



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **TLIU2008A Apply environmental procedures to rail infrastructure**

**Release: 1**

## **TLIU2008A Apply environmental procedures to rail infrastructure**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

This unit involves the skills and knowledge required to care for the environment during rail infrastructure maintenance and construction activities in accordance with approved standards, safeworking and regulatory requirements and workplace procedures. It includes minimising the effects of pollution during work and transporting and handling environmentally hazardous materials safely and in accordance with environmental protection regulations and guidelines. Licensing or certification requirements are not applicable to this unit.

### **Application of the Unit**

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Work must be carried out in accordance with relevant state/territory environmental protection regulations and workplace procedures.

Work is performed under some supervision generally within a team environment. It involves the application of basic environmental protection principles and regulations to work undertaken during rail infrastructure maintenance and construction activities.

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

Not Applicable

## **Employability Skills Information**

**Employability Skills**            This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<b>1 Minimise the effects of pollution during work</b>	1.1 Precautions are taken to ensure spilt fuel, lubricants, chemicals and noxious plants do not pollute the environment 1.2 Equipment and vehicles are operated efficiently to minimise pollution of the air environment through excessive exhaust emissions 1.3 Unnecessary running of engines/equipment is avoided to minimise pollution of the air environment 1.4 Worksites are kept clean and tidy during work operations and the disposal of waste is in accordance with environmental regulations and workplace procedures 1.5 Contaminant from worksites is contained by use of appropriate traps and barriers 1.6 Noise pollution from work is minimised
<b>2 Minimise the effects of pollution during maintenance</b>	2.1 Suitable precautions are taken during maintenance and construction activities not to pollute the environment by implementing housekeeping and environmental protection precautions and procedures 2.2 Rubbish is deposited in designated rubbish disposal bins
<b>3 Avoid environmental damage</b>	3.1 Sensitive sites in the vicinity of work are identified 3.2 Suitable precautions are taken to avoid damage to sensitive sites
<b>4 Transport/handle environmentally hazardous materials safely</b>	4.1 The instructions contained in material safety data sheets in regard to safe transportation requirements are followed in accordance with government regulations and workplace requirements 4.2 Contaminant is disposed of in accordance with relevant regulations, workplace procedures and guidelines 4.3 Environmentally hazardous materials are handled and moved in accordance with relevant regulations, workplace procedures and guidelines aimed at minimising the risk of environmental pollution
<b>5 Complete reports and documentation</b>	5.1 Environmental breaches are reported 5.2 Documentation is completed in accordance with relevant regulations and workplace procedures

## Required Skills and Knowledge

### REQUIRED KNOWLEDGE AND SKILLS

## REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

### Required knowledge:

- Relevant safety, OHS and environmental protection regulations
- Workplace procedures and guidelines for the care of the environment during rail infrastructure maintenance and construction
- Environmental risks when undertaking rail infrastructure maintenance and construction and related precautions to control the risk
- Environmental protection standards required during rail infrastructure maintenance and construction activities
- Site layout including location of rubbish disposal bins and run-off protection measures
- Application of relevant environmental protection regulations and requirements including site specific licence and trade waste requirements
- Service and maintenance procedures
- Procedures and processes for waste and effluent regulation where applicable
- Environmental hazards and toxicity of materials typically carried in loads
- Emission control checking requirements for vehicles and relevant equipment where fitted
- Typical problems that can occur when caring for the environment, and appropriate action that can be taken to prevent or solve them

### Required skills:

- Read and interpret instructions, procedures and information relevant to the care of the environment during rail infrastructure maintenance and construction activities
- Interpret and follow operational instructions and perform work tasks in required sequence
- Complete documentation related to the care of the environment during rail infrastructure maintenance and construction activities
- Promptly report and/or rectify any identified problems that may arise when caring for the environment during rail infrastructure maintenance and construction activities in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unanticipated situations that may occur when caring for the environment during rail infrastructure maintenance and construction activities
- Modify activities depending on differing operational contingencies, risk situations and environments
- Recognise potential pollution risks and ways of minimising them
- Identify and correctly use equipment and vehicles in accordance with environmental protection regulations and guidelines
- Follow routine service and maintenance procedures for equipment and vehicles
- Adapt to differences in equipment and operating environment in accordance with standard

**Required skills:**

operating procedures

- Select and use required personal protective equipment conforming to industry and OH&S standards

**Evidence Guide****EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying the following:
  - the underpinning knowledge and skills
  - relevant legislation and workplace procedures
  - an understanding of the precautions to be undertaken to prevent pollution to the environment within workplace and job role
  - an understanding of the requirements within the workplace procedures and regulatory requirements for the handling and moving of pollutants
  - an understanding of the requirements for the disposal of waste and effluent in accordance with regulations and workplace procedures
  - identification of the pollution likely to affect the workplace and the effect on the job role
- Assessment must include exercises which demonstrate competent performance of the following in a range of situations:
  - minimising the effects of a number of different pollutants during work in a variety of situations
  - identifying sensitive sites
  - disposing of contaminants in accordance with relevant regulations, workplace procedures and guidelines
  - completing documentation in accordance with workplace procedures

## EVIDENCE GUIDE

### Context of and specific resources for assessment

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### Method of assessment

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Operations may be conducted:

- by day or night
- in all weather conditions

Workplaces may comprise:

- large, medium or small worksites in the maintenance and construction of rail infrastructure

Environment may include:

- indoor
- outdoor
- marine or other waterways
- atmospheric

## RANGE STATEMENT

- Sensitive sites may include:
- culturally sensitive sites
  - bio sites
  - environmentally sensitive sites
- Pollutants may include:
- exhaust fumes
  - oils and lubricants
  - gas
  - smoke
  - chemicals and detergents
  - noxious weeds
  - contaminated soils
  - rubbish
  - noise
  - wastes
- Equipment/vehicles may include:
- motor vehicles or trucks
  - fixed equipment emitting exhaust fumes/gases
  - on-track vehicles
  - off-track plant
  - small machinery
- Cleanup equipment may include:
- spill kits
  - bio-degradable detergents
  - hay bales
  - silt traps
- Personnel in the work area may include:
- workplace personnel
  - site visitors
  - contractors
  - official representatives
- Work may involve:
- exposure to chemicals, and dangerous or hazardous substances
  - movements of equipment, goods and vehicles
- Liaison may include:
- internal or external personnel from other work areas (e.g. train controllers)
  - local authorities
- Communication systems may include:
- two-way radios
  - telephones/mobile phones
  - agreed audible or hand signal
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
  - enterprise procedures
  - organisational procedures
  - established procedures



## RANGE STATEMENT

Depending on workplace context, personal protective equipment may include:

- high visibility clothing
- hearing protection
- gloves
- sunscreen
- sunglasses
- safety glasses
- insect repellent
- safety headwear
- safety footwear
- portable radios/mobile phone
- hand lamps
- flags
- safety devices

Information/documents may include:

- OH&S and environmental protection regulations
- regulations and policies concerning noise, waste disposal/reprocessing, handling of dangerous goods/hazardous substances and other environmental protection issues
- local authority regulations and procedures
- workplace housekeeping procedures and policies
- codes of practice for environmental protection
- material safety data sheets
- policies and procedures for entry and work in confined spaces
- manufacturers instructions concerning the use and servicing of equipment
- supplier and/or client instructions
- emergency procedures manuals
- goods identification numbers and codes
- manifests, bar codes, goods and container identification
- relevant legislation, regulations and related documentation
- award, enterprise bargaining agreement, other industrial arrangements
- standards and certification requirements
- quality assurance procedures
- licence conditions

Applicable regulations and legislation may include:

- legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes and/or guidelines
- relevant Australian Standards and related requirements,

**RANGE STATEMENT**

including AS 4292

- relevant state/territory environmental protection legislation
- relevant state/territory OH&S legislation
- workplace relations regulations

**Unit Sector(s)**

Not Applicable

**Competency Field**

**Competency Field**                      U - Environment