



**Australian Government**

# **RIIEGS301D Operate and maintain instruments and field equipment**

**Release: 2**

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## Modification History

Release	Comment
1	This unit replaces RIIEGS301A Operate and maintain instruments and field equipment
2	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 operate and maintain instruments and field equipment in Metalliferous mining.

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

Metalliferous mining

## Elements and Performance Criteria

1. Plan and prepare for use of instruments and field equipment	1.1. Access, interpret and apply operate and maintain instruments and field equipment documentation and ensure the work activity is compliant 1.2. Obtain, read, interpret, clarify and confirm work requirements 1.3. Communicate verbally and in writing with other personnel using approved communication methods 1.4. Select and wear personal protective equipment appropriate for work activities 1.5. Select appropriate type of auxiliary equipment for work activities
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	<p>1.6. Perform equipment pre-start checks to ensure equipment is ready for operation</p> <p>1.7. Identify and address potential risks, hazards and environmental issues, and implement control measures</p> <p>1.8. Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency</p>
2. Test instrument/field equipment	<p>2.1. Perform safety checks</p> <p>2.2. Identify potential faults and/or malfunctions of instruments/field equipment</p> <p>2.3. Label and report damaged or unsafe instruments/field equipment and remove from service</p> <p>2.4. Ensure operational log books are up dated</p>
3. Calibrate instruments/field equipment	<p>3.1. Closely follow calibration schedules</p> <p>3.2. Label out calibration instruments/equipment and advise other operatives promptly</p> <p>3.3. Identify cause/s of incorrect calibration</p> <p>3.4. Perform new base calibration</p> <p>3.5. Recommission instrument/equipment</p> <p>3.6. Prepare compliance and calibration report as required</p>
4. Operate instruments/field equipment	<p>4.1. Optimise instrument/equipment settings for the particular measurement or analysis</p> <p>4.2. Perform measurements with the optimum precision given field and technical constraints</p> <p>4.3. Use time and materials efficiently and perform measurements in priority order</p> <p>4.4. Assess data against quality control information, known standards and references for accuracy and precision</p> <p>4.5. Repeat measurements where non-standard results are obtained</p>
5. Maintain instruments/field equipment	<p>5.1. Perform preventative maintenance</p> <p>5.2. Identify and report equipment wear and faults</p> <p>5.3. Perform minor repairs within limits of authorisation</p> <p>5.4. Replace defective parts and makes adjustments</p> <p>5.5. Seek expert help where difficulties are encountered</p> <p>5.6. Update maintenance and calibration records</p>
6. Identify faults	<p>6.1. Identify and clarify the nature of the fault</p>

in instruments/field equipment	6.2. Determine and rank likely causes of fault 6.3. Apply simple checks and tests 6.4. Obtain suitable tools and equipment to test faults 6.5. Apply fault finding methodology
7. Commission new instruments and equipment	7.1. Arrange commissioning procedures with manufacturer's agent as required 7.2. Unpack, check and assemble instruments/equipment according to manufacturer's warranty requirements 7.3. Calibrate instrument/equipment to meet manufacturer's specifications 7.4. Check instrument/equipment performance against specifications prior to acceptance of item 7.5. Prepare and make operating instructions available

## 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

RIIEGS301A Operate and maintain instruments and field equipment

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>