



Australian Government

UEGNSG319 Custody transfer metering and gas quality analysis

Release: 1

UEGNSG319 Custody transfer metering and gas quality analysis

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Application

This unit involves the skills and knowledge required to calibrate volumetric measuring devices and gas analysers used in the measurement of gas quality.

It includes inspecting, validating, calibrating and recommissioning of custody transfer devices and gas quality measuring equipment in accordance with reference industry standards to meet contractual, organisational or statutory requirements.

This unit applies to any safe work site where gas industry operations occur. It also applies, where applicable, to other workplaces in the electricity supply industry (transmission and distribution and generation), the electrotechnology industry and the water industry, subject to all work health and safety (WHS)/occupational health and safety (OHS) and duty of care requirements being met for the workplace.

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

Pre-requisite Unit

Not applicable

Competency Field

Transmission Discipline

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare for the

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Work requirements for calibration of gas measuring

calibration of custody transfer metering or gas quality measuring equipment	devices are identified and interpreted from plans, equipment specifications and instructions
1.2	Relevant measuring equipment requirements and workplace procedures for equipment work are communicated to appropriate persons
1.3	WHS/OHS, environmental and sustainable energy policies and workplace procedures related to work to be performed are obtained, confirmed and communicated
1.4	Work is prioritised and sequenced following consultation with person/s for completion within acceptable timeframes and in accordance with workplace procedures
1.5	Risk control measures for identified hazards are prioritised, implemented and monitored against the work schedule
1.6	Relevant work permits are obtained to access, isolate/de-energise systems and perform work in accordance with workplace requirements and procedures
1.7	Resources, equipment, tools, calibration gases and personal protective equipment (PPE) required to conduct work are obtained and confirmed to be in working order
1.8	Measurement equipment is tested and calibrated within calibration tolerances in accordance with relevant industry standards and workplace procedures
1.9	Liaison and communication with authorised persons, authorities, clients and land owners are undertaken to resolve issues and coordinate gas work activities
1.10	Persons participating in work are fully briefed and respective responsibilities confirmed, as required, in accordance with workplace procedures
2 Inspect, validate and calibrate custody transfer metering and gas quality measuring equipment	2.1
Information on device and equipment performance is collected and reported in accordance with workplace procedures	2.2
Dealing with customers is consistent with workplace procedures and the specific needs of customers are	

identified and considered in targeting client service

- 2.3 Inspection, validation and calibration of custody transfer metering and gas quality measuring equipment is undertaken to ensure completion in an agreed timeframe and to industry quality standards with a minimum of waste in accordance with workplace requirements
- 2.4 Routine inspections of system are scheduled and monitored in accordance with the work schedule and workplace procedures
- 2.5 Hazard warnings and safety signs are recognised and hazards are assessed WHS/OHS risks are reported to the authorised persons for directions in accordance with workplace procedures
- 2.6 Measuring equipment is calibrated against relevant industry standards using correct calibration devices, equipment, techniques and are undertaken within the scope of workplace procedures
- 2.7 Deviations of measuring results are resolved in accordance with workplace procedures
- 2.8 Ongoing checks of gas quality are undertaken in accordance with given instructions and workplace procedures

3 Return to operational service of custody transfer metering and gas quality measuring equipment

- 3.1 Equipment is returned to operational service in accordance with workplace procedures
- 3.2 Anti-tamper seals are replaced and tagging removed in accordance with workplace procedures, as required
- 3.3 Work completion records, reports and documentation are finalised and processed and appropriate persons notified

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

- | | |
|---|---|
| constants and variables must include the following: | <ul style="list-style-type: none">• calibration skills used in the setting, adjustment, calibration validation or verification of instrumentation sensors• measurement principles• gas chromatography• recording and reporting• equipment• organisational and statutory requirements |
| auxiliary control system must include the following methods: | <ul style="list-style-type: none">• wide open monitor operation• two stage pressure reduction with monitor override |
| competency must include the following device: | <ul style="list-style-type: none">• remote terminal unit (RTU) control of regulators |
| operation and maintenance of pressure controllers, operation, maintenance must include at least two (2) of the following: | <ul style="list-style-type: none">• commissioning/setting• troubleshooting• pressure boosters minor repairs• types/models |
| regulator must include at least two (2) of the following: | <ul style="list-style-type: none">• sleeve types• control valves• diaphragm types• hydraulic plug types |
| valve maintenance and operation must include the following: | <ul style="list-style-type: none">• ball, plug, gate instrument and butterfly valves |
| metres must include at least three (3) of the following: | <ul style="list-style-type: none">• diaphragm meters• rotary meters• turbine meters• ultrasonic• orifice plates• coriolis• oil changing |
| tools/equipment procedures must include at least three (3) of the following: | <ul style="list-style-type: none">• operational checks• single run units• dual run units• city gates |

- district regulators
 - field regulators
 - full maintenance activities
- tools/equipment/procedures must include at least three (3) of the following:
- pressure alterations
 - industrial units
 - city gates
 - regulator stations
 - distribution mains
- tools/equipment/procedures must include at least three (3) of the following:
- flaring and purging
 - industrial units
 - city gates
 - regulator stations
 - distribution mains
- tools/equipment/procedures must include at least three (3) of the following:
- overpressure protection systems function and operation (OPSO)
 - internal pressure relief systems
 - pressure relief valves
 - slam shut systems
 - valve actuator and control systems
- documentation/paperwork must include the following:
- risk assessments
 - completing work sheets
 - notifications and work permits
 - equipment checklists
 - meter bypass forms
 - service orders
 - pressure recording charts

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG319B Custody transfer metering and gas quality analysis.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6a6c032e-ffcb-4f3d-8063-415efbd261e8>

Assessment Requirements for UEGNSG319 Custody transfer metering and gas quality analysis

Modification History

Release 1. This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements including using of risk control measures
- applying sustainable energy principles and practices
- applying workplace procedures and legislative requirements for maintaining appropriate reporting and recording of gas system
- completing job records and process information to appropriate/relevant person/s
- dealing effectively with unplanned events in accordance with workplace procedures, in a manner that minimises risk to personnel and equipment
- inspecting, validating and calibrating custody transfer metering and gas quality analysis measuring equipment
- liaising and communicating with relevant parties involved in repair or modification of gas industry pipelines (distribution)
- maintaining records for the repair and modification of gas industry pipelines (distribution) systems
- recording non-conformances and incidents including customer outages in accordance with workplace procedures and legislative requirements
- returning gas quality measuring equipment to operational service.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- calibration methods, including acceptable tolerances
- custody transfer metering, including flow measurement
- gas flow and the devices used to control flow control, including gas flow control devices
- gas system maintains records
- gas systems operations flow control
- relevant job safety assessments or risk mitigation processes

- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation, including report preparation
- relevant workplace policies and procedures.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6a6c032e-ffcb-4f3d-8063-415efbd261e8>