WELLINGTON NEW ZEALAND

PURSUANT to Section 28 of the Civil Aviation Act 1990

I, JENNIFER MARY SHIPLEY, Minister of Transport,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This 25th day of Nov. 1997

by **JENNIFER MARY SHIPLEY**

Minister of Transport

Civil Aviation Rules

Part 172

Docket Nr. 1052

Civil Aviation Rules

Part 172

RULE OBJECTIVE, EXTENT OF CONSULTATION AND COMMENCEMENT

The objective of Part 172 is to define a regulatory safety boundary for organisations wishing to provide air traffic services for the New Zealand flight information region and for the areas of the Auckland Oceanic flight information region in which New Zealand is responsible for air traffic services. The boundary prescribes the minimum organisational requirements for these persons and organisations and the minimum standards for the provision of air traffic services.

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. The Register was identified as the Regulatory Review Consultative Group.

A draft of Part 172 was developed by the rules rewrite team in consultation with members of the consultative group. An informal draft was published and distributed in December 1995 and a period of informal consultation followed. This culminated in the issue of Notice of Proposed Rulemaking 96-3 under Docket 1052 on 23 October 1996.

The publication of this notice was advertised in the daily newspapers in the five main provincial centres on 23 October 1996. The notice was mailed to 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 40 days was allowed for comment on the proposed rule. Nineteen written submissions were received in response to the Notice of Proposed Rulemaking.

The submissions and verbal comments were considered and where appropriate the proposed rules amended to take account of the comments made.

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

Part 172 comes into force 28 days after notification in the Gazette.

List of Rules

Subpart A — General

Subpart B — Certification Requirements

Subpart A — General

172.1 Applicability

(a) This Part prescribes rules governing—

(1) the certification and operation of organisations providing an air traffic service in—

(i) the New Zealand Flight Information Region, designated under Part 71; or

(ii) the Auckland Oceanic Flight Information Region, designated under Part 71; and

(2) the operating and technical standards for the provision of air traffic services operated by those organisations.

(b) Subparts A, B, and C apply to air traffic services specified in paragraphs (1) to (6) of the definition of the term *air traffic service* in Part 1.

(c) Subpart D and this rule apply to services considered to be air traffic services under paragraph (7) of the definition of the term *air traffic service* in Part 1.

(d) In this Part, references to the Auckland Oceanic Flight Information Region exclude the Cook Sector, designated under Part 71.

172.3 Definitions

In this Part—

Annex 1 means Annex 1 to the Convention:

Annex 2 means Annex 2 to the Convention:

Annex 3 means Annex 3 to the Convention:

Annex 10 means Annex 10 to the Convention:

Annex 11 means Annex 11 to the Convention:

Area of responsibility means the airspace, and in the case of an aerodrome, the manoeuvring area, within which a particular operating position is responsible for the provision of an air traffic service:

ATS Letter of Agreement means a document formalising matters of operational significance between ATS units:

ATS messages means emergency messages, movement and control messages, and flight information messages as described in Part IX of Document 4444:

Document 4444 means the ICAO document titled *Procedures for Air Navigation Services – Rules of the Air and Air Traffic Services:*

Document 7030 means the ICAO document titled *Regional Supplementary Procedures* as applicable to the Middle East/Asia and Pacific regions

Document 9432 means the ICAO document titled *Manual of Radiotelephony:*

Essential traffic means any controlled traffic that is not separated by the prescribed minima in relation to other controlled flights where separation is required:

Filed flight plan means the flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes:

Flow control means measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome, to ensure the most effective utilisation of the airspace:

Operating position means the work station from which one or more air traffic controllers or flight service operators provide air traffic services within an allocated area or areas of responsibility:

Rated air traffic controller means an air traffic controller holding a current licence, and a rating, or ratings, validated for the particular location, issued in accordance with Part 65:

Rated aerodrome flight information operator means a flight service operator holding a current licence, and an aerodrome flight information rating validated for the particular location, issued in accordance with Part 65:

Rated flight service operator means a flight service operator holding a current licence, and a rating, or ratings, validated for the particular location, issued in accordance with Part 65:

Special VFR flight means a VFR flight cleared by ATC to operate within a control zone in meteorological conditions below visual meteorological conditions:

Strayed aircraft means an aircraft that has deviated significantly from its intended track or reports that it is lost:

Traffic avoidance advice means advice provided by an ATS unit to assist a pilot to avoid a collision:

Traffic information means information issued by an ATS unit, to alert a pilot to other known or observed air traffic which may be in proximity to the position, or intended route of flight, and to help the pilot avoid a collision.

172.5 Requirement for certificate

No person shall provide an air traffic service except under the authority of, and in accordance with the provisions of, an air traffic service certificate issued under this Part.

172.7 Application for certificate

Each applicant for the grant of an air traffic service certificate shall—

(1) complete form CAA 24172/01, which shall require the following information—

(i) the applicant's name and address for service in New Zealand; and

(ii) the specific air traffic service or services to be provided; and

(iii) the aerodrome location or airspace designation at, or within which, the service will be provided; and

(iv) such other particulars relating to the applicant and the intended service as may be required by the Director as indicated on the form; and

(2) submit the completed form to the Director with—

(i) the exposition required by 172.125; and

(ii) payment of the appropriate application fee prescribed by regulations made under the Act.

172.9 Issue of certificate

(a) Subject to paragraph (b), an applicant is entitled to an air traffic service certificate if the Director is satisfied that—

(1) the applicant meets the requirements of Subpart B; and

(2) the applicant, and the applicant's senior person or persons required by 172.51, are fit and proper persons; and

(3) the granting of the certificate is not contrary to the interests of aviation safety.

(b) The Director shall ensure, in the interests of aviation safety, that only one certificate for the same air traffic service is current at any time.

172.11 Privileges of certificate

(a) An air traffic service certificate specifies which of the following air traffic services, and which training and assessment for such services, the certificate holder is authorised to provide:

(1) area control service:

(2) approach control service:

(3) aerodrome control service:

(4) flight information service:

(5) aerodrome flight information service:

(6) alerting service:

(7) any other service provided in accordance with Subpart D.

(b) An air traffic service certificate—

(1) states the aerodrome or airspace at, or within which, the service is provided; and

(2) may include such conditions as the Director considers appropriate.

172.13 Duration of certificate

(a) An air traffic service certificate may be granted or renewed for a period of up to 5 years.

(b) An air traffic service certificate remains in force until it expires or is suspended or revoked.

(c) The holder of an air traffic service certificate that expires or is revoked shall forthwith surrender the certificate to the Director.

(d) The holder of an air traffic service certificate that is suspended shall forthwith produce the certificate to the Director for appropriate endorsement.

172.15 Renewal of certificate

(a) An application for the renewal of an air traffic service certificate shall be made on form CAA 24172/01.

(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.

172.17 Transition

Notwithstanding 172.5, the holder of an airways service certificate issued pursuant to the Civil Aviation Regulations 1953 that is in force on the date this Part comes into force may provide an air traffic service under the authority of, and in accordance with, the provisions of that certificate until 23 April 1998.

Subpart B — Certification Requirements

172.51 Personnel requirements

(a) Each applicant for the grant of an air traffic service certificate shall engage, employ, or contract—

(1) a senior person identified as the Chief Executive who has the authority within the applicant's organisation to ensure that each air traffic service listed in its exposition—

(i) can be financed; and

(ii) is provided in accordance with the requirements prescribed by this Part; and

(2) a senior person or persons 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; and

(3) sufficient personnel to manage, support, and provide the air traffic services and any associated training or assessment listed in the applicant's exposition.

(b) The applicant shall establish procedures to—

(1) ensure the competence of those personnel who are authorised by the applicant to provide the air traffic services, and training and assessment for those services, listed in the applicant's exposition; and

(2) provide those authorised personnel with written evidence of the scope of their authorisation; and

(3) ensure that those authorised personnel hold appropriate current licences and ratings issued under Part 65; and

(4) ensure, where practicable, that authorised personnel only exercise the privileges of their rating or ratings if they are familiar with all relevant and current information; and

(5) facilitate, for rated air traffic service licence holders, compliance with the recent experience requirements of Part 65; and

(6) ensure, where practicable, that an air traffic controller shall not exercise the privileges of their rating or ratings—

(i) unless they comply with any endorsements on their medical certificate; and

(ii) when any decrease in their medical fitness might render them unable to safely exercise these privileges.

172.53 ATS training

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures and programmes for the training and assessment of the following personnel:

(1) air traffic controllers:

(2) flight service operators:

(3) personnel directly involved in the provision of an HF aeronautical telecommunication service:

(4) personnel directly involved in activities supporting—

(i) rated air traffic controllers; and

(ii) rated flight service operators.

(b) The applicant shall establish procedures to ensure that personnel giving instruction in an operational environment hold an appropriate current ATS instructor rating issued under Part 65.

(c) The applicant shall establish procedures to ensure that personnel carrying out assessment for the issue of licences, or the issue or validation of ratings, hold an appropriate current ATS instructor or examiner rating issued under Part 65.

172.55 Prevention of fatigue [Reserved]

172.57 Facility requirements

(a) Each applicant for the grant of an air traffic service certificate shall establish the following facilities that are appropriate to the air traffic services listed in the applicant's exposition:

(1) aerodrome control towers:

(2) approach control offices:

(3) area control centres:

(4) aerodrome flight information offices:

(5) flight information centres:

(6) dedicated training and assessment facilities.

(b) An applicant for an aerodrome control service, or an aerodrome flight information service, shall establish procedures to ensure that any aerodrome control tower or aerodrome flight information office, including any mobile tower or office, listed in the applicant's exposition, is—

(1) constructed and situated to provide—

(i) the maximum practicable visibility of aerodrome traffic; and

(ii) protection from glare and reflection; and

(iii) protection from noise; and

(2) safeguarded from any development that would affect the requirements of paragraph (b)(1); and

(3) at solo watch locations, provided with—

(i) toilet facilities that ensure the minimum possible interruption to, or degradation of, air traffic services; and

(ii) storage and preparation facilities for food and drink in the visual control room; and

(4) provided with equipment for two-way voice communication with—

(i) aircraft, in or adjacent to airspace for which the applicant has responsibility; and

(ii) aircraft, vehicles, and persons, on, or adjacent to, the manoeuvring area; and

(5) provided with the following minimum equipment:

(i) a display system or systems designed to show the disposition of current and pending aerodrome traffic together with ancillary information for individual aircraft:

(ii) a power supply:

(iii) appropriate and current maps and charts:

(iv) binoculars:

(v) clocks:

(vi) logbook:

(vii) outside temperature indicator:

(viii) QNH display:

(ix) signal lamp with green, red, and white functions:

(x) telephone communications:

(xi) status monitors for approach and landing aids and any road or rail signalling equipment affecting the use of a runway:

(xii) visibility and cloud height checkpoints:

(xiii) voice and, where applicable, data recording equipment:

(xiv) wind direction and speed display:

(xv) an audible alerting alarm:

(xvi) an AFTN terminal or, where provided for in an ATS letter of agreement, an alternative means of reception and transmission of information normally conveyed by AFTN:

(xvii) if applicable, airfield lighting controls panel; and

(6) provided with two independent sources of the current altimeter setting, at least one of which shall be an aneroid barometer or barometric altimeter situated in the visual control room.

(c) The applicant shall establish procedures to ensure that area control centres, flight information centres, and approach control offices are—

(1) provided with equipment enabling—

(i) to the fullest extent practical, two-way voice communication; and

(ii) where applicable, data communication—

with aircraft in, or adjacent to, airspace for which the applicant has responsibility; and

(2) provided with the following minimum equipment:

(i) a display system or systems designed to show the disposition of current and pending flights together with ancillary information for individual aircraft:

(ii) a power supply:

(iii) appropriate and current maps and charts:

(iv) clocks:

(v) logbook:

(vi) status monitors as appropriate for navigation, approach, and landing aids:

(vii) telephone communications:

(viii) voice recording equipment and, where applicable, data recording equipment:

(ix) an AFTN terminal:

(x) for approach control operating positions, an ILS/MLS status monitor at the approach control or approach control radar operating position for the aerodrome concerned:

(xi) for approach control operating positions responsible for aircraft on final approach, or aircraft landing or taking-off, a wind direction and speed display fed from the same source as the corresponding equipment in the aerodrome control tower.

(d) The applicant shall establish procedures to ensure that the aeronautical telecommunications equipment required by paragraphs (b) and (c) are operated in accordance with the requirements of Part 171.

(e) The applicant shall establish procedures to ensure that visual display units used by air traffic services are positioned with due regard to the

relative importance of the information displayed and ease of use by the staff concerned.

(f) The equipment required by paragraphs (b)(4) and (5), and (c)(1) and (2), shall have a level of reliability, availability, and redundancy, that minimises the possibility of failure, non-availability, or significant degradation of performance.

(g) The applicant shall establish procedures to ensure that the status monitors required by paragraph (b)(5)(xi) and paragraphs (c)(2)(vi) and (x) are fitted with—

(1) an aural signal to indicate a change of status; and

(2) a visual indication of the current status.

172.59 Establishment and transfer of service

(a) Each applicant for the grant of an air traffic service certificate shall include with its application—

(1) for each aerodrome and airspace, a schedule of the proposed hours of service for the first 12 months of operation; and

(2) in respect of an aerodrome, or airspace, not currently provided with an air traffic service, a summary of safety factors considered before seeking certification.

(b) Each applicant for the grant of an air traffic service certificate intending to assume responsibility for providing any air traffic service from an existing certificate holder, shall include with its application, full details of transitional arrangements endorsed by the chief executives of both organisations.

172.61 Shift administration

Each applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that—

(1) adequate time is provided at the beginning and end of each shift, for the performance of those duties required—

(i) before providing an air traffic service; and

(ii) after ceasing to provide an air traffic service; and

(2) a minimum of 5 minutes is provided for each transfer of watch at an ATS operational position.

172.63 Documentation

(a) Each applicant for the grant of an air traffic service certificate shall hold copies of the relevant technical manuals, and all other documents, necessary for the provision and operation of the services listed in its exposition.

(b) The applicant shall establish a procedure to control all the documentation required by paragraph (a). The procedure shall ensure that—

(1) all incoming documentation is reviewed, and actioned as required, by authorised personnel; and

(2) all documentation is reviewed and authorised before issue; and

(3) current issues of all relevant documentation are available to personnel at all locations where they need access to such documentation for the provision and operation of air traffic services; and

(4) all obsolete documentation is promptly removed from all points of issue or use; and

(5) any obsolete documents retained as archives are suitably identified as obsolete; and

(6) changes to documentation are reviewed and approved by authorised personnel who shall have access to pertinent background information upon which to base their review and approval; and

(7) the current version of each item of documentation can be identified to preclude the use of out-of-date editions.

172.65 Contingency plan

(a) Each applicant for the grant of an air traffic service certificate shall establish a contingency plan providing for the safe and orderly flow of traffic in the event of a disruption, interruption, or temporary withdrawal of an air traffic service or related supporting service.

(b) In addition to the requirement in paragraph (a), each applicant for the grant of an air traffic service certificate to provide services in the Auckland Oceanic FIR shall detail in its plan provisions for the continuation of the safe and orderly flow of international traffic not landing in New Zealand.

172.67 Co-ordination requirements

(a) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure, where applicable, co-ordination between each ATS unit listed in the applicant's exposition and the following agencies—

(1) any holder of an aeronautical telecommunication service organisation certificate issued under Part 171; and

(2) any holder of an air navigation service organisation certificate issued under Part 173; and

(3) any holder of an aviation meteorological service organisation certificate under Part 174; and

(4) any holder of an aeronautical information service organisation certificate issued under Part 175; and

(5) aircraft operators; and

(6) the New Zealand Defence Force; and

(7) search and rescue authorities; and

(8) where the listed ATS unit is an aerodrome control or aerodrome flight information unit—

(i) the aerodrome operator; and

(ii) the apron management service, if that service is not provided by the aerodrome control unit.

(b) The applicant shall establish procedures to ensure an ATS letter of agreement is in place between each ATS unit listed in the applicant's exposition and—

(1) each ATS unit responsible for adjoining airspace, and

(2) any other ATS unit with which regular operational co-ordination is required.

(c) The applicant shall establish procedures to ensure each ATS letter of agreement—

(1) details such matters as are necessary for effective co-ordination between the units party to the agreement; and

(2) is kept current; and

(3) is signed by senior representatives of the participating units; and

(4) is part of the applicant's operations manual.

(d) The applicant shall provide systems and procedures to facilitate communications between those ATS units having an operational requirement to communicate with each other.

(e) The applicant shall provide systems and procedures to ensure that ATS units, aircraft operators, and aviation meteorological service providers, where they require the information, are provided, through the exchange of ATS messages, with details of —

(1) the intended movement of each aircraft for which a flight plan has been filed, and any amendments to that flight plan; and

(2) current information on the actual progress of the flight.

(f) The applicant shall establish procedures to ensure that ATS messages are prepared and transmitted in accordance with procedures detailed and

cross-referenced in Document 4444 (Part IX – Air Traffic Services Messages), except that the term *CAVOK* shall not be used.

172.69 Notification of facility status

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures to notify users of its air traffic services of relevant operational information and of any changes in the operational status of each facility or service listed in the applicant's exposition.

(b) The procedures shall ensure that —

(1) operational information for each of the applicant's air traffic services is forwarded to the holder of the aeronautical information service certificate issued under Part 175 for the NZAIP service; and

(2) the users of an air traffic service are notified without delay of any change in operational status of the facility or service that may affect the safety of air navigation, and, except where the change is temporary in nature, information concerning any change in operational status is forwarded to the holder of the aeronautical information service certificate for the NOTAM service.

172.71 General information requirements

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures for the receipt of information on the following activities when the activity could affect airspace used by flights within the applicant's area of responsibility—

(1) pre-eruption volcanic activity; and

(2) volcanic eruptions; and

(3) volcanic ash-cloud; and

(4) release into the atmosphere of radioactive materials or toxic chemicals.

(b) The applicant shall establish systems and procedures to ensure that each ATS unit, as appropriate to the applicant's intended area of responsibility, is kept informed of the operational status of—

(1) non-visual navigation aids; and

(2) visual aids essential for take-off, departure, approach, and landing procedures; and

(3) visual and non-visual aids essential for surface movement.

(c) Each applicant for the grant of an air traffic service certificate for an—

(1) aerodrome control unit; or

(2) approach control unit; or

(3) aerodrome flight information service unit—

shall establish procedures to ensure the unit is kept informed of operationally significant conditions on the movement area. The information shall include the existence of temporary hazards and the operational status of any associated facilities at the aerodrome.

172.73 Meteorological information and reporting

(a) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure that all meteorological information provided as part of any flight information service is—

(1) supplied by the holder of an aviation meteorological service organisation certificate issued under Part 174; or

(2) issued as a *basic weather report* in accordance with 174.3 and 174.6.

(b) The applicant shall establish systems and procedures to ensure that ATS units are supplied with the meteorological information necessary for the performance of their respective functions, in a form that requires a minimum of interpretation by ATS personnel.

(c) The applicant shall establish procedures to ensure that equipment used in the compilation of *basic weather reports*—

(1) supplies data representative of the area for which the measurements are required; and

(2) where that equipment consists of multiple wind direction and speed indicators, identifies the runway, or section of the runway, monitored by each instrument.

(d) The applicant shall establish a procedure to ensure that the information contained in a meteorological bulletin remains unchanged through onward transmission.

172.75 Area and approach control services

(a) Each applicant for the grant of an air traffic service certificate in respect of an area or approach control service shall establish systems and procedures to—

(1) determine, from information received, the positions of known aircraft relative to each other; and

(2) provide for the issue of ATC clearances, instructions, and information, according to the airspace classification and type of flight, for the purpose of preventing collisions between aircraft under the control of the unit, and expediting and maintaining a safe and efficient flow of traffic; and

(3) co-ordinate clearances, as necessary, with other ATC units; and

(4) display, in a manner that permits ready analysis, information on aircraft movements, together with a record of clearances issued.

(b) The procedures required by paragraph (a)(2) shall, except as provided in paragraph (d) and 172.91, ensure vertical or horizontal or composite separation is provided, in accordance with paragraph (c), between—

(1) all flights in classes A and B airspace; and

(2) IFR flights in classes C, D, and E airspace; and

(3) IFR flights and VFR flights in class C airspace; and

(4) IFR flights and VFR flights, at night, in class D and E airspace; and

(5) IFR flights and Special VFR flights; and

(6) Special VFR flights when the flight visibility is reported to be less than 5 km.

(c) The separation required by paragraph (b) shall be in accordance with criteria and minima prescribed by—

(1) Annex 11; or

(2) Document 4444; or

(3) Document 7030; or

(4) Appendix A.

(d) In Class D or E airspace, the ATC separation required by paragraphs (b)(2) and (3) is not applicable to an IFR flight cleared to maintain its own separation from other controlled flights. Such a clearance shall not be issued unless—

(1) the clearance is in response to a specific request from the aircraft; and

(2) the flight is by day, and visual meteorological conditions exist; and

(3) a radar control service is not available; and

(4) the clearance is for a specific portion of the flight; and

(5) the pilots of all flights that will be essential traffic agree with the application of the procedure; and

(6) essential traffic information is passed to all affected flights; and

(7) the flights concerned are on the same ATC frequency.

172.77 Aerodrome control service

(a) Each applicant for the grant of an air traffic service certificate in respect of an aerodrome control service shall establish systems and procedures to—

(1) determine, from information received and visual observation, the relative positions of known aircraft to each other; and

(2) provide for the issue of ATC clearances, instructions, and information, for the purpose of preventing collisions between—

(i) aircraft flying in the vicinity of an aerodrome; and

(ii) aircraft landing and taking off; and

(iii) aircraft operating on the manoeuvring area; and

(iv) aircraft, vehicles, and persons, operating on the manoeuvring area; and

(v) aircraft on the manoeuvring area and obstructions on that area; and

(3) provide for the issue of ATC clearances, instructions, and information, for the purpose of expediting and maintaining a safe and efficient flow of traffic; and

(4) except as provided in 172.91, provide runway and wake turbulence separation in accordance with criteria and minima prescribed by—

(i) Annex 11; or

(ii) Document 4444; or

(iii) Document 7030; and

(5) ensure that emergency vehicles responding to an aircraft emergency are given priority over all other surface movement traffic; and

(6) provide for the control of the movement of persons or vehicles, including towed aircraft, on the manoeuvring area, as necessary to avoid hazard to them or to aircraft landing, taxiing, or taking off; and

(7) co-ordinate as necessary with other ATS units; and

(8) display, at operating positions, continuously updated information on aircraft movements.

(b) The applicant shall establish a procedure to ensure that, when radio communication is not available, basic clearances, instructions, and information required by paragraph (a)(2) can be conveyed by the use of the light signals described in 91.243.

(c) The applicant shall establish procedures to ensure that when required by either the weather, or category of approach, or both—

(1) aircraft on an ILS or MLS approach are informed of ILS/MLS critical area incursions, or the imminent possibility of an incursion; or

(2) the applicable ILS/MLS critical areas are protected from incursion when an aircraft is on an ILS or MLS approach, or has reached a point on the approach from which protection from incursion is necessary.

(d) The applicant shall establish a procedure to ensure that, except as provided in 172.91, and subject to authorisation by the applicable approach control unit, aerodrome control units provide separation between—

(1) IFR flights and Special VFR flights; and

(2) Special VFR flights when the flight visibility is reported to be less than 5 km.

(e) The applicant shall establish a procedure to ensure that, when authority has been delegated by, and accepted from, the applicable area or approach control unit, aerodrome control units provide separation between controlled flights in accordance with the delegation.

(f) The separation required by paragraphs (d) and (e) shall be obtained by the use of vertical or horizontal or composite separation, in accordance with criteria and minima prescribed by—

(1) Annex 11; or

(2) Document 4444; or

(3) Document 7030; or

(4) Appendix A.

172.79 Separation from special use airspace [Reserved]

172.81 Responsibility for control

(a) Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that any controlled flight is under the control of only one ATC operating position at any given time.

(b) The applicant shall establish procedures to ensure that responsibility for the control of all aircraft operating within a given block of airspace is vested in a single operating position. Control of an aircraft or groups of aircraft may be delegated to other operating positions provided that co-ordination between all affected operating positions is assured.

(c) The applicant shall establish procedures for the transfer of responsibility for the control of an aircraft.

(d) The procedures required by paragraph (c) shall ensure that—

(1) transfer arrangements are—

(i) agreed between ATC units responsible for adjacent airspaces and published in ATS letters of agreement; and

(ii) in place for separate operating positions within an ATC unit and promulgated in the holder's operations manual; and

(2) responsibility for control of an aircraft is not transferred from one ATC unit to another without—

(i) communication of appropriate parts of the current flight plan; and

(ii) any relevant control information; and

(iii) the consent of the accepting unit.

172.83 Priorities

(a) Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that, providing safety is not jeopardised, ATC units apply the following priorities—

(1) an aircraft known or believed to be in a state of emergency or impaired operation has priority over all other aircraft; and

(2) an aircraft landing, or in the final stages of an approach to land, has priority over a departing aircraft; and

(3) an aircraft landing or taking off has priority over taxiing aircraft.

(b) The applicant shall establish procedures to ensure that, where practical, following a request from the pilot, an aircraft involved in, or positioning for, the following activities is granted priority—

(1) ambulance or mercy missions; and

(2) search and rescue; and

(3) civil defence or police emergencies; and

(4) carriage of heads-of-state, heads-of-government, or equivalent dignitaries.

(c) The applicant shall establish procedures to ensure that an aircraft at a cruising level shall normally have priority over other aircraft requesting that level, except that, within the Auckland Oceanic FIR—

(1) an aircraft may be given priority for a cruising level in accordance with procedures published in Document 7030, or an ATS letter of agreement; and

(2) an aircraft occupying a cruising level may be reassigned another level to maintain separation.

(d) An applicant for an air traffic service certificate in respect of an area control service may establish procedures regarding priorities to be applied in airspace designated as RNP airspace under Part 71.

(e) Subject to the requirements of paragraphs (a) and (b), an applicant may put in place schemes for the determination of priorities for arriving and departing flights, provided that consultation with interested parties is undertaken prior to implementing the scheme.

(f) The applicant shall establish procedures to ensure that, where priorities are established under paragraphs (d) or (e), relevant information, including details regarding the handling of complaints, is published in the NZAIP.

(g) The applicant shall establish procedures to ensure that, providing safety is not jeopardised, due regard is given to those priorities determined in conjunction with the aerodrome operator for—

(1) aircraft arriving and departing that aerodrome; and

(2) other operations in any control zone associated with that aerodrome.

(h) The applicant shall establish procedures to ensure that, except when applying priority in accordance with other provisions of this rule, priority for arriving and departing flights is allocated on a first-come first-served basis.

(i) The applicant shall establish procedures to ensure that the provision of an ATC service takes precedence—

(1) over the provision of a flight information service whenever the situation so requires; and

(2) over the performance of any other non-ATS tasks.

172.85 Flow control

(a) Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish flow control procedures where, due to limitations in ATS system capacity or aerodrome capacity, the applicant considers the procedures necessary.

(b) The procedures shall take account of—

(1) the requirements of affected aerodrome operators including their traffic handling priorities; and

(2) the needs of aircraft operators, and other ATS providers, who will be affected by the procedures; and

(3) the requirements of the aeronautical information service, including advance notice, and information on the method of activation and de-activation.

172.87 ATC clearances

(a) Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures for the provision of ATC clearances.

(b) The procedures shall ensure that—

(1) no person knowingly issues an ATC clearance or instruction that requires or invites a pilot to violate the provisions of any other rule; and

(2) clearances and instructions contain positive and concise data and are, where practicable, phrased in a standard manner; and

(3) if a pilot advises that a clearance or instruction is unsuitable, an amended clearance or instruction is, if practicable, issued; and

(4) an ATC clearance for an enroute flight consists of—

(i) the aircraft identification as shown in the flight plan or, where similarity with another flight might cause confusion, an alternative identification provided by ATC; and

(ii) the clearance limit; and

(iii) the route of flight; and

(iv) the level(s) of flight for the entire route, or part thereof, and changes of level if required; and

(v) any necessary instructions or information on other matters, such as approach or departure manoeuvres, communications, and the time of validity or expiry of the clearance; and

(5) an ATC clearance for a local flight, a flight operating in defined areas, or a flight operating in a random manner, includes those elements detailed in paragraph (4) that are appropriate; and

(6) an ATC clearance for a transonic flight—

(i) extends at least to the end of the transonic acceleration phase; and

(ii) provides for uninterrupted descent during deceleration from supersonic cruise to subsonic flight.

172.89 Cruising levels

(a) Each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that cruising levels allocated within the New Zealand FIR are selected in accordance with 91.425 for IFR flights, or 91.313 for VFR flights, except that, within controlled airspace—

(1) for both IFR and VFR flights, correlation of cruising level with track need not apply; and

(2) VFR flights may be allocated IFR levels.

(b) Each applicant for an air traffic service certificate for the provision of an area control service in the Auckland Oceanic FIR shall establish procedures to ensure that cruising levels are allocated in accordance with Annex 2, except that correlation of cruising level with track need not apply.

172.91 Deviation from an ATC clearance

(a) Subject to paragraph (b), each applicant for the grant of an air traffic service certificate in respect of an air traffic control service shall establish procedures to ensure that instructions issued to restore any loss of separation do not hinder the responses of a pilot to—

(1) TCAS or GPWS alerts; or

(2) weather, or other emergency situations, necessitating a deviation from an ATC clearance.

(b) The procedures required by paragraph (a) shall ensure that, once the emergency situation has been resolved, if any separation has been lost it is restored.

172.93 Flight information service

General

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that a flight information service is provided to any aircraft that is likely to be affected by the information, if—

(1) the aircraft is being provided with an ATC service; or

(2) the aircraft is being provided with an aerodrome flight information service; or

(3) the aircraft is operating IFR; or

(4) the aircraft is operating VFR having filed the flight plan required by 91.307; or

(5) the pilot of an aircraft operating VFR without a flight plan makes a specific request for flight information.

(b) The applicant shall establish procedures to ensure that the flight information service includes the provision of available and relevant—

(1) SIGMET information; and

(2) information on weather conditions reported or forecast, at departure, destination, and alternate aerodromes; and

(3) information concerning pre-eruption volcanic activity, volcanic eruptions, and volcanic ash clouds; and

(4) information concerning the release into the atmosphere of radioactive materials or toxic chemicals; and

(5) information on changes in the serviceability of navigation aids; and

(6) information on changes in the condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice, or water; and

(7) information on unmanned free balloons; and

(8) other information likely to affect safety.

(c) The applicant shall establish procedures to ensure that flight information provided to aircraft operating on a VFR flight plan, and aircraft specifically requesting the information, includes available details concerning weather conditions along the route of flight that are likely to make operation under VFR impracticable.

(d) The applicant shall establish procedures to ensure that, when requested by a pilot, flight information for a long-distance flight over water includes any available information on surface vessels in the area.

(e) The applicant shall establish procedures to ensure that, whenever water is present on a runway, a description of the runway surface conditions on the centre half of the width of the runway is made available using one of the following terms—

(1) DAMP – the surface shows a change of colour due to moisture; or

(2) WET – the surface is soaked but there is no standing water; or

(3) WATER PATCHES – significant patches of standing water are visible; or

(4) FLOODED – extensive standing water is visible.

(f) The applicant shall establish procedures to ensure that, where practical, local aircraft operators likely to be affected by the information are advised of short-notice changes to published hours of service where they are unlikely to have the information from any other source.

Traffic Information

(g) Each applicant for the grant of an air traffic service certificate for an air traffic control service, shall establish procedures to ensure that essential traffic information is passed to all affected traffic.

(h) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that traffic information is provided to flights likely to be affected by the information as follows:

(1) in class C airspace, between VFR flights, together with traffic avoidance advice on request:

(2) in class D airspace, between IFR and VFR flights by day, and between VFR flights, together with traffic avoidance advice on request:

(3) in class E airspace, between IFR and VFR flights by day, and where practical between VFR flights on request:

(4) in class G airspace, between IFR flights, and where practical between other flights on request.

172.95 Aerodrome flight information service

(a) Each applicant for the grant of an air traffic service certificate in respect of an aerodrome flight information service shall establish systems and procedures to—

(1) determine, from information received and visual observation, the relative positions of known aircraft to each other; and

(2) provide for the issue of advice and information, including the designation of a preferred runway, for the purpose of the safe and efficient operation of—

(i) aircraft flying in the vicinity of an aerodrome; and

(ii) aircraft operating on the manoeuvring area; and

(iii) aircraft landing and taking off; and

(iv) aircraft, vehicles, and persons, on the manoeuvring area; and

(v) aircraft on the manoeuvring area and obstructions on that area.

(b) The applicant shall establish procedures to ensure that the designated preferred runway is that most suitable for the particular operation.

172.97 Alerting service

(a) In this Rule—

ALERFA means the Alert phase:

DETRESFA means the Distress phase:

INCERFA means the Uncertainty phase:

RCC means the rescue co-ordination centre established by the Authority under section 72B(2A) of the Act.

(b) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure the provision of an alerting service within its areas of responsibility—

(1) when aerodrome control or aerodrome flight information service is in attendance, for all aerodrome traffic; and

(2) for all aircraft—

(i) having filed a flight plan in accordance with 91.307 or 91.407; or

(ii) having notified a SARTIME; or

(iii) otherwise known by any air traffic service to be in need of assistance; and

(3) for any aircraft known or believed to be the subject of unlawful interference.

(c) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that, in the event of a state of emergency described in paragraph (f)—

(1) immediate declaration of an INCERFA, ALERFA, or DETRESFA is made, in accordance with paragraph (f); and

(2) the declaration is notified to the ACC or FIC responsible, except where the emergency can be dealt with by local emergency organisations.

(d) Each applicant for the grant of an air traffic services certificate in respect of an area control service or flight information service shall establish procedures to ensure that, in the event of a state of emergency, an ACC or FIC—

(1) serves as the central point within the FIR concerned for collecting all information relevant to the state of emergency; and

(2) except as prescribed in paragraph (l)(1), forwards such information without delay to the RCC.

(e) Notwithstanding paragraph (c), each applicant for an air traffic service certificate for an aerodrome control, approach control, or aerodrome flight information service, shall establish procedures to ensure that whenever the urgency of the situation so requires, those services shall first alert appropriate local emergency organisations.

(f) The declaration required by paragraph (c) shall be made in the following circumstances, and in any other circumstances that warrant such a declaration—

(1) *INCERFA* when—

(i) no communication has been received from an IFR or controlled VFR aircraft within a period of 15 minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with the aircraft was first made, whichever is the earlier; or

(ii) a VFR aircraft on a flight plan fails to arrive at an aerodrome where an ATS unit is on watch within 30 minutes of the estimated time of arrival last notified to, or estimated by, ATS, whichever is the later; or

(iii) a VFR aircraft on a flight plan fails to arrive at a destination within a control zone, within 30 minutes of the estimated time of arrival last notified to, or estimated by, ATS, whichever is the later; or

(iv) a VFR aircraft on a flight plan fails to arrive at its final destination within 30 minutes of the estimated time of arrival last notified to ATS, or estimated by ATS, whichever is the later; or

(v) a pilot fails to report at the nominated SARTIME and immediate checks have failed to locate the aircraft—

except when no doubt exists as to the safety of the aircraft and its occupants; or

(2) *ALERFA* when—

(i) an aircraft is known or believed to be subject to unlawful interference; or

(ii) following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft; or

(iii) an aircraft has been cleared to land, and fails to land within five minutes of the estimated time of landing, and communication has not been re-established with the aircraft; or

(iv) information has been received that indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is likely—

except, in the case of subparagraphs (ii), (iii), and (iv), when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants; or

(3) *DETRESFA* when—

(i) following the alert phase further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the probability that the aircraft is in distress; or

(ii) the fuel on board is considered to be exhausted, or to be insufficient to enable the aircraft to reach safety; or

(iii) information is received that indicates that the operating efficiency of the aircraft has been impaired to the extent that a forced landing is likely; or

(iv) information has been received that, or it is reasonably certain that, the aircraft is about to make or has made a forced landing—

except when there is reasonable certainty that the aircraft and its occupants are not threatened by grave and imminent danger and do not require immediate assistance.

(g) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure the notification of an emergency situation required by paragraph (c)(2) includes such of the following information as is available, in the order listed:

(1) INCERFA, ALERFA, or DETRESFA as appropriate to the phase of the emergency:

(2) agency and person calling:

(3) nature of the emergency:

(4) significant information from the flight plan:

(5) unit that made last contact, time, and frequency used:

(6) last position report and how determined:

(7) colour and distinctive marks of aircraft:

(8) any action taken by the reporting office.

(h) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that, following the notification of an emergency situation, the RCC is provided, without delay, with—

(1) any useful additional information; and

(2) notification when the emergency situation no longer exists.

(i) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure, as necessary, the use of all available means

to establish and maintain communication with, and surveillance of, an aircraft in a state of emergency.

(j) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that, when a state of emergency is considered to exist, the last known position of any aircraft involved is established and recorded.

(k) Each applicant for the grant of an air traffic service certificate for the provision of an area control service or flight information service within the Auckland Oceanic FIR shall establish procedures to ensure that, when a state of emergency is considered to exist, the position and track of other aircraft known to be operating in the vicinity are established to determine those most suitable to provide assistance.

(l) Each applicant for the grant of an air traffic service certificate in respect of an area control service or flight information service shall establish procedures to ensure that —

(1) when an ACC or FIC declares an INCERFA or ALERFA it shall, where practical, advise the aircraft operator prior to notifying the RCC; and

(2) all information notified to the RCC by an ACC or FIC shall, where practical, also be communicated without delay to the aircraft operator.

172.99 Flight plans

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures for the acceptance and actioning of flight plans.

(b) Each applicant shall ensure that the acceptance procedures required by paragraph (a) include, for the first ATS unit receiving a filed flight plan—

(1) a check for compliance with any prescribed flight plan format and data conventions; and

(2) a check for completeness, and to the extent practical, for accuracy; and

(3) provision for any action necessary to make the plan acceptable to ATS.

(c) Any applicant intending to provide air traffic services from more than one location may nominate a single ATS unit within the applicant's organisation to accept filed flight plans on behalf of any or every unit.

(d) Each applicant for the grant of an air traffic service certificate intending to operate a centralised flight planning office shall ensure the office is equipped with—

(1) AFTN, facsimile, and computer data-link connection facilities, for the acceptance of flight plans from aircraft operators and any other ATS unit; and

(2) facilities for the advance filing, retention, and activation of standard or repetitive elements of flight plan information.

172.101 Time

(a) Each applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that ATS unit clocks and other time recording devices—

(1) use Co-ordinated Universal Time and express that time in hours and minutes of the 24-hour day beginning at 0000 UTC; and

(2) are correct to within 5 seconds of UTC as determined by reference to a standard time station or GPS time standard.

(b) The applicant shall establish a procedure to ensure that the correct time, to the nearest half minute, is provided—

(1) in respect of any aerodrome control service or aerodrome flight information service, to IFR aircraft prior to taxiing for take-off unless arrangements have been made for the pilot to obtain it from other sources; and

(2) to any aircraft on request.

172.103 Altimeter setting procedures

Each applicant for the grant of an air traffic service certificate shall establish a procedure to ensure that—

(1) QNH altimeter settings are in hectopascals rounded down to the nearest whole hectopascal; and

(2) the appropriate aerodrome or area QNH setting is provided to all aircraft on initial radio contact, including aircraft that advise having received the current applicable ATIS broadcast; and

(3) ATS units provide to an aircraft, on request, the current applicable aerodrome or area QNH altimeter setting.

172.105 Radio and telephone procedures

(a) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to ensure that—

(1) the standard telephony and radiotelephony phraseology prescribed in paragraph (b) is used; and

(2) in all radiotelephony communications discipline is observed, by transmitting only those messages that are necessary for the provision of an air traffic service, or that otherwise contribute to safety; and

(3) communications procedures are in accordance with the applicable communication procedures prescribed in Annex 10 Volume II, except that—

(i) procedures relating to callsigns for domestic use by New Zealand registered aircraft are those required by 91.249; and

(ii) an aerodrome flight information service shall use the radiotelephony callsign suffix **flight service**.

(b) The applicant shall establish procedures to ensure that, for the purposes of paragraph (a), the standard phraseology, and the circumstances in which it is used, is that published in—

(1) *[Reserved]*

(2) Annex 10; or

(3) Document 4444; or

(4) Document 9432.

(c) For the purposes of paragraph (b), where differences occur between the stated documents, the particular phraseology shall be selected according to the order of precedence of the documents as listed.

172.107 Radar services

Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that, where radar is used to support the provision of an air traffic service—

(1) all radar services are provided in accordance with procedures published in Document 4444 or Document 7030 (as applicable to the Middle East/Asia Region); and

(2) SSR code allocation for international flights is in accordance with the code assignment system published in the applicable ICAO Air Navigation Plan; and

(3) an SSR code management plan is in place for domestic flights that—

(i) conforms to the applicable principles contained in Document 4444; and

(ii) does not conflict with the SSR code allocation tables of 91.247(a); and

(4) full information is made available to pilots and aircraft operators on—

(i) the nature and extent of the radar services provided; and

(ii) any significant limitations regarding such radar services; and

(5) the information displayed at individual radar operating positions is that required for the air traffic services to be provided.

172.109 Aircraft emergencies and irregular operation

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure maximum assistance and priority is given to an aircraft known, or believed to be, in a state of emergency.

(b) Each applicant shall, where appropriate, establish procedures to assist strayed aircraft, unidentified aircraft, and aircraft subject to military interception.

172.111 Action after serious incident or accident

Each applicant for the grant of an air traffic service certificate shall establish procedures regarding a serious incident or accident to—

(1) determine if any air navigation facilities have contributed to the event; and

(2) ensure immediate action is taken to—

(i) warn other aircraft that may be using or intending to use the facilities; and

(ii) advise the operator of the facility of the occurrence, and that the facility may be implicated; and

(3) assist the operator of the facility with the prompt promulgation of any decision to withdraw the equipment from service; and

(4) ensure that any facility identified in paragraph (1) is not used in the provision of separation to IFR aircraft until cleared for use by the relevant holder of an aeronautical telecommunications service certificate issued under Part 171.

172.113 Incidents

Each applicant for the grant of an air traffic service certificate shall establish procedures for—

(1) the notification, investigation, and reporting of incidents in accordance with Part 12; and

(2) the forwarding of facility malfunction reports required by 91.431 to the applicable aeronautical telecommunication service certificate holder.

172.115 Records

(a) Each applicant for the grant of an air traffic service certificate shall establish systems and procedures to identify, collect, index, file, store, secure, maintain, access, and dispose of, records necessary for—

(1) the operational provision of air traffic services; and

(2) the purpose of assisting with any accident or incident investigation.

(b) The records shall include—

(1) telephone communications; and

(2) radio broadcasts and communications; and

(3) air-ground digital data exchanges; and

(4) radar information; and

(5) filed flight plans including standard and repetitive plans; and

(6) flight progress strips; and

(7) staff duty rosters; and

(8) appropriate meteorological and aeronautical information, except where the information is retained for an equivalent period by a meteorological or AIS organisation; and

(9) a record of each internal quality assurance review carried out under the procedures required by 172.123. The record shall detail the activities reviewed and any necessary follow-up corrective and preventive actions.

(c) The applicant shall establish systems and procedures to ensure the electronic recording of—

(1) all ATS radio and telephone communications; and

(2) all high-frequency air-ground communications; and

(3) all relevant data from primary and secondary radar equipment, or obtained through automatic dependent surveillance (ADS), used in providing or supporting an ATC service; and

(4) for any equipment coming into service after the date this Part comes into force, any transfer and acceptance of control process not conducted by telephone.

(d) The applicant shall establish systems and procedures to ensure that electronic records required by paragraph (c)—

(1) include time recording, correct to within 5 seconds of UTC, as determined by reference to a standard time station or GPS time standard; and

(2) either—

(i) replicate the voice communications, and, if applicable, the radar picture, applying at the particular operating position; or

(ii) are accompanied by a statement fully describing the differences between the recording supplied and a recording in accordance with subparagraph (i).

(e) For the purposes of paragraph (d)(2) the term radar picture includes any visual presentation of aircraft position, however derived.

(f) The option provided by paragraph (d)(2)(ii) shall apply only to equipment in service on the date this Part comes into force.

(g) The applicant shall establish systems and procedures to ensure that all records, except where replication is required by paragraph (d)(2)(i), are of sufficient clarity to convey the required information.

(h) The applicant shall establish procedures to ensure that the records referred to in paragraph (b) are retained for 31 days from the date of entry, except for—

(1) staff duty rosters; and

(2) written records associated with the requirements of 172.121(a)(2) and (3)—

which shall be retained for 2 years.

172.117 Logbooks and position logs

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures to ensure that a logbook, with sequentially numbered pages, is kept at each ATS unit, and, where a unit has physically separate operations areas, at each such location within the unit.

(b) The procedure shall ensure that—

(1) the logbook is maintained by the senior person on duty, or the person on watch at a nominated operating position; and

(2) the logbook is maintained throughout the hours of watch of the unit or operations room; and

(3) all entries include the time of entry; and

(4) the person responsible for maintaining a logbook signs *On Watch,* and effects transfer of responsibility by successive *On Watch* entries; and

(5) logbook entries are—

(i) in chronological sequence and in ink; and

(ii) without erasure, defacement, or obliteration; and

(iii) corrected by drawing a single line through the erroneous information and initialling the correction; and

(6) actual times of opening and closing watch are recorded in the logbook, together with the reason for every variation from published hours of service; and

(7) logbooks are retained for a period of 3 years from the date of final entry.

(c) Each applicant shall establish a procedure to ensure the keeping of an operating position log, when such information is not available in the logbook required by paragraph (a).

(d) The procedure shall ensure that the operating position log—

(1) contains sufficient information to identify—

(i) when that position was in operation; and

(ii) the services being provided from that position; and

(iii) the identity of the individual providing the service; and

(2) is retained for a period of 31 days from the date of filing.

172.119 Security

(a) Each applicant for the grant of an air traffic service certificate shall prepare an ATS security programme.

(b) Each ATS security programme shall specify the physical security requirements, practices, and procedures to be followed for the purposes of minimising the risk of destruction of, damage to, or interference with the operation of, any ATS unit operated by the applicant where such destruction, damage, or interference is likely to endanger the safety of aircraft.

(c) Without limiting the generality of paragraph (b), the security programme shall specify such physical security requirements, practices, and procedures as may be necessary—

(1) to ensure that entrances to permanent ATS facilities operated by the applicant are subject to positive access control at all times, so as to prevent unauthorised entry; and

(2) to protect personnel on duty; and

(3) to be followed in the event of a bomb threat or other threat of violence against an ATS unit; and

(4) to monitor unattended ATS unit buildings to ensure that any intrusion or interference is detected.

172.121 Service disruptions

(a) Each applicant for the grant of an air traffic service certificate shall establish procedures, in addition to any requirements in Part 12, to—

(1) advise the Director of any planned disruption to the provision of air traffic services that could have an impact on safety; and

(2) investigate any unplanned disruption to the provision air traffic services; and

(3) report to the Director, within 48 hours of the occurrence, the circumstances surrounding any unplanned disruption to air traffic services when the disruption affected, or could have affected, the safety of air traffic.

(b) Disruptions reportable under paragraph (a) shall include, but are not limited to, any—

(1) failure to open watch within 15 minutes of the promulgated opening time; and

(2) any interruption, of greater than 10 minutes, to the normal provision of an air traffic service; and

(3) curtailment of watch, by greater than 30 minutes, from the promulgated off watch time.

172.123 Internal quality assurance

(a) Each applicant for the grant of an air traffic service certificate shall establish an internal quality assurance system to ensure compliance with, and the adequacy of, the procedures required by this Part.

(b) The internal quality assurance system shall include—

(1) a safety policy and safety policy procedures; and

(2) a procedure to ensure quality indicators, including samples of radio and telephone records, defect and incident reports, and personnel and customer feedback, are monitored to identify existing problems or potential causes of problems within the system; and

(3) a procedure for corrective action to ensure existing problems that have been identified within the system are corrected; and

(4) a procedure for preventive action to ensure that potential causes of problems that have been identified within the system are remedied; and

(5) an internal audit programme to audit the applicant's organisation for conformity with its safety policy; and

(6) management review procedures to ensure the continuing suitability and effectiveness of the internal quality assurance system in satisfying the requirements of this Part.

(c) The safety policy procedures shall ensure that the safety policy is understood, implemented, and maintained at all levels of the organisation.

(d) The procedure for corrective action shall specify how—

(1) to correct an existing problem; and

(2) to follow up a corrective action to ensure the action is effective; and

(3) to amend any procedure required by this Part as a result of a corrective action; and

(4) management will measure the effectiveness of any corrective action taken.

(e) The procedure for preventive action shall specify how—

(1) to correct a potential problem; and

(2) to follow-up a preventive action to ensure the action is effective; and

(3) to amend any procedure required by this Part as a result of a preventive action; and

(4) management will measure the effectiveness of any preventive action taken.

(f) The internal quality audit programme shall—

(1) specify the frequency and location of the audits taking into account the nature of the activity to be audited; and

(2) ensure audits are performed by trained auditing personnel who are independent of those having direct responsibility for the activity being audited; and

(3) ensure the results of audits are reported to the personnel responsible for the activity being audited and the manager responsible for internal audits; and

(4) require preventive or corrective action to be taken by the personnel responsible for the activity being audited if problems are found by the audit; and

(5) ensure follow up audits to review the effectiveness of any preventive or corrective action taken.

(g) The procedure for management review shall—

(1) specify the frequency of management reviews of the quality assurance system taking into account the need for the continuing effectiveness of the system; and

(2) identify the responsible manager who shall review the quality assurance system; and

(3) ensure the results of the review are evaluated and recorded.

(h) The senior person who has the responsibility for internal quality assurance shall have direct access to the Chief Executive on matters affecting the safe provision of any air traffic service listed in the exposition.

172.125 Organisation exposition

(a) An applicant for the grant of an air traffic service certificate shall provide the Director with an exposition containing—

(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 and any other applicable Part; and

(ii) are required to be complied with by its personnel at all times; and

(2) the titles and names of the senior person or persons required by 172.51(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 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)(5)(i); and

(5) in the case of an organisation providing air traffic services from more than one ATS unit, a table listing—

(i) locations of ATS units; and

(ii) the aerodrome or airspace being serviced; and

(iii) the services provided; and

(6) details of the applicant's staffing structure for each ATS unit; and

(7) details of procedures required by 172.51(b) regarding the, competency, qualifications, maintenance of current operating practice, and fitness of personnel; and

(8) details of procedures required by 172.53 regarding the training and assessment of ATS personnel, and regarding the qualifications of ATS training personnel; and

(9) *[Reserved]*

(10) a description of the display systems to be used in meeting the requirements of 172.57(b)(5)(i) and 172.57(c)(2)(i); and

(11) the information required by 172.59 regarding hours of service, the establishment of an air traffic service, and any transitional arrangements; and

(12) procedures regarding shift administration required by 172.61; and

(13) details of the procedures required by 172.63 regarding the control of documentation; and

(14) the contingency plans required by 172.65; and

(15) details of the systems and procedures required by 172.67 regarding co-ordination requirements; and

(16) details of the procedures required by 172.69 regarding the notification of facility status; and

(17) details of the systems and procedures required by 172.71 regarding general information requirements; and

(18) details of the systems and procedures required by 172.73 regarding meteorological information and reporting; and

(19) details of systems and procedures required by 172.75 regarding the provision of area control and approach control services; and

(20) details of systems and procedures required by 172.77 regarding the provision of aerodrome control service; and

(21) *[Reserved]*

(22) details of the procedures required by 172.81 regarding responsibility for control; and

(23) details of the procedures required by 172.83 regarding the application of priorities; and

(24) details of the procedures required by 172.85 regarding flow control; and

(25) details of the procedures required by 172.87 regarding ATC clearances; and

(26) details of the procedures required by 172.89 regarding the allocation of cruising levels; and

(27) details of the procedures required by 172.91 regarding deviations from an ATC clearance; and

(28) details of systems and procedures required by 172.93 regarding the provision of flight information service; and

(29) details of systems and procedures required by 172.95 regarding the provision of aerodrome flight information service; and

(30) details of systems and procedures required by 172.97 regarding the provision of alerting service; and

(31) details of the procedures required by 172.99 regarding the processing of flight plans; and

(32) details of the procedures required by 172.101 regarding time; and

(33) details of altimeter setting procedures required by 172.103; and

(34) details of the radio and telephone procedures required by 172.105; and

(35) details of the procedures required by 172.107 regarding the provision of radar services; and

(36) details of the procedures required by 172.109 regarding aircraft emergencies and irregular operation; and

(37) details required by 172.111 regarding procedures following a serious incident or accident; and

(38) details of the procedures regarding incidents required by 172.113; and

(39) details of systems and procedures required by 172.115 regarding the gathering and management of records; and

(40) details of the procedures required by 172.117 regarding the keeping of logbooks and position logs; and

(41) details of the programme required by 172.119 regarding security arrangements; and

(42) details of the procedures required by 172.121 regarding disruptions to service; and

(43) details of the systems, procedures, and programmes required by 172.123 regarding internal quality assurance; and

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

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

Subpart C — Operating Requirements

172.151 Continued compliance

Each holder of an air traffic service certificate shall—

(1) hold at least one complete and current copy of its exposition at each ATS unit listed in its exposition, except that manuals relating solely to a particular location need only be held at principal locations and the unit concerned ; and

(2) comply with all procedures and standards detailed in its exposition; and

(3) make each applicable part of its 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; and

(5) promptly notify the Director of any change of address for service, telephone number, or facsimile number, required by form CAA 24172/01.

172.153 Operations manuals

(a) Each holder of an air traffic service certificate shall provide, for compliance by its personnel, an operations manual or system of manuals for the services listed in its exposition.

(b) A holder certificated to provide more than one air traffic service, or an air traffic service or services from more than one location, may publish a

core manual together with manual supplements specific to each service or location.

172.155 Trials

(a) The Director may, upon application in writing from the holder of an air traffic service certificate, approve, subject to such conditions on that approval as the Director considers necessary in the interests of aviation safety, the conduct of trials regarding—

(1) separation minima; or

(2) standard phraseology; or

(3) radar procedures.

(b) A trial may be approved by the Director for a single period of no longer than 3 months, and upon further application in writing by the certificate holder, be extended by the Director for a single period of no longer than 3 months.

(c) A trial approved under this rule may be terminated by the Director at any time.

172.157 Denial of ATC clearance

(a) The holder of an air traffic service certificate in respect of an aerodrome control service shall not deny the pilot of an aircraft an ATC clearance on the basis of non-payment of charges owed to the certificate holder unless—

(1) the aircraft is on the ground; and

(2) that clearance is for entry onto the manoeuvring area.

(b) The certificate holder shall continue to provide normal ATC service for any aircraft entering the manoeuvring area without an ATC clearance.

172.159 Suspension of VFR operations

Each holder of an air traffic service certificate for an approach control service or aerodrome control service may, when appropriate for safety

reasons, suspend any or all controlled VFR operations within a control zone.

172.161 Changes to certificate holder's organisation

(a) Each holder of an air traffic service certificate shall ensure that its exposition is amended so as to remain a current description of the holder's organisation and services.

(b) The certificate holder shall ensure that any amendments made to the holder's exposition—

(1) meet the applicable requirements of this Part; and

(2) 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, except that, for the holder's operational manual or manuals, the certificate holder shall forward to the Director—

(1) printed amendments, at least 15 working days in advance of their effective date; and

(2) amendments of an urgent or immediate nature, without delay, and no later than the date on which they are effective.

(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; or

(2) the listed senior persons; or

(3) any aspect of air traffic management that may have an adverse impact on air traffic services provided by States responsible for adjacent airspace.

(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) A certificate holder shall comply with any conditions prescribed under paragraph (e).

(g) Where any of the changes referred to in this rule require an amendment to the certificate, the certificate holder shall forward the certificate to the Director as soon as practicable.

(h) The certificate holder shall make such amendments to the holder's exposition as the Director may consider necessary in the interests of aviation safety.

172.163 Withdrawal or transfer of service

(a) Each holder of an air traffic service certificate who wishes to permanently withdraw an air traffic service shall give the Director at least 90 days notice of the proposal and include in that notice a summary of factors considered in arriving at the decision to withdraw the service.

(b) Each holder of an air traffic service certificate who intends to permanently reduce the hours of operation of an air traffic service shall provide to the Director advance notice of, and the reasons for, the proposed reduction.

(c) Each holder of an air traffic service certificate who is the outgoing provider of an air traffic service shall not hinder the preparation and execution of the transitional arrangements required by 172.59(b).

Subpart D — Other Air Traffic Services

172.201 General

(a) A person may request the Director to determine whether an aviation related service is an air traffic service under paragraph (7) of the definition of the term in Part 1 by application in writing, including a definition, and details of, the proposed service.

(b) The Director may, in consultation with such persons as the Director considers necessary, determine whether any aviation related service is an air traffic service under paragraph (7) of the definition of the term.

172.203 Requirement

No person shall provide a service that the Director determines to be an air traffic service in accordance with 172.201 except under the authority of, and in accordance with, the provisions of an air traffic service certificate issued under this Subpart.

172.205 Application

(a) Each applicant for an air traffic service certificate for an air traffic service under paragraph (7) of the definition of the term shall complete form CAA 24172/01 and submit the completed form to the Director together with—

(1) such other details regarding the applicant's organisation and the air traffic service as the Director may require; and

(2) a payment of the appropriate application fee prescribed by regulations made under the Act.

172.207 Issue of certificate

(a) An applicant is entitled to an air traffic service certificate for an air traffic service under paragraph (7) of the definition of the term if the Director is satisfied that the—

(1) applicant is a fit and proper person; and

(2) granting of the certificate is not contrary to the interests of aviation safety.

(b) The Director may attach such conditions to the certificate as the Director thinks necessary in the interests of safety.

172.209 Operating conditions

Each holder of a certificate issued under this Subpart shall provide the air traffic service in accordance with the conditions attached to the certificate.

Appendix A — Separation minima

A.1 Vertical separation

The 1000 foot vertical separation minima below FL290 prescribed in Document 4444 may be reduced to 500 feet within a TMA or CTR providing—

(1) both aircraft are either medium or light wake turbulence category; and

(2) the lower aircraft is a VFR or Special VFR flight and operating at an altitude of 4500 feet or below.

CONSULTATION DETAILS

(This statement does not form part of the rules contained in Part 172.
It provides details of the consultation undertaken in making the rules.)

Background to the Rules

In April 1988 the Swedavia - McGregor Report on civil aviation regulation in New Zealand was completed. Following the recommendations contained in that report, the Civil Aviation Authority (CAA) (formerly the Air Transport Division of the Ministry of Transport) commenced a complete review of all existing civil aviation legislation. The existing legislation that was still appropriate has been rewritten into the new *Rules* format. New legislation is being generated where necessary for the areas not presently covered.

Considerable research was carried out to determine the format for the new legislation. It was decided that the legislative framework should incorporate the advantages of the regulatory system of the Federal Aviation Administration (FAA) of the United States of America and the system being developed by the European Joint Aviation Authorities and published as Joint Aviation Requirements (JAR).

The new rules are structured in a manner similar to the Federal Aviation Regulations (FAR) of the FAA, and aim to achieve maximum harmonisation whilst allowing for national variations. Close co-operation is also being maintained with the Civil Aviation Safety Authority of Australia to ensure maximum harmonisation with their regulatory code.

New Zealand's revised legislation is published as Civil Aviation Rules (CAR) which are divided into Parts. Each Part contains a series of individual rules which relate to a particular aviation activity.

Accompanying most Parts will be at least one associated Advisory Circular (AC) which will expand, in an informative way, specific requirements of the Part and acceptable means of compliance. For instance an AC may contain examples of acceptable practices or procedures which would meet the requirements of a particular rule.

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

The FARs have been used as the starting point for the development of many CARs. It should be noted however that neither the FAR or JAR systems presently include a Part 172 equivalent.

The objective of the new rules system is to strike a balance of responsibility 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 set standards for, and monitor performance of, aviation participants whilst providing the maximum flexibility for the participants to develop their own means of compliance.

Notice of Proposed Rule Making

To provide public notice of, and opportunity for comment on the proposed new rules, the Authority issued Notice of Proposed Rule Making 96–13 under Docket Number 1052 on 23 October 1996. This Notice proposed the introduction of Civil Aviation Rules Part 172 to provide a regulatory safety boundary for Air Traffic Service Organisations.

Supplementary Information

All comments made on the Notice of Proposed Rule Making are available in the rules docket for examination by interested persons. A report summarising each substantive contact with the Civil Aviation Authority contact person concerning this rule making 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 Publishing Solutions Ltd, PO Box 983, Wellington 6015, Telephone 0800 800 359.

Summary of Comments on Docket Number 1052 NPRM

In this summary the following abbreviations are used when referring to organisations who made submissions:

ACNZ	Airways Corporation of New Zealand Limited
AIA	Aviation Industry Association of NZ (Incorporated), Airports Division
Air NZ	Air New Zealand Limited
ALPA	The New Zealand Airline Pilots' Association
ATCANZ	ATCANZ Airports Limited
BARNZ	Board of Airline Representatives New Zealand (Incorporated)
CIAL	Christchurch International Airport Limited
GAPAN	The Guild of Air Pilots and Air Navigators

1. General comments on the NPRM

Copies of the NPRM were mailed to 187 separate organisations and individuals, and 19 submissions were received. Several submissions commented on matters related to the introductory sections of the NPRM and the major issues are identified and discussed as follows.

1.1 Contestability

1.1.1 Air Nelson considered "that the philosophy of contestability is wrong" as envisaged in Part 172. They believe the current sole provider service to be the safest and requested "that serious consideration of the safety implications is made before enacting legislation that will reduce or remove a layer of safety" from the system. Air Nelson also expressed concern that contestability might "lead to confusion and lack of accountability over who is responsible" and "the demise of the Regional Towers".

CAA response: The philosophy of contestability is a government policy matter and CAA will only be involved if any safety issues arise through the introduction of alternative suppliers of air traffic services. CAA has no prior knowledge of what scenarios might emerge and Part 172 was written to provide for various possibilities. Each provider will operate in a geographic monopoly and the rules applying to co-ordination and responsibility for control remain unchanged. There is no reason why these important areas should be compromised through the possible introduction of different suppliers. In operational terms the side-by-side existence of different area control providers is little different to the situation in, say, continental Europe.

Regarding the "Regional Towers" any closure will only be with the agreement of CAA. If CAA require an air traffic service to be provided at any particular aerodrome, in accordance with CAR 139.113, then it is incumbent on the aerodrome operator to provide that service. If there is any withdrawal of a service then it cannot simply be attributed to Part 172. The proper conclusion will be that the service was determined not to be necessary on safety grounds.

1.1.2 The NZ Gliding Association, in a detailed submission on policy issues, requested that Part 172 be immediately withdrawn. The association considered that "The Authority is encouraging an environment of competition and contestability ..." and "The philosophy of 'contestability' seems to have consumed the aviation safety goal ..."

CAA response: CAA is neutral regarding competition in air traffic services. There has been provision for competition in aerodrome services since 1987 and the basic regulations put in place then were overdue for renewal. CAA does not consider there is anything inherently unsafe regarding the introduction of alternative suppliers but acknowledges one area of concern that arose in a similar contestable environment. CAA attempted, therefore, through the *Prevention of Fatigue* draft rule, to address problems experienced earlier in the United Kingdom with controllers working excessive hours for non-state providers.

1.1.3 BARNZ, while generally favouring competition, saw some areas of difficulty. The Board expressed concern regarding interconnection issues, allocation of responsibilities, duplication of facilities, and costs and

charges. They considered a higher level of CAA intervention might be required "to ensure safety is not compromised".

CAA response: The one interconnection issue of concern to CAA regarded the AFTN. This was originally addressed in the NPRM but has been removed following comment from ACNZ. It is accepted by ACNZ though that connection to the AFTN must be made available.

As indicated in a previous response CAA does not see any difficulty regarding the allocation of responsibilities. It is conceded that some duplication of facilities may result, and also that, at least in the early stages of a multiple provider environment, more CAA facilitation, or intervention, may be required. While CAA must be concerned with compliance costs it is outside our province to either estimate or comment on the eventual impact of contestability on ATS user charges.

1.1.4 Air NZ, while earlier broadly supporting the concept of contestability, now has "severe reservations about the whole process" and queries whether "contestability is a product of economic dogma which may not sit comfortably in this environment". They sought a "fundamental rethink of contestability in the ATC environment". Air NZ also stated that "Under the NPRM there is no one agency responsible for ensuring the sanctity and integrity of the whole system and this gives us very grave concerns."

CAA response: The comments generally address policy matters that are beyond the scope of CAA. The last comment is incorrect. CAA asserts that it is the responsible agency, and Part 172 but one vehicle, through which the integrity of the ATS system will be monitored.

1.1.5 The AIA strongly recommended that "Approach Control services should be made contestable within 12 months of the introduction of the Rule".

1.1.6 Auckland International Airport Limited strongly supported the proposition that all air traffic services should be contestable and that this would be "in the best interests of all the aviation industry ..."

CAA response: The above two comments are noted, but, like several others, would be more appropriate if directed to the Ministry of Transport (MOT).

1.2 Service provision

1.2.1 The New Zealand Gliding Association is concerned that "there is no apparent mechanism provided, under either this Rule, or Part 71, or the Civil Aviation Act 1990, to ensure that a particular service will be provided." CIAL expressed similar concern in regard to air traffic services not covered by Part 139.

CAA response: As the state ATS authority CAA is obligated to ensure the provision of certain air traffic services to international flights. Under CAR 139.113 a certificated aerodrome operator may be required to provide an aerodrome control or aerodrome flight information service. With regard to services in domestic airspace, and services at uncertificated aerodromes, CAA considers it has statutory authority to provide, or ensure the provision of, adequate services.

1.3 Change of provider

1.3.1 Auckland International Airport Limited expressed concern that there was no effective means to make a change to another service provider unless the current incumbent provider (ACNZ) wished to relinquish its role.

CAA response: This is outside the scope of a certification rule. CAA considers that, since 1987, it has been open to the aerodrome operator to take the initiative in establishing the terms on which the incumbent provider continues to operate at an aerodrome. Part 172 has attempted to ensure that, following any decision to effect a change in supplier, the operational hand-over will be seamless to users.

1.4 Financial consequences

1.4.1 Ardmore Airport Limited are concerned that the provision of air traffic services to general aviation may be at a cost which is beyond economic recovery. There is particular concern over the economic viability of Ardmore Airport if compliance costs there "cannot be absorbed from a

market economic viewpoint." They query whether CAA would subsidise such services as part of our safety manifesto.

CAA response: The CAA considers that all legitimate charges are, in essence, recoverable. If a service is required, by CAA, on safety grounds, then the cost of that service should be met by those that benefit from it. CAA has no mandate to subsidise safety services but it is noted here that, in relation to services provided by ACNZ, there is provision in the State Owned Enterprises Act for the provision of non-commercial services.

1.5 ACNZ preliminary concerns

1.5.1 The Chief Executive of the Airways Corporation wrote to the Director of Civil Aviation on 13 November 1996 expressing his concern regarding Part 172. He stated, *inter alia*;

> "Airways has evaluated in great detail the potential effect of these provisions on our operations and the industry", and,
>
> "We are gravely concerned about the draft Rule 172 and consider it unworkable and unacceptable in its current form", and,
>
> "The effect of these requirements will be to impose significant changes on our current operation and create compliance costs in excess of $12 million per annum", and,
>
> "It is our view that the aviation industry is most unlikely to accept this extra burden, ..."

The letter concluded by seeking a meeting with "relevant executives" and an extension of the NPRM comment deadline of 2 December 1996.

On 19 November 1996 ACNZ submitted a "key issues" paper for consideration by CAA prior to the requested meeting. This paper stated, *inter alia;*

> "The inadequacies of the Rule Part involve not only a major part of the content, but also an inappropriate shift in fundamental responsibilities. Practical difficulties, compliance costs and

commercial consequences are significant. There is little or no justification shown for these outcomes.

For these reasons amendments through the NPRM process would not solve the problem. A comprehensive review of the document's intent, coverage and content is required."

CAA response: CAA's initial reaction to the communications quoted above was one of considerable surprise, given previous consultation between CAA and the Corporation, and their written comments to the earlier informal draft document. It is germane to mention that i), there had been a very recent change of CEO at the Corporation, and, ii), the "key issues" paper was not authored by one of the rule-writer's regular contacts.

The key issues paper from the Corporation made it clear that their main concerns were with the overall style of Part 172, and the *Prevention of fatigue* rule.

The style of the rule is broadly similar to other Parts already in force, under the Civil Aviation Rules System, for "Certificated Airways Services". ACNZ have already participated in the consultative process for, and been certificated under, Part 171 *Aeronautical Telecommunication Service Organisations,* and Part 175 *Aeronautical Information Services Organisations.*

It was obvious that ACNZ had particular difficulty with what they considered to be the detailed nature of some parts of the rule, preferring instead a "framework" approach. In general CAA considers that the rule is detailed only where the ICAO documents used in developing the rules are similarly detailed. In areas where ICAO is descriptive rather than prescriptive CAA has adopted a similar approach. One example of the descriptive approach, criticised by another commenter, is in relation to the focal point of an ATC unit, the display system.

While there may have been scope for a different regulatory interface between ACNZ alone and the CAA, such an approach is not seen as suitable in a potential multiple provider environment. It is worth noting here that in the United Kingdom, which provides the best example of the contestable provision of air traffic services, the state civil aviation authority has a more hands-on approach to the supervision of air traffic services than

that envisaged here. Also in the UK, the state authority itself provides the basic operational manual for all ATS providers. In New Zealand the Part 172 rules provide the template for the production of an organisation's own manuals. Except for the United Kingdom the contestable provision of air traffic services is a relatively recent development, as is the regulation and monitoring of ATS provider organisations on a rule basis. For these reasons alone CAA considers detailed rules, where they are used, preferable to the "framework" approach.

ACNZ comments indicated that they saw, through the draft rule, some criticism of their ATS operation. No general criticism was intended, nor does CAA consider it is implied. CAA acknowledges that ACNZ has, since its formation in 1987, provided services which are generally safe, efficient and effective, to the overall satisfaction of its stakeholders. CAA would be failing in its duty though if it did not address, in its rule drafting process, relevant safety issues which come to its notice. Some of the rule content may be in response to circumstances arising either in New Zealand or overseas. In other areas, such as the prevention of fatigue, what may be seen as a proactive position in New Zealand is in fact based on another regulatory authority's reactive response to a problem area.

The "Key Issues" paper forwarded by ACNZ dealt at some length with the draft prevention of fatigue provisions. While CAA is committed to the inclusion of a *Prevention of fatigue* rule in Part 172 the detail for the final rule has been "reserved" pending further consultation and deliberation by CAA. More detailed responses will be found against the rule listing but CAA considers it important to address one of the fatigue related ACNZ submissions here.

Having indicated in its preliminary response to the NPRM draft that the prevention of fatigue provisions would require around 40 extra controllers at a total cost of $4 million per annum, ACNZ now estimated that around 110 additional controllers at a "fully allocated cost in excess of $12 million per annum " would be required. CAA does not accept that the total cost would be $4 million per annum. Needless to say, and particularly in the absence of detail over how the figures are arrived at, CAA also disagrees with the revised estimates.

CAA management and the rule-writer met with ACNZ representatives on 27 November 1996 to discuss ACNZ concerns. The wide-ranging concerns expressed earlier by ACNZ were largely resolved into particular issues at this meeting, and the opportunity was also taken for rule-by-rule discussion.

1.6 ACNZ comments to the NPRM

Further ACNZ comments on the NPRM were received subsequent to the 27 November meeting and rule specific concerns are indicated against that rule.

1.6.1 ACNZ were concerned that "little or no attempt appears to have been made to quantify the additional costs or the benefits of CAR172 over and above those incurred/received under the current regulatory regime." A listing of additional cost areas included:

- Costs associated with airspace co-ordination and flow control
- Costs of "dual provision of services" prior to change of provider
- Costs of extended record retention periods

CAA response:

(a) It is assumed that ACNZ already has internal costs attributable to coordination between adjacent units. With regard to flow control it is suggested that dialogue already does, or should, take place within user group forums already established. CAA considers that the overall costs to industry should be little more than that required by attendance at, say, quarterly meetings of interested parties. CAA notes that ACNZ already conduct effective quarterly user group meetings.

(b) There are admittedly costs associated with a change of provider, but CAA considers that most of those additional costs fall on the incoming party. One possible change of provider scenario could involve the transfer of all operational staff to the new provider, in which case the duplication of staff under training is not an issue. This is a government policy matter as much as an aviation safety issue and should be represented by ACNZ to the appropriate policy agency.

(c) Following ACNZ submissions the record retention period has been rationalised at 31 days and increased costs are not now expected.

1.7 General

1.7.1 ACNZ and BARNZ are two commenters who have misread as one of the specific aims of Part 172 the removal of excessive compliance costs from the NZ aviation system.

CAA response: While the removal of excessive compliance costs is an overall goal of the new rules system it is obvious that in some areas compliance costs may increase. Air traffic service providers are not being singled out, as similar new certification rules are already in place for other airways services and similar general costs of compliance will have applied. Rule-specific compliance costs will be addressed in this summary against the particular rule.

1.7.2 GAPAN "supports the rationale of the proposed rules ..."

1.7.3 An individual commenter stated that "The proposed Rule appears workable and satis (*sic*) from my viewpoint."

2. Specific comments on the NPRM

Where the final rule number has changed the NPRM rule number will also be identified. Specific comments received from the 19 submissions are discussed as follows:

2.1 172.1 Applicability

2.1.1 ACNZ and BARNZ queried the legal status regarding the provision of air traffic services in the Cook and McMurdo sectors of the Auckland Oceanic Flight Information Region.

CAA response: Air traffic services in the Cook Sector are the responsibility of the Cook Islands Government. Existing enactments do not allow for rules coverage to extend to either the Ross Dependency, or the greater area covered by the McMurdo Sector, unless the service is provided from New Zealand.

After further consideration CAA have refined this rule to allow flexibility for possible future developments.

2.2 172.3 Definitions

2.2.1 AIA requested "clear" definitions for aerodrome control and approach control, "so that the difference between the two functions is clearly defined."

CAA response: Core definitions are published in Part 1, and, in the air traffic services area, are usually identical to the ICAO definition. Elaboration on the interface between the two services will be addressed in the advisory circular.

2.2.2 An individual commenter considered that the term "current licence" as used in the definition *Rated air traffic controller* itself needed definition.

CAA response: We agree, and the term current, as used in this context, is now defined in Part 1.

The same commenter objected to the use of the word "specialist" in *Rated aerodrome flight information specialist*, and suggested the term "officer".

CAA response: To align with Part 65 the term is now amended to *Rated aerodrome flight information operator*.

2.2.3 ACNZ suggested an addition to the definition of *essential traffic*, for clarification. They also contested the need for the new definition *strayed aircraft*, not previously used in New Zealand.

CAA response: The first suggestion has been incorporated. A strayed aircraft is not necessarily lost and it is valid to differentiate. With the increasing use of aircraft situational displays (synthetic radar) in oceanic airspace it is conceivable that the term will be useful when off-track operation is observed. It is better to use an ICAO defined term when one is available and therefore the term is retained.

2.2.4 Following comment from the MOT a definition for *operating position* has been added.

2.4 172.7 Application for certificate

2.4.1 ACNZ and BARNZ queried whether individual applications would be required for each service, or whether each provider could forward a single application for its whole operation.

CAA response: CAA has decided that it is the organisation alone that is to be certified and therefore multiple applications will not be required. The draft application form will be amended accordingly.

2.4.2 ACNZ and BARNZ also asked how the responsibility for aerodrome control will be defined in relation to services delegated from approach control.

CAA response: Aerodrome control is defined in accordance with ICAO definitions. The elasticity of the aerodrome traffic circuit, and the associated term "in the vicinity of the aerodrome" is seen in some quarters as a complication, but need not be. The interface works now and there is no operational reason why it should not continue to work in a multiple provider environment. A dynamic approach to the transfer-of-control boundary is spelt out in ICAO Document 4444 (Part II chapter 5) and should be the basis for co-ordination procedures laid down in the required ATS letters of agreement.

2.5 172.9 Issue of certificate

2.5.1 Ardmore Airport Limited, regarding (a)(3), queried the criteria for determining what might be "contrary to the interests of aviation safety."

CAA response: The rule restates section 9(1)(c) of the Act, as amended by the Civil Aviation Amendment Act 1992. This provision gives the Director a discretion not to grant an aviation document where it is clear that, despite the applicant meeting the standards specified in the rule, and being a fit and proper person, the grant of the aviation document would be contrary to the interests of aviation safety. The provision allows for unusual circumstances that were not anticipated by the rules. It is a discretion that would be rarely exercised and with considerable caution.

2.5.2 The AIA were concerned that the wording of (b) might inhibit contestability. Another commenter accepted the wording and noted that any transition would need to be seamless.

CAA response: Paragraph (b) has been reworded for greater clarity. The rule was not designed to fetter contestability but to ensure that only one certificate was **current** at any one time. Where a change of provider is to take place for a continuous (24-hour) service the respective certificates will also need to state the time of cessation and commencement if this is to be other than midnight local time.

2.6 172.11 Privileges of Certificate

2.6.1 CIAL considered that the rules system should be used to detail the responsibility for the provision of those air traffic services not already covered by Part 139. In particular CIAL consider that where an approach control service is required by the Director the aerodrome operator of the primary aerodrome should be made responsible to ensure the provision of that service.

CAA response: CAA acknowledges the interests of an aerodrome operator in relation to the provision of an approach control service for their aerodrome. However, any amendment to Part 139 can only be considered after a decision by the Minister of Transport that the Airways Corporation monopoly on the provision of approach control services will cease.

2.7 172.13 Duration of certificate

172.15 Renewal of certificate

2.7.1 BARNZ considered that a certificate should ideally remain in force until suspended or revoked. Alternatively the term of the licence "should be linked to the contract term negotiated by the service provider with its customer."

2.7.2 ACNZ question the need for certificates to be renewed. They also see the potential for conflict where a certificate expiry date differs from that of the contract period for a contestable service. Other comments by ACNZ indicate possible confusion over some aspects of certification under Part 172.

CAA response: Certification establishes "fitness for purpose" but does not of itself convey any specific right to provide a service. The 5-years maximum duration is a standard administrative requirement in all recent certification rules and is not intended to influence contract-for-service periods.

2.8 172.17 Exemptions

No comments received.

2.9 172.51 Personnel requirements

2.9.1 Ardmore Airport Limited queried if the senior person in (a)(1) and (2) could be the same person.

CAA response: Yes. The inadvertent "and" at the end of (1) has been excised.

2.10 172.53 Training

No comments received.

2.11 172.55 Prevention of fatigue

2.11.1 As indicated earlier there is no detail published under this final rule heading, pending further consideration of the submissions forwarded regarding the NPRM draft rule. There are several different structures possible for the rule, all of which will be considered before a final decision is made. It is expected that the full rule will be published, as part of amendment number 1, later this year.

2.11.2 The AIA commended the attention given to the prevention of fatigue, but felt that the maxima and minima applying to duty hours and breaks were too conservative, particularly where the work-load might be very light for considerable sections of a duty period. AIA strongly recommended "flexibility to fit the operational circumstances at each location."

CAA response: The maxima and minima of the draft rule are in concert with either current practice in New Zealand or overseas, or the findings of

organisations knowledgeable in fatigue related matters. Some figures exceed overseas recommendations, to allow, for instance, for the 6:3 rosters worked at some ACNZ ATS units, and the need for compulsory overtime to be worked in certain situations.

CAA sees a need for mandatory breaks to be taken regardless of the workload situation as the boredom of periods of low activity can be as fatiguing as overload. If the concern is that no service will be available when a solo-watch controller takes a prescribed break then it is suggested that industry is better served when break details are known and published, rather than relying on the randomness of an individual's assessment of the situation at the time.

2.11.3 Air NZ noted that the increased costs of $4 million was "essentially driven by the introduction of new Fatigue Rules ...". They requested CAA provide further information to justify the additional expenditure. In noting that "some reliance was placed on the British rules" Air New Zealand suggested that "ATC operations in New Zealand are fundamentally different."

CAA response: As noted in the NPRM CAA do not accept the ACNZ estimate of $4 million per annum increased costs. Indeed there is one option available at virtually nil cost to the provider, that of closing watch at solo-watch locations to allow two 30-minute breaks per day to be taken. Admittedly this may impose some costs on some operators through a reduction in scheduling flexibility.

CAA is unaware of any factor that makes ATC operations in New Zealand "fundamentally different" from the United Kingdom, or anywhere. Through the efforts of ICAO ATC is performed throughout the world to a very high degree of standardisation, as evidenced by the ready portability of ATC licenses. New Zealand controllers find a ready market for their skills overseas, and overseas controllers are readily assimilated into ATC in New Zealand.

2.11.4 Ardmore Airport Limited suggested that the maximum periods of duty for early starting shifts all be "7 hours 30 minutes provided there was a period of at least 12 hours off duty prior to commencing shift." The company also considered that the provision for one 30-minute break per

shift (except for night shifts) should be extended to cover the night shift. They considered this rule was over complicated, and would generate increased costs. The company drew attention to FAR 65.47 as a simpler concept. The company also said that "Outside of the centres (and Ardmore) it is rare for controllers to be busy for long periods ..."

CAA response: CAA does not accept the sweeping statement suggesting that only the centres and Ardmore regularly experience long busy periods.

A lengthy rule is not necessarily a complicated rule. Given the subject, and the prescriptive approach adopted, the rule is considered to be both concise and logical. The staggered maximum shift times for early starts were an attempt to recognise the fatigue inducing factors caused through sleep interruption and the inability to take both breakfast and lunch under *normal* conditions, raising issues of dietary and digestive deficiencies. The shorter than average shift times were balanced by the ability to roster staff on longer than average hours on afternoon shifts.

Regarding night shifts the rule, in paragraph (2), provides for 20-minute breaks on night shifts. The provision for one 30-minute break on shifts other than the night shift was based on the longer time considered necessary for a meal-break.

The USA FAR 65.47 is relevant only to "tower" controllers, covers only limited parameters, and is not in accord with current anti-fatigue thinking. It is worth noting here that the Unites States NTSB (National Transportation Safety Board) lists "Better regulations to reduce fatigue" on its most-wanted safety wish-list.

2.11.5 ATCANZ responded by reserving its position until it had time to review the material from which the rule criteria had been developed. No further comment was forthcoming.

2.11.6 BARNZ said "The provisions prescribing duty time limitations for air traffic controllers appear onerous and inflexible and impose significant compliance costs on the service provider in terms of additional controllers ...". BARNZ also stated they were unaware of any fatigue problems relating to ACNZ's current work practices ...". Other comments indicated a desire for a less detailed "framework" rule "based on the underlying factors affecting fatigue." BARNZ considered there were "adequate checks and

balances elsewhere in the proposed Rule" to ensure the objective of fatigue prevention.

CAA response: CAA considers that considerable flexibility over working detail and roster practices would still be available under the proposed rule. As already stated, we do not accept the ACNZ estimates of additional costs. While BARNZ may be unaware of fatigue problems, CAA monitoring already identifies fatigue as a recurring factor in air-safety incident analysis. The rule was written as a stand-alone provision, and CAA does not agree there are "adequate checks and balances" regarding fatigue prevention elsewhere in Part 172.

2.11.7 CIAL considered this rule "too detailed and prescriptive." They considered the material in the draft rule "more suited for inclusion in an advisory circular, and then with limitations in its applicability depending on how busy the airport or facility is."

CAA response: CAA is uncomfortable at the prospect of having to sit in judgement on a range of prevention-of-fatigue procedures submitted by various organisations seeking certification as ATS providers. CAA considers it better to build on the United Kingdom experience by putting in place a soundly based prescriptive rule applicable to all providers.

CIAL is one of several commenters to refer to low volume or less busy situations. CAA points out that the UK report on which the rule is based insisted that the recommendations applied to all ATS facilities, from Heathrow to Wick, regardless of the traffic volume. CAA agrees with this view. It is also worth mentioning that the apparent activity at an aerodrome is not necessarily an accurate indicator of ATC workload, particularly approach control.

If there is a genuinely unique situation a provider could use the rule exemption process to seek relief from a particular rule provision. However, the rule provision giving industry the most concern, the maximum 4 hours without a break, is, in the UK, not open to modification.

2.11.8 GAPAN expressed some concern and "acknowledged that it is often difficult to strike a balance between practicality and safety." They identified the break-after-4-hours provision as being "unusually onerous to the service provider of a solo watch operation, if additional personnel are

required to cover the break periods." GAPAN considered this provision "could well result in the retrograde step (from a safety perspective) of the provider withdrawing marginal services on economic grounds." Nevertheless GAPAN "agreed with the CAA view that such breaks are essential to ensure the safe provision of air traffic services."

The Guild went on to outline one a "practical solution" involving a controller taking breaks equipped with a cordless headset and being available for emergencies only.

CAA response: GAPAN is commended for its thoughtful approach. While the breaks specified are not intended to be optional in ordinary circumstances the draft rule was deficient in not providing for emergency situations. ALPA drew attention to the omission and indicated they were amenable to the inclusion of wording to cover both air safety and civil emergencies.

Prescribed breaks should be inviolate in normal circumstances and the wearing of a headset while on a break is seen as intrusive. The idea has merit concerning the physiological needs of staff while on solo watch.

2.11.9 The Hawke's Bay Airport Authority expressed concern at the rest breaks proposed in the draft rule while recognising "that rest periods are necessary" for safe operations. The Authority considered that at most airports there would be periods when "a controller can sit back, relax and have a break." The Authority acknowledged that if a break was to be taken out of the tower then smaller airports may need to operate unattended for the duration of the break. They questioned whether this arrangement would be acceptable to CAA.

CAA response: CAA considers it essential for fatigue prevention that at least once per shift a controller has the opportunity to leave the confines of the tower cab, regardless of workload. The rule is in accord with expert recommendations but, as a minimum requirement, is still less total break time per shift than that enjoyed by most employees, in any field.

If an ATS provider at an aerodrome chooses to close the facility to allow the required breaks to be taken CAA must look favourably at this option. Rule 139.113 is not seen as a constraint here as it is up to aerodrome operators and ATS providers to determine actual hours of operation.

2.11.10 Mount Cook Airline has the same general concerns as preceding commenters. The company prefers that applicants develop their own schemes, and suggests a full study "relevant to New Zealand operations and economics is completed and the requirement fully justified." Mount Cook quote an example of a flight service unit handling one aircraft every 15 minutes as requiring a relieving person, at prohibitive cost. They consider the requirement "ridiculous as the day would be full of breaks anyway." Mount Cook query the justification for, and likely effectiveness of, various maximum duty times.

CAA response: Most of the concerns identified by Mount Cook have already been addressed in this document. A flight-service station handling, say, one aircraft every 15 minutes has an annual movement figure of around 15000 per year, well under the CAA trigger figure for the provision of an aerodrome flight information service. A one-shift-per-day operation could close for the required break while a two-shift-per day operation could cover the break-after-6 hours requirement, and still provide at least 12 hours of uninterrupted service.

Justification for the whole rule lies in acceptance of the statement that "Fatigue and transportation are a potentially deadly combination."[1] The objective measurement of fatigue, and the effectiveness of prevention measures, is a relatively recent development requiring sophisticated before and after monitoring, and CAA is aware of overseas activity in this field.

2.11.11 An individual commenter stated that "these rules do not address the problem of fatigue caused by having two jobs - and they should." The commenter suggested the rule be written to preclude, for example, a controller flying single pilot IFR during rest periods.

CAA response: The issue of what individuals do in their off-duty time, and if and how it impacts on aviation safety, is emotive and difficult. Some of these areas are best addressed, in the first instance, between employer and employee. Insofar as Civil Aviation Rules are concerned, the topic falls

[1] Opening statement by Pamela Della Rocco, Ph.D. of the Civil Aeromedical Institute, US FAA, to the Flight Safety Foundation Corporate Aviation Safety Seminar, 1996.

under the personnel rules, Part 65 being applicable to air traffic services personnel. The comments were forwarded for consideration to the rule-writer for Part 65. As an aside, the UK CRATCOH Report, on which the draft rule is based, considered this same issue. They wondered if a secondary job was necessarily more fatigue inducing than active leisure activities or the care of children.

2.11.12 Another individual commenter provided detailed submissions that are now addressed item by item.

• The commenter takes issue with the statements on page 12 of the NPRM regarding "overseas evidence" and "international research" and considers that the overseas evidence should be detailed, together with an indication of how it fitted "situations in New Zealand."

CAA response: New Zealand is not unique concerning the provision of air traffic services, nor are New Zealand controllers different to their overseas colleagues. Therefore CAA considers it quite appropriate to rely on overseas research in this area. The major document used in formulating the draft rule was identified in the NPRM, and the major interested parties, ACNZ and ALPA, are aware of the sources of additional material used by the rule-writer. Some of the documents used contain lengthy bibliographies, which serve to confirm the depth of research undertaken. An indicative listing of overseas information sources and resource material follows:

FAA Office of Aviation Medicine

Flight Safety Foundation

NASA Ames Research Centre (Fatigue Countermeasures Program)

The "CRATCOH" Report [2]

ICAO Annex 6

---

[2] Report of a Committee on Regulation of Air Traffic Controllers Hours to the United Kingdom Civil Aviation Authority

ICAO Human Factors Digests

Shift Work Alert (ISSN #1087-1365)

• The commenter said "I fail to see how the legal analysis can state that the requirements are based on the internationally accepted standards and recommended practices found in Annex 11, when this "Prevention of Fatigue" issue is not internationally accepted." The commenter also considered it would be valid to compare New Zealand with other countries in relation to annual leave, "recuperative leave", and "extra paid days off".

CAA response: It would have been more correct to use the term "technical requirements" in the reference to Annex 11, but 172.55 is not the only rule that has no basis in the Annex. CAA considers it is very clear that prevention of fatigue issues are internationally accepted as worthy of attention by safety agencies. In Annex 6, ICAO states that "duty period limitations are established for the sole purpose of reducing the probability that fatigue of flight crew members may adversely affect the safety of flight." This concern is extended to air traffic controllers in a discussion on fatigue in ICAO Human Factors Digest No. 8 (Human Factors In Air Traffic Control).

Leave and extra days off are not high on any list of fatigue prevention measures. Fatigue concerns begin with the unbroken period of duty, moving outwards in time through daily, weekly and monthly routines. The rule-writer attempted to address the "recharging of batteries" through insisting on regular periods of leave but this approach is proving difficult to justify in fatigue prevention terms. Leave entitlement cannot of itself be used as an offset for fatigue prevention measures, particularly for those individuals who prefer to accrue leave rather than take it regularly.

• The commenter considered the minimum 20-minute break required by (b)(2) "excessive" given that paragraph 4 already required at least one break of 30 minutes.

CAA response: There may be scope to consider whether a 15-minute minimum break is adequate for work that is not VDU intensive. The 20-minute figure is related to OSH 10 minutes per hour recommendations, but is less than the 30 minutes prescribed in the UK.

• The commenter asks why the limits on maximum periods of duty for early starting shifts do not take account of daylight saving time. The commenter notes that "A mandatory 6 hours meets what is about the practise of many morning shifts " but "places a restraint on roster construction that will lead to even shorter duty periods."

CAA response: Daylight saving is not considered to be relevant as it is primarily clock time that governs individuals sleeping and eating patterns. Getting up at 5am is a sleep interruption for most individuals, regardless of the time of year. CAA considers that any restraint on roster construction additional to those dictated by a rule are internal to the provider organisation. The parties currently involved (ACNZ and ALPA) have already been advised that any clash between a final rule and workplace agreements could, if necessary, be resolved by timing the rule to coincide with the expiry date of existing employment contracts.

• Regarding night shifts the commenter suggests that, where the night shift has provision for "horizontal rest" of 3 hours, the 9 hour limit is unnecessary.

CAA response: "Horizontal rest", however defined, is possibly of some use in helping an individual cope with a night shift, and particularly the "circadian low", but is seen as a poor substitute for conventional sleep. Extending a night shift beyond 0700 is not acceptable to CAA and extension to the evening start time impinges on time better used for pre-shift relaxation.

• The commenter asks "What is different about 0659 and 0701?".

CAA response: Very little. The same type of query can be posed in any situation that requires a line in the sand. Any later time than 0700 means that an individual is still on duty as the traffic builds up. In fatigue terms, and looking at the night shift alone, it would be preferable if it finished at say 0600. This would mean that another shift needs to start at 0600, itself a fatigue stressor. On balance CAA considers 0700 offers the best answer but providers are not disbarred from opting for an earlier changeover time.

• The commenter notes that the 12-hour/10-hour minimum time between shifts is the same as the "current agreement" but points out that at present individual controllers may agree to a reduction to 9 hours minimum.

CAA response: The UK are firm in insisting on 12 hours between all shifts. The FAA, surprisingly, require a minimum of only 8 hours, while the NASA-Ames Fatigue Countermeasures Program research states a 10 hour minimum, "to include an 8 hour sleep opportunity." CAA considers the case for 12 hours very strong, but has included a once-per-cycle 10-hour break to allow relief from a succession of early starts that, on some rosters, might otherwise be unavoidable. Individual agreement to specific roster variations is not seen as having a safety focus, particularly when tied to monetary recompense.

• The commenter notes that the maximum of 7 consecutive periods of duty in (b)(6) accords with the "current agreement".

CAA response: Both the UK CAA and the FAA specify a maximum of 6 consecutive periods of duty. CAA has, with some reluctance, gone past that maximum in recognition that at some locations where a 6:3 roster cycle is currently worked it may be necessary to recall staff on a seventh day to cover exigencies.

• The commenter strongly supported the (b)(7) provision for no more than 2 consecutive night shifts.

• The commenter considered reasonable the minimum 51 hours off-duty following a night shift, as specified in (b)(8).

• The commenter saw difficulties with recall shifts in relation to the off-duty periods required by (b)(9) and (b)(10). As an example it was stated that a recall following an 0100 Monday finish could not begin before 1700 Tuesday.

CAA response: The difficulties appear to be based on a misinterpretation of the term "shift cycle", as defined in the draft rule. In the context of the rule the term "shift cycle" is inclusive of any recalls and does not apply only to the rostered cycle. In the example, and providing other rule provisions are observed, the recall could begin at 1300 Monday.

• The commenter asked why, if a 10-hour shift is okay, is there a "limiting" 8 hours 15 minutes average period of duty in (b)(11).

CAA response: The 10-hour shift was seen as both an offset for the limited hours of early start shifts, and making reasonable provision for the "extended duty" sometimes required at non 24-hour regional locations. In neither case was the longer duty seen as fatigue inducing, as its use was governed by the 8.25 hour average. While the rule does not require it, it was expected that the longer shifts would be used primarily for afternoon shifts which are generally regarded as less demanding.

In commenting on this and some other provisions the commenter has made reference to existing ACNZ rostering practices. While most ACNZ rosters are based on the 2:1 (days on/days off) ratio CAA does not consider it valid to base the rule on any particular rostering system.

• The commenter questions the term "two calendar weeks" used in (b)(12) and asks if it can mean any 14 day period. The commenter also refers to various types of leave in the context of this provision.

CAA response: While consideration was given to using a rolling 14-day period it was considered that the two calendar week period (Monday-Sunday) would offer adequate protection and be administratively simple. It may however be necessary to define the term "calendar week" in the rule. A *Period of duty* as defined in the rule does not include any type of leave.

• In regard to the minimum of 7 off-duty days in any 30 day period the commenter states "it would be useful to specify a figure which reflects the (roster) cycling ...".

CAA response: As indicated earlier CAA does not wish to be involved with the detail of various permutations of rostering practice possible within the rule.

• The commenter pointed out that the 9 consecutive days leave break requirements of (b)(14) did not fit well with the 4:2 roster cycle, where 8 day breaks were a more manageable option. The commenter also asked how compliance could be achieved in relation to long periods of sick leave.

CAA response: It is conceded that the rule, which is based on a conventional weekend plus calendar week period, is somewhat rigid. Consideration could be given to rewriting the rule to allow for 8-day breaks.

Regarding lengthy absences due to accident or sickness the rule wording will need to be refined to spell-out how these absences are to be treated.

• The commenter notes that the rule covers air traffic controllers and aerodrome flight information service personnel but not flight information and flight briefing specialists and states "presumably fatigue amongst this group is considered to have no impact on safety."

CAA response: The presumption is incorrect. Paragraph (d) of the draft rule requires applicants to establish procedures for staff on operational duties not covered by the detailed provisions of paragraph (b). The original intention was to follow the UK example and cover only air traffic controllers under paragraph (b) of this rule. Following representations from ACNZ for inclusion of all flight information staff CAA decided that there was a case for the rule coverage extending to aerodrome flight information service personnel. This group deal with concentrations of aircraft in the vicinity of an aerodrome and their actions or inactions could conceivably result in an accident. CAA considers that, without derogating the importance of the services they provide, other operational staff are unlikely to have as direct an impact on safety as the staff considered in paragraph (b).

• In a summary to the submission the commenter asks "what is the mandate for including this new area?" and suggests the rule is flawed "without evidence and linkages that the international research mentioned exists and are *(sic)* relevant".

The commenter appears satisfied that "current practise" is adequate and that "there must be evidence that shows current practise as falling short of safe operation for the proposed changes to be made."

CAA response: The introduction of a prevention of fatigue rule should not be seen as a criticism of the way the existing provider (ACNZ) has operated. The general satisfaction of CAA with hours of duty arrangements for air traffic controllers is evident from the fact that the Director has so far seen no need to use the provisions of Civil Aviation Regulation 149F (now continued as transitional rule 19.403).

Prevention of fatigue rules already exist for pilots in other CAR Parts and prevention of fatigue provisions are in place for air traffic controllers in the

United Kingdom. Workplace industrial agreements are not seen by CAA as an appropriate vehicle for the definition of fatigue prevention provisions. CAA is not a party to their negotiation, nor need it be, and neither is CAA aware of what has been agreed, either collectively or individually. ACNZ, while strongly disputing the style of the draft rule, acknowledges that a prevention of fatigue rule is appropriate.

• The commenter concludes by strongly urging CAA to either delay the inclusion of Part 172.55 or amend the rule in line with the comments.

CAA response: As already indicated, the final rule is issued with the detail of 172.55 *Reserved* pending further consideration of all comments on this topic.

2.11.13 ALPA met with CAA on 9 December 1996, to clarify several areas, and submitted written comments following that meeting. Some of that comment related to other correspondence on the Docket File, and to matters of timing regarding rule 172.55. ALPA consider the draft fatigue rule "mature in concept" while acknowledging that "one or two parameters might be varied without damaging this concept." ALPA endorse the use of the CRATCOH report in formulating the rule and note that the UK CAA reviewed their applicable rules [3] in 1996 and do not expect any changes to the scheme.

ALPA express concern at any intention to fundamentally alter the style of the draft and "strongly advocate focusing on the pragmatic optimisation" of the rule.

CAA response: CAA acknowledge ALPA's pragmatic approach to the rule as a whole, even though some provisions are less advantageous to controllers than the UK equivalent or current practice.

Specific comments by ALPA, made after they "worked through the impact on most current ATC rosters", are now addressed individually, except that no reference is made where ALPA suggest the rule has minimal impact.

---

[3] CAP 573 "Approval of Air Traffic Control Units", Appendix A "Scheme of Regulation of the Hours of Civil Air Traffic Controllers in the UK"

• ALPA acknowledge that the 4-hour maximum of (b)(1)(ii) could have a significant impact in some situations, particularly where traffic density may not allow a break in service to be considered.

• ALPA saw a possible weakness in the wording of (b)(2), regarding breaks from operational duty, in that shorter breaks inside the maximum periods could be used to negate the effect of the rule.

CAA response: It is conceded the rule as drafted could be circumvented and the more detailed UK version does not have this fault. CAA will consult further with the interested parties.

• ALPA considered the shift length restrictions for early starting shifts contained in (b)(3) would have a "minor but material effect on current rosters." These were "able to be addressed by lengthening afternoon shifts."

CAA response: CAA recognised that a corollary of shorter early shifts might be longer afternoon shifts. This is acceptable in relation to fatigue as the oncoming controller has a better chance of having had adequate sleep and refreshments before starting work.

• ALPA consider the impact of the 9-hour limit for a night shift would be minor. They consider 10-hour night shifts might be acceptable if they included the current practice of "3 hours mandatory horizontal rest."

CAA response: CAA has reservations about the efficacy of 3 hours horizontal rest as a fatigue prevention measure. While shorts rest periods may be beneficial NASA-Ames considers that "sleep longer than 45 minutes results in an increased period of sleep inertia, with its associated prolonged grogginess ..."

• ALPA considered the minimum 10 hours between shifts might affect some units when shifts are extended due to traffic disruptions.

CAA response: The current 9-hour minimum (by individual agreement) is indefensible given the higher minimums specified by both the NASA-Ames (10 hours) and the UK CAA (12 hours).

• ALPA point out that the minimum of 51 hours off duty following a night shift impacts adversely on a provider's ability to recall staff. They suggest a

40-hour minimum break after a single night shift would provide adequate rest while improving management's ability to recall staff.

CAA response: CAA will consider the ALPA suggestion, mindful of expert opinion on sleep deficit recovery periods.

• In commenting on paragraphs (b)(9) and (10) ALPA correctly identify that, combined, these provisions mean a recall can only be worked every second shift cycle. They note that therefore the pool of staff available for recall is reduced but that any problem arising "could be minimised by use of a standby system." ALPA consider the requirements are a "realistic minimum" that provide more flexibility than the UK equivalent.

CAA response: CAA intended that each alternate off-duty period between rostered shift cycles be protected from the requirement to work a recall shift. If one outcome of this anti-fatigue provision is that staff are, at times, nominated as on-standby then, it is suggested, both the individual and aviation safety are better served. Staff on standby are likely to be better prepared for duty than staff subjected to an unexpected recall, which can be hard to turn down.

• ALPA expressed a preference for the "template" in paragraph (b)(13) to be 4 calendar weeks on the basis that calendar weeks "are universally used as the basis for roster creation" and compliance would be simpler to verify.

CAA response: CAA agrees that a calendar week multiple appears to be the best template for this provision. CAA was aware though that this might provide an uneven result when used with the 2:1 rostering system that currently predominates in New Zealand. As a compromise a 30 day counting period was selected as it is equivalent to an "average" calendar month and is also divisible by 3. We envisage further consultation on an optimum figure.

2.11.14 Following receipt of the ACNZ "Key Issues" paper CAA met with ACNZ to hear their concerns. Discussion on the fatigue rule focused on what ACNZ saw as serious impediments over the use of recalls. As agreed at the meeting ACNZ followed up with further written comment regarding 172.55

CAA response: CAA recognises the need for an ATS provider to recall staff, often at short notice, to ensure the continuity of the service. The rule was designed with this awareness and any serious restriction on the use of recalls is unintended. It may be that management practices of long-standing may need to be modified to account for the rule provision that will ensure no staff member has to work recall shifts in consecutive off-duty periods.

2.11.15 ACNZ stated that the rule "contains extremely detailed requirements which do not allow for variation according to the location specific conditions." They considered "there is no single formula that is the best answer in all situations", and requested a framework rule that contained fatigue minimisation factors to be addressed by the applicant. "An analysis by an accepted authority in the field would accompany the exposition."

CAA response: As in the UK the rule has been formulated taking account of widely varying work situations. It is not only for ATS units that are perceived as busy or stressful, but for all units. The rule should not, and does not, define rosters and there remains considerable scope for workplace flexibility within the rule. CAA considers it highly appropriate to base the rule on a credible overseas equivalent, particularly considering the possible entry of new providers with no experience in this area.

Should a provider feel they have a unique situation requiring special consideration then the standard exemption procedures applicable to the rules can be invoked.

• ACNZ said "we will oppose any change to current practice without scientific or medical evidence to change what we have done for many years without major problems occurring." ACNZ expressed reservations regarding the "five year old" UK (CRATCOH) report, saying "Given the age of the study, we would argue that it may not be relevant and we will also take issue with some of the methodology." ACNZ then proposed that the draft prevention of fatigue rule stand aside pending a "scientific evaluation of all the issues".

CAA response: CAA decided to set aside the fatigue rule detail in the interests of not delaying the bulk of the rule. An achieve certification date of 23 April 1998 has been agreed with ACNZ and Amendment 1 to Part 172 will need to be in force by that date, as the means of transferring non-

contentious technical material to the rule appendices. Amendment 1 therefore also offers the opportunity to insert the text for 172.55. In the last days of drafting these consultation details CAA has received a just released review of the UK provisions by an independent research agency.[4] The draft rule provisions will be assessed, against this report and any proposed changes based on the report will be discussed with ACNZ and ALPA. It is hoped that the availability of this very recent report will allay ACNZ concerns over the currency and validity of the UK provisions.

• ACNZ criticised the "detailed work-time limitations, many of which appear to have little or no scientific basis." They also drew attention to areas where the draft rule was more detailed than the UK model.

CAA response: CAA has had meetings with ACNZ representatives at which the basis for the various provisions has been explained. CAA considers that there is a sound knowledge base for all working time detail provisions. Where the rule differs from the UK equivalent those differences are based on the greater knowledge of fatigue prevention measures available since 1990. ACNZ drew particular attention to the three separate steps relating to early starting shifts. CAA was originally amenable to some rationalisation here but following discussion with ACNZ's own expert advisor it was agreed the provisions were appropriate.

• ACNZ state that the minimum breaks between duty periods "would virtually eliminate Airways' ability to continue using the recall system" and that a move to a standby system would require 15-20% additional staff at an annual cost of $5.7 million.

CAA response: CAA recognises the need to recall staff and do not consider the rule forced the outcome suggested by ACNZ. Although the pool of staff available for a particular recall may be reduced CAA considers it should be possible for the provider to enter into arrangements with its staff that ensures reasonable availability of recalls.

---

[4] "A Review of the current Scheme for the Regulation of Air Traffic Controllers Hours (SRATCOH)", by DERA (Defence Evaluation and Research Agency, UK Ministry of Defence).

• ACNZ provide several quotations from "independent expert advice" obtained by ACNZ. The comments quoted focus on stress, and the diversity of ATS operations in New Zealand. ACNZ consider the reports indicate that current work practices are "within accepted norms for fatigue prevention ...". ACNZ affirm that their shift-work practices operate successfully in the New Zealand environment and have done so for many years.

CAA response: Only one of these reports has been made available to CAA. While ACNZ self-regulation has worked reasonably well CAA is aware of some strains and deficiencies within the system. There is for instance no requirement for existing collective or individual agreements to be made available to CAA. It would therefore be possible now for ACNZ to require, or individuals to agree to, work practices which, in relation to the prevention of fatigue, CAA could not condone. In any event workplace agreements are an inappropriate vehicle for provisions regarding public safety.

• ACNZ proposed "that the underlying factors affecting fatigue for shiftworkers be identified and codified in the Rule Part." The rule should require an applicant to demonstrate, in its exposition, how the factors will be addressed, and "The Director could require supporting analyses from appropriate fatigue experts should the efficacy of any such provisions in the exposition be in doubt." ACNZ consider this approach will meet the fatigue prevention objective while keeping compliance costs to a minimum.

CAA response: CAA has reservations about being drawn into an assessment and approval loop that could involve separate and disparate expositions from individual providers, and even individual units. In an area which is admittedly somewhat subjective CAA prefers one relatively simple rule applicable to all providers. CAA has concerns that the approach suggested by ACNZ does not adequately involve the personnel at which the rule is directed, and opens up possibilities of further industrial difficulties, and consequent costs, to the industry.

2.12 172.57 Facility requirements

2.12.1 ATCANZ consider that the Part 139 certificated aerodrome operator should establish the facilities required for aerodrome air traffic services.

CAA response: Firstly, not all ATS attended aerodromes are certificated. Regardless of this CAA considers that full responsibility for any ATS facility should lie with the ATS provider. CAA is interested in dealing with one party only in regard to any particular certificated service. To join a Part 139 aerodrome operator as a responsible party would introduce an unsatisfactory split in accountabilities. This does not prevent any mutually satisfactory arrangement, between a provider and aerodrome operator, regarding buildings or equipment. Nor is an aerodrome operator prevented from seeking certification itself under Part 172.

2.12.2 ACNZ and BARNZ considered the requirements of (b)(1)and (2) regarding the construction, siting and protection of a control tower would be better placed on the aerodrome operator.

CAA response: CAA disagrees. The Part 172 applicant must accept responsibility for the totality of the operation. They will be most affected by any development which might compromise the (b)(1) requirements and they should therefore be motivated to be proactive in seeking protective measures. Section 166 of the Resource Management Act gives airport companies and approach control service providers special status to require protective measures to be put in place in district plans. As an aerodrome operator would also be disadvantaged through an interruption to air traffic services it appears obvious they would co-operate fully in establishing procedures designed to protect the control tower.

2.12.3 ACNZ queried whether CAA would be conducting a review of existing facilities, regarding compliance with (b)(1), or if any *grandfather* rights would apply.

CAA response: No specific review is intended, as compliance with the rule will be assessed as part of the entry-audit process. Where CAA has already drawn attention to deficient aspects of a facility, and these aspects are now embraced by 172.57, then the rule will apply. In other cases it could be anticipated that, where necessary, a reasonable period would be allowed to achieve the required standard.

2.12.4 ACNZ and BARNZ queried the term "continuously available" used in several places in this rule.

CAA response: It is accepted that a literal interpretation of this term is either not achievable, or is only achievable at unwarranted cost. In further consultation with ACNZ the term has been replaced by text, based on similar Document 4444 wording, which more clearly expresses the very high availability required in some areas.

2.12.5 An individual commenter stated that there was no requirement for the alarms required under (b)(5)(xvii) to be audible.

CAA response: Further contact with the commenter has ascertained that the comments related to possible sound intrusion affecting the operation of the tower. The comments were not in opposition to the requirement for what has commonly been called a *crash* alarm. The requirements of (b)(1) should ensure that an undue level of noise is not experienced in the tower.

2.12.6 ACNZ considered the *crash* alarm should be considered part of the aerodrome emergency plan and therefore specified in Part 139.

CAA response: Again not all "attended aerodromes" are certificated under Part 139. In any case any air traffic service includes an alerting service and, at an aerodrome, an audible alarm is seen as the most efficient way of broadcasting a general alert to other personnel who may be able to assist. What happens after the alarm is sounded will depend on any specific procedures in place. The rule should not be read as necessarily requiring the ATS provider to own all the alarm equipment.

2.12.7 ACNZ considered that the "information" contained in (b)(3) regarding food and toilet arrangements at solo watch locations was more appropriate for an Advisory Circular.

CAA response: CAA does not agree. There are obvious safety implications in regard to the provision of any essential service by an individual carrying out a solo watch. Concern increases when there is no relief available at any time during a period of duty. The rule attempts to ensure that the basic personal needs of an individual are adequately catered for at minimum risk to the service being provided. The rule could be criticised though for adopting an overly pragmatic approach which allows for the continuation of the long-standing New Zealand practice of solo watch operation at some facilities. It could be argued that uninterrupted service is only guaranteed when relief staff are readily available.

2.12.8 ACNZ queried the need for continuous communications with persons on the manoeuvring area and suggested that light signals would be a satisfactory alternative in appropriate circumstances. ACNZ also commented on the increased costs for airport companies.

CAA response: The "continuous" requirement has been modified. With the advent of cell-phones and lightweight portable VHF transceivers CAA sees no need to rely on light signals as the sole means of communication with pedestrians on the manoeuvring area. They could, however, still be used as an attention getting device indicating a need to establish two-way communications. Regarding increased costs, CAA considers it likely that those individuals most likely to gain access as an authorised pedestrian will already have, or have easy access to, either a cell-phone or transceiver.

2.12.9 ACNZ stated that the equipment lists contained in (b)(5) and (c)(2) should either be placed in the Advisory Circular or referenced to the similar lists in ICAO Document 9426.

CAA response: CAA does not agree with either suggestion. Minimum requirements are rule material, and minimum equipment lists appear in other Parts. Document 9426 was one of the documents used in defining the rule listing but contains several items which are either self-evident or not directly connected with safety.

2.12.10 ACNZ strongly disagreed with the requirement of (b)(5)(iv) for a barometer or barometric altimeter in the tower, and considered a QNH display or displays driven by remote sensors was adequate. ACNZ estimated the cost of meeting this requirement to be $15 000 nation-wide.

CAA response: CAA is aware of prolonged outages of ACNZ equipment which resulted in no actual aerodrome QNH being available. Contingency measures suggested by ACNZ for the use of a figure derived from the nearest available aerodrome QNH introduce increased possibilities of human error and are not considered appropriate for an ATS attended aerodrome. The UK, USA, and ICAO (in Document 9426) all require that aerodrome ATS units be equipped with a barometer. The FAA option of a mercury barometer has not been adopted due to the difficulty of fitting and reading these instruments in a tower. Regarding the cost estimate, it is noted

that, until the quite recent introduction of new technology equipment, the required barometer was in place.

2.12.11 ACNZ queried the difference between a QNH indicator and a barometer or barometric altimeter.

CAA response: Pointer type barometers can be difficult to read, even when optimally positioned on a control console. To avoid the possibility of direct reading errors it is preferable for an alternative digital display to be used, either direct reading, or a simple manual display sourced from the barometer and regularly up-dated. Both ICAO and the UK list a QNH indicator in addition to a barometer.

2.12.12 ACNZ queried the requirement for status monitors for "other essential equipment" required by (b)(5)(xii).

CAA response: The term has been dropped and replaced by a specific requirement regarding "any road or rail signalling equipment affecting the use of a runway."

2.12.13 ACNZ had concerns regarding the introduction of "alternative means" of information dissemination and "strongly recommended that all ATS providers be connected to the AFTN." They are concerned that "creative alternative means" may "directly affect and threaten other organisations within the aviation system."

CAA response: The option was inserted in consideration of the explosion in information technology and the general preference for non-prescriptive rules. The ACNZ position is generally acceptable to CAA in regard to permanent ATS facilities. It is still conceivable, though, that a facility, in particular a temporary facility, may not need an AFTN connection. The rule is amended to allow "alternative means" where these have been agreed to in an ATS letter of agreement.

2.12.14 ACNZ advised that their air traffic control centres did not currently meet the aural alarm, and, in some cases, the visual alarm requirements, of 172.57(e). They considered that ICAO and UK documentation supported their position.

CAA response: There was considerable dialogue with ACNZ regarding the provision of ILS/MLS alarms at approach control operating positions. In-depth study of various ICAO documents revealed a clear intent that the approach controller have immediate warning of the failure of any element of the ILS/MLS. The current ACNZ system has two additional links in the chain, raising concern regarding timeliness and human error. The requirement for aural/visual alarms of ILS/MLS failure, at approach control operating positions, is retained.

2.13 172.59 Establishment and transfer of service

2.13.1 Auckland International Airport Limited considered that further clarification is required on this topic, particularly regarding the process by which an aerodrome operator may wish to change to an alternative ATS provider.

CAA response: While the call for clarification is acknowledged by CAA there are limits to the extent that this can be addressed in a certification rule. In (b) this rule attempts to ensure a smooth transition when it has already been determined that a change of provider will take place. The mechanisms needed to lead up to this point, if not already clear or in place, are in the government policy and commercial arena, and are not part of the CAA area of responsibility.

2.13.2 ATCANZ commented on the lack of "entry and exit methodologies" including "clear guidelines for access to operational facilities for the training of incoming staff ..."

CAA response: It is considered that these are typical of the items that need to be considered in presenting the "full details of transitional arrangements ..." required by (b).

2.13.3 Ardmore Airport Limited queried whether Part 157 had any application in this area, and considered it might be unrealistic to expect a displaced provider to endorse transitional arrangements.

CAA response: Rule Part 157 has no application in this area. The comment regarding the application of (b) is noted but CAA considers that any difficulties that arise prior to the signing of a transitional agreement are a commercial rather than safety issue. CAA's concern is to ensure that any

commercial disagreement does not impinge on safety. CAA now recognises that (b) is one-sided in that no equivalent provision applies to an outgoing provider. This has been rectified by the addition of paragraph (c) to rule 172.165.

2.13.4 BARNZ warned that, in a commercial environment, it might be unrealistic to expect "willingness on the part of the existing certificate holder to participate in an orderly transfer of service". They were concerned of the possible disruptive effect on airline operations, particularly at larger airports.

CAA response: The warning is noted and paragraph (c) has been added to require co-operation from an outgoing certificate holder. The transfer of service provisions are designed to eliminate any disruptive effect to aircraft traffic. CAA will have to be satisfied that any competitive rivalries are resolved and put aside before issuing a certificate to an incoming provider.

2.13.5 CIAL considered the requirements regarding a transfer of service needed to be "much stronger". They correctly drew attention to the NPRM fault of placing all obligations on a new applicant. CIAL considered "the Airways Corporation has an unfair advantage over other potential providers in that it is the incumbent provider and is in a position to frustrate other organisations."

CAA response: See our previous comments. CIAL accept that the change to 172.165 is appropriate but consider that further detail regarding transitional agreements may be needed in an advisory circular.

2.13.6 CIAL also raised concerns regarding co-operation between different providers at the aerodrome control/approach control and approach control/area control interfaces.

CAA response: In operational terms the existence of different providers should not in any way affect the integrity of the ATS system as a whole. ATS letters of agreement will be the primary document regarding operational co-ordination, and will be required to be in place before certification is granted. It is now accepted by CAA that aerodrome operators have an interest in matters regarding the control zone established for their aerodrome.

2.13.7 An individual commenter stated that there was no provision "for the seamless transfer of provider" and that "part of the solution would be to issue the certificate ahead of the effective date." The same commenter considered it was "not reasonable to expect the co-ordination and co-operation stated."

CAA response: See the previous comments regarding this rule and 172.165. CAA accepts that an operational transfer must be seamless and for this to occur a certificate may need to be issued for a forward effective time and date.

2.13.8 Following MOT input 172.59 has been amended to provide for the submission of a schedule of proposed hours of service by all applicants.

2.14 172.61 Shift administration

2.14.1 ACNZ asked if the duties in (1) were considered to be operational duty.

CAA response: No, not in terms of the definition of *operational duty* contained in the NPRM draft of 172.55. They do however form part of the *Period of duty* as defined in the that rule.

2.14.2 An individual commenter stated that the minimum 5 minutes prescribed in (2) was not essential and would have the effect of making shift start/finish times impractical.

CAA response: CAA strongly disagrees that a minimum *handover* time is not essential. A hurried or incomplete transfer of watch could have serious safety outcomes and it is expected that in many cases providers will stipulate a time greater than the rule minimum. CAA cannot see why shift start and finish times defined by 5 minute increments are in any way impractical.

2.15 172.63 Documentation

172.65 Contingency plan

No comments received.

2.16 172.67 Co-ordination requirements

2.16.1 ACNZ sought clarification over the intent of (b) and (d).

CAA response: The wording of both paragraphs has been refined. There was no intention that every ATS unit needed to co-ordinate or communicate with every other unit.

2.16.2 ACNZ indicated that the instantaneous direct-speech communications required by (g) were not attainable with most voice switching systems and suggested a maximum 5 second response time. Another commenter made similar observations.

CAA response: The requirement is contained in an Annex 11 standard. Paragraph (g) has been deleted as the same requirement is now incorporated by reference through rule 172.107 and Document 4444. Explanation of the term *instantaneous* in Document 4444 is considered to answer ACNZ concerns.

2.16.3 An individual commenter raised the following issues:

(a) The word "adjoining" in (b) should be deleted.

(b) The term CAVOK should be accepted.

(c) The term "aerodrome operator" in (a)(8) is ambiguous and should refer to the licensee.

CAA response:

(a) The word "adjoining" remains necessary in the revised text.

(b) ACNZ and the NZ Meteorological Service do not support the reintroduction of the term CAVOK in New Zealand and wish the existing situation, for which New Zealand has filed a difference with ICAO, to continue. The Met. Service reminded CAA of the reasons for the previous non-acceptance of the term (a misleading impression of the cloud situation was possible, particularly at those aerodromes at higher elevations)

(c) "Aerodrome operator" is the correct term (see 139.5).

2.17 172.69 (New Rule) Notification of facility status

The requirement for this rule was recognised after the issue of the NPRM. A similar rule exists in Parts 139, 171, and 174, and this rule has been the subject of consultation and agreement with ACNZ.

2.18 172.71 (NPRM 172.69) General information requirements

2.18.1 ACNZ were concerned that the wording of (c), regarding conditions on the movement area, implied a responsibility over which they did not have full control.

CAA response: While the ATS provider must be proactive in ensuring it is "kept informed" it is acknowledged that it cannot be held responsible where information is known only to another party, and that party fails to follow an established procedure. In practice though ATS staff in a visual control room (tower) will, by virtue of their duties and location, often be the first to be aware of operationally significant conditions on the movement area.

2.18.2 Ardmore Airport Limited suggested the listing in (a) might be too specific and suggested reference to "natural phenomena that may affect aircraft operations."

CAA response: The proposal is thoughtful but could create considerable difficulties for both providers and CAA in determining what events to cover and which agency, if any, has oversight. The listing comes from Annex 11, and, in the case of volcanic activity, appropriate organisation is in place. For radioactive materials or toxic chemicals, it should be relatively easy to identify possible sources of release.

2.19 172.73 (NPRM 172.71) Meteorological information & reporting

2.19.1 ACNZ pointed out that the requirements regarding the transmission of meteorological bulletins, contained in (d), are best managed through the use of a common communications network such as the AFTN.

CAA response: CAA suspects that, in adopting this standard, ICAO were more concerned about possible corruption of content during voice transmission. The ACNZ comment is noted but CAA consider that facsimile transmission of AFTN hard copy does not create a problem.

2.20 172.75 (NPRM 172.73) Area and approach control services

2.20.1 ACNZ sought amendments to (a)(2) to more clearly define ATC responsibilities relative to the particular airspace classification and type of flight. They also requested an expansion of the purpose statement to indicate that ATC was provided "for the purpose of assisting the pilot in preventing collision."

CAA response: The rule wording has been amended to establish a link with the airspace classification and type of flight. CAA cannot accept the proposed amendment to the purpose statement as to do so would appear to diminish the responsibility of ATC as defined in both ICAO documentation and the Civil Aviation Act. For two aircraft flying in cloud, under area or approach control, the total responsibility lies with ATC. In other situations a pilot's responsibility to avoid collision is acknowledged in three separate rules in Part 91. (91.223, 91.227, and 91.229).

2.20.2 ACNZ recommended the removal of the qualifying statement in (c)(4) of the NPRM.

CAA response: Agreed. The state has ultimate authority in sovereign airspace although on occasions it may be obliged to file a difference with ICAO.

2.20.3 Note that paragraph (d) of the NPRM, a difference already filed with ICAO, has been moved to Appendix A.

2.20.4 ACNZ requested clarification of the text of (e).

CAA response: Following further discussion with ACNZ a revised text was agreed.

2.21 172.77 (NPRM 172.75) Aerodrome control service

2.21.1 Ardmore Airport Limited commented that the multiple cross references in paragraph (a)(5) "makes life difficult" and asked if they could be consolidated into the AIP and Appendix A.

CAA response: While the cross referencing may appear cumbersome it is considered to be the best option available. Most of the material is in Document 4444, while Appendix A will contain material for domestic use, particularly runway separation for light aircraft. It is not legally acceptable, to incorporate by reference within a rule, material from a lower level information document, such as the AIP. In addition there is no particular requirement for ICAO separation minima to be repeated in the AIP.

2.21.2 An individual commenter states "I agree with the view regarding the positive control of aircraft in the zone."

2.21.3 ACNZ continued their objections, raised earlier in the consultative process, regarding the wording of paragraph (a)(2). In reiterating their position they commented;

"Airways are of the opinion that the words 'for the purpose of preventing collision' places too greater, if not all the responsibility for preventing collision between aircraft operating in VMC (visual meteorological conditions) within the vicinity of an aerodrome where a defined separation is not required in accordance with the Annex, on the controller. In fact, the only way a provider can have any assurance the objective will be met would be to separate traffic all the time."

ACNZ also provided two pages of extracts from other documents in support of their argument. In the course of subsequent consultation ACNZ proposed the following amendment to 172.77(a)(2):

> "provide for the issue of ATC clearances, instructions, and information, for the purpose of assisting the pilot to prevent collisions between aircraft ..." (underline added)

CAA response: CAA did not accept this proposal. It was considered that this wording did not accurately reflect the respective responsibilities of the pilot and the aerodrome control service provider. The use of "assist" in this

context places the primary responsibility for preventing collisions on the pilot. CAA does not consider this appropriate. The service provider and the pilot both have responsibility for preventing collisions. Neither as a general rule is more responsible than the other.

If CAA were to insert "assist" in 172.77(a)(2) an inconsistency would be created with the definitions of air traffic control service and aerodrome control service in the Civil Aviation Act. Also relevant to CAA's decision was the fact that no relevant ICAO documents use the term "assist" in this context.

The CAA view of aerodrome control is that the pilot and the controller work together to prevent collisions. The responsibility is shared. The structure of the Civil Aviation Rules is such that the responsibilities of different parties are seldom contained in one Part. The Civil Aviation Rules are structured in terms of applicability and subject. Part 172 certificates organisations providing air traffic services and provides, together with the Act, the regulatory framework within which they operate. Part 91 contains the rules that define the responsibilities of the pilot. CAR 91.223, 91.227, and 91.229 coexist with Part 172 and make clear that the pilot is responsible for avoiding collisions with other aircraft in the air. CAA considers this structure accurately reflects the shared responsibility of the pilot and the service provider.

ACNZ do not have any difficulty with the CAA position where ATC are applying defined separation minima, as in runway and wake turbulence separation. They appear to have considerable difficulty though (at least in terms of liability) with the concept of providing an air traffic control service where control is exercised through a melange of clearances, instructions, and information, and where the success of the operation is very dependent on the alertness, cooperation, and, in particular, the visual acuity of pilots.

The fact that defined separation minima have little relevance in the control of circuit traffic does not inhibit the provision of a control function. To quote ICAO "One of the methods used by air traffic control to prevent collisions is the application of the separation minima as specified in PANS-RAC (Document 4444); however it is not the only method used by air traffic control."

ACNZ did not accept the CAA view and continued to assert their position in correspondence with CAA. On 1 April 1997 ACNZ filed a service charter complaint with CAA regarding the consultation process for this rule. Both parties technical experts sought internal legal opinion regarding their position and an exchange of views between legal counsel followed. A further meeting was held with ACNZ in May but it was still not possible to reach agreement. For its part CAA was confident that the final rule 172.77 contained an accurate rendition of the applicable ICAO standards.

The two parties then agreed to submit the proposed rule for an independent non-binding legal opinion. This opinion endorsed the wording of the rule.

2.21.4 ALPA have "followed correspondence between Airways and CAA on this subject." They said "Whilst we see logic in the Airways argument and understand their perspective, we have no wish to abdicate the professional responsibilities of the Air Traffic Controller. The CAA approach to the issue is acceptable to us although we understand the two parties are working towards a common position."

2.22 172.79 (New Rule) Separation from special use airspace

2.22.1 Since publication of the NPRM a need has been identified, in agreement with ACNZ, for the determination of separation minima from special use airspace. The text for this short rule will refer to Appendix A and will be inserted with the same amendment as the Appendix A detail. The minima will be discussed with ACNZ prior to inclusion.

2.23 172.81 (NPRM 172.77) Responsibility for control

No comments received.

2.24 172.83 (NPRM 172.79) Priorities

2.24.1 AIA commended the approach to this issue and welcomed "the clear recognition of the aerodrome operator's interests".

2.24.2 Air NZ took a contrary view with regard to (c), stating, "we do not consider that the issue of assigning priorities should ever be a matter for the aerodrome operator." Acknowledgement was made of the existence of "slot" allocation mechanisms. Air NZ noted that "the system has not

required such a rule in the past; we see no need for such a rule in the future."

CAA response: As the allocation of priorities by ATC can have an impact on the operation of an airport it seems only reasonable that due regard is given to any priorities determined by the aerodrome operator. The rule is most likely to affect general aviation aircraft at peak times and it is hardly conceivable that an aerodrome operator would seek to disadvantage a regular airline operator. As the need for slot allocation arises from apron congestion as well as airspace congestion it is obvious that aerodrome operators need to be involved.

2.24.3 Ardmore Airport Limited considered that the AIP RAC 6 section on priorities should be amended "to reflect this better rendition" of paragraph (a).

CAA response: The comment is noted. Paragraph (a) has been shortened following other comments and a consequent restructuring of the rule. As an information document the AIP must be consistent with any relevant rule.

2.24.4 CIAL commented that the rule appeared to be more prescriptive than necessary and considered that the applicant should be required to establish a system of priorities "in conjunction with the organisation responsible for ensuring the provision of those services." (CAA or the aerodrome operator).

CAA response: The rule has been considerably modified during the consultation process. While some core prescriptive elements remain, other areas have been opened up by requiring that schemes be devised by ATS providers in consultation with interested parties.

2.24.5 An individual commenter provided some observations on the air traffic controller's role in making priorities work and considered they must have a strong input to their determination.

CAA response: CAA acknowledges that ultimately it is individual controllers who determine priority, in accordance with published criteria. This is why the rule is hedged with several qualifiers designed to allow a controller reasonable flexibility in traffic handling. CAA expects that controllers will continue to apply priorities impartially. Complaints

inevitably arise though, and the publication of complaint procedures should lessen the possibility of grievances being aired on the radio. It is expected that ATS providers would involve their operational controllers in the priority determination process.

2.24.6 An individual commenter asked if (a)(2) and(3) were still reasonable, citing the case of a departing wide-body waiting for a light aircraft on a training flight to land.

CAA response: This is one of the core internationally agreed priorities which form part of the relatively few specific requirements applicable to the exercise of aerodrome control. Other parts of the rule allow priorities to be determined which could, for instance, result in the example quoted being eliminated, or being quite rare, or being approved subject to the acceptance of expediting or delaying manoeuvres. Ultimately though any aircraft on final is entitled to not have its landing disrupted by a preceding departure.

2.24.7 The same commenter indicated that the word "practical" in (b) should be replaced by "practicable". The commenter also suggested (c) conflicted with (a)(2) and (3).

CAA response: The wording of (b) was chosen after careful deliberation. It would always be practicable to accord priority but that might itself result in compromising the safety of other aircraft. On balance it was considered preferable to leave some discretion available to the controller, through the procedures to be established. In regard to (c) the "due regard" qualifier adequately establishes the precedence of (a)(2) and (3).

2.24.8 Both ACNZ and BARNZ considered that (a)(4), (5), and (6) related to efficiency rather than safety and should be deleted.

CAA response: After further consultation with ACNZ these paragraphs have been deleted from (a) and replaced by a more flexible provisions under (e) and (f) in the final rule. In effect this will validate the type of material already contained under "Traffic Priorities" in the AIP.

2.25 172.85 (NPRM 172.81) Flow control

172.87 (NPRM 172.83) ATC clearances

172.89 (NPRM 172.85) Cruising levels

No comments received.

2.26 172.91 (NPRM 172.87) Deviation from an ATC clearance

2.26.1 ACNZ said there needed to be a "definitive statement in the Part that ATC will not be responsible for separation when these events occur". They referred to a statement on this topic in CASO 1.

CAA response: An appropriate addition has been made to final rules 172.75(b) and 172.77(a)(4).

2.27 172.93 (NPRM 172.89) Flight information service

2.27.1 ACNZ objected to paragraph (a) which indicated that an authorisation to provide area control services might be tagged to also require the provision of a flight information service in Class G (uncontrolled) airspace. ACNZ queried how, in a deregulated market, a provider was to "recover the costs of such services when it is clearly known this will be almost impossible to achieve." ACNZ stated that to recover such costs from other revenue was "not accepted in commercial practice."

CAA response: Paragraph (a) has been removed from the final rule. CAA, as the state civil aviation authority, is obliged under the Chicago Convention to ensure the provision of a flight information service and alerting service in the Auckland Oceanic and New Zealand Flight Information Regions. CAA will take such steps as are necessary to ensure the continuation of flight information and alerting services currently being provided.

2.27.2 An individual commenter stated that references regarding flight plans needed considerable clarification, and that traffic information must refer to all known aircraft, whether on a flight plan or not.

CAA response: Regarding flight plans, CAA is aware that there is some confusion over various "types" of flight plan, as indicated by the commenter. "An abbreviated plan", "a full filed plan", and a "full plan lodged over the radio" are merely variations on a theme, and attention is drawn to the definition of a flight plan in Part 1. This definition applies regardless of the extent of the detail supplied or the method of filing.

As indicated by the definition of *traffic information* in 172.3 the exchange of traffic information is not limited to those aircraft on a flight plan.

2.27.3 Rural Aviation (1963) Ltd were the only organisation to respond to the specific call for comment on paragraph (e). They stated they "would have no concerns" if the rule was removed.

CAA response: It has now been decided to retain the rule, at least for the time being. The information is readily available from the United States Coastguard AMVER (Automated Merchant Vessel Reporting) service and it is felt that availability of the information may not have been widely known to affected pilots.

2.28 172.95 (NPRM 172.91) Aerodrome flight information service

No comments received.

2.29 172.97 (NPRM 172.93) Alerting service

2.29.1 ACNZ made detailed submissions to the NPRM rule, and also subsequently as part of the ongoing consultation process.

CAA response: CAA has worked closely with ACNZ to implement, through this rule, recommendations arising from the FIS review undertaken by ACNZ in 1994-95. The major change to the NPRM draft is the addition of SARTIME procedures whereby a pilot will be able to elect alerting service coverage without needing to file a flight plan.

2.29.2 An individual commenter stated that "ATS is not currently responsible for the alerting action ... but is merely the handling agent for such advise (*sic*)". This commenter also opposed some of the changes introduced in the NPRM which linked the provision of an alerting service with the filing of a flight plan.

CAA response: The individual commenter has confused the alerting service with those services provided by the NRCC. The final rule, through the introduction of SARTIME, now provides another avenue for a pilot to elect alerting service coverage.

2.29.3 Another individual commenter indicates that the word "practical" in (l)(1)and(2) should be replaced by "practicable".

CAA response: While the corresponding Annex 11 text does use "practicable" this higher level requirement is seen as too cumbersome in the domestic environment insofar as smaller operators are concerned. In (1), in particular, we consider it is most important that prompt notification to the NRCC should not be delayed by the inability to establish immediate communications with the operator.

2.30 172.99 (NPRM 172.95) Flight plans

2.30.1 ACNZ sought clarification as to the intent of paragraph (a) and suggested paragraph (c) could be read as meaning that a centralised flight planning office had to provide equipment to operators and other ATS providers.

CAA response: After further consultation with ACNZ agreement was reached on revisions that more clearly define ATS responsibilities. These provisions are contained in paragraph (b) of the final rule. Paragraph (d) in the final rule makes it clear that the equipment requirements relate only to the flight planning office.

2.30.2 An individual commenter states that "by definition, all flight plans are filed," and requested clarification.

CAA response: The term *filed flight plan* was used to fit the ICAO terminology used in Document 4444, parts of which have been incorporated by reference into Part 172. The definition has now been added to 172.3.

2.31 172.101 (NPRM 172.97) Time

2.31.1 Following input from ACNZ, the 30 second accuracy requirement of (a)(2) has been increased to 5 seconds. ACNZ state that this accuracy is readily achievable. The closer synchronisation of time systems resulting

from this change will have particular benefit in the incident investigation area.

2.31.2 ACNZ considered time-checks "in this modern age of technology" should be provided only on pilot request.

CAA response: While this rule lifts the requirement to provide a time-check to all VFR aircraft, CAA considers that further consideration and consultation is needed before dispensing with time-checks for IFR aircraft.

2.31.3 Ardmore Airport Limited considered New Zealand should follow the Australian example and make pilots responsible for timekeeping.

CAA response: The Australian AIP reference quoted is directed at pilots and does not relieve ATS of the responsibility to provide time-checks.

2.31.4 An individual commenter stated this was the ideal opportunity to "delete the use of UTC domestically within New Zealand."

CAA response: CAA acknowledges that it has yet to make a final decision on this topic.

2.31.5 Rural Aviation (1963) Limited supported the changes introduced regarding time-checks.

2.32 172.103 (NPRM 172.99) Altimeter setting procedures

2.32.1 ACNZ and Ardmore Airport Limited both considered that when a pilot had stated the correct QNH in the initial radio call ATS should not be required to repeat it.

CAA response: This apparently reasonable view is based on non-standard radiotelephony procedures which have, unfortunately, found their way into the OPS section of the AIP. While it may have seemed helpful for pilots to volunteer the QNH, it is more important, in this vital area, that the internationally standardised format of ATS readout/pilot readback is adhered to. This duplicated enunciation of the QNH is designed to reduce the chance of human error (the *hearback syndrome*). The requirement is imported from the explicit standard contained in Annex 11 paragraph 4.3.4.4(h).

2.33 Deleted (NPRM 172.101) Telecommunications requirements

2.33.1 CAA has decided to delete this rule. Paragraph (a) material is either covered by other rules or will be dealt with in the advisory circular. Following discussion with search and rescue officials it has been decided that monitoring of the emergency channel 121.5 MHz at international airports is no longer required.

2.34 172.105 (NPRM 172.103) Radio and telephone procedures

2.34.1 ACNZ commented that the terminology needed "to be bought into the modern world."

CAA response: Both *telephony* and *radiotelephony* are in the current Concise Oxford Dictionary and the word *radiotelephony* is used by ICAO, Australia, and the United Kingdom in this area. CAA considers the original wording of the rule text is the most appropriate.

2.35 172.107 (NPRM 172.105) Radar services

2.35.1 The Part 91 reference in (3)(ii) has been corrected and the wording of (5) revised for clarification.

2.35.2 The New Zealand Gliding Association drew attention to the lack of any requirement to utilise radar as part of any air traffic control service. They pointed out that the development by ACNZ of an SSR radar environment had involved "significant investment by both commercial and recreational aviation users in New Zealand." The Association warned that any step backwards to a non-radar environment would detract from the "maximal use of airspace."

CAA response: CAA considers it preferable for providers and their customers to determine the radar requirements for any particular situation. CAA does not envisage, nor would it countenance, any significant retreat from existing radar coverage of congested airspace.

2.36 172.109 (NPRM 172.107) Aircraft emergencies and irregular operation

2.36.1 ACNZ, while acknowledging the ICAO basis of paragraph (b), queries its relevance and applicability, and suggests it be deleted.

CAA response: We agree that interception in particular would appear to be a remote possibility in airspace administered by New Zealand, and in recognition of this the qualifier "where appropriate" was inserted. Strayed and unidentified aircraft cannot be discounted though, and as remote as the possibility of interception seems, it still exists.

2.37 172.111 (NPRM 172.109) Action after serious incident or accident

172.113 (NPRM 172.111) Incidents

No comments received. Both rule titles have been revised and 172.113 has been made more specific in regard to facility malfunction reports.

2.38 172.115 (NPRM 172.113) Records

2.38.1 ACNZ queried the reason for the change from 30 to 40 days regarding the retention of electronic records. They pointed out this change would involve expenditure of "several thousand dollars" for additional recording tapes. GAPAN supported the increased retention period.

CAA response: After further consideration CAA has decided to amend the electronic media retention period to 31 days. The 40 day figure was partly based on internal CAA considerations but it is now felt that 31 days should be more than adequate for the reporting or identification of any incident requiring investigation. The linkage with a calendar month should also be administratively simple, thus lessening the possibility of inadvertent erasure.

2.38.2 ACNZ and Ardmore Airport Limited sought rationalisation of the varying retention periods in (f).

CAA response: These have now been rationalised by adopting a 31-day retention period for most records.

2.38.3 ALPA drew attention to problems arising from the 30-second time recording accuracy required by (d)(1). They pointed out that this accuracy figure allowed too great a variation between independent time systems and that this lack of synchronisation could jeopardise incident and accident investigations. They suggested that all data records be "slaved to the same time-base."

CAA response: This issue has been resolved through the amendment to 172.101 which now requires time system accuracy to within 5 seconds. The change was suggested by ACNZ. ALPA, while preferring a single time source for the whole ATS network, have agreed that this change will largely resolve the problem. CAA consider that this change will not cause difficulty for any future ATS providers.

2.38.4 ALPA considered that (d)(2) did not go far enough in ensuring that "data available for replay will demonstrate as close to identically as possible, what was actually displayed and what occurred at the operational position concerned, to facilitate accurate investigations."

2.38.5 ACNZ had earlier sought "clarification as to exactly what radar information is to be recorded."

CAA response: In working through the above comments it became clear that it might be difficult to justify costly modifications to existing equipment, if they were available. It was also clear though that new equipment becoming available has considerably enhanced recording capability. Following consultation with ACNZ and ALPA agreement was reached on rule wording that provides that new equipment will comply with the intent of the draft rule. Other refinements to the rule have also been agreed with ACNZ.

2.38.6 Paragraph (a)(2) was added following input from the MOT.

2.39 172.117 (NPRM 172.115) Logbooks and position logs

2.40 172.119 (NPRM 172.117) Security

No comments received.

2.41 172.121 (New rule) Service disruptions

2.41.1 This new rule was added following comments from the MOT regarding the determination and monitoring of hours of service, and disruptions to promulgated hours of service.

2.42 172.123 (NPRM 172.119) Internal quality assurance

2.42.1 ACNZ asked to what extent radiotelephony sampling would be required. They proposed that each ATS unit be allowed "to measure its quality indicators in the most effective way possible as is the current practice."

CAA response: CAA disagrees. CAA considers it more appropriate for minimum sampling parameters to be determined by QA management, rather than being left to the individual whim of unit managers. Radio and telephone sampling is seen by CAA as a powerful tool in assisting providers to safely deliver a quality service.

2.42.2 ACNZ asked, regarding paragraph (c), "are (2) and (4) not one of the same?"

CAA response: No. Subparagraph (2) relates to an intermediate stage of the overall procedure and (3) relates to the final sign-off stage. In a large organisation it is anticipated that the management level involved with the review will be separate from that involved with the earlier stages of corrective action. In a small organisation the same manager(s) may be involved, but it is anticipated that the review would take place after sufficient time had elapsed to allow an objective assessment of their own earlier actions.

2.42.3 ALPA, in commenting on the wording of (b)(1), stated that "the applicant's organisational goals and needs of its customers are not germane to the concept of safety, especially when the customer is not defined." They considered (b)(1) unnecessary.

CAA response: CAA accepts that the wording of (b)(1) may be rather narrow. This paragraph was common to several earlier certification rules but has since been revised for Part 119. The more general Part 119 version is now substituted here.

2.43 172.125 (NPRM 172.121) Organisation exposition

2.43.1 ACNZ queried whether the requirements of 172.59 applied to their initial certification under Part 172.

CAA response: The requirements of 175.59 did not originally embrace ACNZ but now apply following a change to this rule based on comments from the MOT. This change was discussed with ACNZ.

2.43.2 An individual commenter found the exposition requirement "confusing" and offered suggestions regarding the composition of an organisation's operations manual.

CAA response: The exposition rule may appear daunting but it is in fact meant to serve as a simple checklist. All certification rules contain a similar rule and further useful information regarding expositions generally may be found in Advisory Circulars already issued for Quality Assurance and for certification Parts.

2.44 172.151 Continued compliance

2.44.1 ACNZ questioned the need for each ATS unit within an organisation to have a complete and current copy of the exposition.

CAA response: While operational manuals form part of an organisation's exposition it was not the intention that individual ATS units hold copies of manuals applicable solely to other ATS units. Paragraph (1) has been rewritten accordingly.

2.45 172.153 Operations manuals

2.45.1 ACNZ stated that "the prime purpose of the document is to meet the needs of the provider ... not facilitate auditing" and that the listing in paragraph (c) "should be guidance material". They went on to suggest an addition to the items listed.

CAA response: The attempt to define the document layout was based on the United Kingdom example and was seen as sensible for an authority that could otherwise be faced with a variety of manual styles. The listing has

been removed from the rule and will be held over for possible issue as guidance material.

2.46 NPRM 172.155 (Deleted) AFTN

2.46.1 ACNZ correctly identified this topic as one of several possible interconnection issues. ACNZ said "it is accepted that (AFTN) connection must be made available ... " but raised queries regarding the supply of AFTN terminal equipment, connection costs, and the protection of data-base material.

CAA response: CAA has decided that, while AFTN connection must be available to other ATS providers, the provision is not appropriate in Part 172.

2.47 172.155 (New Rule) Trials

2.47.1 During the consultative process with ACNZ, but following the issue of the NPRM, a need was identified to provide a formal backing for the conduct of operational trials. Currently such trials are agreed on an ad hoc basis between ACNZ and CAA and promulgated in an AIP Supplement. The new rule was developed in conjunction with, and agreed to by, ACNZ, since when a minor change has been made following MOT comments.

2.48 172.157 Denial of ATC clearance

2.48.1 AIA commented, "The Division commends the commonsense approach to this contentious issue. However, it is felt that the addition of reference to the consequences/penalties, applicable to the pilot-in-command of an aircraft entering the manoeuvring area without an ATC clearance, would limit the potential for problems in this area."

CAA response: CAA agrees that an awareness of the penalties involved should limit the potential for further problems. The appropriate rules are contained in Part 91 and CAA will consider how best to draw attention to the penalties applying. Since publication of the NPRM a pilot has been found guilty of multiple entries of a manoeuvring area without a clearance and a substantial fine imposed. CAA included details of this case in the March 1997 *CAA review.*

2.48.2 CIAL, while acknowledging the rule "is logical in terms of safety", considered it "unfair in commercial terms in that an aircraft operator can flout commercial arrangements with the service provider knowing that they are obliged to provide the service anyway." CIAL requested that Part 172 include a section giving the service provider some legal avenue to stop a "smart alec" operator abusing the system.

CAA response: 172.157 was included in this rule with some reluctance, as the issue is seen by CAA as primarily a commercial matter. While there is understanding of the views expressed by CIAL, CAA consider that an ATS service provider, that is also an airport company, has potentially more leverage over an errant operator than, say, ACNZ. This is because it is a reasonable assumption that, at some stage, the operator will have its aircraft on the ground, on airport company property. Part 91 already requires operators to comply with ATC clearances and instructions, and conversely not to operate unless certain clearances are obtained. Essentially the problems outlined by CIAL are commercial and outside the ambit of CAA rules.

2.48.3 An individual commenter stated that this rule "is not in accordance with ICAO standards" and "as in many services, the provision of the service is fundamental and the cost recovery is a different matter."

CAA response: The provision is already the subject of agreement between CAA and ACNZ, as the current sole provider. In recognition that the provision is not in accord with ICAO standards New Zealand has exercised its right to file a difference from the Annex 11 (paragraph 3.7) standard with ICAO. This difference was filed by letter dated 6 June 1995.

2.49 172.159 Suspension of VFR operations

No comments received.

2.50 172.161 Safety inspections and audits

This rule has been deleted following comment from the MOT that this provision is adequately covered by the Civil Aviation Act.

2.51 172.161 (NPRM 172.163) Changes to certificate holder's organisation

No comments received.

2.52 172.163 (NPRM 172.165) Withdrawal and transfer of service

2.52.1 In its comments on 172.59(b) CIAL drew attention to the one-sided nature of that rule in that no like provision was placed on an outgoing certificate holder.

CAA response: Balance is restored through the addition of 172.165(c). This change has been accepted by ACNZ.

2.53 Subpart D — Other air traffic services

172.201 General

172.203 Requirement

172.205 Application

172.207 Issue of certificate

172.209 Operating conditions

2.53.1 Ardmore Airport Limited asked "what is this Subpart designed to cover?"

2.53.2 Mount Cook Airline expressed concern that the "subpart is quite loose in the situations that may be required to be certificated".

CAA response: In brief, the Subpart is designed to cover those services which fall outside the ICAO air traffic services definitions but may conceivably be considered to be an air traffic service in accordance with the additional "other air traffic service" category first introduced in section 2 of the Act. CAA has not yet established policy in this area but services which **may** be considered as coming under this category **could** include; apron management services, information services such as that provided at Mount

Cook, limited services at, say, air-shows, and services provided as part of contingency arrangements when normal air traffic services are unavailable.

2.53.3 Mount Cook Airline further commented that the rule should exclude services that airline operators provide for their own aircraft as "the cost and inconvenience of certification and ongoing audit could lead to the loss of these valuable airline operator tools."

CAA response: CAA is unlikely to require certification where an aircraft operator is providing an information service only to its own aircraft. It is noted though that current AIP entries indicate that Mount Cook Radio also provides limited information to other aircraft. It is reiterated that there is no automatic requirement for certification under this Subpart.

2.54 Appendices

2.54.1 Ardmore Airport Limited said that "The concept of collating separation minima and standard phraseologies into a part of the same document is excellent."

Transitional arrangements

ACNZ continues to operate under the authority of, and in accordance with, its Airways Service Certificates issued under regulation 149A of the Civil Aviation Regulations 1953. ACNZ will be required to be certificated under Part 172 by 23 April 1998.

Conclusion

The Authority concludes from this consultation that aviation industry participants with an interest in air traffic services, while expressing some concern regarding policy issues, generally favour the technical direction of the new rules. Specific issues that were identified in the comments received from the consultative group have been addressed. While agreement could not be reached on 2 issues with industry participants the Authority is satisfied that the rules are workable and meet New Zealand's international

obligations under the applicable ICAO Annex. The comments and all the background material used in developing 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 1052.