



Australian Government

PMASUP348 Monitor and maintain cathodic protection systems

Release: 1

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Modification History

Release 1. Unit Code and Application changed. Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMASUP343 Monitor and maintain cathodic protection systems.

Application

This unit describes the skills and knowledge required to monitor and maintain cathodic protection (CP) systems and all such items of equipment that form part of the CP system.

This unit applies to autonomous operators who are required to demonstrate a significant understanding of the process and the equipment operation in a plant with local control, or in liaison with the control-room operator in a plant with a centralised control panel.

This unit applies to an individual working alone or as part of a team or group, and working in liaison with other shift team members and the control-room operator.

Some jurisdictions may require the holder of this unit to be licensed or certified and users should check with the relevant authorities. Relevant legislation, industry standards and codes of practice within Australia must be applied.

This unit aligns with Australian Standard AS 2885.3—2012 Pipelines—Gas and liquid petroleum Part 3: Operation and maintenance.

Pre-requisite Unit

Nil

Competency Field

Support

Elements and Performance Criteria

Elements	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 and organise operational and maintenance activities	1.1 Review previous reports and check for outstanding work orders or notices 1.2 Assemble equipment and plan maintenance activities 1.3 Take regular readings from CP system monitoring, test equipment and interpret collected data

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Identify CP faults and notify appropriate personnel 1.5 Compile reports based on the collected data and analyse to determine system maintenance and operational adjustments to optimise system integrity
2. Conduct CP system surveys	2.1 Interpret survey specifications to determine survey path and equipment requirement 2.2 Conduct preparation activities on CP system to enable survey to be carried out 2.3 Conduct CP surveys of the system and log and record results of the survey 2.4 Fault-find and diagnose operating CP systems 2.5 Download collected survey data to allow a report to be compiled about survey findings
3. Recommission the system	3.1 Recommission the system to meet system operational requirements 3.2 Restore site to meet environmental and operational requirements 3.3 Compile and update records and drawings to reflect the repair or modification 3.4 Maintain incident records according to procedures
4. Identify and respond to abnormal situations during operation	4.1 Monitor equipment frequently and critically throughout shift using own senses, and measured and indicated data 4.2 Monitor field data and instrumentation to ensure that product remains on specification 4.3 Identify impacts of changes upstream and downstream 4.4 Identify actual and developing situations that may require action 4.5 Take action to remedy abnormal situations according to operating procedures 4.6 Complete required documents outlining abnormal situation management and corrective action taken

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Learning skills to follow instructions, monitor process and select appropriate procedure.
- Reading skills to follow written procedures and documentation.
- Writing skills to complete workplace documentation.
- Oral communication skills to liaise and coordinate with team members and the control-room operator.
- Numeracy skills to monitor field data, instrumentation and process parameters.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is equivalent to PMASUP343 Monitor and maintain cathodic protection systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>

Assessment Requirements for PMASUP348 Monitor and maintain cathodic protection systems

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit:

- at least 2 times, each in a separate work context.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- Australian Standards relating to cathodic protection (CP) systems
- company-specific work organisations and workflows
- operations and functions of CP systems and equipment
- function of solar-powered power generation systems
- operations of 240 V power generation systems
- insulation and monolithic joints
- CP systems abnormal situations including causes and required action:
 - coating damage and deterioration
 - interference from other systems
 - anode not working
 - incorrect current output from central processing unit (CPU) and transmission (TR) unit
 - equipment faults and failure
- organisational procedures and documentation, including:
 - safety, emergency and hazard control
 - work permit systems
 - maintenance
 - standard operating procedures (SOPs)
 - survey specifications
- hierarchy of control
- CP systems hazards:
 - possible causes
 - potential consequences
- appropriate risk controls, including:

- electricity
- gases and liquids under pressure
- equipment failures
- flammability and explosivity
- extreme weather.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - CP systems, tools, equipment and safety gear equipment
 - operating procedures
- abnormal situations must be relevant to cathodic protection systems.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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