Australian Government

Assessment Requirements for UETDRVC008 Coordinate vegetation control operations

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

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, including the use of risk control measures
- applying sustainable energy principles and practices
- using tools, equipment, materials and workplace procedures, including at least three (3) of the following clearing methods:
  - hand clearing
  - machinery assisted clearing
  - growth retardants
  - fire clearing
  - herbicidal clearing
- coordinating operations from two (2) of the following levels:
  - ladder
  - elevated work platform (EWP)
  - tree
  - ground
- considering all of the following:
  - personnel aspects
  - material aspects
  - financial aspects
- dealing with unplanned events on at least one (1) occasion.

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:

- principles of high voltage (HV) encompassing:
  - Commonwealth/state/territory legislation, standards, codes, supply authority regulations

and/or enterprise requirements associated with working on or near HV

- electrical and electrostatic principles related to HV lines - relationship of current, voltage and resistance as related to transmission lines, relationship of phase voltage and respective line voltages
- production of an electric field – units, effect of distance, potential of an object within the field and the effect of distances to the potential
- HV insulators - construction of a disc insulator, construction of a polymeric insulator, effects of an electrical field on disc insulators, identification of the number of disc insulators needed for a single line voltage, and performance of a failed disc insulator on the line and the system
- determining the minimum allowable number of discs per string for each line voltage in the system before bare hand work is to proceed
- techniques in detecting a failed disc in a string
- techniques in using appropriate tools and equipment to test a string
- methods of recording data
- effects of electrostatic induction on the human body - relationship of the resistance of a human body to different levels of current and voltage, relationship of a human body to an electric field, and effects of electrostatic induction on bare hand work
- application of Faraday's cage - effects of a body, advantages, description of the Faraday's cage used by bare hand live line workers
- safety precautions working on or near HV electrical apparatus - safe approach distances from live line; identification of WHS/OHS hazards; assessing and controlling risks; types, selection, maintenance, storage and uses of personnel protective equipment (PPE); permit to work systems and isolation procedures
- types and function of specialised live working equipment
- safe working policies, procedures and practices when using and operating specialised equipment
- methods of using specialised equipment
- emergency response and rescue, including first aid
- effects of lighting and switching surges on performance of string insulators - health effects to workers
- methods used to alleviate surges on transmission lines
- magnetic field - difference between magnetic fields and electrostatic fields; source of magnetic field; techniques in locating, measuring and analysing known sources of magnetic fields; reasons for monitoring magnetic field exposure and techniques used to monitor magnetic fields

- ecological principles for vegetation control encompassing:
  - ecological principles - interdependence of plants, animals, the soil and the environment; environment; habitats and the food chain
  - soil and erosion control principles - soil types, simple tests, types of erosion, theory of erosion prevention and control, land degradation control and functions of trees in the environment
  - basic anatomy and physiology - plant morphology, internal anatomy, growth patterns and

habits, and simple physiology
    - tree hazard assessment encompassing: - symptoms of stress in trees, diagnosing tree problems, assessments for line clearance, personal hazards, the tree's response to wounding and decay, theory of compartmentalisation and tree stability (damage to root systems due to excavation)
    - principles of pruning
    - branch collars
- control of vegetation encompassing:
    - standards, codes, legislation, supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to the control of vegetation - clearance zones and approach distances from overhead power lines, legislation associated with easement access and maintenance, appropriate PPE, equipment maintenance and safety precautions
    - tree climbing and pruning - chainsaw safety and maintenance, basic cross-cutting techniques, simple felling, use of EWPs, safe climbing with ropes and harnesses, use of chainsaws in the tree, cutting techniques, roping techniques, chemical control of foliage and the required safety techniques, and practical work on-site with a range of trees
    - easement management - legislation relating to easement access and maintenance, use of chemicals and herbicides and provision of material safety data sheets (MSDS) for those substances, use of machinery and plant, and access tracks
- working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker encompassing:
    - standards, guidelines/codes of practice, state/territory/local government legislation, supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker
    - definitions of terminologies - 'safe working zone' 'risk assessment', 'safe approach distances zones', 'safe working distances'.' work permits',' access authorisation permits', 'technical standards' 'isolation procedures' and 'compliance requirements'
    - WHS/OHS policies and procedures for working safely - emergency response and first aid procedures, such as cardiopulmonary resuscitation (CPR); roles and responsibilities of employers, employees and other parties under WHS/OHS legislation; PPE; identifying hazards; assessing and controlling WHS/OHS risks; duties of a safety observer; working at heights/confined spaces; permit to work systems and isolation procedures; safe application of different types of tools and equipment; and operation of mobile plant and machinery (e.g. EWP) near live electrical apparatus
    - electricity supply infrastructure assets and voltages
    - techniques and precautions in undertaking different work functions and working safely up to the defined safe working zone near energised electrical apparatus, including electrical powerlines, for non-electrical worker - work functions that may be performed, including vegetation control, scaffolding, rigging, painting, and/or any other activity that requires working safely near live electrical apparatus by a non-electrical worker
- coordination of vegetation control inspection programs encompassing:
    - Commonwealth/state/territory/local government legislation/regulations, standards, codes,

supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to coordinating the inspection of vegetation control: - clearance zones and approach distances from overhead power lines, legislation associated with easement access and maintenance, and use and operation of plant and equipment, such as EWPs, chainsaws/pole saws and stump grinders

- appropriate PPE
- equipment maintenance and safety precautions
- endangered plants/animals/insects
- soil erosion
- chemical treatment
- provision of manufacturer and supplier information, such as MSDSs
- traffic management control plan
- alternative engineering solutions for vegetation management
- emergency response and first aid procedures
- techniques in the inspection of vegetation to determine action required - diagnosing tree problems and systems of stress in trees; identification of fall zone; identification of WHS/OHS hazards; assessing and controlling risks; safety policies, procedures and precautions; responsibilities and protocols for team members; procedures for obtaining electrical access authorities and procedures for coordination of operations
- techniques in determining the resources required for a particular vegetation control project
- techniques in determining the condition of the tools and equipment needed for a particular vegetation control project
- techniques in determining the duration and cost of the vegetation control project
- techniques in relaying information to team members - safe precautions and procedures; clearances zones and approach distances; proper selection, maintenance, use and storage of PPE; procedures regarding safe use of equipment, including pre-operational checks for serviceability; and procedures in the safe transporting, use, storage and disposal of chemicals
- procedures for removal of vegetation
- techniques in record keeping of data.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within 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 conditions involving realistic and authentic activities that replicate operational 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, facilities, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, relevant industry standards, 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=229bace1-b7bc-4653-9300-dffb13ecfad7