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Guidelines for the Protection of the General Public in Compliance with Safety Code 6

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Canada

Preface

This reissue of Issue 1 of the *Guidelines for the Protection of the General Public in Compliance with Safety Code 6* includes a general reformatting, minor editorial changes, an updated cover page and table of contents. For ease of reference, the document may now be referred to as Guideline 02 or GL-02. The content and intent of the document was not modified.

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1. Introduction

Industry Canada requires that radio apparatus be operated in a manner which complies with Health Canada's *Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz*, Safety Code 6 (SC6), 1999. This document provides guidelines for protection of the general public including consideration of existing radiocommunication installations within the local radio environment. Where radiocommunication users and/or service providers respect the general public exposure limits established by Safety Code 6 for areas accessible to the general public, Industry Canada does not normally require area demarcation or access control. However, where limits exceed those specified by Safety Code 6 in areas accessible by the general public, Industry Canada requires users and/or service providers of radiocommunication apparatus to take immediate action to ensure compliance with Safety Code 6. Where technical means such as reducing the transmitter power level or modification to the transmitting facility are not practical, appropriate means of area demarcation and/or access control are required by the users and/or service providers.

2. Situation Scenarios

The following situation scenarios are examples which address only the radio frequency (RF) safety concerns for the general public as recommended in the Safety Code 6. In all cases, reducing the transmitter power level and/or modification to the transmitting facility remains an option to meet the Safety Code 6 recommended limits in terms of the applicable RF power density, RF fields and contact current limits in the frequency band of interest. Where and when fencing is required, consideration must be given to be in compliance with local by-laws and land-use requirements. In certain cases, one or more of the following situations may apply.

2.1 Transmitting Facilities which Satisfy Safety Code 6 Limits at Elevations Less Than or Equal to 2 Metres above the Actual Ground Level[1] at the Site

Situation:

The antenna structure is easily accessible to the general public and the RF values satisfy the Safety Code 6 recommended limits at elevations less than or equal to 2 metres from the actual ground level at the site.

[1] 'Ground level' in this document is the elevation of the terrain near the base of the antenna supporting structure or its equivalent (e.g. elevation of the roof top in the case of roof-mounted antennae).

Suggested Remedy:

Consideration should be given to installing anti-climbing devices around the antenna structure. Otherwise, bilingual ‘Danger’ signs must be posted.

2.2 Transmitting Facilities which do not Satisfy Safety Code 6 Limits at Elevations Less Than or Equal to 2 Metres above the Actual Ground Level at the Site

2.2.1 On Roof-tops of Buildings

Situation:

RF values exceeding the Safety Code 6 recommended limits are being produced on rooftops of buildings where the general public may have access.

Suggested Remedy:

All entrances to the area(s) must be locked to deny access to the general public and marked with ‘Caution’ signs. A contact and/or telephone number should be posted at each entrance in case of emergency.

2.2.2 Sites where the General Public is Unlikely to Visit

Situation:

RF values exceeding the Safety Code 6 recommended limits are being produced at elevations less than or equal to 2 metres above the actual ground level in a remote area that is unlikely to be visited by the general public.

Suggested Remedy:

For sites where the general public is unlikely to visit (e.g. mountainous locations or bordering along expressways, etc.) bilingual signs warning of high RF power density are required. Specifically, ‘Caution’ signs must be posted on all approach roads and paths leading to the affected zone and ‘Danger’ signs must be posted at the tower.

2.2.3 Sites where the General Public is not Expected or Supposed to Visit

Situation:

RF values exceeding the Safety Code 6 recommended limits are being produced at elevations less than or equal to 2 metres above the actual ground level in locations away from residential developments, parks and recreational areas where the general public is not expected or supposed to visit (e.g. on private

or leased lands, etc.).

Suggested Remedy:

Access to the affected zone must be adequately controlled for the circumstances. The perimeter of the affected zone must be marked with appropriate ‘Danger’ signs.

2.2.4 Sites where the General Public is Reasonably Expected to Visit

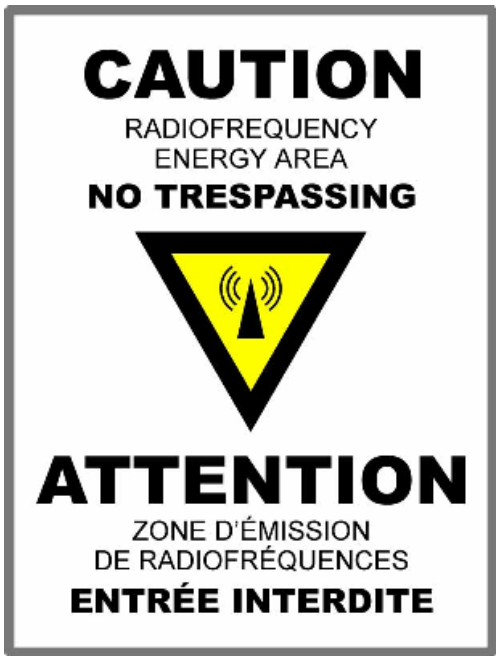
Situation:

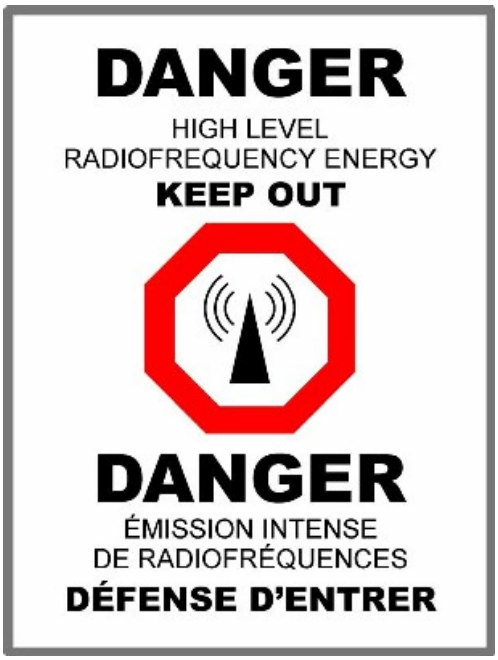
RF values exceeding the Safety Code 6 recommended limits are being produced at elevations less than or equal to 2 metres above the actual ground level in and near residential developments, parks and recreational areas where the general public is reasonably expected to visit.

Suggested Remedy:

The affected zone must have access control (e.g. by fencing off the area to a minimum height of 1.85 metres (6 feet)) to deny access to the general public and must be marked with appropriate ‘Danger’ signs. In heavy snow areas, the fencing height should be a minimum of 2.45 metres (8 feet). Use of non-conductive fencing materials may be required in some situations.

Appendix 1 - Examples of Acceptable 'Caution' and 'Danger' Signs and Sign Posting Requirements





Sign Posting Requirements:

1. Signs must be at least 20 cm by 30 cm (approx. 9 inches by 12 inches) in size.

2. A sufficient number of signs must be installed on, and/or around the affected areas.

3. The height, size and locations of the signs must be such that they are visible and noticeable from any normal angle of approach to the affected areas irrespective of seasonal snow cover or vegetation obstructions.

4. Metallic signs are not recommended near AM sites.