



Spectrum Management and Telecommunications

Client Procedures Circular

Radio Frequency Exposure — Site Compliance and Access Control

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1. Introduction

As a condition of authorization, under Innovation, Science and Economic Development Canada's (hereinafter referred to as ISED or the Department) tower siting policy, entitled [Radiocommunication and Broadcasting Antenna Systems \(CPC-2-0-03\)](#), compliance with Health Canada's Safety Code 6 (SC6) is an ongoing obligation. When assessing compliance, the combined effects of nearby antenna installations within the local radio environment must be considered.

The purpose of this document (CPC-2-0-20) is to outline various compliance measures that may be required to ensure an antenna installation site is compliant with SC6.

Health Canada has established guidelines for exposure to radio frequency (RF) fields, in its SC6 publication, entitled [Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz](#). While the responsibility for developing SC6 rests with Health Canada, ISED has adopted these guidelines for the purpose of protecting the general public.

At any time, antenna installation proponents and operators may be required, as directed by ISED, to demonstrate compliance with the uncontrolled environment (UE) limits which are specified in SC6 (hereinafter referred to as "the UE limits") and, where necessary, implement corrective measures.

Note: When determining RF energy levels for the purpose of assessing compliance with the uncontrolled environment limits of SC6, the measurement equipment uncertainty must be added to the measured level. For additional information relating to SC6 measurements see [GL-01 - Guidelines for the Measurement of Radio Frequency Fields at Frequencies From 3 kHz to 300 GHz](#).

In order to demonstrate compliance, detailed calculations, computer simulations, and/or site surveys (measurements) may be required. In addition, all antenna installation proponents and operators are required to facilitate ISED's access to sites to conduct compliance audits. Compliance with SC6, including the implementation of access control measures and signage, must be undertaken with the highest regard for ensuring the safety of the general public.

1.1. Mandate

Section 5 of the *Radiocommunication Act* states that the Minister may, taking into account all matters that the Minister considers relevant for ensuring the orderly establishment or modification of radio stations and the orderly development and efficient operation of radiocommunication in Canada, issue radio authorizations and approve each site on which radio apparatus, including antenna systems, may be located. Furthermore, the Minister may approve the erection of all masts, towers and other antenna-supporting structures.

1.2. Application

This document sets out requirements and corrective measures to help ensure compliance with the UE limits. For the purpose of this document, a controlled environment (CE) is any area at, or in close proximity to, an antenna installation for which access by the general public has been restricted.

The requirements stated in this document relate specifically to the protection of the general public, and therefore, do not apply to RF exposure related to areas designated as “*occupancy only under controlled conditions*” as set out in Health Canada’s [Technical Guide for Interpretation and Compliance Assessment of Health Canada’s Radiofrequency Exposure Guidelines](#) (Technical Guide).

For the purpose of this document, “general public” does not include any individual who, as a result of work-related activities, is present within a CE at, or in close proximity to, the antenna installation site as well as owners (including their representatives) of properties on which such installations are located.

Note: “Work-related activities” applies to all types of work and is not limited to work specifically related to antenna installations. Examples of work not related to antenna installations include maintenance or repair of a building, an antenna supporting structure, or any associated equipment, on which an antenna is installed.

Nonetheless, it is important to note that employers may have additional obligations to protect their employees under either federal or provincial labour laws, including providing them with relevant information about RF exposure, particularly if they work within a CE. For further information, proponents and operators are encouraged to contact the appropriate occupational health and safety authorities, and to seek advice from their counsel as they see fit.

2. Responsibility

It is the responsibility of all proponents and operators of antenna installations to ensure that all radiocommunication and broadcasting installations, including all guy-wires and associated anchor points, comply with the UE limits at all times in any area accessible to the general public. Site compliance is based on the maximum possible RF energy levels for the entire site, including the combined effects of nearby installations within the local radio environment, not only the proponent’s or operator’s own installation (refer to Note in section 1). **In addition to the RF energy levels, the site must also comply with the UE limits for contact currents and induced currents.** As the limits are frequency dependant, operators must refer to SC6 to determine the appropriate limits when assessing compliance. When designing, constructing, and maintaining a site, proponents and operators should also consider any other hazards at a site, such as direct contact with a radiating element (e.g. AM installations).

Each proponent and operator at a given site is responsible for ensuring the site complies with SC6 requirements. As part of this shared responsibility, each proponent and operator is expected to openly share their system installation parameters and work cooperatively with the other proponents and operators to ensure accurate and consistent analysis.

ISED requires that, at each antenna installation site, a list of all proponents and operators on the site and their up-to-date contact information be readily available. See the Annexes in this document for contact information that must be included and where the information must be posted. Where applicable, contact information for any landlord, property manager, and/or third-party tower owners must also be included. This will not only facilitate information sharing between proponents and operators at a site, but also facilitate efficient and effective responses to issues that may arise relating to a site's operation, including access control and compliance issues.

In some circumstances, property owners could be present inside a CE at the site for prolonged periods and may not be aware of the potential for over-exposure to RF energy. Proponents and operators should take responsibility for making appropriate arrangements with the owner(s) of the property on which their antenna installation is located (e.g. farm field or building) so that the property owner(s) is made aware of the risks of over-exposure within a CE and can effectively avoid such risks.

3. Compliance and Enforcement Measures

ISED requires that, for all antenna installations, the general public must not have access to any area at, or in close proximity to, the antenna installation site, where the UE limits are exceeded. The foregoing applies to RF energy levels as well as contact current and induced current levels. Access controls and corrective measures must meet the requirements set out in this document unless specific alternate measures are required by ISED.

Proponents and operators must be diligent in ensuring their antenna installations remain compliant. It is strongly recommended that proponents and operators of antenna installations have a site inspection regime in place to ensure all of their antenna installations remain compliant.

Factors which could negatively impact site compliance include:

- 1) a change of the local radio environment (e.g. additional emissions, increased output power);
- 2) a change in the local physical environment (e.g. development of land near the antenna installation);
- 3) access controls not being adequately maintained.

Should RF energy levels exceed the UE limits in any area accessible to the general public at, or in close proximity to, the site it will be considered non-compliant. In such cases, the proponents or operators are required to implement corrective measures to bring the site into compliance without delay. In the event of non-compliance, proponents and operators are considered to be in breach of the conditions of their radio authorization and ISED may undertake enforcement actions under the *Radiocommunication Act* against those contributing to the non-compliance.

Repeated failure by a proponent or operator to maintain compliance of their antenna installations may lead to additional enforcement measures. Information about enforcement measures may be found on [ISED's Compliance and Enforcement website](#).

4. Access Control Requirements

The goal of any type of access control is to protect the general public by restricting access, at all times, to any area at, or in close proximity to, the site where the UE limits are exceeded. This section sets out access control requirements for new and existing antenna installation sites. Regardless of the type of site, it is likely some form of access control will be required. The nature of the site and the associated site compliance assessment will assist in determining the appropriate means of access control.

The location of access controls (e.g. fencing) may be determined based on detailed calculations, computer simulations, site surveys (measurements) or a combination thereof. However, regardless of the method used, ISED may require additional information, including additional measurements, to be provided in order for compliance with the UE limits to be demonstrated.

Antenna installations on guyed structures present additional factors which must be taken into consideration when assessing site compliance. Guy-wires and associated anchor points have the potential to re-radiate high levels of RF energy, which may exceed the UE limits. In addition, induced and contact currents may also be present at levels which exceed the UE limits. As neither numerical analysis methods, nor current computer simulations, are able to accurately assess the RF energy, contact current, or induced current levels at these locations, it can necessitate the proponent or operator to conduct measurements at these locations in order to ensure compliance. Proponents and operators are responsible for ensuring the entire site, including all guy-wires and associated anchor points, complies with the UE limits at all times.

Should a proponent or operator be required to implement access controls at a site where none exist, those access controls must, at a minimum, meet the requirements outlined in section 4.3, *Construction of New Access Controls* as well as any additional requirements set out by ISED.

Note: Construction of new access controls may be required even though anti-climbing devices are already installed.

Note: ISED does not accept vegetation as access control as it is difficult to predict and control. It can change drastically within a short period of time, which could result in it providing negligible impediment to human movement through a given area.

At any site where access controls already exist, those measures must meet, at a minimum, the requirements as outlined in section 4.2, *Existing Access Controls*, as well as any other requirements set out by ISED. Where those measures do not meet the minimum requirements as per section 4.2, they must be modified in order to meet those requirements. However, within seven (7) years from the date of publication of this document, all access controls must meet, at a minimum, the requirements of section 4.3, *Construction of New Access Controls* as well as any other requirements set out by ISED. Therefore,

where significant modification to already installed access controls is undertaken, it is strongly recommended that all site access controls be designed and constructed to meet, or exceed, the requirements outlined in section 4.3. Where reconstruction of access controls occurs, the new controls must meet, or exceed, the requirements outlined in section 4.3 as well as any additional requirements set out by ISED.

A site which has been assessed, and deemed compliant by ISED between the release of CPC-2-0-20, Issue 1 (March 2013) and the date of publication of this document, will continue to be considered compliant provided the access controls are appropriately maintained and meet the Existing Access Controls requirements as outlined below in section 4.2. However, such sites will be required to meet the requirements of section 4.3 following the seven-year transition period referenced above.

Proponents and operators must be diligent in monitoring the condition of the site and the surrounding environment to ensure the site remains compliant. In case of doubt as to whether any existing access controls, planned modification or construction of new access controls meet the applicable requirements, it is recommended that the proponent or operator contact the [local ISED office](#) in order to obtain further site-specific guidance.

4.1. Physical Barriers

Typically, the most straightforward way to restrict general public access to areas where the UE limits could be exceeded is by using a physical barrier. Examples of this include, fencing with locked gates enclosing the site, locked doors on rooftops, or an anti-climbing device on a tower. Any location outside of a CE will be considered accessible to the general public.

Access controls are not limited to fencing, other barriers and/or types of access controls may be utilized in place of, or in conjunction with, fencing. However, regardless of the type of barrier, it must restrict access by the general public to any area where the UE limits are exceeded. For example, walls constructed of solid material (e.g. concrete, metal or plywood) may be feasible or preferred in some scenarios. It is important to note that ISED does not accept vegetation (e.g. dense brush/forest) as a means of access control.

When designing, constructing and maintaining physical barriers as a means of access control, many factors must be taken into account to ensure effectiveness. Proponents and operators must recognise that sites, particularly towers, are enticing to investigate and climb, especially for children. Regardless of whether an antenna installation is located on private land, access controls must be designed and constructed to inhibit unauthorised access by the general public (including those who may be considered to be trespassing), at all times, to any area where the UE limits are exceeded.

4.2. Existing Access Controls

This section applies to all sites which have access controls in place as of the date of publication of this document. Those access controls must meet the following requirements (refer to the Notes in section 4).

Requirements:

- Access by the general public to areas where the UE limits are exceeded must be restricted at all times.

- All openings and clearances (e.g. separation between a fence and a gate, or the distance between a fence and the ground) in the access controls must be small enough to preclude access by the general public, including children, to any area where the UE limits are exceeded.
- The height of the fence/barrier must inhibit an individual from passing over it.
- Be structurally sound.
- Impede access by the general public regardless of season, surrounding vegetation, snow accumulation, or climbable objects in close proximity (e.g. generator cabinets).
- Access points (e.g. gates, doors, other moveable barriers) comprising part of the access control measures must be locked at all times unless antenna installation operator personnel are present at the site and are able to prevent general public access to the CE. Any other personnel accessing the CE must, working in conjunction with antenna installation operator personnel (who may or may not be present on site), ensure the access points are locked or that general public access is restricted in an alternate manner at all times.
- Where, due to the nature of the antenna installation (e.g. on a tower), the site is compliant with the UE limits in all areas typically accessible to the general public (e.g. the ground at, or near, the base of the tower), site fencing may not be required. However, in these scenarios, the antenna supporting structures must be equipped with anti-climbing devices to prevent access to parts of the structure where the UE limits are exceeded.

Note: It is important for antenna installation operators to work with property owners/managers in order to clearly communicate, to all authorized personnel who may be entering a CE, the importance of maintaining proper access controls for these areas (e.g. keeping doors/gates locked).

Recommendations and Considerations:

- Conductivity of access controls must be given due consideration, most notably at AM broadcasting sites. Factors such as corrosion or the deterioration of grounding systems must be taken into account, especially as they relate to induced current and/or contact current.
- Site inspection and maintenance regimes should be conducted regularly in order to ensure access controls continue to remain effective.

4.2.1 Modifications to Existing Access Controls

In a case of non-compliance, proponents and operators are required to implement corrective measures without delay. The corrective measures can include temporary measures as referenced in section 6.1, modifying the current access controls in order to meet the *Existing Access Controls* requirements outlined in section 4.2, or replacing the current access controls. When replacing access controls, they are required to meet the *Construction of New Access Controls* requirements outlined in section 4.3.

The following is an example of where existing access control measures may not be sufficient to impede the general public from accessing areas where the UE limits are exceeded, but modifications may be possible to ensure compliance:

An antenna installation is located in a farm field having an existing fence. The fence may be adequate for its original purpose, however, it may not meet the *Existing Access Controls*

requirements as outlined in section 4.2. In such a case, it may be possible to alter the existing access controls to bring the site into compliance.

The decision as to the practicality of any modification compared to the replacement of access controls is left solely to the proponent or operator so long as it results in access controls which meet the *Existing Access Controls* requirements or the *Construction of New Access Controls* as applicable. When making the decision it is important to note that within seven (7) years from the date of publication of this document, all access controls must meet, at a minimum, the requirements of section 4.3, *Construction of New Access Controls* as well as any other requirements set out by ISED. The purpose of altering the design and construction of existing access controls (e.g. fence or barrier) is to ensure it inhibits unauthorised access by the general public to any area where the UE limits are exceeded.

- In a case where a fence/barrier meets the requirements of section 4.2 other than having sufficient height to adequately inhibit an individual from passing over it, the possibility may exist to increase the height to an effective level. If this approach is taken it is important to understand that the material added must meet the requirements of section 4.2 and achieve the goal of restricting access by the general public to any area where the UE limits are exceeded.
- Although barbed-wire is not the only option which may be acceptable for increasing height, as it is commonly utilized at the top fences/barriers some specific criteria for its use are provided.
 - Barbed-wire must:
 - Only be used for the top portion of the fence/barrier,
 - Constitute no greater than the top 35 cm of the fence/barrier,
 - Cannot be spaced further than 105 mm from neighbouring strands of barbed-wire, nor from the top of the fence/barrier,
 - Be installed parallel to the fence/barrier,
 - Comply with any additional requirements set out by ISED
 - It is recommended the barbed-wire be installed on brackets angled outward (i.e. toward the UE)

It must be noted that making alterations to the design and construction of an access control does not necessarily ensure compliance, therefore it is advisable to discuss the planned modifications with [local ISED officials](#) prior to proceeding.

4.3. Construction of New Access Controls

This section applies to all sites which do not have any existing access controls in place as of the date of publication of this document. All access controls installed at these sites must, in addition to meeting the Existing Access Controls requirements outlined in section 4.2, meet the following requirements (refer to the Notes in section 4).

Note: Where a tower is equipped with an anti-climbing device, a physical barrier such as a fence may still be required to bring the site into compliance. In such case, the physical barrier must meet the requirements laid out for Existing or New Access Controls as applicable.

General Requirements:

- If constructed of a conductive material the proponent or operator must ensure they are properly grounded and that contact currents and induced currents have been fully assessed to ensure compliance with the UE limits.
- Proper monitoring and maintenance of all conductive materials must occur to ensure corrosion does not result in a loss of grounding which could result in a build-up of contact currents or induced currents.
- Must be designed and constructed to inhibit any unauthorised entry over, under, or through it regardless of season, surrounding vegetation, snow accumulation, or climbable objects in close proximity.
- Must be at least 180 cm above grade as measured on the UE side of the enclosed area.
- Any horizontal components, such as fence support rails, must be placed on the controlled environment side of the enclosed area and in such a way that they cannot easily be used to assist an individual in scaling the structure.
- Objects in close proximity to an access control, for example generator cabinets, fuel tanks, trees, snow accumulation, which may be used to assist in ascending the access controls more easily must be taken into account. Where such objects are present, the design and construction of the access controls must be altered to the degree necessary (e.g. increasing the height of the fence/barrier) to ensure it still inhibits unauthorised access to the controlled environment.
- Maximum separation between the ground and bottom of the access controls (in all locations) must not exceed 55 mm. The design and construction must be such that access, including by children, cannot be gained by going under the access controls without physically removing a significant amount of material from the ground.
- Must be adequately sound such that an individual cannot push, pull or otherwise move the access controls in any direction to reduce its effectiveness in preventing access to the controlled environment.
- Gates and other access points must be designed and constructed to provide, at a minimum, an equal level of impediment to access as that of the other parts of the access controls. For example, a gate must be of at least the same height as, and have a ground clearance no greater than, the surrounding fence/barrier.
- The maximum spacing between gates and supporting posts must not allow a spherical object of greater than 105 mm to pass through or between, and should be constructed in such a manner so as to impede climbing.
- Access points (e.g. gates, doors, other moveable barriers) comprising part of the access control measures must be locked at all times unless antenna installation operator personnel are present at the site and are able to prevent general public access to the CE. Any other personnel accessing the CE must, working in conjunction with antenna installation operator personnel (who may or may not be present on site), ensure the access points are locked or that general public access is restricted in an alternate manner at all times.
- Where, due to the nature of the antenna installation (e.g. on a tower), the site is compliant with the UE limits in all areas accessible to the general public (e.g. the ground at, or near, the base of the tower), site fencing may not be required. However, in these scenarios, the antenna supporting structures must be equipped with anti-climbing devices to prevent access to parts of the structure where the UE limits are exceeded.

General Recommendations and Considerations:

- Preferably, access controls should be constructed of non-conductive material; this is especially important at AM broadcasting sites.
- It is recommended that gates and doors be self-closing and self-latching where possible.
- The structural integrity or effectiveness of a fence/barrier can be reduced due to the effects of frost/freezing and should be factored in to the design and construction. Significant degradation could result in a site becoming non-compliant over time.

The following information provides specific requirements for chain-link fencing and wooden fencing as they are the most common types of barriers that are typically installed for long-term use, however, it is important to note that these are not the only types of access controls that may be considered sufficient. Other types of barriers or access controls may be acceptable, provided they meet the general requirements listed above and accomplish the goal of inhibiting access by the general public to CEs.

Chain-link

Requirements:

- Link openings must not allow a spherical object of greater than 55 mm to pass through.
- Structural portions of the fence, including posts, fence mesh, horizontal rails, tensioning wires and tie wires must be constructed of steel or material of equal or greater structural performance to it.
- Support posts must be spaced at intervals not exceeding 3 metres.
- Wire gauge of the mesh, tie wires and tensioning wires must be such that it maintains adequate structural integrity of the fence.

Recommendations and Considerations:

- Corrosion can lead to loss of structural integrity as well as a decrease in grounding characteristics, which could result in the presence of induced current and/or contact current levels that exceed the UE limits.
- Use of corrosion resistant materials such as galvanized or vinyl coated metals for all structural portions of the fence, including posts, fence mesh, horizontal rails, tensioning wires and tie wires.
- Use of diamond mesh fencing material.
- Fencing mesh should be located on the outside (UE side) of the support posts.

Wood Fence (Vertical Boards) / Wood Barrier

Requirements:

- Maximum spacing between vertical materials (e.g. fence boards) must not allow a spherical object of greater than 105 mm to pass through or between, and should be constructed in such a manner so as to impede climbing.
- Support posts must not be less than 88 mm by 88 mm (nominal 4"x4") and must not be spaced at intervals of more than 2.4 metres.
- Horizontal rails must not be less than 38 mm by 88 mm (nominal 2"x4") and must be spaced such that the top and bottom rails are at least 1.2 metres apart.
- Vertical boarding must not be less than 19 mm by 88 mm (nominal 1"x4").

Recommendations and Considerations:

- Choice of species and treatment of wood (both for posts and fencing/barrier material) must be such that it does well in wet environments;
- Rot can considerably weaken the structure and possibly lead to failure thereby resulting in the site becoming non-compliant.

4.4. Non-tower Structures

Antenna installations on non-tower structures (e.g. rooftops) may differ considerably from those on purpose built antenna supporting structures. Nevertheless, the requirement to restrict, at all times, unauthorised access by the general public to areas at, or in close proximity to, the antenna installation site where the UE limits are exceeded, equally applies to them. In particular, the requirements listed in section 4.2 and 4.3 apply to non-tower structures as appropriate, however, the following requirements are more specific to rooftops:

- Access points (e.g. doors, hatches, ladder access barriers) comprising part of the access control measures must be locked at all times unless antenna installation operator personnel are present at the site and are able to prevent general public access to the CE. Any other personnel accessing the CE must, working in conjunction with antenna installation operator personnel (who may or may not be present on site), ensure the access points are locked or that general public access is restricted in an alternate manner at all times.
- For locations such as rooftop patios, where the general public is intended to have access, ensuring compliance with the UE limits may require more complex access controls or mitigation measures than may typically be required. Access controls such as fencing around the patio area may be a possible solution; refer to the applicable sections above for specific fencing requirements.
- When assessing a site's compliance, proponents and operators must also consider areas accessible to the general public which are not located on the antenna installation site rooftop. This would include areas such as balconies of apartments, or gathering areas in close proximity to the antenna installation. In such cases, specific mitigation (e.g. change in antenna installation technical parameters or placement) or access controls measures may be required to preclude access to areas where the UE limits are exceeded in order to ensure compliance.

4.5. Alternate Access Controls

There may be specific site circumstances where access controls other than, or in addition to, fences/barriers may be necessary or more appropriate. The Department also recognizes there may be rare situations, due to extenuating circumstances (e.g. extreme snow conditions or topography), where typical access controls may not be feasible or practical. In cases where a proponent or operator believes that such circumstances apply to their antenna installation, they must provide local ISED officials with an explanation of their circumstances as well as a plan detailing the measures to be taken in order to ensure the site complies with the UE limits. The plan must include a site layout drawing or map which details access control measures and locations, area demarcation (signs), any proposed changes to station operating parameters, and any other relevant information. Prior to proceeding with any alternate access control measures, proponents and operators should obtain the Department's approval of the plan.

It is important that proponents and operators are diligent in monitoring their sites and antenna installations as the local physical or radio environment may change, necessitating the addition and/or modification of access control measures. Should changes to the access controls be necessary to ensure compliance, the proponent or operator must bring the site into compliance without delay. Within one week of the implementation of the corrective measures, the proponent or operator must provide an updated plan to ISED detailing what changes have and/or will be made to the permanent alternate access controls in order to ensure site compliance; the plan must include the proposed date of installation of those measures.

Once a plan has been approved by ISED, the site's compliance will be assessed against that plan from the date of approval. Should subsequent plans be approved by ISED, site compliance will be assessed against the most up-to-date approved plan.

Failure to provide the appropriate plan and obtain the necessary approval will be considered a breach of the proponent's or operator's condition of authorization. In the event of non-compliance, ISED may undertake enforcement actions under the *Radiocommunication Act* against those contributing to the non-compliance.

Note: Refer to section 6 of this document as well as section 7.1 of CPC-2-0-03, Issue 5, *Radiocommunication and Broadcasting Antenna Systems*, for requirements related to corrective measures and notification.

5. Signage

It is important to note that signage alone does not constitute access control.

Demarcation signage (e.g. "caution" or "warning") is required in conjunction with access controls in areas where the UE limits are exceeded. Proponents and operators should refer to [Health Canada's SC6 Technical Guide](#) for information relating to the level of advisory and associated signage text. At AM broadcasting sites or other areas where serious injury or death may result, the Department strongly recommends that signage sufficiently reflects the dangers posed.

Note: For the purpose of informing those persons who are authorized to enter a given CE, ISED suggests that operators post appropriate signage at any location within that CE where the CE limits of SC6 are exceeded.

Sign imagery and design should follow accepted industry standards and common practices. Existing signage may remain in place provided it meets the minimum requirements for posting demarcation signs, which are as follows:

- signs must be at least 20 cm by 30 cm in size;
- signs must be written in both official languages;
- a sufficient number of signs must be installed around the affected areas;

- the height, size and location of the signs must allow them to be visible and noticeable from any normal angle of approach to the affected areas, irrespective of seasonal snow cover or vegetation obstructions; and
- metallic signs and posts are not recommended near AM broadcasting sites.

Signage must not make any form of representation as to being posted by, or approved by, the Government of Canada or any of its departments. It shall not display any images or symbols related to the Government of Canada signature, including the “Canada” wordmark, logo or any other symbol or image of the Government of Canada corporate identity.

6. Corrective Measures

6.1. Temporary Measures

Where the RF energy levels at, or in close proximity to, an antenna installation site are found to exceed the UE limits in any area which is accessible to the general public, ISED requires that corrective measures be implemented without delay. Operators shall not leave a site unattended until the site is brought into compliance, unless extenuating circumstances arise; these circumstances and the proposed corrective measures must be discussed with ISED prior to the site being left unattended.

Temporary corrective measures must be implemented until such time as permanent measures can be implemented, however, these measures must still ensure the general public does not have access to any area where the UE limits are exceeded.

Temporary measures can include:

- changing operating parameters,
- implementing temporary access controls such as the installation of temporary fencing,
- placement of security personnel to prevent unauthorized access to areas where the UE limits are exceeded,
- any combination of the above; or
- switch transmissions to an authorized alternate site until the given site is brought into compliance
 - **Note: The alternate site must comply with SC6 at all times.**

In situations where security personnel are posted at a site as a means of access control they must be made aware of the potential exposure to the RF energy present at the site. They must also be given specific instruction and guidance on areas where the general public must not enter (i.e. areas where the UE limits are exceeded).

Within one week of the implementation of the temporary measures, the proponent or operator must provide a plan to ISED detailing what changes will be made to the permanent access controls in order to ensure site compliance. A period of 90 days would typically be considered sufficient time to implement permanent corrective measures. Any delay longer than 90 days must be discussed with ISED, and the proponent or operator must provide a complete action plan regarding the implementation of permanent compliance measures for approval by ISED at that time.

6.2. Notification

Should a proponent or operator determine one of their existing antenna installations is non-compliant, they must inform ISED without delay, including details of what mitigation measures have been implemented to bring the site into compliance. ISED may require that further corrective measures related to access control and/or operating parameters be taken. In addition, the Department may also require the proponent or operator to provide detailed calculations, computer simulations, and/or conduct site surveys (measurements) in order to demonstrate compliance.

7. References

The latest versions of the following publications should be used in conjunction with this guideline document.

- (1) (ISED) [*Broadcasting Procedures and Rules 1 BPR-1, General Rules*](#)
- (2) (ISED) [*Client Procedures Circular CPC-2-0-03, Radiocommunication and Broadcasting Antenna Systems*](#)
- (3) (ISED) [*GL-01, Guidelines for the Measurement of Radio Frequency Fields at Frequencies from 3 kHz to 300 GHz*](#)
- (4) (ISED) [*GL-08, Guidelines for the Preparation of Radio Frequency \(RF\) Exposure Compliance Reports for Radiocommunication and Broadcasting Antenna Systems*](#)
- (5) (ISED) [*Technical Note TN-261, Safety Code 6 \(SC6\) Radio Frequency Exposure Compliance Evaluation Template \(Uncontrolled Environment Exposure Limits\)*](#)
- (6) (Health Canada) [*Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz – Safety Code 6*](#)
- (7) (Health Canada) [*Technical Guide for Interpretation and Compliance Assessment of Health Canada's Radiofrequency Exposure Guidelines*](#)
- (8) (ISED) [*Radiocommunication Information Circular RIC-66, Addresses and Telephone Numbers of Regional and District Offices*](#)

8. Annexes

Annex A: Template - Contact information – all access points

The following contact information must be posted in an easily visible location at all access points to the site.

Site Contact Information

Site Operator/Manager:

Site Contact Phone #:

Note: Prior to entry past this point it is recommended that personnel contact the Site Operator/Manager and/or their employer to determine if any specific access requirements exist.

Annex B: Template - Contact information – posted inside the controlled environment

The following contact information must be posted in an easily accessible location within the site's controlled environment in such a way that any authorized site personnel has access to it. The information must be provided for each antenna installation operator as well as the site landlord, property manager and/or third-party tower owner as applicable.

Site Contact Information

Antenna Installation Operator/Company Name:

➤ **Site Technician(s) Contact Name:**

Technician(s) Phone #:

Technician(s) Office Address:

➤ **Alternate Contact Name:**

Alternate's Phone #:

Alternates Office Address: