



Australian Government

RIICCM303 Conduct vacuum excavations

Release: 1

RIICCM303 Conduct vacuum excavations

Modification History

Not applicable.

Application

This unit describes the skills and knowledge required to conduct vacuum excavations.

It applies to those working in operational roles in civil construction. They generally work under supervision and hold some responsibility for conducting vacuum excavations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

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. Prepare for work	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply vacuum excavation documentation and confirm work activity is compliant 1.3 Identify hazards, environmental issues, assess the risks and implement control measures in line with workplace policies 1.4 Identify and adhere to traffic management signage requirements 1.5 Select equipment and tools required for work activities and check for faults and report or rectify within scope of own role 1.6 Select and wear personal protective equipment required for work activities 1.7 Complete induction procedures as required by workplace policies and procedures and job role requirements 1.8 Identify and apply safety and environmental protection requirements
2. Complete on-site preparation and set	2.1 Check job scope, location and requirements with job owner and contact person as required

ELEMENT	PERFORMANCE CRITERIA
up job	2.2 Obtain required permits and approval and check potential for ground contamination and nature of materials with landowner or job contact as required 2.3 Confirm waste management, disposal and tracking procedures required for material types are in place 2.4 Define work area, check exclusion zone, confirm trench shoring requirements and prepare worksite to comply with job and safety requirements 2.5 Implement protective screening or other methods as required of containing excavation debris 2.6 Inspect, assemble and check vacuum excavation equipment according to organisational requirements 2.7 Complete pre-operational procedures, pre-start and check emergency stop 2.8 Establish communication processes between operators and confirm correct positioning of personnel
3. Undertake vacuum excavation job	3.1 Start-up vacuum excavation system according to operating procedures 3.2 Operate equipment to meet job requirements and minimise direct contact of high pressure water on assets 3.3 Monitor hazards and activate emergency stop as required 3.4 Monitor job, conditions and equipment 3.5 Recognise and diagnose problems and report or rectify within scope of own role
4. Complete job	4.1 Shut down equipment according to operating procedures 4.2 Determine and implement disposal, recycling and waste removal documentation procedures required by material type and clear work area 4.3 Advise job owner and contact person of job completion and report any issues and incidents as required 4.4 Clean and maintain condition of equipment, confirm stability for use, and report issues as required or address within scope of own role 4.5 Check vehicle is clean and fit for transit 4.6 Refuel vehicle, refill with digging water as required and return to base 4.7 Complete required paperwork and process written records

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
Reading	Identifies and interprets information from at times complex workplace procedures, documentation, legislation and regulations
Writing	Records simple and routine information relating to work activities

Unit Mapping Information

New unit.

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 RIICCM303 Conduct vacuum excavations

Modification History

Not applicable.

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:

- conduct vacuum excavations on at least three occasions, including:
 - hydro excavation on at least one occasion
 - air excavation on at least one occasion.

During the above, the candidate must:

- locate, apply and retain on site access to documentation, policies and procedures required for conducting vacuum excavation
- implement the requirements, procedures and techniques for the completion of conducting vacuum excavations, including:
 - preparing work area and tracking equipment
 - conducting preoperational procedures and confirming waste management procedures
 - completing housekeeping activities
- work with others to conduct vacuum excavation that meets required outcomes, including:
 - organising work activities to meet task requirements
 - communicating with others to receive and clarify work instructions
 - using a range of communication techniques and systems
 - using signage to advise others of work activity and exclusion zones
- comply with written and verbal reporting requirements and procedures.

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:

- safety data sheets and materials handling methods
- key risks relating to conducting vacuum excavations, including those associated with:
 - traffic
 - live electrical services
 - operating near other works in progress
 - manual handling
 - gas
 - air excavation

- ground contamination
- nature of material to be excavated
- key policies and procedures, legislation and established requirements for conducting vacuum excavation, including those for:
 - workplace health and safety
 - notifying asset owners
 - environmental protection including potential ground contamination, lawful transport and disposal obligations including re-use and recycling opportunities
 - trench and excavation shoring
 - site isolation and traffic control
 - non-destructive exposure of services and utilities
 - asset exclusion zones
 - operating and maintaining equipment
 - housekeeping activities
- key factors affecting work activities described in performance evidence above, including:
 - vacuum excavation techniques
 - working in a road reserve
 - types of material being excavated
 - types of services, utilities and providers
 - equipment types, characteristics, technical capabilities and limitations.

Assessment Conditions

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

- include access to:
 - vacuum excavation equipment
 - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- 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,
- 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 sectors 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 competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF 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 a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as 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 hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also 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** 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 of competency 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 RII 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.

Links

Companion Volume implementation guides are found in VETNet -

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