



Australian Government

CPPSPS4014A Drain and acid wash swimming pools and spas

Release: 1

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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 drain and acid wash swimming pools and spas. It includes preparing for work, draining and acid washing swimming pools and spas, and completing work 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

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| 1 Prepare for work. | <p>1.1 Applicable provisions of Australian standards, and legislative, manufacturer and enterprise requirements are identified and followed.</p> <p>1.2 <i>Work instructions</i> are obtained, reviewed and confirmed as required with <i>relevant persons</i>.</p> <p>1.3 Draining and acid washing requirements for swimming pool or spa are confirmed in line with enterprise procedures.</p> <p>1.4 Swimming pool or spa to be drained and acid washed is identified and confirmed, and its suitability for process determined in line with enterprise requirements.</p> <p>1.5 <i>Tools, materials and equipment</i> needed to carry out the work are selected and checked for correct operation and safety.</p> <p>1.6 Potential and existing <i>risks and hazards</i> in the work area are identified and controlled in line with work health and safety (WHS) and enterprise requirements.</p> <p>1.7 <i>Sustainability principles</i> are applied to work preparation and application in line with enterprise requirements.</p> |
| 2 Perform acid wash of pool or spa. | <p>2.1 <i>Company disclosure, disclaimer and acknowledgement documentation</i> related to draining and acid washing swimming pool or spa is presented and explained to client in line with enterprise procedures.</p> <p>2.2 <i>Personal protective equipment</i> is used in line with WHS</p> |

- and enterprise requirements.
- 2.3 Pool is drained and acid washed in line with safety, regulatory and enterprise procedures.
 - 2.4 Waste is disposed of in line with enterprise and regulatory requirements.
 - 2.5 Unused chemicals are safely handled, transported and stored in line with enterprise, manufacturer and legislative requirements.
 - 2.6 Accident and emergency situations are responded to in line with WHS, legislative and enterprise requirements.
- 3 Complete work activities.**
- 3.1 Swimming pool or spa 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 spa 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 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 determine suitability of swimming pool or spa for acid washing
- literacy skills to read and interpret technical manuals and specifications related to draining and acid washing swimming pools and spas
- numeracy skills to perform calculations related to preparation of acid for acid washing of swimming pool or spa
- research skills to identify and locate technical information on acid washing materials, hazards and techniques
- technology skills to use tools and equipment associated with draining and acid washing swimming pools and spas

Required knowledge

- acid washing of swimming pools and spas:
 - causes of stain and mineral build-up on pool and spa surfaces
 - dilution of acid
 - discharge of the acid wash mix after acid washing the pool
 - draining and acid washing procedure
 - environmental impact
 - frequency
 - hydrostatic pressure
 - impact on swimming pool or spa surface and structure:
 - cracking, thinning or delamination of tiles and plaster
 - plaster may shrink, expand, crack, blister, flake or pop off
 - pool may raise out of the ground
 - surface is etched, becomes rough or the aggregate in the plaster mix is exposed
 - tiles may fall off the pool or spa
 - uneven stain removal or surface finish
 - neutralising acid
 - purpose
 - risks
 - safe disposal of waste

- safety
- sanding
- suitability of swimming pools and spas
- waste water discharge
- acids:
 - muriatic acid:
 - alternative names
 - handling, transportation and storage
 - material safety data sheet
 - properties
 - safety
 - neutralising
 - personal protective equipment for working with acids
 - properties
 - safety:
 - storage
 - use
 - waste
 - work practices
 - types
- chemical-safety principles and practices
- client disclosure and acknowledgement documentation:
 - content
 - purpose
- commonwealth, state or territory, and local government legislation and regulations, Australian standards and codes of practice impacting on draining and acid washing swimming pools and spas related to:
 - chemical safety
 - dangerous goods
 - plumbing regulations controlling conduct of plumbing work
 - environment protection
 - environmental health
 - work health and safety
 - private and public swimming pools and spas
 - waste disposal
- water testing:
 - results
 - techniques
 - types of tests

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 safely draining and acid washing a swimming pool or spa.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • select and use appropriate personal protective equipment and safe work practices • safely prepare acid used in acid washing swimming pools or spas • drain a swimming pool or spa • acid wash a swimming or spa following safe work procedures • reinstate a swimming pool or spa to operational condition after safely draining and acid washing.
Context of and specific resources for assessment	<p>Assessment of essential underpinning knowledge may be conducted in an off-site context and is to comply with relevant regulatory and Australian Standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • relevant codes, standards and government regulations • a technical reference library with current publications on draining and acid washing swimming pool and spas: <ul style="list-style-type: none"> • chemical safety • acids • problems associated with acid washing swimming pools and spas.
Method of assessment	<p>Assessment methods must:</p> <ul style="list-style-type: none"> • 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. <p>This unit could be assessed on its own or in combination with other units relevant to the job function.</p>
Guidance information	Reasonable adjustments for people with disabilities must be made to

for assessment	<p>assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>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.</p>
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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.

<i>Work instructions</i> include:	<ul style="list-style-type: none"> • access to site and specific site requirements • chemical safety • equipment, tools and material requirements • personal protective clothing and equipment requirements • equipment and systems location information • information on acids: <ul style="list-style-type: none"> • handling, transportation and storage • emergency procedures • material safety data sheet • properties • safety • WHS • reporting requirements • specific client requirements • swimming pool and spa information: <ul style="list-style-type: none"> • features, functions and capabilities • manufacturer instructions • service and maintenance requirements • construction material • type • warranties and guarantees • timeframes • work schedules • work tasks and procedures.
<i>Relevant persons</i> may	<ul style="list-style-type: none"> • client

include:	<ul style="list-style-type: none"> • colleague • equipment and systems manufacturer • site managers or project manager • spa manager or operator • supervisor • technician.
<i>Tools, materials and equipment</i> include:	<ul style="list-style-type: none"> • chemical pump sprayer • chemical respirator • communications equipment • computer and software • goggles • hand tools • hose • ladders • muriatic acid • personal protective equipment • soda ash.
<i>Risks and hazards</i> include:	<ul style="list-style-type: none"> • atmospheric hazards • burns • chemical hazards • confined spaces • electrical hazards • entrapment • exposure to: <ul style="list-style-type: none"> • acid and acid fumes • algae • asbestos • bodily fluids • contaminated surfaces • contaminated water: <ul style="list-style-type: none"> • bacteria • faecal • viruses • debris • disinfection by products • dogs • dust • fumes • fibres • glass

	<ul style="list-style-type: none"> • heights • insects • live power • natural and other gas build-up • noise • snakes • spiders • sun • spa chemicals • vermin • waste water • weather • hot water diseases • inadequate ventilation • manual handling • non-compliance with building codes and regulations • non-compliance with chemical safety codes and regulations • personal health hazards • plant and equipment hazards • trips and falls • water hazards.
<i>Sustainability principles:</i>	<ul style="list-style-type: none"> • cover the current and future social, economic and environmental use of resources • may include: <ul style="list-style-type: none"> • appropriate material selection that has minimal environmental impact • disposal of waste material to ensure minimal environmental impact • efficient use of material • efficient energy and water use.
<i>Company disclosure, disclaimer and acknowledgment documentation</i> may include:	<ul style="list-style-type: none"> • client signature • environmental risks • impact on swimming pool or spa structure • impact on swimming pool or spa surface • legislation and regulations • quality of finished job • safety.
<i>Personal protective equipment</i> includes:	<ul style="list-style-type: none"> • buoyancy vest or personal flotation device (PFD) • chemical resistant clothing • chemical resistant footwear • chemical resistant gloves

	<ul style="list-style-type: none">• chemical respirator or face mask• communications equipment• 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• safety harness• sun protection (e.g. sunhat, sunscreen and sunglasses)• uniforms or overalls• water-resistant clothing.
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Unit Sector(s)

Competency field

Unit sector Swimming pool and spa service

Custom Content Section

Not applicable.