



Australian Government

ICTRFN404 Undertake radio communications signals monitoring

Release: 1

ICTRFN404 Undertake radio communications signals monitoring

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to check radio communications signals for interference management, investigation, licence conditions intelligence and frequency occupancy purposes with discretion to determine appropriate action according to relevant legislation and regulations.

It applies to individuals working as field officers from regulatory authorities or other private and public organisations. They combine technical skills with broader organisational and administrative skills to monitor and action non-compliance of radio communications.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

Unit Sector

Telecommunications – radio frequency networks

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for radio communications signals monitoring	1.1 Prepare for given work according to relevant legislation, codes, regulations and standards, including work health and safety (WHS) issues and possible hazards 1.2 Identify specific triggers that lead to need for monitoring activities 1.3 Determine monitoring coordinates as result of client complaint 1.4 Determine extent and nature of communications problem through

	desktop research and relevant information 1.5 Enter necessary details into appropriate work management system
2. Plan and organise monitoring activities	2.1 Determine monitoring activities and responsibilities according to organisational requirements 2.2 Determine procedures, timeframes, resources and equipment requirements for self and others according to organisational and task requirements 2.3 Obtain resources and equipment and prepare according to organisational and task requirements 2.4 Identify communication strategies to make clients aware of their obligations under relevant legislation, codes, regulations and standards according to organisational policies and procedures 2.5 Update and review procedural and information guides as required 2.6 Implement risk management strategies as required according to set procedures and timelines
3. Undertake monitoring	3.1 Carry out monitoring activities according to organisational and legislative requirements, including WHS 3.2 Use and maintain resources and equipment according to organisational and task requirements 3.3 Identify and confirm communications and/or interference problems 3.4 Locate position and source of communications and/or interference problems 3.5 Identify organisation responsible for communications and/or interference problems 3.6 Undertake compliance analysis of unlicensed, unauthorised and non-standard equipment if appropriate 3.7 Provide advice to operational and technical subordinate officers according to organisational policies and procedures as required
4. Act on non-compliance	4.1 Provide information to client and take action as result of failure to achieve compliance according to organisational guidelines and legislative requirements based on seriousness of possible breach 4.2 Identify contraventions of compliance requirements and report recommended action according to organisational policies and procedures 4.3 Refer serious or complex situations for advice or resolution according to organisational policies and procedures 4.4 Use relevant collection methods to gain information and evidence about elements of each offence to be prosecuted and provide according to legislation, procedures and rules of evidence

	4.5 Conduct and fulfil court attendance requirements in compliance with organisational guidelines as required 4.6 Ensure case is finalised according to court outcomes and organisational guidelines
5. Provide reports and information	5.1 Interpret requirements of relevant legislation and provide information and advice on technical and operational matters 5.2 Advise clients affected by outcomes within limits of privacy legislation 5.3 Maintain records and prepare and provide reports according to organisational requirements 5.4 Update any compliance management systems with relevant findings and outcomes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.4, 3.5, 4.4, 5.1	Analyses and consolidates information and data from a range of sources, against defined criteria and requirements, and checks for accuracy and completeness
Writing	1.5, 2.5, 3.7, 4.1, 4.2, 5.2-5.4	Accurately records and completes organisational documents and correspondence using clear language and correct spelling, grammar and terminology
Oral Communication	1.4, 3.7, 4.2, 5.2	Uses collaborative and inclusive techniques, including active listening and questioning and reading of verbal and non-verbal signals, to convey and clarify information and to confirm understanding
Numeracy	2.2	Applies numerical modelling skills to identify, analyse and evaluate budgetary information, time durations and human resource allocations
Navigate the world of work	1.1, 2.1-2.5, 3.1, 3.2, 3.5-3.7, 4.1-4.6, 5.1-5.3	- Accepts responsibility and ownership for the task and makes decisions on completion parameters and the need for coordination with others - Ensures knowledge of legislative

		requirements and products is kept up to date to provide accurate information • Takes personal responsibility for following explicit and implicit policies, procedures and legislative requirements • Identifies and acts on issues that contravene relevant policies, procedures and legal requirements
Interact with others	1.2, 2.4, 3.3, 3.7, 4.2-4.5	• Selects and uses appropriate conventions and protocols when communicating with clients and co-workers in a range of work contexts • Uses a range of strategies to establish a sense of connection and build rapport with clients and co-workers • Recognises and accommodates basic differences and priorities of others • Cooperates with others and contributes to work practices where joint outcomes are expected and deadlines are to be met • Identifies and explores differences in a diverse range of people in the work context and makes adjustments to communication in recognition of these differences • Recognises behaviours and triggers that contribute to conflict and implements strategies to moderate conflict
Get the work done	1.1-1.4, 2.1-2.5, 3.1-3.7, 4.1-4.6, 5.1, 5.3	• Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes • Makes routine decisions and implements standard procedures for routine tasks, using formal decision making processes for more complex and non-routine situations • Addresses less predictable problems and initiates standard procedures in response, applying problem solving processes in determining a solution • Contributes to continuous improvement of current work practices by applying basic principles of analytical and lateral thinking • Uses familiar digital technologies and systems to access information, search and enter data and code, present information and communicate with others, cognisant of data security and safety

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTRFN404 Undertake radio communications signals monitoring	ICTRFN4174A Undertake radio communications signals monitoring	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTRFN404 Undertake radio communications signals monitoring

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Performance Evidence

Evidence of the ability to:

- comply with site risk control, work health and safety (WHS), environmental, quality and communication requirements
- apply knowledge of appropriate procedures and techniques for conducting radio communications signals monitoring
- perform efficient and effective preparation and monitoring appropriate to a communications environment site
- calibrate, maintain and commission instruments and field equipment
- monitor communications under general direction in a range of different contexts
- respond effectively to different challenges and operational requirements for monitoring, including coping with difficulties, irregularities and breakdowns in routine.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify and summarise the legislation, codes of practice and other formal agreements that directly impact on monitoring of radio communications signals including:
 - specifics of what constitutes an offence
 - responses for non-compliance
 - environmental requirements
 - privacy issues
- outline specific WHS requirements that impact on monitoring in terms of safety of self and public safety including:
 - radio frequency (RF) personal protective equipment

- electromagnetic radiation (EMR) at RF transmission sites
- building site induction requirements
- environmental conditions
- explain specific monitoring procedures for radio communications and relevant organisational policies and procedures
- summarise characteristics of different environments and workplaces where monitoring takes place
- explain radio communications systems used in the relevant work context
- outline specific issues related to antenna performance including:
 - directivity
 - gain
 - height
- summarise the effects of cable attenuation and impedance mismatch
- outline the effects of ionosphere including:
 - high frequency (HF) propagation
 - warning, fadeout and solar flares
 - ionospheric prediction service (IPS)
- explain modulation methods, AM, FM and digital formats
- explain field strength surveys and EMR measurements
- outline the propagation properties of the terrain
- describe the legal process for prosecuting a complaint and undertaking attendance at court
- describe the process and use of direction finding equipment for HF, very high frequency (VHF), ultra high frequency (UHF) and microwave technologies.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the telecommunications – radio frequency networks field of work and include access to:

- sites on which monitoring may be conducted
- monitoring and testing equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on monitoring activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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