
Spectrum Management

Broadcasting Circular

Broadcasting Receiving Undertakings (Cable Television) Inspection Procedure

NOTICE

Broadcasting circulars are issued for the guidance of departmental staff and are complementary to **Broadcasting Procedures and Rules.**

Foreword

As part of its Broadcast Standards and Regulations Program, the Department has enacted an inspection procedure for broadcasting receiving undertakings (cable television).

Purpose

The purpose of this document is to explain the inspection procedure which the Department must follow to carry out cable system inspections.

Procedure

The details of the procedure are provided on the following pages.

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1. Introduction

- 1.1 This document presents the procedure for performing inspections on all cable television systems including MATV, if applicable.
- 1.2 The inspection involves a site inspection, a leakage performance evaluation, a spectrum compliance evaluation and a client interface meeting. Cable inspections maintain a departmental presence in the cable industry and promote compliance with the Broadcasting Certificate requirements.
- 1.3 A client interface meeting is included in order to allow the Department representative and the broadcaster or its representative an opportunity to review the technical operation of the cable system and to have a general discussion or policies, rules and responsibilities.
- 1.4 The results of the inspection should be reported on Form 16-935 *Broadcasting Receiving Undertakings (Cable Television) - Inspection, Qualification and Verification Report* reproduced in Appendix A or on its electronic SCOMS version.

2. Frequency of Inspections

- 2.1 All systems shall be inspected at least once within the normal seven-year CRTC renewal period. Districts may undertake more frequent inspections as deemed necessary, as would be desirable in a case where a cable system received only a short-term CRTC licence renewal, or where a system has failed the ELD evaluation.
- 2.2 Cable systems which are approved for carriage of aeronautical channels A-1, A-2, EE and FF will require inspection more frequently due to the potential of causing harmful interference in the 108-137 MHz and 328.6-335.4 MHz frequency bands. Approved systems should be re-evaluated 1 year after receiving initial authority to carry aeronautical channels and every second year thereafter.

3. Inspection Procedure

3.1 Preparation

- 3.1.1 The inspector shall review the documentation on file for the cable system to be evaluated. This includes log books reporting on offset measurements sent by the cable operators, the safety procedure that must be filed with the Department and a report on the cable systems, leakage activities that the operator must prepare and send to the Department in the year preceding renewal of the Certificate (see BP-23, Issue 4, paragraph 3.10.4, 3.10.5, 3.10.6).
- 3.1.2 Attention should be given to past inspections and in particular to service areas which have previously significantly contributed to the cable system's leakage problem.
- 3.1.3 A system map must be obtained from the system operator with the various types of plant construction indicated by area. This will facilitate advance planning of the service areas to be surveyed.

3.2 Site Evaluation and Commentaries on Safety Aspects

- 3.2.1 The inspector should note any changes at the head-end site (e.g. antenna tower structural problems, significant tower modifications, obstruction paint/lighting deficiencies).
- 3.2.2 Safety-related aspects should also be noted. Where a structural problem is suspected which could relate to the safety of a tower, the inspector should inform the cable operator or its representative for appropriate action.
- 3.2.3 A record shall be made of any addition to the service area or major technical changes which have occurred since the last visit.
- 3.2.4 The departmental representative should discuss the responsibilities of the broadcaster, in order to be in compliance with the *Canadian Environmental Assessment Act*.

3.3 Evaluation of Leakage Performance

- 3.3.1 Evaluation of the cable system shall be initially determined by conducting a partial Equivalent Leakage Density (ELD) survey. If the initial survey reveals that a significant leakage problem is evident, then a full ELD survey should be performed. In addition, where aeronautical channels are employed, the survey data may also be used to calculate the Cumulative Leakage Index (CLI), for cable systems which employ aeronautical channels.
- 3.3.2 It is suggested that the inspector should not inform the system operator as to which areas will be evaluated during the leakage patrol, in order to ensure a quick repair program is not carried out within the areas to be sampled.
- 3.3.3 The ELD and CLI evaluation will normally be discontinued when the maximum ELD limit or CLI figure has been exceeded or when it becomes quite evident that the applicable limits will not be exceeded.
- 3.3.4 The measurement procedures for conducting both an ELD and CLI survey are detailed in Broadcasting Procedure 23 - *Technical Standards and Procedures for Broadcasting Receiving Undertakings (Cable Television)* - and Broadcasting Circular 12 - *Procedures for Qualifications and Verification: Use of Aeronautical and Emergency Frequencies by Broadcasting Receiving Undertakings (Cable Systems)*.
- 3.3.5 The inspector shall also check for the existence of a cable leakage logbook and shall assess the system's overall leakage monitoring program. The inspector should note the method employed to detect cable leakage, the frequency used and the number of receiver-equipped vehicles and portable units.
- 3.3.6 Operators should also be reminded that they are required to have in place a safety procedure to handle any complaint of interference to aeronautical frequencies or any other radio services as a result of cable leakage.
- 3.3.7 The operator shall be advised of the results of the inspection, with a general indication of the location of the leaks, as soon as possible after its completion. However, should the inspection visit reveal major problems, the operator is to be notified immediately that remedial measures are required. If the problem is not resolved to the satisfaction of the regional or district office within an adequate time period, a report should be forwarded to Headquarters.

3.4 Spectrum Compliance Procedure

- 3.4.1 Special attention should be paid to channels which occupy aeronautical frequencies between 108-137 and 328.6-335.4 MHz, i.e. A (14), B (15), C (16), A-1 (99), A-2 (98), EE (41) and FF (42). If any signals are present in these channels, the inspector shall verify that authorization has been given and shall measure the frequency of these signals with an accuracy of within 1 kHz. In addition, the inspector shall check for compliance with the requirements applicable to the aeronautical and safety frequencies of 75 MHz, 121.5 MHz, 156.8 MHz, 243 MHz and 406-406.1 MHz.
- 3.4.2 The inspector shall also verify that the operator has the equipment required to measure and maintain the frequency and stability of the required offsets and that the operator maintains a logbook showing that monthly measurements of offsets are made, as applicable. A verification of the measuring equipment should be performed by having the operator demonstrate its operation.
- 3.4.3 For systems using aeronautical frequencies, the inspector should verify that the operator has not gone beyond his authorized service area without receiving authority.

3.5 Client Interface

- 3.5.1 The client interface portion of the inspection consists of a meeting between the system operator or its representatives, and a departmental representative (usually an inspector). Note that the departmental representative should have a thorough understanding of the cable system operations and related problems which may be discussed.
- 3.5.2 The departmental representative(s) should discuss and note any major plans or problems associated with the operation of the undertaking and at the same time, bring the operator up-to-date on the regulations, standards and procedures which may affect the operation.

Appendix A

Broadcasting Receiving Undertakings (Cable Television) Inspection, Qualification and Verification Report

Broadcasting Receiving Undertaking (Cable Television) Inspection, Qualification and Verification Report

Government of Canada
Industry Canada

Note:

- (1) For **inspection reports**, refer to the procedure in Broadcasting Circular 20.
- (2) For **qualification and verification reports**, refer to Broadcasting Circular 12.

SECTIONS A TO F ARE TO BE COMPLETED BY THE INSPECTOR

INSPECTION REPORT _____	File No: _____
VERIFICATION REPORT _____	Certificate No: _____
QUALIFICATION REPORT _____	Expiry Date: _____

A - GENERAL			
Licensee		Tel. Number: () _____ Fax Number: () _____	
Address		Postal Code: _____	
Name of Chief Technician or Engineer		Tel. Number: () _____ Fax Number: () _____	
Number of Connected Subscribers	Number of Channels Used (Total)	Is this a Master Antenna Television system (MATV)? ____ YES ____ NO	Localities served by the system:
Number of Potential Subscribers	List Channels Overlapping Aeronautical Bands		
Is this the first qualification report for this system? ____ YES ____ NO			
If not, date of last report _____			
B - SITE EVALUATION AND COMMENTARIES ON SAFETY ASPECTS			
Comment on any changes to the head-site and on any safety-related aspects noted during the inspection. Outline significant changes from previous reports, where applicable.			

C - EVALUATION OF LEAKAGE MONITORING AND RESPONSE TO INTERFERENCE PROBLEMS PROGRAMS	
(a)	Technique employed (cuckoo, etc.)
(b)	Frequency used _____ MHz
(c)	Number of vehicles equipped with receivers _____
(d)	Is the equipment shared with another system? Yes ____ No ____ If so, which system(s)? _____
(e)	Does the operator have the equipment required to measure and maintain the accuracy of the required offsets? Explain:
(f)	Is there a leakage logbook? Yes ____ No ____ Comments:
(g)	Is there an offset logbook? Yes ____ No ____ Comments:
(h)	Give a brief description of the system's leakage monitoring program. This should include details of the reporting procedure, the average verification time, the types of equipment used, how often patrols are performed, how long it takes for the complete system to be patrolled, the availability of records and any other pertinent information. However, evaluation of a vehicle may be omitted from verification reports if the inspector is generally satisfied with the monitoring program. Include all pertinent information with this report.
(i)	Give a brief description of the system's maintenance and interference problems response program. Describe the safety procedure in the event of interference with aeronautical radionavigation systems. Include all pertinent documentation.

D - EVALUATION OF LEAKAGE PERFORMANCE

Temperature _____ °C Weather Conditions _____ Date _____

Test Frequency _____ MHz Distance Patrolled _____ km

Total Length of Cable Plant _____ km Trunk _____ % Distribution _____ %

Note the level, indicate plant configuration (rear or front lot) and note approximate location of leaks.

Oedometer Start: _____ km Time: Start: _____

Finish: _____ km Finish: _____

No.	Level	Front Lot Plant	Rear Lot Plant	Patrolled Zone	Address	Comments

Use additional sheets as required.

E - VERIFICATION OF OPERATING CONDITIONS				
Channels (MHz)	Offsets		Protected Frequencies (MHz)	Are operating conditions being met? Explain if necessary.
	Required	Measured		
A			74.8 - 75.2	
B			121.5	
C			156.8	
EE			243	
FF			406 - 406.1	

F - SIGNATURE BLOCK

Inspector(s) Signature: _____ Telephone: (____) _____
 Date: _____ Fax: (____) _____

- SECTIONS G TO I ARE TO BE COMPLETED BY REGIONAL STAFF -

G - LEAKAGE MONITORING PROGRAM ASSESSMENT

Using the inspector's description and any other applicable information, provide a brief assessment of the system's leakage monitoring program and its effectiveness. If applicable, discuss significant changes from previous report(s).

H - RECOMMENDATION

In your opinion, should this system be authorized to use or continue to use aeronautical frequencies?
 YES ____ NO ____

I - SIGNATURE BLOCK

Regional Staff Signature: _____ Telephone: (____) _____
 Date: _____ Fax: (____) _____