

SAFETY ALERT FROM WORK SAFE VICTORIA

RADIOFREQUENCY (RF) RADIATION DANGERS OF EXPOSURE

(PRINT THIS LEAFLET AND PLACE IT ON SITE)

Working near radio transmission devices, such as dishes and antennas typically mounted on roofs, can be dangerous or may affect health if exposure to excessive levels of radiofrequency (RF) radiation occurs.

Workers may be exposed to RF radiation if the work area on a building or structure has radio transmission devices. Workers most at risk are those involved in tasks where access is required to roof spaces containing communication transmission hardware. Such tasks include:

- **Roof maintenance**
- **Window cleaning**
- **Facade maintenance**
- **Delivery, installation or maintenance of any plant or gear, or any other task, where access to the roof is required.**

<p>What is RF radiation?</p>	<p>RF radiation, also known as EME, EMR or EMF, is low frequency radiation (less than 300 GHz) which includes microwave transmissions. The major sources of RF radiation are radio, television, mobile telephone and paging transmission antennas.</p>
<p>Health effects</p>	<p>RF radiation heats in the same way that microwave ovens heat food. Harmful heating of body tissue is a possibility where there is exposure to RF fields above the maximum recommended exposure levels. Shocks, similar to electric shocks, due to touching or receiving arcs from RF devices are also possible from over-exposure to RF radiation. Currently there is no known link between exposure to RF radiation and an increased risk of cancer.</p>
<p>Responsibilities</p>	<p>Employers must ensure that employees, independent contractors or the general public are not exposed to RF radiation above recommended maximum levels outlined in the radiation protection standard, Maximum Exposure Levels to Radiofrequency fields - 3 kHz to 300 GHz published by the Australian Radiation Protection and Nuclear Safety Agency, ARPANSA (see further Information for more details). Any person who has management or control over the workplace, including access to and egress from the workplace must also, so far as is practicable, provide a safe workplace. This includes building owners, occupiers or building managers who control access to the roof. No person should be able to access a roof with radio antennas without receiving training and information on the risk of any RF radiation present and the controls needed to avoid over-exposure.. This is a joint responsibility of those persons who control access to the roof area and any principal contractors and subcontractors undertaking works on the roof.</p>
<p>How to avoid over-exposure</p>	<p>Section 5 of the ARPANSA radiation protection standard recommends how the risk of occupational exposure may be managed. Key factors to ensure a safe workplace include:</p>
<p>Hazard identification / Risk assessment</p>	<ul style="list-style-type: none"> ▪ Identify radiation sources and list the contact numbers of all companies controlling transmissions from the roof or work location. ▪ Determine "NO GX areas where maximum exposure levels may be exceeded. This may be by measurement, or on the advice of a competent person. ▪ Document information on No Go Areas. <p>These actions of hazard identification and risk assessment need to be taken prior to workers accessing any area where RF radiation is likely.</p>
<p>Control measures</p>	<p>The preferred method of controlling exposure to RF radiation is to cease or power down transmissions. However, as control over the transmission signal is usually remote from the worksite, employers need to ensure that they are able to continually verify the strength of the signal during the works.</p>

	Develop a Safe Work Procedure (SWP) giving consideration to all identified risks, including RF radiation.
Induct and train all workers in the SWP	<p>Make sure that NO GO areas are sign-posted, marked or provided with physical barricades in accordance with the SWP.</p> <p>Where workers have a need to enter a NO GO area, they should be directly supervised by a competent person who has undergone training in safely managing an RF radiation environment.</p> <p>A recommended checklist for control of exposure to RF radiation is provided in Attachment 1 – see below</p>

ATTACHMENT 1: RADIOFREQUENCY (RF) RADIATION CHECKLIST

QUESTIONS TO ASK ABOUT RF ON SITE	TICK HERE
1. Are there likely sources of radiofrequency radiation?	
For areas where workers need to access, all sources of RF radiation should be identified by a competent person. Likely sources include transmission antennas or dishes for radio, television, mobile telephone and paging services.	
2. NO GO areas	
Have all areas where the maximum recommended exposure levels may be exceeded been documented? [This information should be determined having regard to maximum transmission conditions.]	
3. Is the information available at the workplace?	
Have identified No Go Areas been signed, marked or barricaded	
4. Has access been restricted?	
The occupier of any workplace where RF radiation is possible should ensure that general access to the area, e.g. roof space, is physically restricted at all times. Access should be limited to persons who are trained and experienced in working in RF radiation environments or to people working under the direct supervision of such people.	
5. Are there multiple contractors?	
Where multiple contractors are required to access an area where a risk of RF radiation exposure has been identified, then the principle contractor, or where there is no principle contractor, the occupier, should take responsibility for restricting access to the area.	
6. Has a safe work procedure (SWP) been developed?	
In addition to all other identified risks, the SWP should specifically address how any risks to workers from RF radiation are to be controlled.	
7. Have all workers been trained?	
All workers should be instructed and trained in regard to SWP and specifically as to the measures to be taken to eliminate or minimise exposure to RF radiation.	
8. Has a supervisor been appointed?	
Where any works are to take place in an area where there is a risk of RF radiation above the recommended exposure level, then the work should only proceed under the direction of a supervisor who is trained and experienced in RF radiation and relevant controls.	
9. Has provision been made for ongoing monitoring?	
Where RF radiation exposure level in the work area is being controlled by the 'powering down' or cessation of transmission levels, then an ongoing system of monitoring the transmission levels should be implemented.	