



Australian Government

UEGNSG220 Construct and lay polyethylene gas distribution mains

Release: 1

UEGNSG220 Construct and lay polyethylene gas distribution mains

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 construct and lay polyethylene gas distribution mains.

It includes constructing and laying polyethylene gas distribution mains using relevant tools and equipment, completing necessary documentation, and working safely in accordance with workplace procedures and relevant legislative, industry standard and code of practice requirements.

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 Prepare to construct and lay polyethylene gas distribution mains

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 Job requirements, including alignment of main and services and workplace procedures for the site, are discussed with relevant person/s to confirm the work schedule
 - 1.3 WHS/OHS, environmental and sustainable energy policies and procedures are obtained and applied in accordance with workplace procedures
 - 1.4 Hazards are identified, WHS/OHS risks are assessed and control measures prioritised, implemented and monitored in accordance with workplace procedures
 - 1.5 Scope of work and level of responsibility under the relevant work permit and/or notification is confirmed with relevant person/s in accordance with job requirements and workplace procedures
 - 1.6 Equipment, tools and personal protective equipment (PPE) required to carry out the work are identified, obtained and checked for correct operation and safety in accordance with workplace procedures
 - 1.7 Relevant person/s are consulted to ensure the work is coordinated effectively with others involved
 - 1.8 Materials, plans, diagrams, drawings and resources required to construct and lay polyethylene gas distribution mains are confirmed, scheduled and obtained in accordance with workplace procedures
 - 1.9 Safety and emergency response procedures and responsibilities for an incident are checked and confirmed with relevant person/s
 - 1.10 Third-party issues are referred to relevant person/s in accordance with workplace procedures
 - 1.11 Site preparation, safety plan and work schedule are confirmed with relevant person/s in accordance with workplace procedures
 - 1.12 Road signs, barriers and warning devices are positioned in accordance with job instructions, workplace procedures and traffic management plans
- 2 Construct and lay polyethylene gas distribution mains**
- 2.1 WHS/OHS and environmental risk control measures, schedule of work and workplace procedures for carrying out work are followed

- 2.2 Materials, tools, equipment and measuring devices required for the work are selected and used correctly and safely in accordance with manufacturer instructions and workplace procedures
 - 2.3 Hazardous activities are conducted safely in accordance with WHS/OHS workplace procedures and job instructions
 - 2.4 Excavation bed/trench is prepared for laying of polyethylene gas pipe in accordance with relevant industry standards and workplace procedures
 - 2.5 Construction and laying of polyethylene gas distribution mains are conducted in accordance with relevant industry standards and workplace procedures
 - 2.6 Materials are prepared, aligned, constrained and jointed in accordance with relevant industry standards and workplace procedures
 - 2.7 Work is carried out to the required standard, without waste of materials or damage to apparatus, equipment, and the surrounding environment or services using sustainable energy principles
 - 2.8 WHS/OHS risks, incidents and accidents are reported to the immediate authorised person/s for directions in accordance with workplace procedures
 - 2.9 Unplanned events are referred to authorised person/s for directions in accordance with workplace procedures
 - 2.10 Quality and safety checks of work and testing of pipework is carried out in accordance with industry standards, work instructions and workplace procedures
- 3 Complete work and relevant documentation**
- 3.1 WHS/OHS and environmental risk control measures for work completion are followed
 - 3.2 Work site is rehabilitated, cleaned up and made safe in accordance with and 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 Relevant person/s are notified of work completion in accordance with workplace procedures

- 3.5** Relevant documentation is completed and provided 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 UEGNSG220A Construct and lay Polyethylene gas distribution mains.

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 UEGNSG220 Construct and lay polyethylene gas distribution mains

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 controls for stray, static and induced electrical faults
- applying electrostatic mitigation workplace procedures
- applying material handling workplace procedures
- applying relevant industry standards, guidelines, codes of practice and regulations
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements
- applying sustainable energy and environmental principles and practices
- checking tools, equipment, plant and personal protection equipment (PPE) for correct operation and safety
- cleaning, checking and storing tools and equipment
- communicating effectively with others
- completing required documentation and reporting
- conducting quality and safety checks
- constructing and laying polyethylene gas distribution mains
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- identifying and correctly reading plans, drawings, manuals and diagrams
- positioning road signs, barriers and warning devices
- preparing the excavation site
- rehabilitating and maintaining a clean work area
- selecting correct materials, equipment, tools, personal protection equipment and measurement devices
- testing pipework
- working in accordance with relevant work permit/notifications.

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:

- conditions for direct installation or insertion of polyethylene pipeline
- controls for stray, static and induced electrical faults
- construction of polyethylene pipelines
- effective communication techniques
- environmental and sustainable energy principles and practices
- excavation/trenching and bedding requirements for polyethylene pipelines
- hazardous activities, including the use of power tools, lifting, climbing, and working in confined spaces, excavations and trenches
- installation and testing of polyethylene pipelines
- jointing procedures, methods and calculations
- plastic gas main pipelines types, characteristics and components
- polyethylene gas pipelines types, characteristics and components
- problem-solving techniques
- quality and safety checks
- relevant standards, legislations, codes and regulations
- relevant WHS/OHS legislated requirements, including:
 - hazards, risk assessment and control measures
 - dangers of working with live gas
- relevant manufacturer specifications
- relevant materials, plans, diagrams, drawings and resources
- relevant materials, tools, equipment, plant, measuring devices and PPE
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes includes electrostatic hazards and risk mitigation
- relevant WHS/OHS legislated requirements
- relevant work permits and/or notifications
- relevant workplace documentation
- relevant workplace policies and procedures
- road signs, barriers, warning devices and traffic management plans
- site preparation, safety plans, job requirements and work schedules.

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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