



Australian Government

RIIOGD403D Conduct drilling operations

Release: 3

RIIOGD403D Conduct drilling operations

Modification History

Release	Comment
1	This unit replaces RIIOGD403A Conduct drilling operations
2	Performance Criteria amended to make requirements more explicit.
3	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 apply conduct drilling operations in Drilling.

This unit is appropriate for those working in supervisory roles where risk needs to be managed.

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

Drilling

Elements and Performance Criteria

1. Plan and prepare for drilling operations	1.1 Access, interpret and apply drilling operations documentation and ensure compliance the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify, address and report potential hazards, risks and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate to the work activities 1.5 Communicate emergency response and work health and safety requirements, including the possibility of wellbore influx and well
---	---

	control, to crew members 1.6 Resolve and maintain coordination requirements with others at the site prior to commencing, during, and on completion of work activities 1.7 Check, clean and lubricate equipment, including mud riser/conductor/connections and rectify and report faults 1.8 Check tool requirements and assembled in wellhead area
2. Commence drilling operations	2.1 Identify, obtain, interpret and clarify drilling program requirements 2.2 Undertake surface hole drilling 2.3 Commence intermediate and main hole drilling operations 2.4 Monitor, maintain and record drilling parameters in line with drilling program 2.5 Calculate and maintain kill sheet requirements and carry out and record integrity tests 2.6 Maintain accurate tubular tallies 2.7 Inspect and prepare casing running tools and casing for operation
3. Maintain drilling operations	3.1 Undertake cementing preparations 3.2 Run casing and prepare for cementing 3.3 Undertake preparations, and give assistance in drilling stem tests and logging and coring operations 3.4 Instruct crew on safe core recovery procedures 3.5 Put arrangements in place for nipple-up and drilling out
4. Drill intermediate and/or main holes	4.1 Obtain, read, clarify and confirm drilling program/timing schedule 4.2 Check equipment and tools for sizing and integrity and rectify or report faults 4.3 Maintain hole within deviation limits 4.4 Adhere to sound drilling and safety practices during nipple-up and pressure testing operations
5. Prepare for hole abandonment	5.1 Confirm program for completion or abandonment 5.2 Check tools/equipment for integrity and rectify or report faults 5.3 Complete written reports
6. Conduct	6.1 Clean, check, maintain and store plant, tools and equipment

housekeeping activities	6.2	Report issues identified with 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

No equivalent 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 RIIOGD403D Conduct drilling operations

Modification History

Release	Comment
1	This unit replaces RIIOGD403A Conduct drilling operations
2	Performance Criteria amended to make requirements more explicit.
3	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.

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 relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of drilling operations including:
 - identifying, addressing and reporting potential hazards and risks
 - controlling identified hazards
 - carrying out emergency response
 - identifying, addressing and reporting environmental issues
 - preparing written records and reports
 - rectifying and/or reporting faults and malfunctions
- works effectively with others to undertake and complete drilling operations including:
 - preparing for and organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - using a range of communication techniques and aids to advise others of work activity and exclusion zones
- demonstrates completion of the construction of drilling operations that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - undertaking surface and main hole drilling

- carrying out cementing procedures
- maintaining drill hole
- preparing the hole for abandonment
- troubleshooting and problem solving, including rise in rotary torque and mud pressure
- performing calculations including:
 - quantities up-hole calculations
 - velocity specific calculations
 - gravity volumes calculations
 - capacities pressure calculations

Knowledge Evidence

The candidate must demonstrate knowledge in applying effective drilling operations through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - setting up work activity
 - site isolation, signage and erecting barriers
 - work health and safety
 - selecting and checking for faults, all plant, tools and equipment to carry out tasks
 - carrying out work to specifications
 - maintaining tubular tallies
 - applying effective techniques for drilling operations
 - standard working practices and procedures for drilling operations

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

Links

Companion Volume implementation guides are found in VETNet -

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