Australian Government

CPPSPS3005A Routinely maintain swimming pool and spa dosing systems

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

CPPSPS3005A Routinely maintain swimming pool and spa dosing systems

Modification History

Version	Comments
1	This version first released with CPP07 Property Services Training Package Version 13.

Unit Descriptor

This unit of competency specifies the outcomes required to carry out routine maintenance of swimming pool and spa dosing systems. It includes preparing for routine maintenance to swimming pool and spa dosing systems, carrying out routine maintenance, and completing maintenance activities.

Application of the Unit

This unit of competency supports the work of swimming pool and spa technicians engaged in servicing domestic, commercial and public swimming pools and spas.

Licensing/Regulatory Information

Service technicians are not permitted to undertake any installation, replacement, maintenance and repair functions that are restricted to licensed trades or occupations (subject to relevant state and territory regulations). Different states and territories may have regulatory mechanisms that apply to this unit. Users are advised to check for regulatory limitations.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	**Prepare for routine maintenance.**	1.1	Applicable provisions of Australian standards, and legislative, manufacturer and enterprise requirements are identified and followed.
		1.2	***Work instructions*** are obtained, reviewed and confirmed as required with ***relevant persons***.
		1.3	Swimming pool or spa dosing system to be serviced is identified and confirmed in line with enterprise requirements.
		1.4	Maintenance requirements of swimming pool or spa dosing system are confirmed in line with enterprise procedures.
		1.5	***Tools and equipment*** needed to carry out the work are selected and checked for correct operation and safety.
		1.6	Potential and existing ***risks and hazards*** in the work area are identified and controlled in line with work health and safety (WHS) and enterprise requirements.
2	**Carry out routine maintenance.**	2.1	***Personal protective equipment*** is selected and used in line with WHS and enterprise requirements.
		2.2	Swimming pool or spa dosing system is inspected and assessed for operational effectiveness against normal operating criteria.
		2.3	***Routine servicing*** of swimming pool or spa dosing system is carried out in line with manufacturer instructions, legislative and regulatory requirements and

enterprise procedures.

2.4 ***Faults*** are identified and ***routine repairs*** undertaken in line with manufacturer instructions, and legislative, regulatory, client and enterprise requirements.

2.5 Complex faults and repair requirements are reported to relevant persons in line with enterprise requirements.

3 Complete maintenance activities.

3.1 Serviced swimming pool or spa dosing system is reinstated to operational condition in line with work instructions and enterprise procedures.

3.2 Work area is restored to original condition and checked for safety hazards, waste is disposed of, and tools and equipment are cleaned and stored in line with WHS and enterprise requirements.

3.3 Malfunctions, faults, wear or damage to swimming pool or spa, dosing system and environs, tools and equipment are reported for repair or replacement in line with enterprise procedures.

3.4 Notification of work completion is made to relevant persons in line with enterprise procedures.

3.5 Information is provided to clients on compliance of swimming pool or spa and environs with safety legislation in line with enterprise requirements.

3.6 Relevant documentation is completed and securely maintained in line with enterprise procedures.

Required Skills and Knowledge

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

Required skills

- communication skills to interact in an ethical manner with clients from diverse social, economic and cultural backgrounds
- decision-making and problem-solving skills to identify faults in swimming pool and spa dosing systems
- literacy skills to read and interpret work instructions
- numeracy skills to interpret mathematical and graphical information related to swimming pool and spa dosing systems
- research skills to locate manufacturer's and other information on components of swimming pool and spa dosing systems
- technology skills to use tools and equipment required to carry out routine maintenance on swimming pool and spa dosing systems

Required knowledge

- Australian Competition and Consumer Commission product safety guidelines
- chlorine chemistry:
  - hazards
  - production
  - role in sanitisation
  - types of chlorine
- commonwealth, state or territory, and local government legislation and regulations, Australian standards, and codes of practice impacting on the routine maintenance of swimming pools and spas related to:
  - electrical regulations controlling conduct of electrical work
  - environmental health
  - private and public swimming pools and spas
  - work health and safety
- dosing:
  - chemicals
  - hazards
  - purpose
  - procedures
- electrical safety principles
- safe chemical-handling principles
- swimming pool and spa dosing systems:

- common faults
- components
- electrically interlocking chemical feeder and pool pump systems:
  - procedure
  - purpose
- maintenance
- operating principles of dosing systems
- purpose of dosing systems
- types, operating principles and servicing of dosing systems:
  - dosing control systems
  - erosion feeders or flow-through chemical feed systems: pressure differential feeders,
  - pressure erosion dry chemical feeders, pressure to vacuum feeders, and spray erosion dry chemical feeders
  - gas feed systems, excluding chlorine gas systems: carbon dioxide and ozone
  - ionisers
  - liquid solution feeds
  - salt water pool chlorinators: brine method and in-line
  - ultraviolet (UV) systems
- water testing:
  - parameters
  - techniques
  - test results

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by carrying out routine maintenance of swimming pool and spa dosing systems.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person should demonstrate the ability to: • locate, interpret and apply relevant information, standards and specifications to carry out routine maintenance of swimming pool and spa dosing systems • apply safety requirements throughout the work sequence, including using personal protective clothing and equipment • carry out routine maintenance activities on the dosing systems of swimming pools and spas, including identifying faults and undertaking routine repairs in line with manufacturer instructions and client and enterprise requirements • report complex faults and repair requirements to relevant persons in line with enterprise requirements • restore work area to original condition and check swimming pool or spa dosing system and environs for safety hazards • ensure that waste is disposed of and tools and equipment are cleaned and stored in line with WHS and enterprise requirements.
Context of and specific resources for assessment	Assessment of essential underpinning knowledge may be conducted in an off-site context and is to comply with relevant regulatory and Australian Standards' requirements. Resource implications for assessment include: • relevant codes, standards and government regulations • a technical reference library with current publications on different types of swimming pool and spa dosing systems and components.
Method of assessment	Assessment methods must: • satisfy the endorsed Assessment Guidelines of the CPP07 Property Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles • confirm that competency is verified and able to be transferred to

	other circumstances and environments. This unit could be assessed on its own or in combination with other units relevant to the job function.
Guidance information for assessment	Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support. Assessment processes and techniques should, as far as is practical, take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work instructions may include**:**	• access to site and specific site requirements
	• dosing system information:
	  • features, functions and capabilities
	  • manufacturer instructions
	  • service and maintenance requirements
	  • type
	  • warranties and guarantees
	• equipment and systems location information
	• equipment, tools and material requirements
	• personal protective clothing and equipment requirements
	• reporting requirements
	• specific client requirements
	• timeframes
	• work schedules
	• work tasks and procedures.

Relevant persons may include:	• client • colleague • equipment and systems manufacturer • site manager or project manager • supervisor • swimming pool or spa manager or operator

	• technician.

Swimming pool and spa dosing systems may include:	• dosing control systems
	• erosion feeders or flow-through chemical feed systems:
	  • pressure differential feeders
	  • pressure erosion dry chemical feeders
	  • pressure to vacuum feeders
	  • spray erosion dry chemical feeders
	• gas feed systems excluding chlorine gas systems:
	  • carbon dioxide
	  • ozone
	• ionisers
	• liquid solution feeders:
	  • diaphragm and piston pumps
	  • peristaltic pumps
	• ozone systems
	• salt water pool chlorinators:
	  • brine method
	  • in-line
	• UV systems.

Tools and equipment may include:	• communications equipment • computer and software • hand tools • measuring devices • multimeter • personal protective equipment • power tools.

Risks and hazards may include:	• burns and scalds
	• chemical hazards
	• confined spaces
	• electrical hazards
	• exposure to:
	  • algae
	  • asbestos
	  • bodily fluids
	  • contaminated surfaces
	  • contaminated water:
	  • bacteria
	  • faecal
	  • viruses
	  • disinfection by products

	• dogs • dust • fibres • glass • heights • insects • live power • natural and other gas build-up • noise • snakes • spiders • sun • swimming pool and spa chemicals • vermin • weather • hydraulic entrapment • gas hazards • inadequate ventilation • manual handling • non-compliance with building codes and regulations • personal health hazards • plant and equipment hazards • trips and falls • water hazards.
Personal protective equipment may include:	• buoyancy vest or personal flotation device (PFD) • gloves • hard hat or protective head covering • hearing protection (e.g. earplugs and earmuffs) • high visibility vest • non-slip and waterproof boots or other safety footwear • protective eyewear and glasses • protective outdoor clothing • respirator or face mask • safety harness • sun protection (e.g. sunhat, sunscreen and sunglasses) • uniforms or overalls • water-resistant clothing.
Routine servicing may include:	• adjustments • cleaning • confirming operation • filling chemicals

	• inspecting • measuring • programming automated systems • replacing worn components • testing.
Faults may include:	• dosing system not working • indicator lights not working • no reading or inaccurate reading • scaling • water quality • worn and damaged parts.

Routine repairs may include:	• dosing control system:
	  • recalibrate unit
	  • repair non-electrical components
	• replace probes
	  • erosion feeders or flow-through chemical feed systems:
	  • repair non-electrical components
	• gas feed systems:
	  • repair non-electrical and non-gas components
	• ionisers:
	  • repair non-electrical components
	• liquid solution feeders:
	  • repair non-electrical components
	  • replace diaphragms, pistons and feed points
	• ozone systems:
	  • repair non-electrical components
	• salt water pool chlorinators:
	  • repair non-electrical components
	  • replace cell
	• UV systems:
	  • repair non-electrical components
	  • replace consumables.

Unit Sector(s)

Competency field

Unit sector Swimming pools and spas

Custom Content Section

Not applicable.