



Australian Government

RIICPL301D Install water mains pipelines

Release: 3

RIICPL301D Install water mains pipelines

Modification History

Release	Comment
1	This unit replaces RIICPL301A Install water mains pipelines.
2	Editorial corrections.
3	Performance Criteria wording amended. Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to install water mains pipelines in Civil Construction.

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

1. Plan and prepare for installing water mains pipelines	1.1 Access, interpret and apply water mains pipelines documentation and ensure the work activity is compliant 1.2 Obtain, interpret, clarify and confirm work/plans/specifications requirements 1.3 Identify, obtain and implement traffic signage requirements 1.4 Select and check for faults, equipment/tools for work activities 1.5 Identify, confirm and apply environmental protection
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	requirements 1.6 Select and wear correct personal protective equipment appropriate for work activities 1.7 Identify, address and report potential hazards and risks 1.8 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency
2. Set out and excavate	2.1 Prepare work area and materials 2.2 Determine and apply dewatering requirements 2.3 Determine the location, alignment direction, level and grade of mains pipe system 2.4 Set out works to specification 2.5 Advise plant operator of excavation requirements and monitor levels 2.6 Install mains pipe system support mechanism
3. Install mains pipeline	3.1 Lower and place pipes in position 3.2 Join pipes correctly 3.3 Place pipes and fit valves, fittings and flow control devices 3.4 Continuously check, alignment level and grade for conformance 3.5 Position side support and/or overlay beside the pipes 3.6 Check mains pipe system support structure 3.7 Monitor backfill procedure and ensure work is completed to specification 3.8 Construct valve chambers, minor structures and thrust blocks
4. Test mains pipe system	4.1 Perform mains pipe system test procedures establishing pressurisation, functionality and serviceability 4.2 Record in writing and report test results
5. Clean up	5.1 Clear work area and dispose of or recycle materials 5.2 Clean, check, maintain and store plant, tools and equipment

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIICPL301A Install water mains pipelines

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIICPL301D Install water mains pipelines

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies applicable legislation, documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient installation of water mains pipelines including:
 - applying problem solving and troubleshooting techniques
 - applying diagnostic techniques
- works effectively with others to undertake and complete the installation of water mains pipelines that meets all of the required outcomes including:
 - communicating clearly and concisely with others to receive and clarify work instructions
 - using a range of communications techniques and equipment to convey information to others
- demonstrates completion of installation of water mains pipelines that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - determining the location, alignment direction, level and grade of mains pipe system
 - installing the support mechanism

- installing a minimum of hundred (100) metres of water mains pipeline
- completing pipe joins to specifications
- performing pressurisation, functionality and serviceability test to specifications
- maintaining written and verbal reporting requirements and procedures

Knowledge Evidence

The candidate must demonstrate knowledge in installing water mains pipelines through:

- accessing, interpreting and applying the legislative, organisation and site requirements and procedures for:
 - hazard identification, risk assessment and response
 - using JSA/JSEA/safe work method statements
 - project quality measures
 - using tools/equipment
 - maintaining excavation/trench safety
 - confined space entry
 - site dewatering
- using safety data sheets and materials handling methods
- using civil construction terminology
- using mains pipe systems and installation procedures
- identifying mains pipe and utility services
- using concrete and concrete fabrication
- using sedimentation and erosion controls
- reading and interpreting engineering drawings
- identifying equipment types, characteristics, technical capabilities and limitations
- managing site mains water pressure
- identifying valves and flow control devices
- construction of water reticulation
- calculating pipeline grades and percentages
- identifying site isolation and traffic control responsibilities and authorities

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,

- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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