



Australian Government

UEGNSG229 Prepare simple drawings of as laid gas mains and services

Release: 1

UEGNSG229 Prepare simple drawings of as laid gas mains and services

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 produce drawings for as laid, new and altered gas installations, mains and services.

It includes preparing drawings of newly constructed or altered pipework that is required to be recorded for future locating.

This unit does not include complex drafting skills.

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

Pre-requisite Unit

Not applicable.

Competency Field

Gas Distribution

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan to prepare simple drawings of as laid gas mains and services

PERFORMANCE CRITERIA

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

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) workplace procedures and environmental measures for the site are identified, obtained and applied
- 1.2** Types of drawings required and key features, symbols

and abbreviations for each type of plan and drawing used in the gas industry are identified in accordance with the scope and standard of work being undertaken

- 1.3** Drawing requirements and needs are determined from work instructions and confirmed with relevant person/s in accordance with workplace procedures
 - 1.4** Client issues in relation to the drawing requirements are clarified and resolved in accordance with workplace procedures
 - 1.5** Equipment, tools and apparatus for producing drawings are identified, obtained and checked for correct operation prior to commencing work
- 2 Prepare drawings of as laid gas mains and services**
 - 2.1** Site inspection is conducted, as required, and factors that may impact on technical drawings, including orientation, altering landscapes, building structures or temporary land marks are identified
 - 2.2** Starting point and cross reference points are established and measurements from the starting point, distances and off sets taken and recorded in accordance with job requirements and workplace procedures
 - 2.3** As laid pipework is drawn to scale on graph paper using industry standard drawing conventions in accordance with relevant codes and technical industry standards
 - 2.4** Fittings that effect the off-set or depth of the pipework, including elbows and tees, are indicated on the drawing as required
 - 2.5** Additional fittings that need to be recorded in line with drawing specifications, including in-line valves and tapping tees, are indicated on the drawing, as required
 - 2.6** All dimensions, including off-sets, distances, directions, pipe diameter, symbols and abbreviations are included on the drawing in accordance with job specifications and workplace procedures
 - 2.7** Standard drawing conventions are used to correct original job drawing to show final as laid arrangement in accordance with workplace procedures
 - 2.8** Quality and safety checks of work and testing of pipework is conducted in accordance with industry

- standards, work instructions and workplace procedures
- 3 Complete work and relevant documentation**
- 3.1** Additional documentation is completed, including district plan number, network area, street name, pressure ratings, pipe size and type, date laid and additional comments, as required, in accordance with job requirements
 - 3.2** Drawings are finalised and signed off/closed in accordance with workplace procedures
 - 3.3** Tools, equipment and any surplus resources and materials are cleaned, checked and securely stored in accordance with workplace procedures
 - 3.4** Appropriate person/s are notified of work completion in accordance with workplace procedures
 - 3.5** All drawings and forms are completed and submitted to appropriate person/s in accordance with workplace procedures

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 UEG Gas Industry Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG229A Prepare simple drawings of as laid gas mains and services.

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 UEGNSG229 Prepare simple drawings of as laid gas mains and services

Modification History

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Performance Evidence

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

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements
- applying sustainable energy and environmental principles and practices
- completing work and relevant documentation
- completing relevant details on the drawing, including:
 - pipe size
 - pressure range
 - location
 - diameter
 - material
 - fittings
 - off-sets
 - distances
- conducting site inspections
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- determining cross reference points
- drawing as laid pipework to represent appropriate scale, perspective, dimension and volume
- finalising drawings
- identifying various gas pressures
- identifying coding for different pressures
- identifying various pipe materials
- interpreting symbols and abbreviations
- identifying and interpreting relevant gas drawings, including:
 - district plans
 - mains detail plans
 - industrial services plans
 - gas easement drawings

- transmission pipeline plans
- identifying and interpreting relevant plans, including:
 - Dial Before You Dig plans
 - drain plans
 - power plans
 - telecommunication plans
 - water plans
- preparing drawing of a gas main or service
- using legend to determine specifications.

Knowledge Evidence

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

- as laid technical drawings for gas pipework
- cross reference points
- different gas related drawings, including:
 - district plans
 - industrial drawings
 - easement drawings
 - gas mains detail plans
 - gas pipeline route maps and alignment sheets
- drawing conventions and features
- factors that may impact on technical drawings, including:
 - orientation
 - altering landscapes
 - building structures
 - temporary land marks
- fittings that effect the off-set or depth of the pipework
- gas mains and services as laid drawings
- key features, symbols and abbreviations on site plans
- measuring devices to record off-sets
- problem-solving techniques
- relevant drawing equipment, tools, materials, drawings and personal protective equipment (PPE)
- relevant legislation, standards, codes, regulations and procedure requirements
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements, including:
 - hazard identification and reporting
 - implementing risk control measures
- relevant workplace documentation, drawings and forms

- 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.

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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 PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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