



Australian Government

UEGNSG348 Supervise the operation of plant and equipment for the construction of gas transmission pipelines

Release: 1

UEGNSG348 Supervise the operation of plant and equipment for the construction of gas transmission pipelines

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 supervise the operation of plant and equipment for the construction of gas transmission pipelines.

It includes undertaking functions for transmission pipeline construction, including interpreting instructions; knowing the capabilities and limits of plant, equipment and tools; and effective communication and supervision of personnel. It also includes supervising operations to ensure work health and safety (WHS)/occupational health and safety (OHS), environmental and cultural heritage issues are effectively addressed in the transmission pipeline construction process.

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

Pre-requisite Unit

Not applicable.

Competency Field

Gas Transmission

Unit Sector

Gas Industry

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare work schedule for the use of plant and equipment

PERFORMANCE CRITERIA

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

1.1 Job instructions are obtained and confirmed with relevant person/s

- 1.2 WHS/ OHS, environmental, cultural heritage and sustainable energy policies and procedures for the work are obtained and confirmed with relevant person/s
 - 1.3 Work schedule is checked to ensure resources, equipment and personnel skills required meet compliance requirements in accordance with workplace procedures
 - 1.4 Work and maintenance schedule is discussed with relevant person/s to determine work and confirm responsibilities and capabilities
 - 1.5 Previous work activities are obtained from personnel and appropriate action taken with regard to current work schedule and use of plant and equipment
 - 1.6 Hazards and WHS/OHS risks are identified and prioritised and control measures, implemented and monitored in accordance with workplace procedures
 - 1.7 Relevant work permit/s are obtained and currency confirmed in accordance with job requirements and workplace procedures
 - 1.8 Responsibilities for first aid and incidents at the work site are checked and confirmed with relevant person/s in accordance with workplace procedures
- 2 **Supervise operations in accordance with the work schedule**
 - 2.1 WHS/OHS risk control measures and policies and procedures are followed in accordance with workplace procedures
 - 2.2 Work schedule is monitored and instructions given/remedial action taken to address any problems encountered with the operation of plant and equipment

Instructions are provided for any remedial action associated with the operation of plant and equipment in accordance with workplace procedures
 - 2.3 Instructions are provided to operators to ensure the work area is made safe in accordance with workplace procedures
 - 2.4 Hazards and risks related to safety and plant operation are identified and action taken in accordance with workplace procedures

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| | 2.5 | Unplanned events and non-routine problems are referred to authorised person/s for directions in accordance with workplace procedures |
| | 2.6 | Work schedule is monitored and remedial action taken to address any problems encountered in accordance with requirements and workplace procedures |
| | 2.7 | Plant and equipment usage/operation is supervised and quality and safety checks are undertaken in accordance industry standards and workplace procedures |
| 3 Complete work and relevant documentation | 3.1 | Work undertaken and plant and equipment usage is checked against work schedule for conformance with job requirements and anomalies reported to authorised person/s in accordance with workplace procedures |
| | 3.2 | Accidents and incidents are actioned and reported to authorised person/s in accordance with workplace procedures |
| | 3.3 | Supervision of shutdown procedures is performed in accordance with workplace procedures to ensure environmental compliance and condition of plant and equipment is maintained |
| | 3.4 | Tools, plant, equipment and any surplus resources and materials are cleaned, checked and securely stored in accordance with workplace procedures |
| | 3.5 | Appropriate person/s are notified of work completion in accordance with workplace procedures |
| | 3.6 | Work completion records, report forms, documentation and data sheets are completed in accordance with job instructions and 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.

large plant and equipment must include at least two (2) of the following:	• excavator with vacuum lift • bending machine with mandrel • rock saw • bucket wheel
backfill plant and equipment include the following:	• padding machine • excavator • grader • dozer • front end loader
clear and grade plant and equipment includes the following:	• dozer • excavator • grader • backhoe • front end loader
ditching plant and equipment includes the following:	• excavator • rock saw • bucket wheel trencher
hydrostatic testing plant and equipment includes the following:	• crane truck • side boom • rough terrain crane
joint coating plant and equipment includes the following:	• grit blasting rig over ditch wrapping machine • thermal coil
lower and lay plant and equipment includes the following:	• side boom with roller cradles • excavator
minor mechanical maintenance includes the following:	• excavator and vacuum lift • bending machine and mandrels • internal line up clamp • tack rig • side boom • roller cradles • rock saw • bucket wheel trencher • thermal coil • over ditch wrapping machine • padding machines • mitsu bucket
string and bend plant and equipment includes the following:	• excavator • bending machine with mandrels

welding includes the following:

- side boom
- side boom
- internal line up clamp
- tack rig

Unit Mapping Information

This unit replaces and is equivalent to UEGNSG348A Supervise the operation of plant and equipment for the construction of gas transmission pipelines.

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 UEGNSG348 Supervise the operation of plant and equipment for the construction of gas transmission pipelines

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, performance criteria and range of conditions on at least two separate occasions and include:

- applying organisational management systems and procedures for work health and safety (WHS)/occupational health and safety (OHS), including:
 - identifying hazards
 - managing risk through the incorporation of effective control measures
- applying relevant industry standards, guidelines, codes of practice, legislation and regulations
- applying relevant WHS/OHS requirements, including:
 - correctly selecting and using personal protective equipment (PPE)
 - effectively using safety data sheets (SDS)
 - hazard identification and reporting
 - implementing risk control measures
 - preparing job hazard analysis
 - safe manual handling techniques
- communicating instructions to transmission pipeline construction workforce, contractors and stakeholders, including communication with ground crew during operations
- completing work and relevant documentation, data sheets, reports and records
- complying with permits pertaining to transmission pipeline construction operations
- complying with relevant cultural heritage requirements
- conducting quality and safety checks
- coordinating an effective response to a transmission pipeline construction emergency
- dealing with an environmental incident, including:
 - controlling and minimising the impact of an environmental incident
 - controlling environment incident
 - incident investigation
 - applying incident reporting and notification procedures
 - reviewing environmental incident
 - making recommendations to prevent reoccurrence

- implementing recommendations
- dealing with unplanned events
- following workplace procedures
- operating and maintenance schedule requirements for large plant and equipment, including:
 - dozer
 - excavator
 - grader
 - backhoe
 - front end loader
 - side boom
 - internal line up clamp
 - tack rig: dozer or skid steer
 - grit blasting rig
 - side booms with roller cradles
 - crane truck: heavy rigid truck
 - rough terrain crane
- preparing work schedule for the use of plant and equipment
- protecting the environment whilst constructing a transmission pipeline, including:
 - installation of siltation control methods, such as straw and synthetic bails
 - curb side filter rolls
 - erosion prevention
 - weed spread mitigation
 - application of SDS information
 - noise control techniques
 - odourant handling and testing processes
 - excavation restoration, compaction and seeding
 - applying green tagging for flora and fauna habitat
 - application of cultural heritage awareness and protection requirements for a pipeline construction site
- supervising operations in accordance with the work schedule
- supervising shutdown procedure
- using small plant and equipment, including the following:
 - extra low voltage lighting equipment
 - gas detectors
 - general concrete mixer
 - general trolley
 - hand held tools
 - hand wrapping machines
 - holiday detection equipment
 - non-pressurised pumps and hoses

- power tools
- pressurised pumps and hoses
- traffic barriers
- wheelbarrows.

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:

- construction activity procedures
- construction materials: properties, characteristics and applications
- contingency planning and management
- cultural and heritage awareness requirements and procedures
- environmental requirements and procedures
- interpreting, applying and communicating information, including:
 - manufacturer manuals
 - requirements and procedures
 - technical information and drawings
 - site plans
 - basic geological and technical data
- on-site communication techniques, including:
 - hand signals
 - satellite phones
 - radios
- project and time management skills
- quality assurance procedures
- relevant legislation, regulations, codes, standards and policies
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant stakeholders
- relevant WHS/OHS legislated requirements, including:
 - hazards, risk assessment and control measures
 - PPE and spill kits
 - hazardous materials
 - manual handling
 - confined spaces
 - gas detection
 - SDS
 - emergency and incident response

- relevant workplace documentation, forms and reports
- relevant workplace policies and procedures
- supervisory and leadership techniques
- transmission pipeline construction functions, including:
 - backfill
 - clear and grade
 - ditching
 - hydro testing
 - joint coating
 - lower and lay
 - mechanical (minor maintenance)
 - string and bend
 - welding
- transmission pipeline construction techniques, equipment and tools.

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.

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