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Spectrum Management

Client Procedures Circular

Environmental Process, Radiofrequency Fields and Land-Use Consultation

Canada

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Client Procedures Circulars describe the various procedures or processes to be followed by the public when dealing with Industry Canada. The information contained in these circulars is subject to change without notice. It is therefore suggested that interested persons consult the nearest district office of Industry Canada for additional details. While every reasonable effort has been made to ensure accuracy, no warranty is expressed or implied. As well, these circulars have no status in law. Additional copies of this or other circulars in the series are available from any office of the Department.

Comments and suggestions may be directed to the following address:

Industry Canada
Radiocommunications and
Broadcasting Regulatory Branch
300 Slater Street
Ottawa, Ontario
K1A 0C8

Attention: DOSP

Introduction

Industry Canada recognizes the importance of considering the potential impact of antennas and their supporting structures on their surroundings. As such, the Department has instituted procedures for users of the radio frequency spectrum which give consideration to the following three areas: (i) the environment; (ii) Health Canada's *Limits of Exposure to Radiofrequency Fields at Frequencies from 10 kHz to 300 GHz, Safety Code 6* (referred to as Safety Code 6 from hereon); and (iii) land-use consultation.

In January 1995, the Parliament of Canada proclaimed the *Canadian Environmental Assessment Act* (CEAA). This Act requires that federal government departments take into account environmental effects in the exercise of their mandate. Separate from this legislative requirement, Industry Canada has incorporated procedures to evaluate the radiofrequency fields associated with radio transmitters. The Department also requires that applicants meet the standards contained in Safety Code 6. Further, Industry Canada recognizes that land-use authorities may have an interest in the location of significant antenna structures proposed within their jurisdiction and may have legitimate concerns that should be considered in the exercise of authority under the *Radiocommunication Act*.

These procedures were developed in consultation with the Canadian Environmental Assessment Agency and take into consideration comments received from our request for public comment published in notice SMRR-001-92 of the Canada Gazette on February 15, 1992.

Principle

Industry Canada must exercise its spectrum management functions with due regard for the environment.

Mandate

Section 5 of the *Radiocommunication Act* states that the Minister may take into account all matters relevant to radiocommunication authorizations. The requirement for an environmental assessment is contained in section 5(1)*(d)* of the *Canadian Environmental Assessment Act*.

Policy

Industry Canada will consider environmental effects and Safety Code 6, and will ensure that land-use authority consultation has been taken into consideration before issuing a site-specific radio authorization for significant antenna structures.

Process Overview

Applicants for site-specific radio authorizations are required to follow the procedures set out in this document before Industry Canada will issue an authorization. Technical information concerning specific issues related to broadcast applicants only, such as radio frequency exposure analysis, may be found in the Broadcast Procedures and Rules, Part I (BPR-I) and the appropriate BPR or BP for the specific service in which the broadcast station is operating.

Owners of those stations that do not require site-specific radio authorizations are not required to file documentation, but have responsibilities as described in this document.

Filing Requirements

This table lists the minimum environmental and consultation information that must be submitted to Industry Canada.

TYPE OF STATION	SUBMISSION REQUIREMENTS
Type 1 Land, coast or earth stations that require a site-specific radio station authorization, including broadcast undertaking stations to which the *Broadcasting Act* applies – **site-specific**	Preliminary Environmental Information and Municipal/Land-use Consultation Attestation (Annex I). Broadcasting undertakings also require a Radio Frequency Exposure Analysis.
Type 2 Stations that do not require a site specific authorization, e.g., amateur, general radio service (GRS) and satellite receiving stations – **non-site-specific**	No specific filing procedure. Responsibilities are as described herein.

General Procedures

Environment

This subsection applies only to Type 1 applicants as Industry Canada does not issue site-specific authority to Type 2 radio station owners. Both types are required to comply with the general procedures under the subsections entitled Radiofrequency Fields and Land-Use Consultation.

Industry Canada expects that the installation or modification of radio stations will be done in a manner that complies with the CEAA. Most stations will have an insignificant environmental effect and will be excluded from the CEAA process.

Applicants for site-specific radio stations are required to include a Preliminary Environmental Information and Municipal/Land-Use Consultation Attestation (Annex I) with each application. Where the applicant or Industry Canada identifies that the station does not meet the exclusion criteria established under the CEAA, further examination will be required. Should there be the potential for an adverse environmental effect, site-specific applicants will be required to describe the effect and, where possible, propose mitigation measures, in compliance with the requirements of the CEAA and in consultation with Industry Canada. As well, an indication is required of whether the effect will occur during the construction, operation or modification phase.

Industry Canada will ensure that the environmental assessment process is applied as early as is practicable in the planning stages so that environmental factors are considered in any decisions that may be made. We expect users of the radio frequency spectrum to give due consideration to potential environmental impacts.

Examples of Adverse Environmental Effects

The following are some examples of what may be considered adverse environmental effects:

- detrimental effects on water bodies, ground water or soil;
- adverse effects on legislated protected areas such as national parks, historic canals or other protected areas;
- alteration, disruption or destruction of terrestrial and aquatic habitat for wildlife and fisheries;
- changes to current use of lands and/or quality of lands and natural resources for traditional purposes by aboriginal persons;
- alteration of historical, archaeological, paleontological or heritage resources resulting from a change in the environment.

Radiofrequency Fields

Published by the Department of Health and Welfare in 1991, Safety Code 6 contains recommended safety procedures for the installation and use of radiofrequency-emitting devices. Maximum exposure levels and durations of exposure are used to determine whether the signal emitted can be considered safe. We suggest that those considering a radio installation refer to Safety Code 6 for guidance.

Industry Canada requires that radio stations be installed and operated in a manner that complies with Safety Code 6.

Land-Use Consultation

The purpose of this procedure is to ensure that land-use authorities are aware of significant antennas proposed within their boundaries. Industry Canada believes that local concerns related to land-use are important to the community, and that municipal and other land-use authorities should have the opportunity to make their views known with regard to radiocommunication antenna towers within their boundaries. Therefore, we have instituted procedures to ensure that municipalities and other land-use authorities are consulted prior to the building of significant antenna structures.

In notice SMRR-002-90 published in the Canada Gazette on June 16, 1990, we published the requirement that applicants intending to install significant antenna structures notify and consult with appropriate authorities. This consultation is intended to provide an opportunity to have land-use concerns addressed while respecting federal jurisdiction for the installation and operation of radiocommunication systems. However, federal jurisdiction in matters of radiocommunications cannot provide immunity from any action that may be taken by a land-use authority.

When Industry Canada becomes aware of a land-use authority objection to a site-specific station, issuance of the licence will be delayed for a period of time sufficient for negotiations between the parties. While individual circumstances will vary, Industry Canada generally considers that once a participating land-use authority is contacted, it should make its views known to the applicant within 60 days. Further, the consultation process should be completed within 120 days.

The siting of antennas and their supporting structures is best dealt with in a spirit of co-operation, based on disclosure of the details to the land-use authority by those intending to install or modify a significant antenna structure. Early contact ensures an opportunity for full consultation.

To maximize the benefits of the consultation process, the parties should consider each other's requirements and work toward solutions that minimize the impact on the surroundings, including considering existing sites, while not unduly prohibiting the development of the radio facility.

Roles of the Parties Involved

Introduction

The Canadian Environmental Assessment Agency, Industry Canada, the land-use authority and the applicant or radio station owner all have an important role to play. Full consultation can only be achieved through early contact by the applicant or owner with the other parties, and with the co-operation of everyone involved.

The Canadian Environmental Assessment Agency

The role of the Canadian Environmental Assessment Agency includes:

- administering the environmental assessment process;
- providing advice to federal authorities;
- promoting uniformity and harmony in the assessment of environmental effects; and
- promoting or conducting research in matters of environmental assessment and encouraging the development of environmental assessment techniques and practices.

Industry Canada

The role of Industry Canada is to implement the provisions of the *Canadian Environmental Assessment Act* and ensure that applicants for radio authorizations involving significant antenna structures disclose their plans to land-use authorities and that the process operates in a timely fashion. Industry Canada will provide information to both our clients and land-use authorities. This may include providing observations on the validity of land-use by-laws as they relate to radio installations.

Industry Canada does not play a direct role in the consultation. The responsibility remains with the radio station applicant or owner and the land-use authority to work toward a mutually acceptable agreement. Applicants for radio stations as well as owners of stations that do not require a site-specific radio authorization must disclose their plans for significant antenna structures to their land-use authority. Where required, it is expected that the parties will propose and examine alternatives and in so doing, will give consideration to each other's needs.

Land-Use Authority

Industry Canada does not require, nor does it have the power to require, the participation in this process by any land-use authority.

The procedure does not have the effect of conferring any federal power on a land-use authority. Nor does it confer any right of veto.

In the event that a proposal is opposed, the land-use authority may provide Industry Canada with a statement should it wish to do so. There is no specified form for statements of either concurrence or opposition.

Clients

The role of owners of Type 1 and Type 2 stations, as it relates to the environment, radiofrequency fields and land-use consultation, is contained in the sections which follow. These address specific procedures for each type of station.

More generally, experience to date and industry market forecasts indicate considerable growth in the provision of spectrum-based telecommunication services. For the most part, the consumers of these services are concentrated in urban areas and along transportation corridors. Consequently, the providers of these services must, of necessity, locate their facilities in proximity to these concentrations and thus in proximity to each other and with largely coincident coverage areas. If all service providers were to act independently to establish separate antenna structures, the potential would exist for justifiable concern that the number of such structures within an area would be excessive. To avoid such a situation, Industry Canada expects applicants and antenna structure owners, along with industry associations, to work cooperatively in reaching agreements which allow for and encourage the sharing of antenna structures so as to minimize their number.

Specific Procedures - Type 1 Site-Specific Stations

Environment

Type 1 applicants must submit a Preliminary Environmental Information Attestation (Annex 1) with their application. Where the proposal is not excluded from CEAA assessment, the applicant must either (i) alter the proposal so as to minimize the potential for environmental impact to the point where the exclusion requirements are met, or (ii) participate in the CEAA assessment process as required by Industry Canada. The installation of a station must be stopped should any unforeseen adverse environmental effect become apparent.

Radiofrequency Fields

Part of ensuring that the station complies with Safety Code 6 includes determining the radiofrequency (RF) field that the station produces. The authorization process for Type 1 stations includes an initial analysis that considers the potential effect of the proposed station within the existing radio environment. Where the analysis indicates that the maximum RF field level permitted by Safety Code 6 may be exceeded, the applicant may be required to undertake mitigation measures. These measures may include reducing the transmitter power or duration of transmission, changing the type, direction or height of the antenna, or restricting access to areas near to the antenna. Where the calculation indicates that the proposed station will meet Safety Code 6, Industry Canada will continue the normal authorization process.

In installations where there may not be compliance with Safety Code 6, the applicant may be required to provide additional information to facilitate Industry Canada's analysis. Where this initial analysis is inconclusive, the applicant may be required to provide measurements or calculations to support the proposed station's compliance.

Broadcasting undertakings are required to provide a radiofrequency exposure analysis with each application. Specific technical requirements are contained in Broadcast Procedures and Rules, Part I (BPR-I) and the BPR appropriate for the service in which the broadcast station is proposed.

Land-Use Consultation

All applicants for Type 1 stations must complete and submit a signed Municipal/Land-Use Consultation Attestation for new or modified antenna structures (Annex I). Applicants must consult with the municipal/land-use authority when proposing the installation of a significant antenna structure. In the event the applicant believes that the antenna structure is not significant and chooses not to consult, it will be with the acceptance of any consequences of this decision. The Municipal/Land-Use Consultation Attestation covers the following cases: agreement by both parties, non-response by land-use authorities, inconsequential installations and non-concurrence.

Where Industry Canada receives proof of land-use authority concurrence, or an attestation that the proposed antenna is inconsequential (not applicable to broadcast undertakings), Industry Canada will continue to process the application. If the attestation indicates that the land-use authority has been consulted but has not yet made its views known, issuance of a licence may be delayed until the views of the land-use authority are known or a sufficient time has elapsed for it to have commented. Should the applicant attest to believing that the structure or change proposed to it is insignificant, and accepts the consequences of this decision, Industry Canada will continue to process the application. If an application is opposed by a land-use authority, Industry Canada will ensure that both parties have had sufficient opportunity to negotiate before entertaining a petition to issue the authorization.

If the land-use authority and the applicant are unable to come to an agreement, it is the responsibility of the applicant to provide Industry Canada with a written submission detailing all actions taken to address the concerns of the land-use authority. The information required should include, but not necessarily be limited to: a chronological summary of all events (letters, meetings, consultations, etc.); the requirement for the establishment of the specific site in question; reasons for the proposed location; and a review of alternative locations considered and reasons for their rejection, including associated costs and technical analysis. This analysis may include pattern coverage maps, Safety Code 6 analysis or any other engineering study that may be deemed appropriate.

Applicants for broadcast undertakings shall consult with the local municipality or land-use authority regarding the location of all proposed antenna towers. The following publications give further information about broadcast undertaking municipal consultation:

Broadcast Procedures and Rules, Part II (BPR-II)	Section C-10.4.2
Broadcast Procedures and Rules, Part III (BPR-III)	Sections C-5.5.2, D-1.3 and F-1.3
Broadcast Procedures and Rules, Part IV (BPR-IV)	Sections C-5.5.2, D-1.3, F-1.3 and H-2.2
Broadcast Procedure 23 (BP-23)	Section 6.11

Specific Procedures - Type 2 Non-Site-Specific Stations

Environment

Type 2 stations are either exempted from the requirement to hold a radio station licence or are not issued a site-specific authority. For this type of station, Industry Canada does not approve the siting of the installation within the existing radio environment. As such, they are not captured by the requirements of the CEAA.

Radiofrequency Fields

Type 2 stations must comply with Safety Code 6. Where it is expected that the operation of the proposed station will result in non-compliance with Safety Code 6, mitigation measures as described for Type 1 must be pursued by the owner of the station.

Land-Use Consultation

Prior to the installation of an antenna structure for which it is felt that community concerns could be raised, owners of Type 2 stations must consult with their land-use authority. There is no specific procedure for this consultation, nor is there any requirement to receive the prior approval from Industry Canada to construct the antenna or its supporting structure. Where the land-use authority concurs with the proposal, installation of the structure may proceed. Should the owner of the Type 2 station believe that the proposed structure or change proposed thereto is insignificant, and decide to proceed with the installation without consulting with the land-use authority, it must be with the acceptance of any consequences of this decision.

Where the owner of a Type 2 station has consulted with the land-use authority but has not received a response, the owner may decide to either:

- continue to pursue a decision from the land-use authority, or
- proceed with the installation of the structure and accept any consequences of this decision.

Industry Canada expects Type 2 radio station owners to address the concerns of the community in a responsible manner, and to consider seriously all requests put forward by the land-use authority. Where Industry Canada believes that the installation of an antenna structure is not appropriate within its surroundings, it may request submissions explaining why the structure should not be altered or removed.

Related Documents

Readers who wish to obtain additional information are directed to the following sources:

Canadian Environmental Assessment Act

Limits of Exposure to Radiofrequency Fields at Frequencies from 10 kHz to 300 GHz (Safety Code 6), Issue EHD-TR-160, 1991, Bureau of Radiation and Medical Devices, Health Canada

The above documents are available from:

Canada Communication Group
Government Publishing Centre
45 Sacré-Coeur Blvd
Hull, Quebec
K1A 0S9
(613) 956-4802

The following documents are available from Industry Canada regional and district offices, as well as Industry Canada in Ottawa.

Radiocommunication Act

Radiocommunication Information Circular 66 (RIC-66), *Addresses and Telephone Numbers of Regional and District Offices*

Canadian Municipalities and the Regulation of Radio Antennae and their Supporting Structures, Professor David Townsend, University of New Brunswick Faculty of Law

Broadcast Procedures and Rules, Part I, *General Rules*

Broadcast Procedures and Rules, Part II, *Application Procedures and Rules for AM Broadcasting Undertakings*

Broadcast Procedures and Rules, Part III, *Application Procedures and Rules for FM Broadcasting Undertakings*

Broadcast Procedures and Rules, Part IV, *Application Procedures and Rules for TV Broadcasting Undertakings*

Broadcast Procedure No. 23, *Technical Standards and Procedures for Broadcasting Receiving Undertakings (Cable Television)*

Annex 1

Preliminary Environmental Information and Municipal/Land-Use Consultation Attestation

Part A - Identification

I, _____ (the applicant), propose to install or modify the antenna(s) or antenna-supporting structure described herein:

☐ new structure, or ☐ modified structure,

_____ (address, description of location),
with the following coordinates: _____°_____'_____" north latitude and _____°_____'_____" west longitude.

Part B - Preliminary Environmental Information Attestation

The proposed antenna installation and supporting structure are:

Yes	No	
G	G	Within 30 metres of a water body including a wetland.
G	G	Likely to release a polluting substance into a water body.
G	G	In a national park or other federally protected area.
G	G	A significant modification to an existing antenna installation.
G	G	Attached to, or within 15 metres of, an existing building.
G	G	Independent of an existing building and, individually, they or any supporting line have a footprint greater than $25m^2$.
G	G	Located on Territorial Crown land requiring a permit under the *Territorial Land Use Regulations*.

I note that further study may be required where the proposed structure is not excluded from the *Canadian Environmental Assessment Act* and may have significant adverse environmental effects.

Part C - Municipal/Land-Use Consultation Attestation

(1) ____ I have consulted with the municipal/land-use authority and have obtained their concurrence;

(2) ____ I have consulted, or will consult, the municipal/land-use authority on _____ (date) and will forward any comments when received. I understand that this may delay the issuance of a radio authorization;

(3) ____ ***** I have not consulted with the appropriate municipal/land-use authority, as I believe that the structure or the change proposed thereto is insignificant. I accept any consequences of this decision; or,

(4) ____ I have consulted with the appropriate municipal/land-use authority and they do not concur. I now petition Industry Canada to consider the application based on the attached details of my consultation.

***** Not applicable to a broadcast undertaking.

"I declare that this information is true, complete and correct to the best of my knowledge."

_____	_____	_____
Applicant's signature	Title (if on behalf of a Company)	Date