



WELLINGTON NEW ZEALAND

PURSUANT TO Section 30 of the Civil Aviation Act 1990

I, WILLIAM ROBSON STOREY, Minister of Transport,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

this *24th* day of

August

1992

by WILLIAM ROBSON STOREY

Minister of Transport

A handwritten signature in black ink, appearing to read 'W. Robson Storey', written over the printed name and date.

Civil Aviation Rules Part 171

**Aeronautical Telecommunication Service Organisations —
Certification**

Docket Nr. 1020

**Civil Aviation Rules
Part 171**

**AERONAUTICAL TELECOMMUNICATION
SERVICE ORGANISATIONS —
CERTIFICATION**

RULE OBJECTIVE AND EXTENT OF CONSULTATION

The objective of Part 171 is to define a regulatory safety boundary for persons or organisations wishing to provide aeronautical telecommunication services in support of the New Zealand civil aviation air navigation system, or in support of individual air navigation requirements. The boundary prescribes the minimum organisational requirements for these persons and organisations and prescribes the minimum requirements for the operation of aeronautical telecommunication facilities.

In May 1990 the Air Transport Division of the Ministry of Transport published a notice of intention to carry out a complete review of the aviation regulatory system. This notice, in Civil Aviation Information Circular Air 3, listed the areas in which rules would be made and invited interested parties to register their wish to be part of the consultative process. This register was identified as the Regulatory Review Consultative Group. Some 26 organisations and individuals registered their wish to be consulted in the development of rules for aeronautical telecommunication organisations.

A draft document was developed by the rules rewrite team in consultation with the members of the consultative group. An informal draft was published and distributed in June 1991.

A period of informal consultation followed. This

included some written comments, telephone discussions and a meeting with the Airways Corporation of New Zealand who is the main provider of aeronautical telecommunication services. This informal consultative process culminated in the issue of Notice of Proposed Rule Making 91-6 under Docket number 1020 NR on 10 July 1991. The publication of this notice was advertised in the daily newspapers in the five main provincial centres on 11 July 1991.

The notice was mailed to all members of the Regulatory Review Consultative Group and to other parties, including overseas Aviation Authorities and organisations, who were considered likely to have an interest in the proposal.

A period of 82 days was allowed for comment on the proposed rules. Five written submissions were received in response to this notice. Further meetings and discussions were held with some members of the consultative group to address various aspects and in particular the radio apparatus licensing requirements. These submissions and discussions were considered and where appropriate the proposed rules amended to take account of the concerns raised. The Aviation Approvals and the Aviation Safety Monitoring Branches of the Air Transport Division also provided comment on the structure of the proposed Part 171.

The rules as amended were then referred to and signed by the Minister of Transport.

List of Rules

<p>Subpart A — General 1</p> <p>171.1 Applicability. 1</p> <p>171.3 Definitions 1</p> <p>171.5 Requirement for Certificate 1</p> <p>171.7 Application and Issue 2</p> <p>171.9 Scope of Certificate 2</p> <p>171.11 Display of Certificate. 2</p> <p>171.13 Duration of Certificate 2</p> <p>171.15 Renewal of Certificate 2</p> <p>171.17 Safety Inspections and Audits. 2</p> <p>171.19 Exemptions 3</p> <p>Subpart B — Certification Requirements 3</p> <p>171.51 Personnel Requirements 3</p> <p>171.53 Facility Requirements 3</p> <p>171.55 Airways Security Programme 4</p> <p>171.57 Documentation 5</p> <p>171.59 Periodic Inspection and Testing 5</p> <p>171.61 Certification of Facility Performance 5</p> <p>171.63 Inspection Measuring and Test Equipment 6</p>	<p>171.65 Notification of Facility Information 6</p> <p>171.67 Facility Check After Accident or Incident 6</p> <p>171.69 Facility Malfunctions 7</p> <p>171.71 Records. 7</p> <p>171.73 Internal Quality Assurance 8</p> <p>171.75 Organisation Exposition 8</p> <p>Subpart C — Operating Requirements. 9</p> <p>171.101 Continued Compliance 9</p> <p>171.103 Identification Codes and Call Signs 9</p> <p>171.105 Communication Procedures 9</p> <p>171.107 Operating and Maintenance Instructions 9</p> <p>171.109 Deviations 9</p> <p>171.111 Privileges of Certificate Holder 9</p> <p>171.113 Limitations on Certificate Holder 10</p> <p>171.115 Changes to Certificate Holder's Organisation 10</p>
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Subpart A — General

171.1 Applicability

This Part prescribes rules governing —

- (1) the certification and operation of organisations providing aeronautical telecommunication services in support of IFR flight or an air traffic service; and
- (2) the operating and technical standards for facilities operated by those organisations.

171.3 Definitions

In this Part —

“Aeronautical Telecommunication Service” means —

- (1) a telecommunication service provided to support the following services as defined in Annex 10, Volume II, Chapter 1:
 - (i) aeronautical broadcasting service;
 - (ii) aeronautical fixed service (AFS);
 - (iii) aeronautical mobile service;
 - (iv) aeronautical radio navigation service; and
- (2) any other telecommunication service provided specifically to support the New Zealand air navigation system:

“Annex 10” means Annex 10 (up to and including amendment No. 68) to the Convention:

“Critical Performance Parameter” means a performance parameter that has a direct effect on the operational integrity of a facility:

“Facility” means —

- (1) the following types of communication systems for the aeronautical broadcast service (as that service is defined in Annex 10, Volume II, Chapter 1):
 - meteorological information for aircraft in flight (VOLMET);
 - automatic terminal information service (ATIS); and

- (2) the following types of communication systems for the aeronautical fixed service (as that service is defined in Annex 10, Volume II, Chapter 1):
 - ATS direct speech circuits;
 - aeronautical fixed telecommunication network (AFTN);
 - ground-ground data interchange; and

- (3) the ground elements of the following types of communication systems for the aeronautical mobile service (as that service is defined in Annex 10, Volume II, Chapter 1):

- HF air-ground communication;
- VHF air-ground communication;
- UHF air-ground communication;
- selective calling system (SELCAL);
- air-ground data interchange; and

- (4) the following types of radio navigation aids for the aeronautical radio navigation service (as that service is defined in Annex 10, Volume II, Chapter 1):

- Instrument Landing System (ILS);
- Microwave Landing System (MLS);

- VHF Omnidirectional radio range (VOR);
- Distance Measuring Equipment (DME);
- Non-directional Radio Beacon (NDB);

- Precision Approach Radar (PAR);
- Secondary Surveillance Radar (SSR);
- Primary Surveillance Radar (PSR); and

- (5) the following types of telecommunication systems that support an air traffic service:

- flight data processing system (FDPS);
- radar data processing system (RDPS);
- radar and flight data processing system (RFDPS).

171.5 Requirement for Certificate

- (a) Except as provided in paragraph (c), no person shall provide an aeronautical telecommunication service or operate a facility except under the authority of, and in accordance with the provisions of, a telecommunication service certificate issued under this Part.

- (b) The Director may grant a certificate authorising aeronautical telecommunication services varying from the operation of a single private facility to a network of facilities required for the New Zealand air navigation system.
- (c) A person may operate a facility on an aeronautical radio frequency without holding a telecommunication service certificate if —
 - (1) the facility —
 - (i) is a radiocommunication facility that does not support an air traffic service; or
 - (ii) is a radio navigation aid that does not support IFR flight or an air traffic service; and
 - (2) the facility does not interfere with any other aeronautical telecommunication service or facility; and
 - (3) where applicable —
 - (i) the Secretary of Commerce has granted a written radio apparatus licence for the facility; and
 - (ii) the Director has allocated an identification code or call sign for the facility.

171.7 Application and Issue

- (a) An application for the grant of a telecommunication service certificate shall be made on form CAA 24171/01 and submitted to the Director with the exposition required by 171.75.
- (b) An applicant is entitled to a telecommunication service certificate if —
 - (1) the applicant, and the applicant's senior person or persons required by 171.51(a)(1) and (2) are fit and proper persons; and
 - (2) the applicant pays any applicable fees or charges prescribed by regulations made under the Act; and
 - (3) the applicant provides an exposition that is acceptable to the Director and the applicant meets all other requirements of Subpart B; and
 - (4) the granting of the certificate is not contrary to the interests of aviation safety.

171.9 Scope of Certificate

The telecommunication service certificate specifies the types of facilities that the certificate holder is authorised to operate.

171.11 Display of Certificate

The holder of a telecommunication service certificate shall display the certificate in a prominent place, generally accessible to the public at the holder's principal place of operation and shall produce the certificate to the Director upon request.

171.13 Duration of Certificate

- (a) A telecommunication service certificate may be granted or renewed for a period of up to 5 years.
- (b) A telecommunication service certificate remains in force until it expires or is suspended or revoked.
- (c) The holder of a telecommunication service certificate that expires or is revoked shall forthwith surrender the certificate to the Director.
- (d) The holder of a telecommunication service certificate that is suspended, shall forthwith produce the certificate to the Director for appropriate endorsement.

171.15 Renewal of Certificate

- (a) An application for the renewal of a telecommunication service certificate shall be made on form CAA 24171/01.
- (b) The application shall be submitted to the Director before the application renewal date specified on the certificate or, if no such date is specified, not less than 30 days before the certificate expires.

171.17 Safety Inspections and Audits

Each holder of a telecommunication service certificate is required under the Act to permit persons duly authorised by the Director to carry out inspections and audits of the holder's facilities, documents and records in accordance with the Act, to determine compliance with this Part.

171.19 Exemptions

The Director may exempt the holder of a telecommunication service certificate from any requirement in this Part in accordance with the Act.

Subpart B — Certification Requirements

171.51 Personnel Requirements

- (a) Each applicant for the grant of a telecommunication service certificate shall engage, employ or contract:
- (1) A senior person identified as the Chief Executive who is acceptable to the Director, and who has the authority within the applicant's organisation to ensure that all activities undertaken by the organisation can be financed and carried out to meet applicable operational requirements, and in accordance with the requirements prescribed by this Part;
 - (2) A senior person or group of senior persons who are acceptable to the Director, and who are responsible for ensuring that the applicant's organisation complies with the requirements of this Part. Such nominated person or persons shall be ultimately responsible to the Chief Executive;
 - (3) Sufficient personnel to inspect, supervise, and maintain the facilities listed in the applicant's exposition.
- (b) The applicant shall —
- (1) establish a procedure to assess the competence of those personnel who are authorised by the applicant to place any of the facilities listed in the applicant's exposition into operational service; and
 - (2) establish a procedure to maintain the competence of those authorised personnel; and
 - (3) provide those authorised personnel with written evidence of the scope of their authorisation.

171.53 Facility Requirements

- (a) Each applicant for the grant of a telecommunication service certificate shall establish procedures to ensure that —
- (1) each facility listed in their exposition —
 - (i) is designed, installed and commissioned to meet the applicable operational specification; and
 - (ii) conforms with the applicable system characteristics and specification standards prescribed in Volume I of Annex 10; and
 - (2) each non-directional radio beacon (NDB) listed in their exposition conforms with the following requirements (which are additional to the specifications prescribed in section 3.4 of Annex 10, Volume I, Part I):
 - (i) the radiated signal shall be an uninterrupted carrier identified by the on/off keying of either a 1020 Hz plus or minus 50 Hz amplitude modulating tone, or a second carrier separated 1020 Hz plus or minus 50 Hz from the continuous carrier;
 - (ii) the monitoring functions recommended in paragraphs 3.4.8.2 and 3.4.8.4 of Annex 10, Volume I, Part I shall be read as mandatory specification requirements for each NDB facility;
 - (iii) the monitoring system for each NDB facility shall transmit a warning to a control point and switch off the NDB upon detection of any of the conditions detailed in paragraphs 3.4.8.1 and 3.4.8.2 of Annex 10, Volume I, Part I; and
 - (3) each UHF distance measuring equipment (DME) listed in their exposition conforms with the following requirements (which are additional to the specifications prescribed in section 3.5 of Annex 10, Volume I, Part I):

- (i) the beacon code identity signal prescribed in paragraph 3.5.3.6.3(a) of Annex 10, Volume I, Part I shall be transmitted at least once but not more than twice every 40 seconds with the code groups equally spaced;
 - (ii) the monitor function recommended in paragraph 3.5.4.7.2.3 of Annex 10, Volume I, Part I, shall be read as a mandatory specification requirement for each DME facility; and
- (4) each radio navigation aid listed in their exposition is provided with a monitoring system that will remove the facility from operational service and transmit a warning to an appropriate control point upon detection of any of the following conditions:
- (i) navigation information outside the prescribed tolerance for the facility;
 - (ii) failure of the identification signal;
 - (iii) failure of the monitoring system; and
- (5) information on the operational status of any of the radio navigation aids listed in the applicant's exposition that are essential for the approach, landing and take-off at an aerodrome, is provided without delay —
- (i) to the aerodrome control tower if that aerodrome has one; and
 - (ii) to the air traffic control unit providing an approach control service for that aerodrome if such a service is being provided; and
- (6) each facility listed in their exposition is installed with suitable power supplies and means to ensure continuity of operation appropriate to the needs of the operational service being supported; and
- (7) each facility listed in their exposition is installed in accordance with the airways security programme required by

171.55 to minimise the risk of destruction, damage or interference with the operation of the facility; and

- (8) any critical site area of any facility listed in their exposition is —
- (i) clearly identified on the site drawings for the facility; and
 - (ii) physically protected by suitable signposts on the site; and
 - (iii) protected by written agreements with the site owner, aerodrome operator and air traffic control unit as appropriate, to ensure that site restrictions are not infringed by buildings, fences, vehicles, machinery or aircraft.
- (b) Where an applicant intends to operate a temporary facility for the purpose of carrying out site tests, the applicant shall establish a procedure for conducting those tests. The procedure shall ensure that there is no possible interference to any other operating facility and that appropriate information is forwarded to the Aeronautical Information Service (AIS) for the issue of a NOTAM or the publication of a Supplement to the Aeronautical Information Publication.

171.55 Airways Security Programme

Each applicant for the grant of a telecommunication service certificate is required under Part 112 (Airways Security Programmes) to establish an airways security programme for the facilities listed in their exposition.

[Until Part 112 comes into force, applicants for a telecommunication service certificate must establish an airways security programme that meets the requirements of subclauses (2) and (3) of regulation 10 of the Civil Aviation (Security) Regulations 1989, except that those requirements shall apply in respect of a facility as defined in this Part and not an air navigation facility as defined under those regulations]

171.57 Documentation

- (a) Each applicant for the grant of a telecommunication service certificate shall hold copies of relevant equipment manuals, relevant technical standards and practices (including Annex 10) and any other documentation (including technical instructions) that is necessary for the provision and operation of the facilities listed in their exposition.
- (b) The applicant shall establish a procedure to control all the documentation required by paragraph (a). The procedure shall ensure that —
- (1) all documentation is reviewed and authorised by appropriate personnel before issue; and
 - (2) current issues of all relevant documentation are available to staff at all locations where they need access to such documentation for the provision and operation of facilities; and
 - (3) all obsolete documentation is promptly removed from all points of issue or use; and
 - (4) changes to documentation are reviewed and approved by appropriate personnel; and
 - (5) the current version of each item of documentation can be identified to preclude the use of out of date editions.

171.59 Periodic Inspection and Testing

- (a) Each applicant for the grant of a telecommunication service certificate shall establish procedures for the periodic inspection and testing of the facilities listed in their exposition to verify that they meet the applicable operational requirements and performance specifications.
- (b) These procedures shall —
- (1) cover ground inspections and ground tests, and where necessary flight tests; and
 - (2) include the criteria for establishing or changing the period between the periodic tests for a facility. The criteria shall have regard to —

- (i) any applicable information published by the International Civil Aviation Organisation (ICAO) or any other aeronautical authority; and
 - (ii) any applicable reliability data for the facility; and
 - (iii) information on the proven reliable performance of the facility, the proven performance of other similar facilities, and the stability of the facility's operating environment; and
- (3) ensure that the grounds for establishing or changing the period between the periodic tests for a facility are documented.

(c) In addition, the applicant shall establish —

- (1) a programme of periodic ground inspections for each facility; and
- (2) a programme of periodic ground tests for each facility; and
- (3) a programme of periodic flight tests for each radio navigation aid unless the applicant can establish from the criteria in paragraph (b)(2) that periodic ground tests can replace the periodic flight tests for a facility without affecting the safety of air navigation.

(d) The programmes required by paragraph (c)(2) and (3) for the periodic ground and flight tests shall be based on the criteria in paragraph (b)(2) and shall specify the maximum period between the tests for each facility.

(e) The applicant shall notify the Director of any radio navigation aid that is not subjected to periodic flight tests.

171.61 Certification of Facility Performance

Each applicant for the grant of a telecommunication service certificate shall establish a procedure to ensure that no facility listed in their exposition is placed into operational service unless —

- (1) the person placing the facility into operational service is authorised and is assessed as competent under the procedures required by 171.51(b); and
- (2) the appropriate checks have been carried out to verify the performance of the facility; and
- (3) the facility record has been completed in accordance with the procedures required by 171.71.

171.63 Inspection Measuring and Test Equipment

- (a) Each applicant for the grant of a telecommunication service certificate shall ensure that appropriate inspection, measuring and test equipment is available for their personnel to maintain the safe operation of each facility listed in their exposition.
- (b) The applicant shall establish a procedure to control, calibrate and maintain all of the applicant's inspection, measuring and test equipment to ensure that each item of equipment has the precision and accuracy that is necessary for the measurements and tests to be performed.
- (c) The procedure shall ensure that each item of test equipment required for the measurement of critical performance parameters is —
 - (1) calibrated before use or at prescribed intervals against certified equipment having a known valid relationship to nationally recognised standards. Where no such standards exist, the basis used for the calibration shall be documented. Records of such calibrations and the standards used shall be maintained in accordance with the procedures required by 171.71; and
 - (2) identified with a suitable indicator to show its calibration status; and
 - (3) controlled to —
 - (i) safeguard against adjustments that would invalidate the calibration setting; and
 - (ii) ensure that the handling, preservation and storage is such that the accuracy and fitness for use is maintained.

- (d) Where hardware and software systems are used as an alternative form of facility performance testing, the functions of the systems shall be checked before being released for use in order to establish that they are capable of verifying the performance of the facility. These functions shall be checked at prescribed intervals. Records of these checks shall be maintained as evidence and verification of adequate performance of the test system.

171.65 Notification of Facility Information

- (a) Each applicant for the grant of a telecommunication service certificate shall establish a procedure to notify the users of the facilities listed in their exposition of the operational information for each facility and of any changes in the operational status of those facilities.
- (b) The procedure shall ensure that —
 - (1) the operational information on any facility that supports an air traffic service or the New Zealand air navigation system is forwarded to the Aeronautical Information Service (AIS) for publication in the New Zealand Aeronautical Information Publication; and
 - (2) the users of a facility are notified without delay of any change in the operational status of a facility if the change may affect the safety of air navigation. For those facilities published in the New Zealand Aeronautical Information Publication the information concerning any change to their operational status shall be forwarded to the Aeronautical Information Service for the issue of a NOTAM.

171.67 Facility Check After Accident or Incident

- (a) Each applicant for the grant of a telecommunication service certificate shall establish a procedure to check and record the operating condition of any facility listed in their exposition that may have been used by an aircraft or an air traffic service involved in an accident or incident.
- (b) The procedure shall ensure that —

- (1) the checks are carried out as soon as practicable after notification to the applicant's organisation of such an accident or incident; and
- (2) the record of the facility's operating condition as checked and the past recorded history are kept in a secure place for possible use by any subsequent investigation.

171.69 Facility Malfunctions

- (a) Each applicant for the grant of a telecommunication service certificate shall establish a procedure to record, investigate, and rectify any detected or reported malfunction of any facility listed in their exposition.
- (b) The procedure shall ensure that a report is forwarded to the Director whenever a facility malfunction investigation reveals that —
 - (1) the facility has been operating outside the allowable tolerances; or
 - (2) the facility had the potential to operate outside the allowable tolerances; or
 - (3) there appears to be a recurring cause for the facility malfunction reports.
- (c) The report required in paragraph (b) shall be forwarded within 10 days of the malfunction being detected or reported and shall include full details of the malfunction, the findings of the investigation and the corrective action taken to prevent a recurrence.

171.71 Records

- (a) Each applicant for the grant of a telecommunication service certificate shall establish procedures to identify, collect, index, store, maintain and dispose of the records that are necessary for the safe provision and operation of the facilities listed in their exposition.
- (b) The procedures shall ensure that —
 - (1) a record is kept for each facility in order to —

- (i) document the performance of the facility; and
 - (ii) provide a history of its maintenance and the periodic inspections and tests. The history shall be traceable to the person or persons responsible for each of the recorded activities; and
- (2) there is a record of the documentation required by 171.59(b)(3) concerning the establishment of, or change in, the periodic tests for a facility; and
- (3) there is a record for each item of test equipment required for the measurement of critical performance parameters. The record shall provide a traceable history of the location, maintenance, and the calibration checks for such test equipment; and
- (4) there is a record of each facility malfunction recorded and investigated under the procedures required by 171.69(a). The record shall detail the nature of the malfunction, the findings of the investigation, the follow up corrective actions, or where applicable include a copy of the report forwarded to the Director; and
- (5) there is a record of each internal quality assurance review of the applicant's organisation carried out under the procedures required by 171.73(a); and
- (6) there is a record for each person who is authorised by the applicant to place facilities into operational service. The record shall include details of their experience, qualifications, training, competence assessments and current authorisations; and
- (7) all records are legible and of a permanent nature; and
- (8) all facility records are retained for a period of at least 3 years unless a longer period is required to establish a performance history for a facility.

171.73 Internal Quality Assurance

- (a) Each applicant for the grant of a telecommunication service certificate shall establish internal quality assurance procedures to ensure compliance with, and the adequacy of, the procedures and programmes required by this Part.
- (b) The senior person who has the responsibility for internal quality assurance shall have direct access to the Chief Executive on matters affecting the performance of facilities.

171.75 Organisation Exposition

- (a) An applicant for the grant of a telecommunication service certificate shall provide the Director with an exposition which shall contain —
 - (1) a statement signed by the Chief Executive on behalf of the applicant's organisation confirming that the exposition and any included manuals —
 - (i) define the organisation and demonstrate its means and methods for ensuring ongoing compliance with this Part; and
 - (ii) will be complied with at all times; and
 - (2) the titles and names of the senior person or persons required by 171.51(a)(1) and (2); and
 - (3) the duties and responsibilities of the senior person or persons specified in paragraph (a)(2) including matters for which they have responsibility to deal directly with the Director or the Authority on behalf of the organisation; and
 - (4) an organisation chart showing lines of responsibility of the senior persons specified in paragraph (a)(2) and extending to each location listed under paragraph (a)(7); and
 - (5) a summary of the applicant's staffing structure at each location listed under paragraph (a)(7); and

- (6) a list of the types of facilities to be covered by the certificate; and
- (7) a summary of the scope of activities at each location where personnel are based for the purpose of providing or maintaining the facilities listed under paragraph (a)(8); and
- (8) a list providing the operational details of each facility associated with each location listed under paragraph (a)(7); and
- (9) details of the applicant's airways security programme required by 171.55; and
- (10) details of the applicant's procedures required by —
 - (i) 171.51(b)(1) and (2) regarding the competence of personnel; and
 - (ii) 171.53(a) regarding the design, installation and commissioning of facilities; and
 - (iii) 171.53(b) regarding operation of temporary facilities for site tests; and
 - (iv) 171.57 regarding the control of documentation; and
 - (v) 171.59 regarding periodic inspections and tests of facilities; and
 - (vi) 171.61 regarding the certification of facility performance; and
 - (vii) 171.63 regarding the control, calibration and maintenance of inspection, measuring and test equipment; and
 - (viii) 171.65 regarding the notification of facility information; and
 - (ix) 171.67 regarding facility checks after notification of an accident or incident; and
 - (x) 171.69 regarding facility malfunctions; and
 - (xi) 171.71 regarding the identification, collection, indexing, storage, maintenance and disposal of records; and
 - (xii) 171.73 regarding internal quality assurance of the organisation; and

(11) procedures to control, amend and distribute the exposition.

(b) The applicant's exposition must be acceptable to the Director.

Subpart C — Operating Requirements

171.101 Continued Compliance

Each holder of a telecommunication service certificate shall —

- (1) hold at least one complete and current copy of their exposition at each major location specified in their exposition; and
- (2) comply with all procedures detailed in their exposition; and
- (3) make each applicable part of their exposition available to personnel who require those parts to carry out their duties; and
- (4) continue to meet the standards and comply with the requirements of Subpart B prescribed for certification under this Part.

171.103 Identification Codes and Call Signs

Each holder of a telecommunication service certificate requiring an identification code for a radio navigation facility or a call sign for a communications facility shall apply to the Director on form CAA 24IDA with the appropriate details.

171.105 Communication Procedures

Each holder of a telecommunication service certificate shall ensure that their procedures for operating the facilities listed in their exposition are in accordance with the applicable communication procedures prescribed in Annex 10, Volume II.

171.107 Operating and Maintenance Instructions

Each holder of a telecommunication service certificate shall provide, for the use and guidance of their personnel, operating and maintenance instructions for each facility listed in their exposition. The instructions shall be controlled by the documentation control procedures required by 171.57 and shall set out the requirements for operating and maintaining each facility. The instructions shall include a list of —

- (1) the critical performance parameters; and
- (2) the associated minimum performance levels for those parameters; and
- (3) the test equipment required for the measurement of those parameters; and
- (4) the mandatory check procedures for placing the facility into operational service; and
- (5) the mandatory inspection and test procedures for the operation and maintenance of the facility.

171.109 Deviations

- (a) Subject to compliance with 171.113(a), the holder of a telecommunication service certificate may deviate from any requirement of this Part to meet an emergency situation if there is a need to take immediate action for the protection of life or property involving carriage by air.
- (b) A certificate holder who deviates from a requirement of this Part under paragraph (a) shall provide a written report to the Director as soon as practicable, but in any event not later than 14 days after the emergency. The report shall cover the nature, extent and duration of the deviation.

171.111 Privileges of Certificate Holder

Subject to 171.113, the holder of a telecommunication service certificate may operate any of the facility types listed on the holder's certificate provided that —

- (1) each facility operated is listed in the holder's exposition; or
- (2) if the facility is not listed in the exposition, its operation is for site test purposes controlled by the procedures required by 171.53(b).

171.113 Limitations on Certificate Holder

- (a) The holder of a telecommunication service certificate shall not operate a facility (except for site test purposes controlled by the procedures required by 171.53(b)) if there is any cause to suspect the integrity of the information being provided by the facility. A cause to suspect the integrity of the information being provided by a facility includes the infringement of any critical site area of the facility until performance checks on the facility verify that the infringement does not and will not affect the performance of the facility.
- (b) A certificate holder shall not operate a radio transmitting facility on an aeronautical radio frequency except pursuant to a written radio apparatus licence granted by the Secretary of Commerce for the facility.
- (c) Except where a deviation under 171.109 is required or a site test is carried out under the procedures required by 171.53(b), a certificate holder shall not operate a facility unless —
 - (1) the facility is listed in the holder's exposition; and
 - (2) the performance of the facility meets the applicable published information; and
 - (3) the performance of the facility meets the applicable facility requirements in 171.53(a); and
 - (4) any integrity monitoring system for the facility is fully functional; and

- (5) all the periodic tests for the facility are completed in accordance with the programmes established under 171.59(c)(2) and (3); and
- (6) the facility is included in the holder's airways security programme if the destruction, damage, or interference of the facility is likely to endanger the safety of an aircraft in flight; and
- (7) the provisions of the holder's airways security programme for the facility are being complied with.

171.115 Changes to Certificate Holder's Organisation

- (a) Each holder of a telecommunication service certificate shall ensure that their exposition is amended so as to remain a current description of the holder's organisation and facilities.
- (b) The certificate holder shall ensure that any amendments made to the holder's exposition meet the applicable requirements of this Part and comply with the amendment procedures contained in the holder's exposition.
- (c) The certificate holder shall provide the Director with a copy of each amendment to the holder's exposition as soon as practicable after its incorporation into the exposition.
- (d) Where a certificate holder proposes to make a change to any of the following, prior notification to and acceptance by the Director is required:
 - (1) The Chief Executive;
 - (2) The listed senior persons;
 - (3) The airways security programme;
 - (4) The types of facility the holder operates.
- (e) The Director may prescribe conditions under which a certificate holder may operate during or following any of the changes specified in paragraph (d).

- (f) Where any of the changes referred to in this rule requires an amendment to the certificate, the certificate holder shall forward the certificate to the Director as soon as practicable.
- (g) The certificate holder shall make such amendments to the holder's exposition as the Director may consider necessary in the interests of aviation safety.

CONSULTATION DETAILS AND TRANSITIONAL ARRANGEMENTS

(This statement does not form part of the rules contained in Part 171. It provides details of consultation undertaken in making the rules and also explains transitional arrangements.)

Background to the Rules

In April 1988 the Swedavia - McGregor Report on Civil Aviation Regulation in New Zealand was completed. This report concluded that aviation safety should be a joint responsibility of both the Authority and the participants in the civil aviation system. There was widespread agreement that a complete overhaul of the civil aviation regulatory system was necessary. As a result, the Government enacted the Civil Aviation Act 1990 to implement the first stage of the report's recommendations. To implement the remaining recommendations of the report the Air Transport Division of the Ministry of Transport commenced a complete review and rewrite of all existing civil aviation legislation.

Considerable research was carried out to determine the format for the new legislation. The Authority decided that the most suitable legislative framework should incorporate the advantages from the system being developed by the European Joint Aviation Authorities (JAA) and from the existing United States of America Federal Aviation Administration (FAA) system. The European Joint Aviation Requirements (JAR) are being structured in a manner similar to the Federal Aviation Regulations (FAR) of the FAA and aim to achieve maximum harmonisation while allowing for national variations.

New Zealand's revised requirements will be published in several Parts as Civil Aviation Rules (CAR). Each Part will set out a series of individual rules that relate to a particular aviation activity.

Accompanying each Part of the CAR will be at least one associated Advisory Circular (AC). These will expand, in an informative way, specific requirements of the CAR Part and show an acceptable means of compliance. For example, an AC will contain the minimum acceptable practice or practices that will be necessary to meet the rules.

The CAR numbering system is based on the FAR Part numbering system. As a general principle the subject matter of a CAR Part will harmonise with the FAR, although the title may differ to suit New Zealand terminology. Where a proposed CAR Part does not readily equate with a FAR number code, a number has been selected that does not conflict with any existing FAR Part.

The FAR has been used as the start point for the development of many of the CAR, but there are likely to be significant differences in the content of each Part of the Rules. The FAR Part 171 is written for the Non-Federal Navigation Facilities only and the JAR system does not presently include the equivalent of a Part 171.

The objective of the new rules system is to strike a balance of responsibility for safety between the state authority and those who provide services and exercise privileges in the civil aviation system. This balance must enable the state authority to maintain continuing regulatory control and supervision while providing the maximum flexibility for participants to develop their own means of compliance.

Section 7 of the Civil Aviation Act 1990 (the Act) allows the CAR to require participants to hold an aviation document to carry out particular civil aviation activities. Section 12 of the Act requires the holders of such documents to carry out their activities safely and in accordance with the relevant prescribed safety standards and practices.

Notice of Proposed Rule Making

The Authority issued Notice of Proposed Rule Making 91-6 under Docket Number 1020 NR on 10 July 1991 to provide public notice of and the opportunity for comment on the proposed new rules. This Notice proposed the introduction of Civil Aviation Rules Part 171 to provide a regulatory boundary for the certification of organisations wishing to provide aeronautical telecommunication services to support either the New Zealand civil aviation air navigation system or individual air navigation requirements. The notice also included provisions for persons wishing to operate private facilities on an aeronautical radio frequency without an aviation document provided the facility does not support air navigation requirements.

Supplementary information

All comments made on the Notice of Proposed Rule Making (NPRM) are available in the rules docket for examination by interested persons. A report summarising each substantive contact with the Air Transport Division contact person concerning this rulemaking has been filed in the docket.

Availability of the Document

Any person may view a copy of these rules at Aviation House, 1 Market Grove, Lower Hutt. Copies may be obtained from the Civil Aviation Authority of New Zealand, PO Box 31-441, Lower Hutt 6315.

Summary of comments to Docket Number 1020 NPRM

Five written submissions were received. Twenty two issues were raised by the commenters and some of these were raised by more than one commenter. Six general comments were also raised by the commenters.

1. General comments on the NPRM

Five issues were raised relating to the rule making process and the introductory sections of the NPRM. These are discussed as follows:

1.1 The New Zealand Air Line Pilot's Association (ALPA) expressed concern about the overall rule making process. They are concerned that the NPRM was published before CAR Part 11 which prescribes the general rule making procedures. They are concerned that the rules only provide the bare bones mandatory requirements with the advisory circulars written in permissive rather than mandatory language. They considered that NPRM 91-6 for Part 171 was poorly organised, badly drafted and in need of significant alteration to both its form and content. They thought New Zealand lacked the technical expertise to construct rules on any basis other than that already tried and tested by the major aviation states. They further considered that there is no justification for New Zealand to pursue a separate developmental path to that followed by the rest of the aviation world.

Part 171 Certification - Aeronautical Telecommunication Service Organisations

The Authority found it difficult to understand some of these concerns as they appear to be inconsistent with ALPA's other positive comments on the rule Part. It was discovered later that these comments are almost an exact reprint of their comments on an earlier NPRM relating to another rule Part that is unrelated to Part 171.

The NPRM for Part 171 followed the general procedures prescribed in Part 11 that was published as NPRM 92-2 in February 1992 and is expected to be signed into law by July 1992.

New Zealand is not pursuing a separate development for its rules system. As stated in the background statement above the new rules system is based upon the American FAR and European JAR rules systems for aviation.

The concept of the new rules is that they will prescribe the minimum requirements to ensure the safety of air navigation. The advisory circulars support the rules and provide an explanation of an acceptable means of meeting a rule requirement. The advisory circulars cannot be written in mandatory language because they are not an enforceable document. They provide guidance material for a person or organisation seeking compliance with the rules.

The organisation and structure of the final rule Part 171 has been changed in various places but the intent and overall content is essentially the same as that published in the NPRM. This change was necessary to make the intent of the rule Part clearer and to structure it on the format of the New Zealand Standard NZS 9001 (ISO 9001). NZS 9001 is the quality system model for *Quality Assurance in Design/development, Production, Installation and Servicing* organisations.

Subpart D of the NPRM has been deleted and the requirements and standards for facilities have been rewritten into the certification requirements of Subpart B. Some of the requirements that were in Subpart C of the NPRM have also been moved into the certification requirements of Subpart B. Some of the detail that was included in the advisory circular has also been moved into the rule requirements. The details of these changes are covered in the following comments that relate to the various paragraphs of the rules.

References to rule paragraphs in this commentary refer to the final rule numbering with the relevant NPRM paragraph number in brackets.

1.2 ALPA considered that the regulatory boundary in the objective statement of the NPRM should have stated the requirement to adhere to the standards and recommended practices of Annex 10 and to adhere to the guidance material contained in the International Civil Aviation Organisation (ICAO) Document 8071 - the Manual on Testing of Radio Navigation Aids.

The Authority does not accept this view. Section 33 of the Civil Aviation Act 1990 requires rules made under the Act to be consistent with the ICAO standards relating to aviation safety and security and to have regard to the recommended practices of ICAO to the extent adopted by New Zealand.

Part 171 incorporates the system characteristics and specification standards of Annex 10 into the rules. Facilities are required to comply with the relevant system characteristics and specification standards prescribed in Annex 10. Part 171, in paragraphs 171.53(a)(2) and (3), also specifies some of the recommendations of Annex 10 as standard requirements for certain facilities where the Authority considers it necessary to ensure the safety of air

Part 171 Certification - Aeronautical Telecommunication Service Organisations

navigation. The advisory circular for Part 171 recommends that organisations should comply with the recommendations of Annex 10 and where they cannot comply they should advise the Authority so that a difference, if it is significant to air navigation, can be filed with ICAO. The advisory circular also provides a reference to ICAO Document 8071 for the periodic testing of facilities.

1.3 The Airways Corporation of New Zealand Ltd (ACNZ) commented that the background statement in the NPRM could infer that there are no regulations that relate to the provision of aeronautical telecommunication services in New Zealand. They point out that the New Zealand Radio Communications Act 1989, the New Zealand Radio Regulations 1987 and the International Telecommunication Union Radio Regulations 1990 also apply to the use of aeronautical frequencies, the operation of equipment and the licensing of radio equipment and radio operators.

The statement in the NPRM related to the absence of any civil aviation regulations for aeronautical telecommunication services and was not intended to imply the absence of any other regulations.

1.4 Both ACNZ and ALPA commented on the cost and benefit statement. ACNZ commented that full compliance with the monitoring requirements for all facilities would impose considerable costs in some cases. Such costs would have to be passed onto the industry.

The Authority appreciates that some existing facilities do not comply with all the requirements, particularly the monitoring requirements, prescribed in Part 171. It is also appreciated that it may not be economically sensible for some new facilities to comply fully with all the rule requirements. In these cases the Authority would expect to be able to grant an exemption under section 37 of the Act.

ALPA considered that the costs and benefits statement did not properly address the objectives, the alternatives and the costs and benefits for the rule Part. They cited the FAA rule making procedure as a good example to follow and consider that a meaningful cost benefit analysis of proposed regulatory action is likely to be of advantage to all aviation industry participants.

The Authority's rule making procedures are based on the FAA system and adapted to suit the New Zealand environment. As part of these rule making procedures the Authority is obliged to examine the potential benefits and costs of each proposed rule making action to ensure that the public and the aviation industry are not burdened with rules whose costs outweigh the benefits.

In Part 171 the Authority considers that the cost and benefit statement does adequately address the objectives and alternatives for the rule making action.

The requirements set out in Part 171 are modelled on the new rules concepts for approved organisations and on the ICAO standards for aeronautical telecommunications. The costs and benefits analysis of Part 171 was not made from a zero base assessment. It would be unreasonable to expect such a zero base assessment as Part 171 is required to regulate an existing activity. There is no alternative to making these rules as the aeronautical telecommunication services that had previously been provided by the Civil Aviation Division of the Ministry of Transport are now provided by an independent State Owned Enterprise. The safety benefit to New Zealand and to the aviation industry is that under Part 171 the operating agencies and ground elements of the air navigation system will be subjected to the same regulatory environment as the aircraft systems and their operating agencies.

Currently the Airways Corporation of New Zealand Ltd is the principal provider of the telecommunication services but there is also the potential for other organisations such as aerodrome operators to become service providers. The Airways Corporation already follows the basic principles of a quality management system and therefore the Authority considered that there would not be any significant additional costs for the Corporation to comply with the organisational requirements of Part 171. Any aerodrome operator who may wish to operate their own telecommunication services is likely to be certificated under Part 139 (Aerodromes - Certification, Operation and Use) which is also based on the quality management principles. Therefore the management concepts of Part 171 should not impose any unreasonable cost on a certificated aerodrome operator.

The Authority therefore considers that the benefits from Part 171 will outweigh any additional costs that may be incurred by the aviation industry.

1.5 ALPA considers that the proposed Part does not comply with the requirements of the Civil Aviation Act 1990 as stated in the legal comment. They consider that the interpretation of the *Convention* in section 2 of the Act implies that New Zealand is obliged to implement the recommended practices of ICAO as well as the standards.

The Authority does not accept this interpretation, which is not supported by section 33 of the Act. This is commented on in paragraph 1.2 above.

2. Subpart A - General requirements

Six issues relate to the general requirements (Subpart A) of Part 171. These are discussed as follows:

2.1 One commenter considered, in relation to the definition for Annex 10, that it would be more realistic to automatically include the latest amendment of any document incorporated into the rule unless specific notification to the contrary is given by the Authority.

Section 36 of the Act, which deals with the incorporation of documents into the rules, does not allow such a process. Each amendment to any document incorporated by reference into a rule cannot come into force as a rule until the amendment has been subjected to the rule making procedures under the Act.

2.2 ALPA suggested that the definitions section of Part 171 should include a definition for *Quality Assurance*.

The Authority considers this unnecessary as the term is adequately defined in the NZS 5604 publication (Quality - Vocabulary). The advisory circular also quotes this definition in paragraph AC 171.73, which deals with the internal quality assurance requirements.

2.3 One commenter questioned the numbering of the application form ATD 2400 as it should not be necessary to amend that rule when the Air Transport Division is changed to the stand alone Civil Aviation Authority.

The Authority agrees and the application form for Part 171 is CAA 24171/01. There will be a separate form for each applicable rule Part with the form number incorporating the rule Part number.

2.4 One commenter considered that it seems unnecessary to have terminating certificates when the Authority would be carrying out ongoing audits of an organisation during the validity period of the certificate.

Part 171 Certification - Aeronautical Telecommunication Service Organisations

The decision for all aviation documents issued to organisations to be terminating was taken from the recommendations of the Swedavia - McGregor Report paragraph 13.3. Their recommendation is that no document should be valid for more than five years. This was based on the premise that there will have been sufficient change in that time in both the industry and the organisation to justify a reassessment in the form of a re-entry audit or inspection.

When a document falls due for renewal, a review of all the information on the client file will be carried out. If an audit has recently been carried out, this may show that the organisation is in compliance and that no further action is required to complete the renewal process.

It could be that the Authority planning system will note that the renewal is due and programme an audit visit to coincide with the renewal. Alternatively the review by the Authority could show that only specific areas of the organisation need to be audited to verify compliance.

It can therefore be seen that the renewal is a *check point* in the audit process where the Authority will take stock of the organisation. It will ensure that any regulatory changes or policy changes have been considered by the organisation and will provide an overall review of the organisation's documentation.

2.5 ALPA considered that the rule on safety audits by the Authority should include the requirement for a safety audit to monitor compliance with the Part and to investigate the cause of any non-compliance. They also suggest that the rule should specify the intervals between the safety audits.

The Authority does not accept this view. The rule is written for an organisation providing an aviation service. Paragraph 171.17 is not drafted to create a requirement, but rather to remind organisation of requirements that already exist under the Civil Aviation Act 1990. The Authority's audit procedures will ensure that the cause for any non-compliance is investigated. The advisory circular also covers this requirement.

The period between safety audits will vary for each organisation. This variation will depend on many factors such as the size of the organisation, the performance history of the organisation, the addition of new services or facility types. A large organisation will be audited as a number of separate audit modules and therefore different parts of the organisation will be audited at different times.

2.6 ALPA considers that the rule permitting exemptions to be granted should include the conditions under which an exemption can be granted and the action that the Authority must take, including the filing of differences with ICAO, when an exemption is granted.

The Authority does not accept this view. Section 37 of the Act adequately sets out the conditions to be met for an exemption to be granted. The advisory circular refers to this section of the Act.

The civil aviation rules for certificated organisations should not mix the Authority's tasks and responsibilities with the requirements for a participant in the civil aviation system. The responsibilities and activities of the Authority are detailed in the Authority's procedures manuals. This includes the actions to be taken regarding the notification of differences to ICAO. The advisory circular advises that the Authority is responsible for notifying ICAO, under Article 38 of the Convention, of any differences between the New Zealand and ICAO standards and practices.

3. Certification, operating and facility requirements

Eighteen issues were raised relating to the certification, operating and facility requirements in the NPRM.

As stated in paragraph 1.1 above, the format of Part 171 has been rearranged to clarify the certification requirements for an aeronautical telecommunication service organisation. This rearranged format also follows the general format of NZS 9001, which is the Quality System model for such organisations. Paragraphs have been renumbered in some places, additional paragraphs inserted and the performance requirements for facilities that were in Subpart D of the NPRM have been included in the certification requirements of Subpart B. Subpart D has been deleted.

The following discussion will follow the layout and numbering of the final rule document. The discussion will refer to the relevant NPRM paragraph and will address the comments received in the consultation submissions.

171.51 Personnel requirements

ACNZ advised that they have difficulty with the term *Chief Executive*. It could cause confusion as they already have a person designated as the Chief Executive of the Corporation.

The civil aviation rules use the term *Chief Executive* to identify the person within an organisation who has the overall authority and responsibility to ensure that the organisation can provide its services in accordance with the safety requirements set by the Authority. This authority must include the necessary financial authority.

A large organisation such as the Airways Corporation may hold a number of certificates to cover the activities of different business units. Each certificated business unit would have to nominate a senior person as its *Chief Executive* in terms of the rules. The actual title of this person within the overall organisation's structure is a matter for the organisation to decide. The Advisory Circular has been amended to reflect this intent.

171.53 Facility requirements

The NPRM document had this rule titled *Technical Standards and Practices* and specified a requirement for an organisation to establish standards and practices for the safe operation of facilities. This requirement was too general to adequately specify an organisation's responsibilities in establishing its facilities.

This rule now covers the design, installation, commissioning, and performance standards for the aeronautical telecommunication facilities. It replaces NPRM paragraph 171.53 and now includes the requirements of NPRM rules 171.151 and 171.157 that prescribed the facility installation requirements and facility performance standards respectively.

ALPA considered that NPRM rule 171.53 on technical standards and practices should have specified that *the ICAO Standards, Recommended Practices and Guidance Material contained in Annex 10 and the Guidance Material contained in ICAO Doc 8071 are to be reflected in an organisation's standards and practices for the provision and operation of their facilities.*

The Authority does not agree. As stated in paragraph 1.2 above, the Act requires the rules to be consistent with the standards of ICAO and to have regard to the recommended practices. The rule specifies that facilities must conform with the system characteristics and

Part 171 Certification - Aeronautical Telecommunication Service Organisations

specification standards in Annex 10 and where the Authority considers it appropriate for aviation safety, some of the recommendations in Annex 10 are specified as standard requirements for particular facilities.

The Advisory Circular advises that a certificated organisation should follow the Recommended Practices of ICAO where ever possible. Where the Recommended Practices cannot be met, the organisation is requested to advise the Authority accordingly. The Advisory Circular, in the section on periodic inspection and testing, provides reference to the guidance material contained in Annex 10 and in Document 8071.

ALPA considered that an additional paragraph should have been included in NPRM rule 171.151 concerning installation requirements to state that *each radio navigation aid shall meet the relevant monitoring requirements prescribed in Annex 10.*

The Authority considers this unnecessary because 171.53(a)(1)(ii) of the final rule Part, which incorporates the requirements of NPRM rule 171.151, requires each facility to conform with the applicable system characteristics and specification standards prescribed in Annex 10. This will automatically include any monitoring requirements that are specified in Annex 10.

ALPA further considered that the monitoring requirements of 171.53(a)(4), [NPRM 171.151(a)], should be amended to cover *each facility essential for the approach, landing and take-off at an aerodrome* and that *the warning shall be transmitted to the control tower and the ATS unit providing the approach control.*

The Authority does not fully accept this amendment. The requirement covers all radio navigation aids including en-route and not just those associated with an aerodrome. However, 171.53 has been amended by the addition of paragraph (5). This requires status information for those radio navigation aids that are essential for the approach, landing and take-off at an aerodrome to be transmitted to the aerodrome control tower and to the ATS approach control unit.

The ALPA amendment also suggests that the requirement would apply to all facilities essential for the approach, landing and take-off at an aerodrome. This could be taken to include communications facilities that do not have such monitoring systems. Therefore the paragraph continues to refer to radio navigation aids.

ACNZ advised that the requirement in NPRM 171.151(a)(2) for the monitoring system to detect corrupted identification signals could not be complied with. The only reasonable means available to detect corrupted identification signals are aural checks or the pilot reports on facility malfunctions.

The Authority accepts this comment and the final rule has been amended to delete this requirement. The Advisory Circular recommends that there be a regular (daily) aural check where possible to check for correct identification coding.

ACNZ also advised that not all of the existing NDB and DME facilities can fully comply with the monitoring requirements of the rule.

The Authority accepts that this is the present situation and would require ACNZ to apply for an exemption for each of those facilities. Such an exemption would apply until the existing equipment is replaced. Any new equipment would be expected to meet the monitoring requirement although there may be some remote sites where it is not feasible to transmit a warning to a control point.

ALPA considered that NPRM 171.151(d) should be reworded to refer to the relevant chapter in Annex 14 for facilities installed on or near the operational areas of aerodromes.

This requirement has been deleted from the final rule as the aerodrome operator is responsible for ensuring that any facilities constructed on or near the operational area of an aerodrome comply with the aerodrome rules of Part 139, which are based on Annex 14. The Advisory Circular however provides a reference to Part 139 and Annex 14 for Part 171 certificate holders.

ALPA considered that the security requirements for each facility, 171.53(a)(7) and (8) [NPRM 171.151(b)] should be written in greater detail to cover the establishment and protection of critical site areas for facilities.

The rule has been amended to include these requirements. An additional rule 171.55 has also been inserted to cover the airways security programme that is required under the Civil Aviation (Security) Regulations 1989. These Regulations will eventually be replaced by new rules contained in Part 112 for airways security programmes.

An additional rule, 171.53(b) has been included in the final of Part 171 to cover an organisation's procedures for the operation of a temporary facility for site test purposes.

171.57 Documentation

[NPRM 171.59]

ALPA considered that an additional paragraph should be added to this rule to state that *the technical standards are to include the applicable facility characteristics and specification standards prescribed in Subpart D and the applicable ICAO documents referenced in this Part.*

These requirements have essentially been incorporated into the rewrite for the final rule. The rule has also been expanded to specify the items that must be included in the procedures to control the organisation's documentation. These items were previously included in the Advisory Circular.

171.59 Periodic inspection and testing

[NPRM 171.63]

ALPA considered that the rule needed to contain more of the detail that is covered in the Advisory Circular concerning the period between periodic tests. They also considered that the procedures for the periodic inspections and tests must be in accordance with the ICAO documents referenced in the Part.

The rule has been rewritten to specify clearly the requirements for the periodic inspection and testing of facilities. The only ICAO document referenced in Part 171 is Annex 10, which requires radio navigation aids to be the subject of periodic ground and flight tests. This requirement is now specified in the rule. The rule also specifies the criteria that must be considered to establish the period between the periodic tests.

Other ICAO documents such as attachment C to Part I of Annex 10 and Document 8071 provide guidance material on the ground and flight testing of some ICAO standard facilities. As this is guidance material only and does not prescribe standards it cannot be referenced in the rule. The Advisory Circular provides the references to this material.

ACNZ considered that it is not clear whether a facility can continue with the present interval of periodic inspections and tests or would it need to revert to the periods recommended in the Advisory Circular until reliability data is established for the facility. They are concerned about their existing non-directional radio beacons (NDB), which are not subjected to periodic flight tests. Their concerns also relate to their decision to purchase Doppler VOR equipment, which will require fewer flight tests than the present conventional VOR equipment.

The Authority does not intend that the present periods for the periodic tests of facilities should be changed while reliability data is collected unless there is evidence that the reliability of a facility is unsatisfactory. The rule specifies that the criteria for establishing the period between periodic tests shall have regard to any applicable information published by ICAO or any other aeronautical authority. Any applicable reliability data, which could include a manufacturer's calculated reliability data, also should be used for determining the period between periodic tests for a facility.

171.61 Certification of facility performance

[NPRM 171.111]

This rule has been brought forward into the certification requirements of Subpart B. The rule has also been rewritten as a procedure that an applicant must establish for placing facilities into operational service.

171.63 Inspection measuring and test equipment

[NPRM 171.61]

ALPA considered that this rule should also include the detail that is covered in the Advisory Circular concerning test hardware and software that may be used as an alternative form of testing and monitoring.

This rule has been amended to include this detail. Other details concerning the calibration requirements of test equipment required for the measurement of critical performance parameters has also been moved from the Advisory Circular into the rule.

171.65 Notification of facility information

[NPRM 171.113]

The title has been changed to notification of facility information instead of notification of facility status. This rule now covers the requirement to promulgate the operational information of a facility as well as to notify users of any change in its operational status.

ALPA's comment that the rule should include the requirement for a NOTAM to be issued for any change in operational status has been incorporated.

171.67 Facility check after accident or incident

[NPRM 171.57]

The title of this rule has been changed to more accurately reflect the requirement in the rule. This rule has also been amended to include any facilities used by an air traffic service that may be involved in an accident or incident. The amendment includes the requirement for the checks to be carried out as soon as practicable after the certificate holder has been advised

of the accident or incident. This amendment also requires the information on the facility status and performance to be kept in a secure place for possible use by any subsequent investigation.

171.69 Facility malfunctions

[NPRM 171.55]

This rule has been amended to include the reporting of specified malfunctions to the Authority. This reporting action was previously covered under 171.107 in the NPRM document. NPRM 171.107 has therefore been deleted from the final rule.

ALPA considered that all facility malfunction reports should be reported to the Authority.

The Authority does not need to be on the address list for all facility malfunction reports in order to carry out its surveillance function of aeronautical telecommunication service providers. Facility malfunctions or suspected malfunctions can arise from many causes that may not involve the performance of a facility. The Authority does not monitor the day-to-day activities of certificated organisations. The aim of the new rules is to make certificated organisations responsible for these day-to-day activities through their own internal procedures. The Authority becomes interested when an organisation's internal procedures break down and unsafe or potentially unsafe conditions arise or when there appears to be a recurring cause for the malfunction reports.

The organisation is required to maintain a record for each malfunction. The Authority must be allowed access to these records during a safety inspection or audit if the inspector or auditor considers that such information is necessary.

Both ALPA and ACNZ considered that the term *erroneous information*, as used in NPRM 171.107, should be clarified to ensure that it is interpreted correctly.

This is now unnecessary as the term is not used in the amended rule.

ACNZ advised that their procedures for handling facility malfunction reports are being revised to accommodate their recent changes in responsibility for coordinating and monitoring the reports.

One commenter considered that the Advisory Circular section dealing with facility malfunctions contained detail that was not appropriate for Part 171. This detail relates to the information that a pilot is required to include in a facility malfunction report. He considered that the 171 Advisory Circular should focus on the 171 certificate holder's responsibilities and let other rules focus on the pilot's responsibilities.

The commenter appears to misunderstand the intent of AC 171. The AC is to advise the facility operator of the information that they should expect in a pilot's malfunction report. Rule Part 91 will specify the requirement for pilots to file facility malfunction reports.

171.71 Records

[NPRM 171.103 and 171.105]

These NPRM rules dealing with personal records and facility records respectively have been combined into an amended rule, 171.71 and brought forward into the certification requirements of Subpart B. This final rule also includes other record keeping requirements for periodic testing of facilities, test equipment and facility malfunctions.

ALPA considered that facility records should be held for a period of seven years to enable the performance history of a facility to be established.

The Authority has reconsidered the retention period for facility records. It is considered that a retention period of three years would provide sufficient test data to establish the reliability history of a facility. However a longer period may be required in some cases where test data is unreliable or the period between periodic tests is such that insufficient data is collected over a three year period.

171.73 Internal quality assurance

[NPRM 171.65]

ALPA considered that this rule should state that *there shall be provision for the regular reviews of the organisation's documentation, procedures and performance of facilities and that the review reports shall be made available to the Authority on request.*

The Authority does not intend to include such a requirement in this rule. Regular reviews of an organisation's procedures and activities are only one of the elements of acceptable internal quality assurance procedures. The inclusion of such a requirement in this rule may convey to some organisations that they only need to carry out regular reviews of their organisation to comply with the requirement. The Advisory Circular provides significant guidance information on internal quality assurance procedures that will satisfy the requirement of this rule.

There is no need to state that the organisation's review reports shall be made available to the Authority. As specified in 171.17, the Act gives the Authority access to the organisation's documents and records, which includes the records of the internal quality assurance reviews.

171.75 Organisation exposition

[NPRM 171.67]

The title has been changed to organisation exposition as the term *service provider* that was used in the NPRM document is not used in the final rule Part.

The content of the exposition has also been amended to incorporate the changes that have been made to the certification requirements in Subpart B.

ACNZ advised that their documentation for the Systems Group covers the general requirements for the exposition.

171.103 Identification codes and call signs

This is a new rule and incorporates the requirement from NPRM 171.153 for the issue of identification codes and call signs.

ACNZ expressed concern about NPRM 171.153 as they considered that there could be confusion if applications for a radio apparatus licence were to be directed through the Authority. As explained in the introductory comments in the NPRM document the details concerning the management of the aeronautical frequency bands had not been finalised and three options were to be considered.

Part 171 Certification - Aeronautical Telecommunication Service Organisations

The Communications Division of the Ministry of Commerce advised that option three covered in the NPRM introductory comments regarding the Authority's management of the aeronautical frequency bands was most unlikely.

The Authority has had discussions with the Ministry of Commerce (MOC) on this matter. The Authority and the MOC aim to establish an agreement whereby the MOC will allocate the aeronautical frequencies on behalf of the Authority and will issue the radio apparatus licences. The agreement will include the criteria to be met in the allocation of frequencies in the aeronautical frequency bands. There also will be some prerequisites for the issue of radio apparatus licences for ground facilities and for aircraft radio installations operating on aeronautical frequencies. The Advisory Circular will provide guidance information on the allocation of aeronautical radio frequencies.

ALPA considered that this rule should state that the allocation of frequencies and identification codes will be in accordance with the ICAO regional frequency plans and the frequency allocation tables in Annex 10.

These requirements will be included in the agreement with MOC and included in the Advisory Circular as information.

171.105 Communication procedures

[NPRM 171.155]

The New Zealand Meteorological Service advised that they are users of the aeronautical fixed telecommunication network (AFTN) by entering data into the AFTN through its computer. They appear to be unsure about the effect that Part 171 will have on their operations.

Part 171 will not apply directly to the Meteorological Service as they are not providing an aeronautical telecommunication service. However Part 174 for certificated meteorological services will require these organisations to comply with the communications procedures and protocols that are prescribed in Annex 10 if they input data to the AFTN.

171.107 Operating and maintenance instructions

[NPRM 171.109]

The title of this rule has been changed as some oral comments received indicated that the rule was being interpreted as requiring these operating and maintenance instructions to be contained in a manual. This is not the intent. The instructions may be written on individual sheets of paper pinned on a wall at a facility or the instructions may be accessed via a computer terminal.

ALPA considered that the *mandatory inspection procedures for the operation and maintenance of the facility* should be stated as an item to be included in the operations and maintenance manual.

This rule has been amended to include this requirement. It was previously covered in the Advisory Circular.

Part 171 Certification - Aeronautical Telecommunication Service Organisations

This requirement in the rule originates from the Swedavia - McGregor Report and from the Civil Aviation Act.

The Swedavia - McGregor Report concluded that although the Authority needs to reduce its level of intervention in terms of approving an operator's organisation and personnel, the Authority must retain some involvement to be satisfied that an operator has the necessary competence and organisational structure to discharge its responsibilities. The report recommended that this involvement should be limited to the organisational structure and senior levels of personnel selection.

In addition, section 9(3) of the Act requires any holder of an aviation document, which also includes any person lawfully entitled to exercise the privileges in respect of the document, to continue to satisfy the fit and proper person test against the criteria specified in section 10 of the Act.

These senior persons are those specified in 171.51(2). They are the senior persons who are responsible for controlling the functions of the organisation, authorising the documented procedures required to be established by the rules and ensuring that the procedures are followed.

ACNZ also considered that the prior notification and acceptance of a change in the scope of services provided could be unreasonably restrictive to the Corporation's business operations.

The Authority has no desire to restrict an organisation's business operations and therefore the reference to any change in the scope of services provided by the organisation has been deleted from this rule.

The other prior notification and acceptance requirements specified in the NPRM concerning the locations and quality assurance procedures have also been reviewed. The Authority concluded that prior notification and acceptance of these is not required and therefore they have been deleted from the rule. The Authority will be notified of these changes when the organisation amends its exposition.

Part 171 Advisory Circular

ALPA commented that the interpretations applied by the Authority to the standards and recommended practices of Annex 10 must be consistent with the international standards and recommended practices of Annex 10. They suggest that the AC interpretation of recommendation 3.4.2.1 of Annex 10 regarding the signal strength for the rated coverage of an NDB is in direct conflict with the ICAO recommendation for a flight inspection value.

It is difficult to understand ALPA's concern. The interpretations given in the Advisory Circular are consistent with Annex 10. Paragraph 3.4.2.1 of Annex 10 recommends the minimum field strength in the rated coverage of an NDB should be 70 microvolts per metre. The supporting guidance material in Attachment C to Part I of Annex 10 advises that extensive experience has shown that in relatively low noise level areas the figure of 70 microvolts per metre is satisfactory. The calculated coverage of an NDB is based on normal atmospheric and known ground conditions. This calculated coverage is used to determine the possible interference to or from any other NDB. There are many variable factors that can significantly increase or decrease the coverage of an NDB. A flight inspection only captures a snapshot of the facility performance at a particular time and may or may not reflect any abnormal condition. If there is any material variation in the coverage of an NDB then the published information will include such comments. The Advisory Circular advises that the rated coverage for an NDB in New Zealand should be based on a signal strength of 70 microvolts per metre.

Conclusion

The Authority believes that Part 171 meets New Zealand's international obligations and is consistent with the recommendations of the Swedavia - McGregor Report of 1988. Specific issues that have been identified in the comments have been addressed and, where appropriate, changes have been made to meet the concerns raised. The comments and all background material used in formulating the rules are held on the docket file and are available for public scrutiny. Persons wishing to view the docket file should call at Aviation House, 1 Market Grove, Lower Hutt and ask for Docket file No: 1020.

Implementation

Part 171 will come into force 28 days after notification in the New Zealand Gazette. After that date, any person, except those covered by the transitional arrangements below, wishing to operate a facility or provide an aeronautical telecommunication service to which Part 171 applies will be required to hold a Telecommunication Service Certificate.

Transitional Arrangements

Any person who, prior to the date that Part 171 is notified in the New Zealand Gazette, is operating a facility or providing an aeronautical telecommunication service to which Part 171 applies will have a period of twelve months from the date that Part 171 comes into force to obtain a Telecommunication Service Certificate.

After the expiry of this twelve month period no person may operate a facility or provide an aeronautical telecommunication service to which Part 171 applies unless that person holds a Telecommunication Service Certificate.

To enable certificates to be issued within this twelve month period those persons requiring Part 171 certification for existing services should submit their applications as soon as their documentation is complete and in no case later than ten months from the date that Part 171 comes into force.

171.109 Deviations

This is an additional rule that allows a certificated organisation to take any actions that may be necessary to protect life or property in the event of an emergency involving carriage by air. The rule requires a report to be forwarded to the Authority whenever the provisions of this rule are implemented.

171.111 Privileges of certificate holder

[NPRM 171.115]

This rule has been reworded with an additional subparagraph included to allow the operation of a facility for site test purposes.

171.113 Limitations on certificate holder

[NPRM 171.117]

This rule has been amended to include the requirement for facilities to be listed in the exposition, to be covered by a radio apparatus licence if applicable, and to be covered by the organisation's airways security programme if applicable.

ACNZ advised that a facility would not normally be withdrawn from service if there was a failure in that part of the monitoring system that transmits a warning to a remote monitoring point unless it related to an ILS facility.

This policy complies with the intent of the rule.

ACNZ considered that the requirement for a facility to be withdrawn from service if the prescribed periodic inspections and tests have not been completed could cause facilities to be needlessly withdrawn from service. They advise that facilities have only been withdrawn from service for overdue flight inspections. They consider that the observance of this requirement for ground inspections could be very restrictive.

This rule has been amended to delete the periodic inspections and refers only to the certificate holder's programmes of periodic tests for a facility. The periodic tests include both ground tests and flight tests.

The periodic ground tests are included in this requirement because in some cases, periodic flight tests have been replaced by periodic ground tests. In other cases the period between flight tests has been extended because of the improved capability of ground tests. Ground tests are an essential element in ensuring the continuing integrity of a facility and therefore these tests must be kept up to date.

171.115 Changes to certificate holder's organisation

[NPRM 171.119]

ACNZ commented on the requirement for the organisation to notify the Authority and to obtain prior acceptance before making changes to the listed senior persons and to the scope of services provided.

They considered that the senior positions requiring prior notification and acceptance need to be clarified.