



Australian Government

CPCCDE3021A Operate demolition material crushing plants

Release 1

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Modification History

New unit, based on CPCCDE3013A.

This version first released with CPC08 Construction, Plumbing and Services Training Package Version 9.

Not equivalent unit CPCCDE3013A Operate a crushing plant.

Unit Descriptor

This unit of competency specifies the outcomes required to operate a stationary or mobile crushing plant to produce crushed demolition materials in a range of sizes. It includes the preparation, inspection, maintenance, operation and shut-down of a crushing plant. It may include working with others and as a member of a team.

Application of the Unit

This unit of competency supports those who operate a crushing plant in the demolition industry.

Licensing/Regulatory Information

Licensing, legislative, regulatory or certification requirements apply to demolition work in different States and Territories. Candidates are advised to consult with the relevant regulatory authorities.

Pre-Requisites

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
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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 | Plan and prepare. | <p>1.1 <i>Compliance requirements</i> relevant to crushing and screening plant operations are accessed and applied.</p> <p>1.2 <i>Work requirements</i> are obtained using relevant <i>information</i>, confirmed and applied to planning and preparation.</p> <p>1.3 <i>Work health and safety (WHS) requirements</i> are followed according to safety plans and policies.</p> <p>1.4 <i>Plant and equipment</i> are selected to carry out tasks that are consistent with job requirements and checked for serviceability, and faults are rectified and reported before work begins.</p> <p>1.5 <i>Environmental requirements</i> are identified for the project according to environmental plans and regulatory obligations.</p> <p>1.6 Crushing plant <i>pre-start, start-up</i>, run and <i>shut-down procedures</i> are conducted to ensure correct operational condition according to manufacturer requirements, and faults are identified and corrected or reported to supervisor.</p> <p>1.7 <i>Work area and equipment are prepared</i> and sequence of tasks is planned in coordination with <i>relevant personnel</i>.</p> |
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| 2 | Operate crushing plant. | 2.1 | <i>Operating technique</i> is selected and modified to meet <i>changing work conditions</i> according to workplace and environmental requirements and manufacturer recommendations. |
| | | 2.2 | Uncrushed <i>materials</i> are directed into hopper, and feed of uncrushed materials is maintained according to manufacturer instructions. |
| | | 2.3 | Operations are monitored, conducted and controlled within the equipment limitations and while <i>communicating</i> with relevant personnel, to maintain crushing and screening efficiency and effectiveness. |
| | | 2.4 | Crushing plant is stopped, cleared of blocked materials and restarted as required, according to manufacturer instructions and site safety plan. |
| | | 2.5 | Crushing plant settings are maintained according to manufacturer instructions. |
| | | 2.6 | Work is completed according to requirements and within the operating capacity of the allocated equipment. |
| 3 | Carry out post-operational procedures. | 3.1 | Plant and equipment are inspected and faults are reported according to workplace and manufacturer requirements. |
| | | 3.2 | <i>Operational maintenance, servicing, lubricating and housekeeping tasks</i> are conducted according to manufacturer requirements. |
| | | 3.3 | Operational records and reports are maintained and processed according to workplace requirements. |
| | | 3.4 | Crushing plant is shut down according to manufacturer instructions and site safety and operation plan. |
| 4 | Clean up. | 4.1 | Work area is cleared and materials disposed of, reused or recycled according to legislation, regulations, codes of practice and job specification. |
| | | 4.2 | Tools and equipment are cleaned, checked, maintained and stored according to manufacturer recommendations and standard work practices. |

Required Skills and Knowledge

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

Required skills

- learning skills to:
 - evaluate own actions and make judgements about performance and necessary improvements
 - respond to change, such as differences in current work site environmental and sustainability requirements
- numeracy skills to:
 - estimate weight of volumes of demolition debris
 - perform measurements and calculations associated with work, such as determining maximum load capacity of equipment
- oral communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, and share information
 - report hazards on the work site, including faults in equipment
 - use language and concepts appropriate to cultural differences
- reading skills to:
 - interpret documentation, including drawings
 - understand written instructions, procedures and signage, such as:
 - job safety analyses (JSA)
 - safe work method statements (SWMS)
 - safety data sheets (SDS)
- writing skills to complete pre-operational checklists and equipment fault forms

Required knowledge

- construction terminology
- procedures for material storage and environmentally friendly waste management
- quality requirements relating to products of crushing operations
- types, characteristics, uses and limitations of plant and equipment involved in the conduct of crushing operations, including:
 - hazards associated with the conduct of crushing operations
 - method of operation and maintenance requirements of crushing plant and equipment
 - techniques associated with the conduct of crushing operations
- workplace and equipment safety requirements that apply to the operation of a demolition material crushing plant

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 observation of the operation of a crushing plant in the workplace.

Critical aspects for assessment and evidence required to demonstrate competency in this unit A person should demonstrate the ability to crush a minimum of 100 tonnes of demolition material into two different nominal sizes of crushings, which may be 5mm, 10mm, 20mm or 40mm, including:

- communicating and working effectively and safely with others
- completing work to specification
- complying with site safety plan and requirements of:
 - organisational procedures and processes, including quality requirements
 - standards and codes of practice applicable to the operation of a demolition materials crushing plant
 - WHS legislation and regulations
- identifying work requirements
- safely and effectively operating plant, and using tools and equipment.

Context of and specific resources for assessment Assessment of this unit:

- must be in the context of the work environment
- must meet relevant compliance requirements.

Resource implications for assessment include:

- an induction procedure
- realistic tasks covering the mandatory task requirements, including a crushing schedule and work instructions
- research resources, including industry-related systems information
- support materials appropriate to activity, including:
 - relevant manuals and specifications
 - safety data sheets
- tools and equipment appropriate to applying safe work practices
- workplace instructions relating to safe work practices and addressing hazards and emergencies.

Method of assessment Assessment for this unit must verify the practical application of the required skills and knowledge, using a combination of the

following methods:

- direct observation of tasks in real work conditions
- questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- review of relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Guidance information for assessment

This unit could be assessed on its own or in combination with other units relevant to the job function.

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.

Compliance

requirements relating to crushing and screening plant operations may include:

- manufacturer guidelines and specifications
- organisation and site requirements and procedures
- requirements of relevant legislation, codes and standards.

Work requirements may include:

- achievement targets
- coordination requirements and issues
- hazards and potential hazards
- lighting conditions
- nature and scope of tasks
- operational conditions
- plant configuration
- plant or equipment defects
- product details
- site layout and out of bounds areas

Information may include:

- stockpile details
- work site inspection requirements.
- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- memos
- safe work procedures relating to the operation of crushing plant
- safety data sheets
- signage
- verbal, written and graphical instructions, including manufacturer specifications and instructions where specified
- work bulletins
- work schedules, plans and specifications.
- dust suppression and extraction procedures
- emergency procedures, including extinguishing fires, organisational first aid requirements, and evacuation procedures
- handling activities that may require the assistance of others or the use of manual or mechanical lifting devices where size, weight or other issues, such as a disability are a factor
- hazard control
- hazardous materials and substances
- personal protective equipment (PPE) prescribed under legislation, regulations and workplace policies and practices, such as:
 - chemical and gas detectors
 - eye protection
 - hearing protection
 - protection from the elements
 - protective clothing
 - respiratory devices
 - safety harness when working at heights
- safe operating procedures, including operational risk assessment and treatments associated with:
 - falling objects
 - lighting
 - plant movement
 - power cables, including overhead service trays, cables and conduits
 - restricted access barriers
 - surrounding structures

Work health and safety requirements must comply with state and territory legislation and regulations and project safety plan and may include:

- traffic control
 - trip hazards
 - work site visitors and the public
 - working at heights
 - working in confined spaces
 - working in proximity to others
 - use of firefighting equipment
 - use of tools and equipment
 - workplace environmental requirements and safety.
- Plant and equipment*** may include:
- conveyor belts
 - crusher plants
 - excavators.
- Environmental requirements*** may include:
- clean-up management
 - dust suppression and extraction
 - noise suppression
 - sedimentation control
 - ventilation of work area
 - vibration control
 - waste management.
- Pre-start and start-up procedures*** may include:
- visual inspection tour of the plant
 - checking and topping up fluid levels, including fuel
 - lubrication and greasing
 - inspecting attachments to ensure security and to identify defects
 - checking instrument and control levers and reporting defects and damage
 - following prescribed start-up sequence
 - confirming plant is operational.
- Shut-down procedures*** may include:
- emergency shut-down procedures
 - end of work shut-down sequence
 - securing equipment.
- Preparation of work area and equipment*** may include:
- location of stockpile areas or bins
 - positioning plant
 - preparing and setting plant for initial size range of crushings
 - safeguarding site and non-site personnel by:
 - erecting barricades and posting signs
 - identifying hazards
 - selecting and implementing control measures for the hazards identified
 - selecting appropriate equipment to ensure personnel safety and protection

- stabilising plant.
- Relevant personnel** may include:
 - demolition team members
 - lead contractor
 - mobile plant operators
 - maintenance personnel
 - waste management team members.
- Operating technique** may include:
 - crusher adjustment
 - feed control adjustment
 - working safely around other machines and personnel.
- Changing work conditions** may include:
 - feed grading
 - feed contamination
 - weather conditions
 - day-time
 - night-time.
- Materials** may include:
 - blocks
 - bricks
 - concrete
 - in situ demolition site materials
 - pavers
 - recycled materials
 - rocks
 - stone.
- Communication** may include:
 - hand signals and other non-verbal communication
 - use of communications technology, such as radios and mobile phones.
- Operational maintenance, servicing, lubricating and housekeeping tasks** may include:
 - changing worn components
 - cleaning
 - adjusting equipment
 - greasing
 - scheduled servicing.

Unit Sector(s)

Demolition

Custom Content Section

Not applicable.