



Australian Government

RIICSG405E Carry out inspections of civil structures

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to carry out inspections of civil structures, including implementing the job plan and overseeing and reporting on the execution of civil structure inspections.

It applies to those working in supervisory or technical roles. They generally perform a broad range of operational activities in their area of responsibility and are responsible for monitoring a safe work environment.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare tasks	1.1 Obtain, interpret and clarify work requirements 1.2 Access, interpret and apply documentation required to inspect civil structures and confirm work activity is compliant 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment according to site requirements 1.5 Prepare and implement a job plan that meets task requirements in consultation with team members 1.6 Confirm required resources are acquired and made available for task

ELEMENT	PERFORMANCE CRITERIA
2. Prepare team members to execute tasks	2.1 Identify team member training requirements and develop and implement training plans 2.2 Issue task instructions to team members and others involved according to job requirements
3. Oversee execution of tasks	3.1 Monitor civil structures inspection task performance 3.2 Implement adjustments to inspection processes or job plan if required and confirm required outcomes are achieved 3.3 Confirm program for plant, equipment and tool maintenance is carried out and written records are kept
4. Report on execution of tasks	4.1 Complete and submit reports according to site requirements 4.2 Recommend changes to improve tasks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	Calculates basic measurements including mass and dimensions
Oral communication	Presents training plans and task instructions to a group using sector-specific vocabulary
Writing	Writes training plans, job plans and workplace reports and recommendations considering available resources and time frames

Unit Mapping Information

Supersedes and is equivalent to RIICSG404D Supervise civil masonry, crib and gabion structure construction.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIICSG405E Carry out inspections of civil structures

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- carry out inspections of civil structures on at least two occasions, including:
 - interpreting project contract specification requirements
 - applying procedures to problem solve
 - making decisions for activity
 - carrying out continuous improvement in meeting task outcomes.

During the above, the candidate must:

- locate and apply required legislation, documentation, policies and procedures
- implement procedures and techniques for the inspection of civil structures, including:
 - calculating quantities for executing tasks, including:
 - volumes
 - grades
 - percentages
 - areas
 - resource consumption figures, including required supply rates
 - interpreting civil concrete structure construction materials properties and test results
- work with others to plan, prepare and conduct inspections of civil structures, including:
 - using communication techniques and equipment to provide instruction and supervision to those supervising others inspecting civil structures
 - preparing for and conducting briefings, toolbox and site meeting
 - complying with written records and reporting systems, including:
 - preparing and presenting job reports
 - preparing and maintaining logbooks and diaries.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- legislation required to carry out inspections of civil structures
- policies, procedures and documentation required to carry out inspections of civil structures, including those relating to:
 - risk assessment and management
 - statutory compliance
 - communication techniques and equipment
 - organisational, client and site operational requirements
 - work health and safety
 - emergency response
 - specifications
 - environmental management quality management
 - materials quality and delivery
 - culture and heritage of site
 - coordination, timing and budgeting
 - workplace relationships
 - assessing operational techniques
 - assessing resource requirements
 - reporting requirements, including
 - task specifications
 - job plan
 - task drawings
 - activity scheduling
 - unit costs
 - overall task costs
- principles and techniques required to carry out inspections of civil structures, including those related to:
 - civil structures, including:
 - civil concrete structures
 - civil steel structures
 - civil timber structures
 - civil masonry, crib and gabion structures
 - civil structure inspection tasks and outcomes
 - site set out tasks
 - task specific information and requirements, including:
 - site geological, geotechnical, hydrological and meteorological data
 - site engineering survey data
 - job plan development

- devising and implementing training plans
- team leadership
- works planning
- mentoring
- estimating
- civil structures inspection monitoring
- civil works construction sequencing
- civil structures plant and equipment capabilities and application, including maintenance requirements
- relationship between various areas of civil works
- civil structures inspection and related activities terminology.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to carry out inspections of civil structures
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

- **Assessor requirements**

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge

- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 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.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**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 a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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