



Australian Government

Department of Education, Employment and Workplace Relations

A VIB3002B Inspect and report on aerodrome lighting systems

Revision Number: 1

AVIB3002B Inspect and report on aerodrome lighting systems

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to inspect and report on aerodrome lighting systems, including inspecting and reporting faults in aerodrome lighting, making any identified unserviceable condition safe, and confirming and reporting the return of the aerodrome lighting to serviceable condition. Required performance includes compliance with all relevant regulatory requirements, conventions and protocols, i.e. CAR 94 and 95. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Work is performed under limited supervision.

Work involves the application of relevant principles, regulations, protocols and procedures when inspecting and reporting on aerodrome lighting systems as part of commercial airport activities across a variety of operational contexts within the Australian aviation industry.

Licensing/Regulatory Information

Not applicable.

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
1 Inspect the aerodrome lighting	<p>1.1 Access to the aerodrome is arranged with appropriate authorities</p> <p>1.2 Lighting systems are prepared for inspection</p> <p>1.3 Lighting systems are inspected for serviceability, and faults or hazardous situations which may affect aircraft safety are identified</p> <p>1.4 Where appropriate, the hazardous situation created by faulty lighting systems is rectified or made safe in accordance with workplace procedures and regulatory requirements</p>
2 Report faults in aerodrome lighting	<p>2.1 Any requirement for official notification of lighting faults is assessed</p> <p>2.2 Suitably qualified electrical contractors are contacted for repairs where appropriate</p> <p>2.3 Relevant authorities or organisations are notified of damage to aerodrome lighting, switching mechanisms and circuits in accordance with workplace communication procedures and regulatory requirements</p>
3 Make any unserviceable condition safe	<p>3.1 Faulty lights are replaced or repaired in accordance with workplace procedures and regulatory requirements, with minimal disruption to aircraft movements</p> <p>3.2 Relevant authorities or organisations are notified of aerodrome works in accordance with workplace communication procedures and regulatory requirements</p> <p>3.3 Temporary lighting is installed as required</p>
4 Report the return of the aerodrome lighting to serviceable condition	<p>4.1 Restored aerodrome lighting systems are inspected and confirmed for serviceability</p> <p>4.2 Relevant authorities or organisations are notified of the restoration of lighting serviceability in accordance with workplace communication procedures and regulatory requirements</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

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

Required knowledge:

- Relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders, i.e. CAR 94 and 95
- Relevant OH&S and environmental procedures and regulations
- Features and characteristics of aerodrome lighting systems
- Aerodrome operating procedures
- Reporting procedures
- Relevant equipment used in the inspection and reporting on aerodrome lighting systems
- Effects on the serviceability of the aerodrome caused by lighting faults
- Allowable minor repairs under electrical codes and regulations and procedures for engaging a qualified electrician to carry out major repairs
- Purpose and application of unserviceability markers
- Purpose and application of Method of Working Plans (MOWPs)
- Safety hazards and risks that exist when inspecting aerodrome lighting systems and related risk control procedures and precautions
- Problems that may occur when inspecting and reporting on aerodrome lighting systems and appropriate action that should be taken

Required skills:

- Communicate effectively with others when inspecting and reporting on an aerodrome lighting system
- Read and interpret instructions, regulations, procedures and other information relevant to inspecting and reporting on an aerodrome lighting system
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to inspecting and reporting on an aerodrome lighting system
- Report faults in aerodrome lighting
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when inspecting and reporting on an aerodrome lighting system
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when inspecting and reporting on an aerodrome lighting system in accordance with regulatory requirements and workplace procedures

REQUIRED KNOWLEDGE AND SKILLS

- Implement contingency plans for unexpected events that may arise when inspecting and reporting on an aerodrome lighting system
- Apply precautions and required action to minimise, control or eliminate hazards that may exist during inspecting and reporting on an aerodrome lighting system
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required to inspect and report on an aerodrome lighting system and when facilitating any required repairs

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 underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement

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.

- Lighting inspections may need to occur:
- by day or by night
 - in any weather conditions
- Aerodrome lighting serviceability inspections should occur in accordance with the Manual of Standards - Aerodromes, including:
- at least one hour prior to the first commercial transport operation of the day, or
 - prior to the last light of the day (dusk)
 - immediately after any significant phenomenon which could reasonably be expected to affect the serviceability of the aerodrome, or
 - otherwise as determined by the aerodrome operator
- Situations requiring reporting may include:
- changes to temporary or permanent published aerodrome information
 - hazardous situations resulting in some or all of the aerodrome becoming unserviceable
 - aerodrome works
 - restoration of aerodrome serviceability
- Relevant authorities for accessing and reporting purposes include:
- aerodrome operator or delegated person
 - NOTAM Office (Airservices Australia)
 - Civil Aviation Safety Authority
 - Air Traffic Control (ATC)
 - Australian Defence Forces Command for military bases
 - aerodrome users
- Aerodromes may include:
- licensed aerodromes
 - unlicensed aerodromes
 - Aircraft Landing Areas (ALAs)
- Aerodrome movement area includes:
- apron
 - taxiway
 - runway
 - Obstacle Restriction Area (ORA)
- Permanent aerodrome lighting and circuits include:
- runway lighting
 - runway end lights
 - threshold lights
 - runway end identification lights
 - obstacle lighting
 - aerodrome beacon
 - approach lighting
 - illuminated wind indicators

RANGE STATEMENT

- Pilot Activated Lighting (PAL)
 - taxiway centre lights
 - taxiway edge lights
 - apron edge lights
 - apron flooding lights
 - 'T' Visual Approach Slope Indicator System (T-VASIS)
 - Precision Approach Path Indicator (PAPI)
 - standby power
- Temporary aerodrome lighting includes:
- kerosene flares, or
 - battery lights
- Reportable hazardous situations caused by faulty lights include:
- power supply failure
 - circuit failure
 - partial lighting failures, as described in rules and practices for aerodromes
 - failure of lighting to the wind indicator
 - failure of obstruction lights
 - failure of aerodrome beacon
 - failure of the Pilot Activated Lighting (PAL) warning signal
- Procedures for making the lighting problem safe include:
- partial closure of the movement area
 - closing the movement area (aerodrome closure)
 - contacting the aerodrome user
- Unserviceability lights are:
- red lights
- Suitable means of reporting will include some or all of the following:
- verbal communications
 - Notices to Airmen (NOTAMs)
 - other written means of communication as is appropriate (e.g. fax)
 - Method of Working Plan (MOWP)
- Initiating repairs or hazard removal procedures includes:
- notifying relevant aerodrome personnel
 - undertaking the repairs
 - removing the hazard
 - notifying appropriate electrical contractors
 - serviceability inspection (following repairs)
- Hazards in the work areas may include:
- high voltage electrical cables
 - aircraft noise
 - aircraft movements
 - other vehicles in the vicinity of the aircraft
 - personnel in the vicinity of the aircraft
 - jet blast

RANGE STATEMENT

- fumes
 - dust
- Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
 - standard operating procedures
- Information/documents may include:
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders pertaining to air traffic control operations, i.e. CAR 94 and 95
 - aerodrome manual
 - workplace operating procedures manuals
 - Manual of Standards - Aerodromes (previously Rules and Practices for Aerodromes [RPA])
 - En Route Supplement Australia (ERSA)
 - Departure and Approach Procedures (DAP)
 - relevant Civil Aviation Advisory Publications (CAAPs)
 - regular public transport (RPT) routes and timetables
 - workplace procedures and instructions and job specification
 - lighting equipment manufacturers specifications and instructions
 - induction and training materials
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Applicable regulations and legislation may include:
- Civil Aviation Act (1988) and Civil Aviation Regulations and Orders (CAR 94 and 95)
 - relevant requirements, standards and recommended practices of the International Civil Aviation Organization (ICAO) pertaining to airport reporting
 - Manual of Standards - Aerodromes (previously Rules and Practices for Aerodromes [RPA])
 - applicable state, territory and commonwealth regulations concerning:
 - electrical codes and regulations
 - OH&S
 - workplace relations
 - workers compensation
 - environmental protection
 - equal opportunity

Unit Sector(s)

Not applicable.

Competency field

Competency Field B - Equipment Checking and Maintenance