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant State/Territory Road Traffic Authority

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory learner permit or driver licence requirements before driving a heavy rigid vehicle on a public road.

Field C Driving vehicle

This unit involves the skills and knowledge required to drive a heavy rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, and effective management of hazardous situations. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant State/Territory Road Traffic Authority

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory learner permit or driver licence requirements before driving a heavy rigid vehicle on a public road.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Drive the heavy rigid vehicle	<ul style="list-style-type: none">1.1 The heavy rigid vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturer's instructions1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage1.3 Engine operation is maintained within manufacturer's specified torque range and temperature through effective gear selection and smooth transition in gear changes1.4 Braking system of heavy rigid vehicle is managed and operated to ensure effective control of the vehicle under all conditions1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving1.6 The heavy rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning.1.7 The heavy rigid vehicle is parked, shut down and secured in accordance with manufacturer's specifications, traffic regulations and workplace procedures1.8 Where required, overwidth and overweight permit applications are undertaken in accordance with relevant regulatory requirements1.9 Appropriate procedures are followed in the event of a driving emergency
2 Monitor traffic and road	<ul style="list-style-type: none">2.1 The most efficient route of travel is taken through

- | | |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conditions | monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations |
| | 2.2 Traffic and road conditions are constantly monitored and acted upon to enable safe operation and ensure no injury to people or damage to property, equipment loads and facilities |
| 3 Monitor and maintain vehicle performance | 3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle |
| | 3.2 Performance and efficiency of vehicle operation is monitored during use |
| | 3.3 Defective or irregular performance or malfunctions are reported to the appropriate authority |
| | 3.4 Vehicle records are maintained/updated and information is processed in accordance with workplace procedures |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
- a.1. follow correct heavy rigid vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks
 - a.4. monitor and maintain vehicle performance
 - a.5. follow OHS and environmental protection procedures and regulations
 - a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that form part of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy rigid vehicle controls, instruments and indicators and their use
- d. Heavy rigid vehicle handling procedures

- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on heavy rigid vehicle and related action
- i. Differences between transmission types
- j. Fatigue management techniques
- k. Principles of operation of air brakes and procedures for their use
- l. Fatigue management techniques
- m. Driving hazards and related defensive driving techniques
- n. Principles of stress management when driving a vehicle
- o. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- p. Workplace driving and operational instructions
- q. Causes and effects of fatigue on drivers
- r. Strategies to manage on-road fatigue
- s. Factors which increase fatigue-related accidents
- t. Lifestyles which promote the effective long-term management of fatigue
- u. Ability to read instructions, procedures and signage relevant to the driving of a heavy rigid vehicle
- v. Map reading and road navigation techniques
- w. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy rigid vehicle equal to or less than 4.5 tonnes GVM and seating up to 12 adults (including the driver and all types of transmission), and/or
 - a.2. drive such a commercial heavy rigid vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy rigid vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations
 - a.6. communicating effectively with others when driving a heavy rigid vehicle
 - a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to the class of vehicle
 - b.2. OHS policies and procedures
 - b.3. identification of driving hazards and the use of appropriate defensive driving techniques
 - b.4. workplace procedures and instructions (including security and housekeeping procedures)
 - b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy rigid vehicle
 - b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks

- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory road traffic authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. follow correct heavy rigid vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks
 - a.4. monitor and maintain vehicle performance
 - a.5. follow OHS and environmental protection procedures and regulations
 - a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that form part of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy rigid vehicle controls, instruments and indicators and their use
- d. Heavy rigid vehicle handling procedures
- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on heavy rigid vehicle and related action
- i. Differences between transmission types
- j. Fatigue management techniques
- k. Principles of operation of air brakes and procedures for their use
- l. Fatigue management techniques
- m. Driving hazards and related defensive driving techniques
- n. Principles of stress management when driving a vehicle
- o. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- p. Workplace driving and operational instructions
- q. Causes and effects of fatigue on drivers
- r. Strategies to manage on-road fatigue

- s. Factors which increase fatigue-related accidents
- t. Lifestyles which promote the effective long-term management of fatigue
- u. Ability to read instructions, procedures and signage relevant to the driving of a heavy rigid vehicle
- v. Map reading and road navigation techniques
- w. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy rigid vehicle equal to or less than 4.5 tonnes GVM and seating up to 12 adults (including the driver and all types of transmission), and/or
 - a.2. drive such a commercial heavy rigid vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy rigid vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations
 - a.6. communicating effectively with others when driving a heavy rigid vehicle
 - a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to the class of vehicle
 - b.2. OHS policies and procedures
 - b.3. identification of driving hazards and the use of appropriate defensive driving techniques
 - b.4. workplace procedures and instructions (including security and housekeeping procedures)
 - b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy rigid vehicle
 - b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory road traffic authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or

b.2.2.in an appropriate work situation

Range Statement

General context

- a. Driving must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory roads and traffic authority pertaining to heavy rigid vehicles
- b. Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
- c. Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy rigid vehicle across a variety of driving contexts

Worksite environment

- a. Type of vehicle includes all heavy rigid vehicles, for example any rigid vehicle with 3 or more axles, including trucks or buses, greater than 8 tonnes GVM.
- b. Driving may be carried out in typical road transport situations, including:
 - b.1. operations conducted at day or night
 - b.2. typical weather conditions
 - b.3. on the open road
 - b.4. on a private road
 - b.5. while at a depot, base or warehouse
 - b.6. while at a client's workplace or work site
- c. Vehicle handling procedures may include:
 - c.1. starting a vehicle
 - c.2. steering and manoeuvring a vehicle
 - c.3. accelerating and braking
 - c.4. positioning and stopping a vehicle
 - c.5. reversing a vehicle
 - c.6. operating vehicle controls, instruments and indicators
 - c.7. using air brakes
 - c.8. using defensive driving techniques
 - c.9. managing engine performance
- d. Pre-operational checks may include:
 - d.1. visual check of vehicle
 - d.2. checking and topping up of fluid levels
 - d.3. checks of tyre pressures
 - d.4. checks of operation of vehicle lights and indicators
 - d.5. checks of brakes
- e. Minor routine repairs may include:
 - e.1. replacement of blown globes in vehicle lights
 - e.2. replacement of broken fan belt
 - e.3. replacement of blown fuse
 - e.4. replacement of door mirrors
 - e.5. repairs to rear tail-light lens
 - e.6. changing of tyres
 - e.7. repair of tyre punctures
 - e.8. replacement of broken coolant hose
- f. Driving hazards may include (examples only):

- f.1. wet and iced roads
- f.2. oil on road
- f.3. animals and objects on road
- f.4. fire in vehicle
- f.5. leaking fuel
- f.6. faulty brakes
- f.7. parked vehicles on the road
- f.8. faulty steering mechanism on vehicle
- f.9. pedestrians crossing the road
- f.10. flooded sections of road
- f.11. windy sections of road
- f.12. foggy conditions
- f.13. work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- g. Factors that can cause traffic delays and diversions may include:
 - g.1. traffic accidents
 - g.2. flooded sections of road
 - g.3. road damage
 - g.4. bridge/tunnel damage
 - g.5. road works
 - g.6. building construction
 - g.7. emergency situations such as bushfires, building fires, etc.
 - g.8. road closures for special events such as marches, parades, sporting events, etc.
 - g.9. holiday traffic
 - g.10. road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- h. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - h.1. company procedures
 - h.2. enterprise procedures
 - h.3. organisational procedures
 - h.4. established procedures

Sources of information/documents

- a. Documentation/records may include:
 - a.1. State/Territory heavy rigid vehicle driving licence and permit requirements
 - a.2. State/Territory road rules
 - a.3. workplace driving instructions and procedures
 - a.4. vehicle manufacturer's instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - a.5. emergency procedures
 - a.6. vehicle log book or record book (where required)
 - a.7. relevant standards and certification requirements
 - a.8. quality assurance procedures

Applicable regulations and legislation

- a. Applicable procedures and codes may include:

- a.1. relevant State/Territory roads and traffic authority driving regulations and licence/permit requirements pertaining to heavy rigid vehicles
- a.2. relevant State/Territory road rules
- a.3. relevant State/Territory permit regulations and requirements
- a.4. relevant State/Territory OHS legislation
- a.5. relevant State/Territory fatigue management regulations
- a.6. relevant State/Territory environmental protection legislation

General context

- a. Driving must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory roads and traffic authority pertaining to heavy rigid vehicles
- b. Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
- c. Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy rigid vehicle across a variety of driving contexts

Worksite environment

- a. Type of vehicle includes all heavy rigid vehicles, for example any rigid vehicle with 3 or more axles, including trucks or buses, greater than 8 tonnes GVM.
- b. Driving may be carried out in typical road transport situations, including:
 - b.1. operations conducted at day or night
 - b.2. typical weather conditions
 - b.3. on the open road
 - b.4. on a private road
 - b.5. while at a depot, base or warehouse
 - b.6. while at a client's workplace or work site
- c. Vehicle handling procedures may include:
 - c.1. starting a vehicle
 - c.2. steering and manoeuvring a vehicle
 - c.3. accelerating and braking
 - c.4. positioning and stopping a vehicle
 - c.5. reversing a vehicle
 - c.6. operating vehicle controls, instruments and indicators
 - c.7. using air brakes
 - c.8. using defensive driving techniques
 - c.9. managing engine performance
- d. Pre-operational checks may include:
 - d.1. visual check of vehicle
 - d.2. checking and topping up of fluid levels
 - d.3. checks of tyre pressures
 - d.4. checks of operation of vehicle lights and indicators
 - d.5. checks of brakes
- e. Minor routine repairs may include:
 - e.1. replacement of blown globes in vehicle lights
 - e.2. replacement of broken fan belt
 - e.3. replacement of blown fuse
 - e.4. replacement of door mirrors
 - e.5. repairs to rear tail-light lens
 - e.6. changing of tyres

- e.7. repair of tyre punctures
 - e.8. replacement of broken coolant hose
 - f. Driving hazards may include (examples only):
 - f.1. wet and iced roads
 - f.2. oil on road
 - f.3. animals and objects on road
 - f.4. fire in vehicle
 - f.5. leaking fuel
 - f.6. faulty brakes
 - f.7. parked vehicles on the road
 - f.8. faulty steering mechanism on vehicle
 - f.9. pedestrians crossing the road
 - f.10. flooded sections of road
 - f.11. windy sections of road
 - f.12. foggy conditions
 - f.13. work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
 - g. Factors that can cause traffic delays and diversions may include:
 - g.1. traffic accidents
 - g.2. flooded sections of road
 - g.3. road damage
 - g.4. bridge/tunnel damage
 - g.5. road works
 - g.6. building construction
 - g.7. emergency situations such as bushfires, building fires, etc.
 - g.8. road closures for special events such as marches, parades, sporting events, etc.
 - g.9. holiday traffic
 - g.10. road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
 - h. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - h.1. company procedures
 - h.2. enterprise procedures
 - h.3. organisational procedures
 - h.4. established procedures
- Sources of information/documents**
- a. Documentation/records may include:
 - a.1. State/Territory heavy rigid vehicle driving licence and permit requirements
 - a.2. State/Territory road rules
 - a.3. workplace driving instructions and procedures
 - a.4. vehicle manufacturer's instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - a.5. emergency procedures
 - a.6. vehicle log book or record book (where required)
 - a.7. relevant standards and certification requirements
 - a.8. quality assurance procedures

Applicable regulations and legislation

a. Applicable procedures and codes may include:

- a.1. relevant State/Territory roads and traffic authority driving regulations and licence/permit requirements pertaining to heavy rigid vehicles
- a.2. relevant State/Territory road rules
- a.3. relevant State/Territory permit regulations and requirements
- a.4. relevant State/Territory OHS legislation
- a.5. relevant State/Territory fatigue management regulations
- a.6. relevant State/Territory environmental protection legislation

Unit Sector(s)

Not applicable.

TDTC597C Drive heavy combination vehicle

Modification History

Not applicable.

Unit Descriptor

Field C Driving vehicle

This unit involves the skills and knowledge required to drive a heavy combination vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, coupling and uncoupling of trailer, and effective management of hazardous situations. Assessment of this unit will usually be undertaken within a licensing examination conducted, by or under the authority of, the relevant State/Territory Road Traffic Authority

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory learner permit or driver licence requirements before driving a heavy combination vehicle on a public road.

Field C Driving vehicle

This unit involves the skills and knowledge required to drive a heavy combination vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, coupling and uncoupling of trailer, and effective management of hazardous situations. Assessment of this unit will usually be undertaken within a licensing examination conducted, by or under the authority of, the relevant State/Territory Road Traffic Authority

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory learner permit or driver licence requirements before driving a heavy combination vehicle on a public road.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Drive the heavy combination vehicle	<ul style="list-style-type: none">1.1 The heavy combination vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturer's instructions1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage1.3 Engine operation is maintained within manufacturer's specified torque range and temperature through effective gear selection and smooth transition in gear changes1.4 Braking system of heavy combination vehicle is managed and operated to ensure effective control of the vehicle under all conditions1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving1.6 The heavy combination vehicle is driven in reverse, maintaining visibility and achieving accurate positioning1.7 The heavy combination vehicle is parked, uncoupled, shut down and secured in accordance with manufacturer's specifications, traffic regulations and workplace procedures1.8 Where required, overwidth and overweight permit applications are undertaken in accordance with relevant regulatory requirements1.9 Appropriate signage, lights and the like are checked for operational effectiveness and for conformity to prescribed traffic regulations

- | | | |
|---|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 1.1 | Appropriate procedures are followed in the event of a driving emergency |
| 2 | Monitor traffic and road conditions | 2.1 The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations |
| | 2.2 | Traffic and road conditions are constantly monitored and acted upon to enable safe operation and ensure no injury to people or damage to property, equipment loads and facilities |
| 3 | Monitor and maintain vehicle performance | 3.1 Vehicle performance is maintained through pre-operational inspections and checks of the vehicle |
| | 3.2 | Prime mover and trailer are aligned and coupled in accordance with manufacturer's instructions and workplace procedures |
| | 3.3 | Coupled vehicle is checked and tested to ensure it is correctly secured and to confirm that it is fully operational |
| | 3.4 | Performance and efficiency of vehicle operation is monitored during use |
| | 3.5 | Defective or irregular performance or malfunctions are reported to the appropriate authority |
| | 3.6 | Vehicle records are maintained/updated and information is processed in accordance with workplace procedures |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. follow correct heavy combination vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks

- a.4. monitor and maintain vehicle performance
- a.5. follow OHS and environmental protection procedures and regulations
- a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that are form of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy combination vehicle controls, instruments and indicators and their use
- d. Heavy combination vehicle handling procedures
- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on heavy combination vehicle and related action
- u. Map reading and vehicle and related action
- i. Differences between transmission types
- j. Principles of operation of air brakes and procedures for their use
- k. Fatigue management techniques
- l. Driving hazards and related defensive driving techniques
- m. Principles of stress management when driving a vehicle
- n. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- o. Workplace driving and operational instructions
- p. Causes and effects of fatigue on drivers
- q. Strategies to manage on-road fatigue
- r. Factors which increase fatigue-related accidents
- s. Lifestyles which promote the effective long-term management of fatigue
- t. Ability to read instructions, procedures and signage relevant to the driving of a heavy combination vehicle
- u. Map reading and road navigation techniques
- v. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy combination vehicle, and/or
 - a.2. drive a commercial heavy combination vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy combination vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations

- a.6. communicating effectively with others when driving a heavy combination vehicle
- a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to heavy combination vehicles
 - b.2. OHS policies and procedures
 - b.3. identification of driving hazards and the use of appropriate defensive driving techniques
 - b.4. workplace procedures and instructions (including security and housekeeping procedures)
 - b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy combination vehicle
 - b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory road traffic authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. follow correct heavy combination vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks
 - a.4. monitor and maintain vehicle performance
 - a.5. follow OHS and environmental protection procedures and regulations
 - a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that are form of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy combination vehicle controls, instruments and indicators and their use
- d. Heavy combination vehicle handling procedures
- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques

- h. Pre-operational checks carried out on heavy combination vehicle and related action
- u. Map reading and vehicle and related action
- i. Differences between transmission types
- j. Principles of operation of air brakes and procedures for their use
- k. Fatigue management techniques
- l. Driving hazards and related defensive driving techniques
- m. Principles of stress management when driving a vehicle
- n. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- o. Workplace driving and operational instructions
- p. Causes and effects of fatigue on drivers
- q. Strategies to manage on-road fatigue
- r. Factors which increase fatigue-related accidents
- s. Lifestyles which promote the effective long-term management of fatigue
- t. Ability to read instructions, procedures and signage relevant to the driving of a heavy combination vehicle
- u. Map reading and road navigation techniques
- v. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy combination vehicle, and/or
 - a.2. drive a commercial heavy combination vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy combination vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations
 - a.6. communicating effectively with others when driving a heavy combination vehicle
 - a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to heavy combination vehicles
 - b.2. OHS policies and procedures
 - b.3. identification of driving hazards and the use of appropriate defensive driving techniques
 - b.4. workplace procedures and instructions (including security and housekeeping procedures)
 - b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy combination vehicle
 - b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures

- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory road traffic authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Range Statement

General context

- a. Driving must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory roads and traffic authority pertaining to heavy combination vehicles
- b. Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
- c. Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy combination vehicle across a variety of driving contexts

Worksite environment

- a. Type of vehicle includes all heavy combination vehicles that may be driven on public and private roads and work sites
- b. Driving may be carried out in typical road transport situations, including:
 - b.1. operations conducted at day or night
 - b.2. typical weather conditions
 - b.3. on the open road
 - b.4. on a private road
 - b.5. while at a depot, base or warehouse
 - b.6. while at a client's workplace or work site
- c. Vehicle handling procedures may include:
 - c.1. starting a vehicle
 - c.2. steering and manoeuvring a vehicle
 - c.3. accelerating and braking
 - c.4. positioning and stopping a vehicle
 - c.5. reversing a vehicle
 - c.6. operating vehicle controls, instruments and indicators
 - c.7. using air brakes
 - c.8. using defensive driving techniques
 - c.9. managing engine performance
- d. Pre-operational checks may include:
 - d.1. visual check of vehicle
 - d.2. checking and topping up of fluid levels

- d.3. checks of tyre pressures
- d.4. checks of operation of vehicle lights and indicators
- d.5. checks of brakes
- d.6. checks of coupling equipment
- e. Minor routine repairs may include:
 - e.1. replacement of blown globes in vehicle lights
 - e.2. replacement of broken fan belt
 - e.3. replacement of blown fuse
 - e.4. replacement of door mirrors
 - e.5. repairs to rear tail-light lens
 - e.6. changing of tyres
 - e.7. repair of tyre punctures
 - e.8. replacement of broken coolant hose
- f. Driving hazards may include (examples only):
 - f.1. wet and iced roads
 - f.2. oil on road
 - f.3. animals and objects on road
 - f.4. fire in vehicle
 - f.5. leaking fuel
 - f.6. faulty brakes
 - f.7. parked vehicles on the road
 - f.8. faulty steering mechanism on vehicle
 - f.9. pedestrians crossing the road
 - f.10. flooded sections of road
 - f.11. windy sections of road
 - f.12. foggy conditions
 - f.13. work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- g. Factors that can cause traffic delays and diversions may include (examples only):
 - g.1. traffic accidents
 - g.2. flooded sections of road
 - g.3. road damage
 - g.4. bridge/tunnel damage
 - g.5. road works
 - g.6. building construction
 - g.7. emergency situations such as bushfires, building fires, etc.
 - g.8. road closures for special events such as marches, parades, sporting events, etc.
 - g.9. holiday traffic
 - g.10. road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- h. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - h.1. company procedures
 - h.2. enterprise procedures
 - h.3. organisational procedures
 - h.4. established procedures

Sources of information/documents

- a. Documentation/records may include:
 - a.1. State/Territory heavy combination vehicle driving licence/permit requirements
 - a.2. State/Territory road rules
 - a.3. workplace driving instructions and procedures
 - a.4. vehicle manufacturer's instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - a.5. emergency procedures
 - a.6. vehicle log book or record book (where required)

Applicable regulations and legislation

- a. Applicable procedures and codes may include:
 - a.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to heavy combination vehicles
 - a.2. relevant State/Territory road rules
 - a.3. relevant State/Territory permit regulations and requirements
 - a.4. relevant State/Territory OHS legislation
 - a.5. relevant State/Territory fatigue management regulations
 - a.6. relevant State/Territory environmental protection legislation

General context

- a. Driving must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory roads and traffic authority pertaining to heavy combination vehicles
- b. Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
- c. Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy combination vehicle across a variety of driving contexts

Worksite environment

- a. Type of vehicle includes all heavy combination vehicles that may be driven on public and private roads and work sites
- b. Driving may be carried out in typical road transport situations, including:
 - b.1. operations conducted at day or night
 - b.2. typical weather conditions
 - b.3. on the open road
 - b.4. on a private road
 - b.5. while at a depot, base or warehouse
 - b.6. while at a client's workplace or work site
- c. Vehicle handling procedures may include:
 - c.1. starting a vehicle
 - c.2. steering and manoeuvring a vehicle
 - c.3. accelerating and braking
 - c.4. positioning and stopping a vehicle
 - c.5. reversing a vehicle
 - c.6. operating vehicle controls, instruments and indicators
 - c.7. using air brakes
 - c.8. using defensive driving techniques
 - c.9. managing engine performance
- d. Pre-operational checks may include:

- d.1. visual check of vehicle
- d.2. checking and topping up of fluid levels
- d.3. checks of tyre pressures
- d.4. checks of operation of vehicle lights and indicators
- d.5. checks of brakes
- d.6. checks of coupling equipment
- e. Minor routine repairs may include:
 - e.1. replacement of blown globes in vehicle lights
 - e.2. replacement of broken fan belt
 - e.3. replacement of blown fuse
 - e.4. replacement of door mirrors
 - e.5. repairs to rear tail-light lens
 - e.6. changing of tyres
 - e.7. repair of tyre punctures
 - e.8. replacement of broken coolant hose
- f. Driving hazards may include (examples only):
 - f.1. wet and iced roads
 - f.2. oil on road
 - f.3. animals and objects on road
 - f.4. fire in vehicle
 - f.5. leaking fuel
 - f.6. faulty brakes
 - f.7. parked vehicles on the road
 - f.8. faulty steering mechanism on vehicle
 - f.9. pedestrians crossing the road
 - f.10. flooded sections of road
 - f.11. windy sections of road
 - f.12. foggy conditions
 - f.13. work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- g. Factors that can cause traffic delays and diversions may include (examples only):
 - g.1. traffic accidents
 - g.2. flooded sections of road
 - g.3. road damage
 - g.4. bridge/tunnel damage
 - g.5. road works
 - g.6. building construction
 - g.7. emergency situations such as bushfires, building fires, etc.
 - g.8. road closures for special events such as marches, parades, sporting events, etc.
 - g.9. holiday traffic
 - g.10. road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- h. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - h.1. company procedures
 - h.2. enterprise procedures

h.3. organisational procedures

h.4. established procedures

Sources of information/documents

a. Documentation/records may include:

a.1. State/Territory heavy combination vehicle driving licence/permit requirements

a.2. State/Territory road rules

a.3. workplace driving instructions and procedures

a.4. vehicle manufacturer's instructions, specifications and recommended driving procedures including preoperational checks of vehicle

a.5. emergency procedures

a.6. vehicle log book or record book (where required)

Applicable regulations and legislation

a. Applicable procedures and codes may include:

a.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to heavy combination vehicles

a.2. relevant State/Territory road rules

a.3. relevant State/Territory permit regulations and requirements

a.4. relevant State/Territory OHS legislation

a.5. relevant State/Territory fatigue management regulations

a.6. relevant State/Territory environmental protection legislation

Unit Sector(s)

Not applicable.

TDTD1097B Operate a forklift

Modification History

Not applicable.

Unit Descriptor

Field D Load Handling

This unit involves the skills and knowledge required to operate a forklift, including checking forklift condition, driving the forklift to fulfil operational requirements, monitoring site conditions and monitoring and maintaining forklift performance. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant State/Territory OHS Authority.

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory OHS regulatory requirements concerning the safe operation of forklifts

Field D Load Handling

This unit involves the skills and knowledge required to operate a forklift, including checking forklift condition, driving the forklift to fulfil operational requirements, monitoring site conditions and monitoring and maintaining forklift performance. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant State/Territory OHS Authority.

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory OHS regulatory requirements concerning the safe operation of forklifts

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Check forklift condition	<p>1.1 Condition of forklift is checked for compliance with OHS and workplace requirements for warning devices, manufacturer's specifications and the nature of the load shifting task</p> <p>1.2 Attachments are checked to ensure appropriate adjustment and operation</p> <p>1.3 Mirrors and seats are adjusted for safe operation by the driver</p> <p>1.4 Log books are checked and appropriate workplace documentation is completed in accordance with workplace requirements</p>
2 Drive the forklift	<p>2.1 Forklift is started, steered, manoeuvred, positioned and stopped in accordance with regulations and manufacturer's instructions</p> <p>2.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage</p> <p>2.3 Operational hazards are identified and/or anticipated and avoided or controlled through defensive driving and appropriate hazard control techniques</p> <p>2.4 Forklift is driven in reverse, maintaining visibility and achieving accurate positioning</p> <p>2.5 The forklift is parked, shut down and secured in accordance with manufacturer's specifications, regulations and workplace procedures</p>
3 Operate a forklift to handle loads	<p>3.1 The lifting task to be undertaken is appropriately planned and the correct lifting truck and attachments are selected</p> <p>3.2 The load is lifted, carried, lowered and set down in accordance with OHS legislation, manufacturer's specifications and company procedures</p>

- | | | | |
|---|-------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Monitor site conditions | 4.1 | When selecting the most efficient route, hazards and traffic flow are identified and appropriate adjustments are made |
| | | 4.2 | Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs |
| 5 | Monitor and maintain forklift performance | 5.1 | Performance and efficiency of vehicle operation is monitored during use |
| | | 5.2 | Defective/irregular performance and malfunctions reported to relevant personnel |
| | | 5.3 | Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

a. Assessment must confirm appropriate knowledge and skills to:

- a.1. operate a forklift safely in a workplace environment
- a.2. handle loads and drive defensively
- a.3. manage forklift controls, read instruments and adjust engine power to site requirements
- a.4. locate, interpret and apply relevant information
- a.5. carry out pre-operational checks on a forklift
- a.6. work effectively with colleagues
- a.7. convey information in written and oral form
- a.8. maintain workplace records
- a.9. use workplace colloquial and technical language and communication technologies in the workplace context
- a.10. meet relevant regulatory requirements

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that are part of a worker's job function

Required knowledge and skills

- a. Knowledge of relevant duty of care requirements pertaining to the operation of a forklift
- b. Relevant OHS and environmental procedures and regulations
- c. Forklift controls, instruments and indicators and their use

- d. Forklift handling procedures
- e. Procedures to be followed in the event of an operational emergency
- f. Engine power management and safe operating strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on forklift and related action
- i. Site layout and obstacles
- j. Operating hazards and related defensive driving and hazard control techniques
- k. Principles of stress management when driving a forklift
- l. Workplace operating procedures
- m. Ability to identify points of balance and safe lifting positions on a range of loads when operating a forklift
- n. Ability to read instructions, procedures and signage relevant to the operation of a forklift
- o. Ability to monitor and anticipate operational hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real or simulated practical and knowledge assessments that demonstrate the skills and knowledge to operate a forklift to carry out a range of load shifting operations in a workplace, and/or
 - a.2. operate a forklift to shift loads in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. operating a forklift safely in workplace environment
 - a.2. handling loads and driving defensively
 - a.3. managing forklift controls, reading instruments and adjusting engine power to site requirements
 - a.4. locating, interpreting and applying relevant information
 - a.5. carrying out pre-operational checks
 - a.6. working effectively with colleagues
 - a.7. conveying information in relevant form
 - a.8. maintaining workplace records
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory regulations and licence requirements pertaining to forklift operation
 - b.2. OHS policies and procedures
 - b.3. identification of operational hazards and the use of appropriate defensive driving and hazard control techniques
 - b.4. workplace procedures and work instructions (including security and housekeeping procedures)
 - b.5. forklift manufacturer's guidelines and instructions
 - b.6. environmental protection procedures when operating a forklift and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify accidents, incidents and any identified faults or malfunctions in accordance with manufacturer's instructions, regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory forklift licensing authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. operate a forklift safely in a workplace environment
 - a.2. handle loads and drive defensively
 - a.3. manage forklift controls, read instruments and adjust engine power to site requirements
 - a.4. locate, interpret and apply relevant information
 - a.5. carry out pre-operational checks on a forklift
 - a.6. work effectively with colleagues
 - a.7. convey information in written and oral form
 - a.8. maintain workplace records
 - a.9. use workplace colloquial and technical language and communication technologies in the workplace context
 - a.10. meet relevant regulatory requirements

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that are part of a worker's job function

Required knowledge and skills

- a. Knowledge of relevant duty of care requirements pertaining to the operation of a forklift
- b. Relevant OHS and environmental procedures and regulations
- c. Forklift controls, instruments and indicators and their use
- d. Forklift handling procedures
- e. Procedures to be followed in the event of an operational emergency
- f. Engine power management and safe operating strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on forklift and related action
- i. Site layout and obstacles
- j. Operating hazards and related defensive driving and hazard control techniques
- k. Principles of stress management when driving a forklift
- l. Workplace operating procedures
- m. Ability to identify points of balance and safe lifting positions on a range of loads when operating a forklift
- n. Ability to read instructions, procedures and signage relevant to the operation of a forklift
- o. Ability to monitor and anticipate operational hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real or simulated practical and knowledge assessments that demonstrate the skills and knowledge to operate a forklift to carry out a range of load shifting operations in a workplace, and/or
 - a.2. operate a forklift to shift loads in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. operating a forklift safely in workplace environment
 - a.2. handling loads and driving defensively
 - a.3. managing forklift controls, reading instruments and adjusting engine power to site requirements
 - a.4. locating, interpreting and applying relevant information
 - a.5. carrying out pre-operational checks
 - a.6. working effectively with colleagues
 - a.7. conveying information in relevant form
 - a.8. maintaining workplace records
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory regulations and licence requirements pertaining to forklift operation
 - b.2. OHS policies and procedures
 - b.3. identification of operational hazards and the use of appropriate defensive driving and hazard control techniques
 - b.4. workplace procedures and work instructions (including security and housekeeping procedures)
 - b.5. forklift manufacturer's guidelines and instructions
 - b.6. environmental protection procedures when operating a forklift and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify accidents, incidents and any identified faults or malfunctions in accordance with manufacturer's instructions, regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory forklift licensing authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Range Statement

General context

- a. Operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory authority
- b. Operation of a forklift is performed under some supervision, generally within a team environment

c. Operation of a forklift involves the application of routine equipment operation principles and procedures to maintain the safety and operation of a forklift in a variety of operational contexts

Worksite environment

a. Types of forklift may include counterbalance trucks, reach trucks and pallet trucks

b. Operations may be carried out in typical forklift operational situations, including:

b.1. operations conducted at day or night

b.2. typical weather conditions

b.3. on the open road

b.4. on a private road or worksite

b.5. while at a workplace

c. Customers may be internal or external

d. Workplaces may comprise large, medium or small worksites

e. Work may be conducted in:

e.1. restricted spaces

e.2. exposed conditions

e.3. controlled or open environments

f. Loads to be shifted may require special precautions

g. Loads to be shifted may be:

g.1. irregularly shaped

g.2. packaged or unpackaged

g.3. labelled or unlabelled

g.4. palletted or unpalletted

h. Hazards in the work area may include exposure to:

h.1. chemicals

h.2. dangerous or hazardous substances

h.3. movements of equipment, goods and materials

i. Personnel in the work area may include:

i.1. workplace personnel

i.2. site visitors

i.3. contractors

i.4. official representatives

j. Forklift handling procedures may include:

j.1. starting a forklift

j.2. steering and manoeuvring a forklift

j.3. accelerating and braking

j.4. positioning and stopping a forklift

j.5. reversing a forklift

j.6. operating forklift controls, instruments and indicators

j.7. using defensive driving techniques

j.8. managing engine performance

k. Pre-operational checks may include:

k.1. visual check of forklift

k.2. checking and topping up of fluid levels

k.3. checks of tyres

k.4. checks of operation of forklift lights and indicators

k.5. checks of brakes

l. Hazards may include (examples only):

- 1.1. wet and iced operating surfaces
- 1.2. oil on operating surface
- 1.3. faulty brakes
- 1.4. workplace obstacles and other operational equipment and vehicles
- 1.5. damaged loads and pallets
- 1.6. other personnel in work area
- m. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - m.1. company procedures
 - m.2. enterprise procedures
 - m.3. organisational procedures
 - m.4. established procedures
- n. Personal protection equipment may include:
 - n.1. gloves
 - n.2. safety headwear and footwear
 - n.3. safety glasses
 - n.4. two-way radios
 - n.5. high visibility clothing

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes, including IMDG markings and HAZCHEM signs
 - a.2. manifests, bar codes, picking slips, merchandise transfers, stock requisitions, goods and container identification
 - a.3. Australian Standard 2359 - Industrial Truck Code
 - a.4. manufacturer's specifications for forklift and associated equipment
 - a.5. operations and service record book or log
 - a.6. workplace procedures and policies for the operation of forklifts
 - a.7. supplier and/or client instructions
 - a.8. ADG Code and material safety data sheets
 - a.9. regulatory requirements concerning the use of forklifts
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable procedures and codes may include:
 - a.1. relevant State/Territory regulations pertaining to the operation of forklifts
 - a.2. relevant codes and standards, including Australian Standard 2359 - Industrial Truck Code
 - a.3. relevant State/Territory OHS legislation
 - a.4. relevant State/Territory fatigue management regulations
 - a.5. relevant State/Territory environmental protection legislation

General context

- a. Operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory authority
- b. Operation of a forklift is performed under some supervision, generally within a team environment

c. Operation of a forklift involves the application of routine equipment operation principles and procedures to maintain the safety and operation of a forklift in a variety of operational contexts

Worksite environment

a. Types of forklift may include counterbalance trucks, reach trucks and pallet trucks

b. Operations may be carried out in typical forklift operational situations, including:

b.1. operations conducted at day or night

b.2. typical weather conditions

b.3. on the open road

b.4. on a private road or worksite

b.5. while at a workplace

c. Customers may be internal or external

d. Workplaces may comprise large, medium or small worksites

e. Work may be conducted in:

e.1. restricted spaces

e.2. exposed conditions

e.3. controlled or open environments

f. Loads to be shifted may require special precautions

g. Loads to be shifted may be:

g.1. irregularly shaped

g.2. packaged or unpackaged

g.3. labelled or unlabelled

g.4. palletted or unpalletted

h. Hazards in the work area may include exposure to:

h.1. chemicals

h.2. dangerous or hazardous substances

h.3. movements of equipment, goods and materials

i. Personnel in the work area may include:

i.1. workplace personnel

i.2. site visitors

i.3. contractors

i.4. official representatives

j. Forklift handling procedures may include:

j.1. starting a forklift

j.2. steering and manoeuvring a forklift

j.3. accelerating and braking

j.4. positioning and stopping a forklift

j.5. reversing a forklift

j.6. operating forklift controls, instruments and indicators

j.7. using defensive driving techniques

j.8. managing engine performance

k. Pre-operational checks may include:

k.1. visual check of forklift

k.2. checking and topping up of fluid levels

k.3. checks of tyres

k.4. checks of operation of forklift lights and indicators

k.5. checks of brakes

l. Hazards may include (examples only):

- 1.1. wet and iced operating surfaces
- 1.2. oil on operating surface
- 1.3. faulty brakes
- 1.4. workplace obstacles and other operational equipment and vehicles
- 1.5. damaged loads and pallets
- 1.6. other personnel in work area
- m. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - m.1. company procedures
 - m.2. enterprise procedures
 - m.3. organisational procedures
 - m.4. established procedures
- n. Personal protection equipment may include:
 - n.1. gloves
 - n.2. safety headwear and footwear
 - n.3. safety glasses
 - n.4. two-way radios
 - n.5. high visibility clothing

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes, including IMDG markings and HAZCHEM signs
 - a.2. manifests, bar codes, picking slips, merchandise transfers, stock requisitions, goods and container identification
 - a.3. Australian Standard 2359 - Industrial Truck Code
 - a.4. manufacturer's specifications for forklift and associated equipment
 - a.5. operations and service record book or log
 - a.6. workplace procedures and policies for the operation of forklifts
 - a.7. supplier and/or client instructions
 - a.8. ADG Code and material safety data sheets
 - a.9. regulatory requirements concerning the use of forklifts
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures

Applicable regulations and legislation

- a. Applicable procedures and codes may include:
 - a.1. relevant State/Territory regulations pertaining to the operation of forklifts
 - a.2. relevant codes and standards, including Australian Standard 2359 - Industrial Truck Code
 - a.3. relevant State/Territory OHS legislation
 - a.4. relevant State/Territory fatigue management regulations
 - a.5. relevant State/Territory environmental protection legislation

Unit Sector(s)

Not applicable.

TDTD397C Handle dangerous goods/hazardous substances

Modification History

Not applicable.

Unit Descriptor

Field D Load handling

This unit involves the skills and knowledge required to handle dangerous goods and hazardous substances, including identifying requirements for working with dangerous goods and/or hazardous substances, confirming site incident procedures, selecting handling techniques, and handling and storing dangerous goods and hazardous substances.

Persons achieving competence in this unit will need to fulfil all of the relevant Australian and State/Territory regulations and codes concerned with the handling of dangerous goods and hazardous substances.

Field D Load handling

This unit involves the skills and knowledge required to handle dangerous goods and hazardous substances, including identifying requirements for working with dangerous goods and/or hazardous substances, confirming site incident procedures, selecting handling techniques, and handling and storing dangerous goods and hazardous substances.

Persons achieving competence in this unit will need to fulfil all of the relevant Australian and State/Territory regulations and codes concerned with the handling of dangerous goods and hazardous substances.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify requirements for working with dangerous goods and/or hazardous substances	1.1 Dangerous goods and/or hazardous substances are identified from information including class labels, manifests and other documentation 1.2 Storage requirements for hazardous substances and/or dangerous goods are identified and applied 1.3 Legislative requirements for hazardous substances and/or dangerous goods are known and used to plan work activities 1.4 Handling procedures for different classes and characteristics of goods are observed 1.5 Confirmation is sought from relevant personnel where dangerous goods or hazardous materials do not appear to be appropriately marked
2 Confirm site incident procedures	2.1 Incident reporting processes are identified 2.2 Emergency equipment is located and checked according to workplace procedures and statutory regulations 2.3 Emergency procedures are identified and confirmed
3 Select handling techniques	3.1 Load handling and shifting procedures are selected in accordance with identified requirements for particular goods 3.2 Handling equipment is checked for conformity with workplace requirements and manufacturer's guidelines 3.3 Where relevant, suitable signage is checked for compliance with workplace procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. identify dangerous goods/hazardous substances (from labels, IMDG markings, HAZCHEM signs and other relevant identification criteria)
 - a.2. safely handle dangerous goods/hazardous substances
 - a.3. assess handling and storage precautions and requirements for dangerous goods/hazardous substances
 - a.4. estimate weight and dimensions of load and any special requirements
 - a.5. select appropriate equipment and work systems including personal protection equipment
 - a.6. identify job and site hazards and plan work to minimise risks
 - a.7. determine (any) required permits
 - a.8. use appropriate communication strategies and equipment
 - a.9. locate, interpret and apply relevant information
 - a.10. maintain workplace records and documentation
 - a.11. apply hierarchy of hazard control

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that are part of a worker's job function

Required knowledge and skills

- a. Relevant regulations and codes concerning the handling of dangerous goods and hazardous substances
- b. Application of relevant aspects of ADG Code and relevant Australian Standards
- c. Permit and licence requirements
- d. Workplace procedures for handling and storing dangerous goods/hazardous substances
- e. Risks when handling dangerous goods and hazardous substances and related precautions to control the risk
- f. Equipment applications, capacities, configurations, safety hazards and control mechanisms
- g. Housekeeping standards procedures required in the workplace
- h. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- i. Ability to read and comprehend simple statements in English
- j. Ability to identify containers and goods coding, IMDG markings and, where applicable, emergency information panels
- k. Ability to plan own work including predicting consequences and identifying improvements

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to safely handle dangerous goods and hazardous substances, and/or
 - a.2. safely handle dangerous goods and hazardous substances in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. assessing handling and storage precautions and requirements for dangerous goods/hazardous substances
 - a.2. estimating weight and dimensions of load and any special requirements
 - a.3. selecting appropriate equipment and work systems including personal protection equipment
 - a.4. identifying job and site hazards and planning work to minimise risks
 - a.5. determining required permits
 - a.6. using appropriate communication strategies and equipment
 - a.7. locating, interpreting and applying relevant information
 - a.8. maintaining workplace records and documentation
 - a.9. identifying and safely handling equipment and goods
 - a.10. applying hierarchy of risk control
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. Dangerous Goods Code and other relevant regulations
 - b.2. hazard prevention policies and procedures
 - b.3. workplace procedures and work instructions concerning the manual shifting of loads
 - b.4. issue resolution procedures
 - b.5. job procedures and work instructions
 - b.6. guidelines relating to the safe use of machinery and equipment
 - b.7. quality assurance procedures (where existing)
 - b.8. security procedures
 - b.9. housekeeping processes
 - b.10. environmental protection procedures
- c. Action is taken promptly to report accidents and/or incidents in accordance with regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. identify dangerous goods/hazardous substances (from labels, IMDG markings, HAZCHEM signs and other relevant identification criteria)
 - a.2. safely handle dangerous goods/hazardous substances
 - a.3. assess handling and storage precautions and requirements for dangerous goods/hazardous substances
 - a.4. estimate weight and dimensions of load and any special requirements
 - a.5. select appropriate equipment and work systems including personal protection equipment
 - a.6. identify job and site hazards and plan work to minimise risks
 - a.7. determine (any) required permits

- a.8. use appropriate communication strategies and equipment
- a.9. locate, interpret and apply relevant information
- a.10. maintain workplace records and documentation
- a.11. apply hierarchy of hazard control

Interdependent assessment of units

a. This unit of competency may be assessed in conjunction with other units that are part of a worker's job function

Required knowledge and skills

- a. Relevant regulations and codes concerning the handling of dangerous goods and hazardous substances
- b. Application of relevant aspects of ADG Code and relevant Australian Standards
- c. Permit and licence requirements
- d. Workplace procedures for handling and storing dangerous goods/hazardous substances
- e. Risks when handling dangerous goods and hazardous substances and related precautions to control the risk
- f. Equipment applications, capacities, configurations, safety hazards and control mechanisms
- g. Housekeeping standards procedures required in the workplace
- h. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- i. Ability to read and comprehend simple statements in English
- j. Ability to identify containers and goods coding, IMDG markings and, where applicable, emergency information panels
- k. Ability to plan own work including predicting consequences and identifying improvements

Resource implications

a. Access is required to opportunities to:

- a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to safely handle dangerous goods and hazardous substances, and/or
- a.2. safely handle dangerous goods and hazardous substances in an appropriate range of operational situations

Consistency in performance

a. Applies underpinning knowledge and skills when:

- a.1. assessing handling and storage precautions and requirements for dangerous goods/hazardous substances
- a.2. estimating weight and dimensions of load and any special requirements
- a.3. selecting appropriate equipment and work systems including personal protection equipment
- a.4. identifying job and site hazards and planning work to minimise risks
- a.5. determining required permits
- a.6. using appropriate communication strategies and equipment
- a.7. locating, interpreting and applying relevant information
- a.8. maintaining workplace records and documentation
- a.9. identifying and safely handling equipment and goods
- a.10. applying hierarchy of risk control
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. Dangerous Goods Code and other relevant regulations
 - b.2. hazard prevention policies and procedures
 - b.3. workplace procedures and work instructions concerning the manual shifting of loads

- b.4. issue resolution procedures
- b.5. job procedures and work instructions
- b.6. guidelines relating to the safe use of machinery and equipment
- b.7. quality assurance procedures (where existing)
- b.8. security procedures
- b.9. housekeeping processes
- b.10 environmental protection procedures
- c. Action is taken promptly to report accidents and/or incidents in accordance with regulatory requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. This unit covers anyone working in the transport, warehousing, distribution and storage industries who may handle dangerous goods and/or hazardous substances
- b. Work must be carried out in compliance with the relevant OHS regulations concerning the safe handling of dangerous goods and hazardous substances
- c. Work is performed under general supervision
- d. Work involves the application of the codes of practice and established procedures for the safe handling of dangerous goods and hazardous substances

Worksite environment

- a. The dangerous goods may be handled in a range of work environments by day or night and may be:
 - a.1. for short-term storage
 - a.2. for long-term storage
 - a.3. in transit
- b. Customers may be internal or external
- c. Workplace environment may include:
 - c.1. movement of equipment
 - c.2. movement of goods
 - c.3. materials and vehicular traffic
- d. Requirements for work may include:
 - d.1. site restrictions and procedures
 - d.2. use of safety and personal protection equipment
 - d.3. communications equipment
 - d.4. specialised lifting and/or handling equipment
 - d.5. incident breakdown procedures

- d.6. authorities and permits
- d.7. hours of operations
- d.8. noise restrictions
- d.9. additional gear and equipment
- d.10. segmentation procedures
- d.11. emergency procedures, including response to spillage/leaks, evacuation and fire-fighting
- e. Hazards may include:
 - e.1. hazardous or dangerous materials
 - e.2. contamination of, or from, materials being handled
 - e.3. noise, light, energy sources
 - e.4. stationary and moving machinery, parts or components
 - e.5. service lines
 - e.6. spills, leakages, ruptures
 - e.7. fire or ignition
 - e.8. dust/vapours
- f. Hazard management is consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
- g. Consultative processes may involve:
 - g.1. other employees and supervisors
 - g.2. suppliers, potential customers and existing clients
 - g.3. representatives of regulatory authorities with jurisdiction over OHS, dangerous goods and hazardous substances
 - g.4. management and union representatives
 - g.5. industrial relations and OHS specialists
 - g.6. other maintenance, professional or technical staff
- h. Personnel in the work area may include:
 - h.1. workplace personnel
 - h.2. site visitors
 - h.3. contractors
 - h.4. official representatives
- i. Identification of goods may be from material safety data sheets, packaging labels, manifests, stock lists, and HAZCHEM interpretative advice
- j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
- k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. mask and respirator
 - k.5. protective clothing
 - k.6. breathing apparatus

Sources of information/documents

- a. Information/documents may include:

- a.1. goods identification numbers and codes
- a.2. manifests, stock lists, packaging labels, bar codes, stock lists
- a.3. goods and container identification
- a.4. workplace procedures and policies concerning the handling of dangerous goods and hazardous substances
- a.5. supplier and/or client instructions
- a.6. material safety data sheets
- a.7. Australian Dangerous Goods Code
- a.8. HAZCHEM interpretative advice
- a.9. relevant legislation, codes, regulations and related documentation concerning the handling of dangerous goods and hazardous substances
- a.10. award, enterprise bargaining agreement, other industrial arrangements
- a.11. standards and certification requirements
- a.12. quality assurance procedures
- a.13. emergency procedures pertaining to dangerous goods and hazardous substances

Applicable regulations and legislation

a. Applicable regulations and legislation may include:

- a.1. relevant Australian and State/Territory regulations relating to the handling of dangerous goods and hazardous substances
- a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
- a.3. relevant Australian Standards such as: AS 1216, AS 1596, AS 1894, AS 1940, AS 2030.1-4, AS 2508.2.001-013, AS 2508.3.001-014
- a.4. relevant State/Territory OHS legislation
- a.5. relevant State/Territory environmental protection legislation

General context

- a. This unit covers anyone working in the transport, warehousing, distribution and storage industries who may handle dangerous goods and/or hazardous substances
- b. Work must be carried out in compliance with the relevant OHS regulations concerning the safe handling of dangerous goods and hazardous substances
- c. Work is performed under general supervision
- d. Work involves the application of the codes of practice and established procedures for the safe handling of dangerous goods and hazardous substances

Worksite environment

- a. The dangerous goods may be handled in a range of work environments by day or night and may be:
 - a.1. for short-term storage
 - a.2. for long-term storage
 - a.3. in transit
- b. Customers may be internal or external
- c. Workplace environment may include:
 - c.1. movement of equipment
 - c.2. movement of goods
 - c.3. materials and vehicular traffic

- d. Requirements for work may include:
 - d.1. site restrictions and procedures
 - d.2. use of safety and personal protection equipment
 - d.3. communications equipment
 - d.4. specialised lifting and/or handling equipment
 - d.5. incident breakdown procedures
 - d.6. authorities and permits
 - d.7. hours of operations
 - d.8. noise restrictions
 - d.9. additional gear and equipment
 - d.10. segmentation procedures
 - d.11. emergency procedures, including response to spillage/leaks, evacuation and fire-fighting
- e. Hazards may include:
 - e.1. hazardous or dangerous materials
 - e.2. contamination of, or from, materials being handled
 - e.3. noise, light, energy sources
 - e.4. stationary and moving machinery, parts or components
 - e.5. service lines
 - e.6. spills, leakages, ruptures
 - e.7. fire or ignition
 - e.8. dust/vapours
- f. Hazard management is consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
- g. Consultative processes may involve:
 - g.1. other employees and supervisors
 - g.2. suppliers, potential customers and existing clients
 - g.3. representatives of regulatory authorities with jurisdiction over OHS, dangerous goods and hazardous substances
 - g.4. management and union representatives
 - g.5. industrial relations and OHS specialists
 - g.6. other maintenance, professional or technical staff
- h. Personnel in the work area may include:
 - h.1. workplace personnel
 - h.2. site visitors
 - h.3. contractors
 - h.4. official representatives
- i. Identification of goods may be from material safety data sheets, packaging labels, manifests, stock lists, and HAZCHEM interpretative advice
- j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures
 - j.3. organisational procedures
 - j.4. established procedures
- k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear

- k.3. safety glasses
- k.4. mask and respirator
- k.5. protective clothing
- k.6. breathing apparatus

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, stock lists, packaging labels, bar codes, stock lists
 - a.3. goods and container identification
 - a.4. workplace procedures and policies concerning the handling of dangerous goods and hazardous substances
 - a.5. supplier and/or client instructions
 - a.6. material safety data sheets
 - a.7. Australian Dangerous Goods Code
 - a.8. HAZCHEM interpretative advice
 - a.9. relevant legislation, codes, regulations and related documentation concerning the handling of dangerous goods and hazardous substances
 - a.10. award, enterprise bargaining agreement, other industrial arrangements
 - a.11. standards and certification requirements
 - a.12. quality assurance procedures
 - a.13. emergency procedures pertaining to dangerous goods and hazardous substances

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant Australian and State/Territory regulations relating to the handling of dangerous goods and hazardous substances
 - a.2. Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:
 - a.2.1. Australian and International Dangerous Goods Codes
 - a.2.2. Australian Marine Orders and the International Maritime Dangerous Goods Code
 - a.2.3. IATA's 'Dangerous Goods by Air' regulations
 - a.2.4. Australian and International Explosives Codes
 - a.3. relevant Australian Standards such as: AS 1216, AS 1596, AS 1894, AS 1940, AS 2030.1-4, AS 2508.2.001-013, AS 2508.3.001-014
 - a.4. relevant State/Territory OHS legislation
 - a.5. relevant State/Territory environmental protection legislation

Unit Sector(s)

Not applicable.