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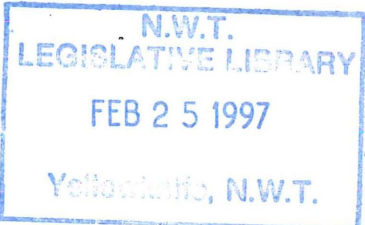


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Evaluation of ERS services report
for Iqaluit Airport
Avery Cooper Ltd. in January 1997

by:

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Overview

The categorical conclusion (Section 4.5.3 on p.29) reached in the Avery/Cooper Report is that “air carriers will not have a problem if ERS is removed from Iqaluit”. From this follows the recommendation (Section 6.0 on p.31): “..... that Iqaluit Emergency Response Services are not required for the safe and effective operation of the airport, and can be removed”.

Our study concludes that the findings of the Avery/Cooper report may not be entirely accurate, or complete for the following reasons:

Reaction of the Airline Users

The reality is that air carriers may indeed have a problem with the removal of the current style of ERS, depending upon the nature and operability of alternative fire/safety arrangements made available in the future.

Airline representatives indicate that a significant change in the status of ERS services are worrisome because there will likely be a lessening in quality or speed of response -- amounting to an effective reduction in safety. Definitive statements from airline management on the evolving safety situation at Iqaluit, however, will be contingent upon complete knowledge of the specifics of alternative arrangements that might be made to cover the ERS function.

Reaction of the Military

The military, on the other hand, consider Category 5 ERS protection available at Iqaluit as their current preferred minimum threshold for CF-18 training purposes. At FOL locations where this is not provided on an ongoing basis, they have had three options in the past: Fly in their own Category 5 foam-truck-tanker and crews prior to exercises (Rankin Inlet), work with a former Armed Forces-owned pre-positioned truck on a co-operative basis with the local civilian airport authority (Inuvik), or make the decision to operate without fire ERS protection (within the authority of the Winnipeg Command structure).

The military, of course, will use the FOL site operationally as an evolving threat might dictate, with or without ERS at the Iqaluit airport. On the question of military training usage of the airport, however, and its economic impact on the town: an FOL site without ERS will mean that DND will have to incur greater costs (in airlift repositionings of Category 5 firefighting tankers/equipment and crews for practice out of Iqaluit, as they do at Rankin -- or possibly accept the higher risk of a quickly unraveling incident at Iqaluit). With the recent CF-18 incident, the problems become evident very rapidly once circumstances trigger an event.

With the Canadian military across the country under such pressure to reduce cost, it is quite conceivable that DND, all other factors being equal, will choose to train at a lower-cost centre, one already equipped with ERS-Category 5.

Reaction of Itinerant flights and Cold-weather Testing Operations

The high quality 9,000 foot U.S. Airforce Strategic Air Command designed-and-built runway is a superb landing surface and alternate location for medium and widebody aircraft ferrying across the polar regions from the West Coast of North America to Europe. British Airways, Aeroflot, Aer Lingus, Lufthansa all have used Iqaluit in past years on the advice of international route planning firms. There is also the executive fly-through traffic to and from Europe to West-coast U.S. destinations. The recent Virgin Airlines visit (and incident) also occurred; although reason for the stop was purely fortuitous, and not planned. Regardless, an important element of each decision to land at Iqaluit, and the business which flows from each arrival, was the existence of ERS to some tangible and published standard.

In addition, Iqaluit has been the occasional centre for cold-weather proofing of new aircraft types. For example, April of 1996 saw the Boeing Company come to Iqaluit for cold-weather testing of their new 777 airplane type. It is conservatively estimated that the 60 some odd engineering personnel traveling with the aircraft spent in the neighbourhood of \$500,000 in the town of Iqaluit during their stay. With a good-quality runway, and quick-response fueling available, and ERS, it is conceivable that much more cold-weather testing of new aircraft types could be done. There is, of course, the question of higher standards of ERS required to serve larger craft, and the increasing standards about to be imposed through ICAO in 1999 and 2003; this would require an even greater investment in equipment and manpower to meet the higher ERS levels.

Ultimate Economic Consequences

One thing is certain: if any changes made to ERS ultimately involve charging-back to the airline on a user-pay basis, or result in their being assessed higher costs for whatever reason, it is certain that rates for passenger and cargo will be raised to compensate for these cost rises. For an airline business defending its rate of return on investment, the only logical response in the face of an increased cost input (whether call-out or insurance costs) would be to charge these back through to the users in both passenger fares and cargo rates. The cost-of-living implications of carrier rate increase for Iqaluit (already in 1991 - indexed at 155-160 over Montreal=100 -- GNWT Statistics Quarterly), and in effect all Baffin communities served through Iqaluit as transshipment point (for example Kimmirut in 1991 - indexed at 160-165 over Montreal=100 -- GNWT Statistics Quarterly), could well generate a considerable increase in the cost of living.

Transportation rates are a significant cost-input into virtually every product or service sold on Baffin Island, this is especially true when there is no road connection to the South. The annual Sealift option, for many categories of human and other perishable cargoes, is simply not viable. So increased air-rates for Iqaluit would actually exacerbate an already difficult high-cost environment. The consequences of this increased cost structure would be the reduction of economic competitiveness for the new capital of Nunavut, as well as all the 13 communities that depend upon Iqaluit for transshipment of personnel and materials.

In addition, fueling businesses at the airport may well experience a lowering of overall business volumes as international airlines now transiting through Iqaluit could choose to go to other airports where a higher standard of ERS can be had.

Merged ERS Services

The most oft-repeated future scenario for the future would see the Town of acquiring the responsibility to provide ERS at the airport. This is more easily said than done, however, because the nature of structural (typically wood buildings) fire-fighting of the type encountered in communities, is radically different from the high-volatility (fuels, metals, composites, plastics) environment found in aviation emergencies.

There is also a matter of legal responsibility and liability in delivering a service for which the Town of Iqaluit is only marginally equipped or prepared. Transport Canada Category 5 response times demand 3 minutes from alarm to ERS positioning at the end of the runways in optimal weather conditions. In order to maintain this standard with a joint ERS - municipal firefighting force (largely volunteer), all fire services for the town would have to be moved to the airport -- this, in turn, would cause a serious reduction in response times for the distant newly-developed residential areas of Iqaluit depending upon off-utilidor, tanker truck fire-fighting service. In other words, a merged service

might provide some standard of ERS, but at a direct cost of a reduction in response time to local taxpayers in their structures.

The type of firefighting used in a structural context, with water as the extinguishing agent, is markedly different from the more specialized and unique style of high-volatility fuel-based firefighting, with foam extinguishing agent, quick precision passenger-extraction procedures, required in airport aviation emergencies. Initial and ongoing training costs in ERS for the Iqaluit Fire Department would be considerable.

ERS role in Marketing of Airport

With regard to the marketing of the Iqaluit Airport, the Avery/Cooper Report may have understated the relevance of ERS with the statement : “ERS may have a limited role in making the airport more marketable” (Section 4.4.4 on p.28) . The report notes that Hamilton, Gander and North Bay maintain ERS for marketing purposes, because their traffic patterns of enplaned/deplaned passengers have not been to a level to formally mandate ERS services. As an example of how ERS services are marketed elsewhere, the website for the Edmonton Airport Authority specifically addresses the service capability with the following compelling phraseology:

“The Airport maintains an ERS which operates 24 hours a day.....has an ICAO Category rating 9, and a Transport Canada Fire Category 8 (second highest rating for Canadian Airports).....all Emergency Response personnel are trained and certified as specialists in aircraft emergency firefighting.....The airport is well-equipped to handle emergency landings. Damage control and risk minimization are inherent to the Airport because of the vast amount of surrounding farmland”

Aviation Insurance Implications

Insurance industry representatives admit that ERS existence is not one of the criteria used to determine rates for air carriers. Insurance rates for airlines are typically set on a continental basis: for example, two identical airline operations would pay more in Africa than in North America for similar coverage. However, industry representatives also conclude that a serious incident at any specific airport, such as Iqaluit, which brought a major liability to them (especially if a full disaster was keyed to a non-existent ERS) would undoubtedly cause them to re-assess the rate structure upward. This new rate would be applied to an insured airline continuing to fly into that airport on a scheduled basis.

Funding Transfer

GNWT Transport Personnel indicate that the prime reason for the ERS being shut-down in Iqaluit is that the Department is \$20M short in its revenues in the oncoming year's budget. In these circumstances, they have concluded that ERS-Iqaluit is a least-effectiveness area in spending, and that it should therefore be terminated. Moines were transferred by the Federal Government in the base budget for the department, to include ERS at Iqaluit, but with the flexibility to make other arrangements depending upon local conditions. The Avery/Cooper report (Section 4.5.2 on p.29) notes that: "Funding has been transferred to the GNWT without conditions. As a result, the changes to ERS in Iqaluit will not have an impact on funding".

Enplaning/Deplaning and Cargo Volumes

ERS requirements are determined by threshold levels of enplaning and deplaning passenger numbers. In the 1995 Statistics Canada document catalogue #51-203-XPB (table 1.1), Iqaluit is seen to be number 51st in rank in Canada's top 100 airports at 70,017 total enplaning/deplaning passengers.

What is not recognized with this single enplaned/deplaned criterion is that in an important aspect of northern air traffic is ignored. In the air-cargo section of the same Statistics Canada volume (table 5.1), Iqaluit is rated as 16th in the top 50 airports with a total tonnage of 1,599. Much of this cargo is carried in a mixed combination passenger-freight configuration.

Recommendations:

- 1. That prior to any firm decision on the removal of ERS at Iqaluit, the Territorial Government conduct additional studies to investigate the full range of socio-economic implications flowing from service termination. Studies should investigate the likelihood of airline insurance cost rises, chargebacks to airlines, consequent rising fare/cargo rates, and the inevitable upward pressure on the cost of living in the Baffin region generally.**
- 2. That the Territorial Government conduct additional studies to investigate revenue generation options prior to any service termination. These studies should investigate the potential for aircraft fueling businesses and other related aviation services. Further studies on historical and projected hospitality, crafts and tourism spin-offs from visiting aviation personnel or passengers should be done to quantify benefits of traffic levels supported by ERS.**
- 3. That in the interim, the Territorial Government should continue to upgrade and maintain specialized airport fire-fighting equipment, while providing unique ERS training to the Town of Iqaluit Firefighters, most of whom are volunteers working with a structural firefighting force.**

Bibliography

You have searched for: **Fire prevention** (lc+subject)

There are 12 records found matching your search.
12 records displayed.

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Description: 229 p.; 28 cm.
Language: eng
LC Subject: Fire prevention, Search and rescue operations
ID: **IC-ID: 1124** (ICAO publication)

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LC Subject: Search and rescue operations, Fire prevention,
Airplanes--Equipment and supplies
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Total number of records searched: 10476

Appendices

MEMORANDUM OF UNDERSTANDING
BETWEEN
TRANSPORT CANADA
AND
THE DEPARTMENT OF NATIONAL DEFENCE
RELATIVE TO
CIVIL/MILITARY OPERATIONS
AT
THE IQALUIT AIRPORT
IN THE NORTHWEST TERRITORIES

PURPOSE

1. An owner-operator/occupant relationship exists between Transport Canada (TC), also referred to as the Department of Transport (DoT), and the Department of National Defence (DND) at the Iqaluit Airport. The purpose of this Memorandum of Understanding (MOU) is to define the general principles governing the responsibilities, procedures and operating requirements concerning military operations at these locations. DND will act as the Executive Agent for the United States Department of Defense, as represented by the Secretary of Defense or his delegated representative.

BACKGROUND

2. North American Aerospace Defence (NORAD) plans call for the irregular deployment of military aircraft and associated support personnel to Forward Operating Locations (FOLs). Four northern airfields, Inuvik, Yellowknife, Rankin Inlet and Iqaluit have been upgraded and designated as FOLs by DND. The FOLs will provide austere facilities to support NORAD operations. This MOU relates only to operations at the Iqaluit airport.

3. Air defence operations from these locations will be essentially long-range, medium- and high-altitude interceptions of unidentified airborne objects entering Canadian airspace. It is not intended, nor is it proposed to support low-level tactical training from the FOLs. All DND aircraft shall adhere to appropriate Flying Orders and Air Traffic Control (ATC) rules and procedures as promulgated by TC, except in emergency situations.

4. The Iqaluit Airport, hereafter referred to as an "FOL airport", is owned by the federal government in the name of TC. TC retains full responsibility for airport policy; funding, operations and maintenance, and capital; long range planning; operational standards; equipment procurement; and ensuring the airport operation complies with aeronautical and airport safety regulations. See also Annex C.

5. Site plans showing administration and control of the land by TC, and its use and occupancy by DND, are attached as Annex A.

6. TC operates an ATC Tower, and/or a Flight Service Station (FSS) and related navigational aids at the FOL airports. In addition, TC holds the responsibility for civil aviation safety and security and civil aviation regulations. TC is also the authority which issues airport certification approval, including monitoring certification compliance.

DEFINITIONS

7. The following definitions shall apply:
- a. "Party" shall mean either DND or TC;
 - b. "Parties" shall mean DND and TC;
 - c. "Agent" means the Party which represents and negotiates on behalf of other users of the airport;
 - d. "Aircraft manoeuvring area" means that part of an airport (excluding aprons) used for the take-off and landing of aircraft and for the surface movement of aircraft associated with take-off and landing;
 - e. "Aircraft movement area" means that part of an airport used for the surface movement of aircraft and includes the manoeuvring area and aprons;
 - f. "Airport operating surfaces" means the runways, taxiways, aprons, and roads on the airport and the FOL site;
 - g. "DND" means Department of National Defence, represented by the Minister of National Defence or a delegated representative, who is an occupant of the airport;
 - h. "TC" shall mean Transport Canada (Airports Group and/or Aviation Group) as represented by the Minister of Transport or a delegated representative, who is charged with the administration and control of the airport and its facilities (also referred to as the Department of Transport);
 - i. "DoT" shall mean the Department of Transport as represented by the Minister of Transport or a delegated representative, who is charged with the administration and control of the airport and its facilities (referred to in this MOU as Transport Canada);
 - j. "FOL site" means the land area and structures thereon that comprise the location for hangars, operations building, accommodations building and other support facilities, all of which are owned by DND;

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 - i. "DoT" shall mean the Department of Transport as represented by the Minister of Transport or a delegated representative, who is charged with the administration and control of the airport and its facilities (referred to in this MOU as Transport Canada);
 - j. "FOL site" means the land area and structures thereon that comprise the location for hangars, operations building, accommodations building and other support facilities, all of which are owned by DND;

- k. "FOL airport" means the airport, including the FOL site at Iqaluit;
- l. "Incremental cost" means all additional direct variable costs or savings incurred as a result of an action to expand or add an output, service or operation, that are in excess of the original level of service provided prior to the construction of the FOL;
- m. "Maintenance" means the work required to maintain an asset in acceptable condition including preventative maintenance, scheduled maintenance and repairs. This excludes work required to raise the standard of the asset, extend its useful life, change its function or otherwise improve the asset;
- n. "Operations" means the utilization of financial or human resources to provide an airport or aviation service. Operations may include the use of assets as a means to the end product;
- o. "Standing Operating Procedures" (SOPs) means a set of instructions covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness (also called Standard Operating Procedures); and
- p. "Emergency" means a condition that threatens the well-being of personnel and/or resources that needs immediate treatment.

ANNEXES

8. The following are the annexes which, although deemed to form part of this MOU, have separate signatories in accordance with paragraph 50 below:

- a. Annex A. IQALUIT SITE PLAN SHOWING LAND ADMINISTRATION AND CONTROL BY TC AND DND;
- b. Annex B. IQALUIT - LIST OF FACILITIES AND SERVICES OF ONE PARTY LOCATED ON THE LAND AREA OF THE OTHER PARTY;
- c. Annex C. FUNCTIONAL RESPONSIBILITIES OF TC AND DND AT THE IQALUIT AIRPORT;
- d. Annex D. IQALUIT - SCHEDULE OF INCREMENTAL COSTS AND RATES OF PAY;
- e. Annex E. IQALUIT - PROVISION OF PETROLEUM, OIL AND LUBRICANTS TO THE FORWARD OPERATING LOCATIONS;

- f. Annex F. IQALUIT - CONCEPT OF OPERATIONS AND AVAILABILITY CRITERIA;
- g. Annex G. LIST OF COLLATERAL AGREEMENTS
- h. Annex H. ANNEX APPROVAL FORM; and
- i. Annex I. GLOSSARY OF TERMS.

9. Since the details of the various annexes mentioned above will be negotiated by and signed off by subordinate officials (see paragraph 50 below), the form at Annex H has been developed as a status tracking mechanism. This form will be reproduced locally and attached to each annex/appendix to confirm its timeliness and authenticity. Annexes H and I (and any other "information only" annexes that may be developed) will be amended and updated by the Fighter Group OPI as necessary and do not require sign off.

10. Annexes may be added to this MOU as deemed necessary by the Parties as a means to amplify and clarify any aspects of the interrelationship between the Parties concerning the airport and the FOL.

AGREEMENTS

11. Standing Operating Procedures (SOPs) will be defined and established by the appropriate TC Airport Manager and the DND Support Base to complement this MOU and will address, but not be restricted to such matters as:

- a. snow removal procedures and priorities;
- b. emergency response services;
- c. safety procedures;
- d. security procedures;
- e. emergency procedures;
- f. environmental issues;
- g. aircraft armament conditions and procedures; and
- h. dangerous cargo or hi-jack/bomb scare conditions.

12. MOUs concerning the provision of Military ATC Services are established between the appropriate Area Control Centre and Air Command. Activating and implementing these MOUs is the responsibility of the Deputy Chief of Staff Support Operations (DCOS Sp Ops), Air Command Headquarters.

GOVERNING PRINCIPLES

13. DND has the right and authority under the National Defence Act or the Emergencies Act, to terminate or suspend the rights or privileges granted under this MOU or Defence Controlled Access Area Regulations in times of emergency. DND also has the right and authority to take possession, or take control of the operation or management of any property installed on the aerodrome as may be necessary for defence purposes, subject to any right to compensation pursuant to the National Defence Act or Emergencies Act.

14. Annex C to this MOU stipulates which Party will be responsible for the management, operation and maintenance of the FOL airports and will include but not be restricted to the following:

- a. visual aids to navigation;
- b. aircraft movement areas (includes snow and ice control (SNIC)) and Foreign Object Damage (FOD) control);
- c. airport roads and vehicle parking areas;
- d. buildings and related utility and municipal services;
- e. Emergency Response Services (ERS);
- f. airport security and policing;
- g. environmental protection in accordance with the airport's Environmental Plan (e.g., - Glycol management and recovery, Urea control measures, noise, dangerous chemicals); and
- h. the provision of Military ATC Terminal Radar Services to both civilian and military aircraft.

15. TC will act as the Agent for site civil aviation requirements. DND will act as the Agent for all military aviation requirements and other military activities.

16. The Party that is providing a service at the time this MOU is executed will continue to provide that service to the other Party until such time as other arrangements are negotiated to change the responsibility.

17. Services rendered by TC to DND that exceed civil requirements according to classification or category will be cost recovered by TC in accordance with Annex D.

18. Services rendered by DND to TC that exceed military requirements will be cost recovered by DND in accordance with Annex D.

STANDARDS

19. Standards, where applicable, will be those of TC unless otherwise agreed by the Parties.

20. Where requested and agreed, the airport level of service provided shall meet the higher of the two parties standard. The incremental capital and ongoing operating and maintenance costs of providing a service above one Party's standard, as agreed between the Parties, will be borne by the Party requiring the higher standard.

21. Both Parties to this MOU recognize that compliance/adherence to stated/specified standards or level of service could be affected by factors beyond the control of either party such as, but not limited to:

- a. available resources;
- b. unserviceability of equipment;
- c. severe weather conditions;
- d. budgetary restraints;
- e. delay in supply of materials;
- f. strikes; and
- g. unexpected breakdown of equipment.

22. Should there be a deterioration in performance caused by one or more factors above, the Parties will consult/negotiate a solution that is mutually acceptable.

23. Consultation on compliance with standards for services supplied by either Party shall be through the authorized officers defined in paragraph 50.

CLAIMS

24. Where applicable, liability resulting from claims will be determined in accordance with the Treasury Board policy of Mutual Forbearance. In other cases, claims will be settled by the appropriate Party as it sees fit.

FINANCIAL TERMS

25. Interdepartmental charging within this MOU will be within the Treasury Board guidelines on financial administration.

26. No charge will be levied by TC where any DND requirement for a service can be wholly met within the standard that TC is providing to meet purely civil requirements.

27. No charge will be levied by DND where TC requirements for a service can be wholly met within the standard that DND is providing to meet purely military requirements.

28. Where incremental services are provided to DND on a continuing or demand basis, TC will identify each incremental cost and reflect it in Annex D. The unit cost base will be developed by TC from actual cost records. For the airport operating surfaces, a unit cost representing the latest cost incurred by TC will be the cost charged to DND.

29. The recoverable costs are shown in Annex D of this MOU. TC will forward quarterly, an invoice addressed to:

Three Wing Construction Engineering Officer
Alouette, QC
GOV 1A0

30. Payments will then be made payable to the Receiver General of Canada and forwarded to the Iqaluit Airport Manager.

31. If, in any year during the term of this MOU, formal agreement on revised rates is not reached by 1 April of that year, billing for services rendered will continue at existing rates until formal agreement with revised rates is reached, at which time a one time adjustment covering the period from 1 April to the date of formal agreement on revised rates will be made.

32. Costing of services and facilities provided by each Party will be the subject of a joint annual review occurring within the budgetary cycle of both Parties in order to update the costs to be recovered and provide for preparation of work plans, estimates and budgets.

LANDS AND FACILITIES

33. The lands under the administration and control of TC and for the use and occupancy of DND are depicted at Annex A. If, within the boundaries of the lands under the administration and control of TC, or for the use and occupancy of DND, the other Party has a requirement for the use of certain lands and facilities to support its responsibilities, the Parties hereby agree to the following:

- a. that neither Party will, without full consultation and concurrence with the other Party, erect or construct within its area of administration and control any building, structure or works which will in any manner interfere with signals from electronic facilities and/or systems, violate Registered Airport Zoning Regulations or which are not in conformity with coordinated long-range development plans. Either Party

planning major construction or renovations will normally provide the other Party with as much notice as is possible.

- b. that, should TC require the use of the lands set aside for the use and occupancy of DND for the effective operation of the aerodrome, the said lands will be transferred in accordance with the provisions of the Federal Real Property Act and applicable environmental legislation. Forty-eight (48) months will be provided to DND to relocate. TC will provide financial assistance equivalent to the replacement value of existing installations for any necessary replacement of lands, buildings, structures or other works which were constructed or erected on such lands prior to TC's identification in writing of the need for said lands;
- c. that, should DND require the use of lands under the administration and control of TC for the effective operation of the FOL, the said lands will be made available to DND. Forty eight (48) months will be provided to TC to relocate. DND will provide financial assistance equivalent to the replacement value of existing installations for any necessary replacement of lands, buildings, structures of other works which were constructed or erected on such lands prior to DND identification in writing of the need for said lands;
- d. that, in the event that one Party has a requirement to locate facilities or works on land under the administration and control, or use and occupancy of the other Party, or the facilities or works affects the registered zoning of the other Party, the Party with the requirement will be responsible for obtaining the approval of the other Party for capital installation costs and will also be responsible for any incremental operating and maintenance costs incurred by the other Party;
- e. that, should DND no longer have a requirement for use of any of its lands, buildings, structures or facilities, they will be disposed of in accordance with the provisions of the Federal Real Property Act and applicable environmental legislation; and
- f. that access to facilities under the administration and control, or use and occupancy of one Party, but located in the operational area or designated area of the other Party, will be accommodated to the maximum extent possible. Lists of facilities and services of one party located on the land area of the other are identified at Annex B.

ACCESS

34. The Parties shall have the respective use and control of the lands specified at Annex A and shall have the right to enforce any and all regulations in accordance with Annex C, including trespass regulations, on those lands.

UTILITIES AND ESSENTIAL SERVICES

35. DND shall be responsible for the payment of all utility and essential services at the FOL site.

HOURS OF OPERATION

36. The hours of operation of the airport and associated services will be as published at appropriate intervals in the requisite aeronautical information and advisory publications.

37. Notwithstanding the above, the hours of operation are adjusted frequently to accommodate civilian flight schedules. The Iqaluit Airport Manager should be contacted as required for the latest operations schedule.

DEPLOYMENT ACTIVATION AND ALERTING

38. DND will be responsible to provide timely notification to the Area Operations Centre (AOC), the ATC Tower (and/or FSS) and the Airport Manager (APM) that FOL activation is imminent. Upon notification, the APM, the AOC and ATC Tower/FSS will ensure airport services and appropriate aircraft operating surfaces are ready to accept deploying aircraft in accordance with Annex F. DND agrees to assume all incremental costs associated with standby and overtime pay at rates outlined and dated in Annex D to satisfy these requirements.

EMERGENCY RESPONSE SERVICES (ERS)

39. TC will manage, operate and maintain airport ERS services at the FOL airports during the period DND fighter aircraft are using the airport, to the level as published in the Canada Flight Supplement. During deployment periods, DND will supplement TC equipment and manpower as necessary to increase the ERS category to meet DND requirements. In the event services are withdrawn or reduced, TC agrees to advise DND ninety (90) days prior to the planned reduction or withdrawal of services.

40. If DND aircraft recover at the Iqaluit airport outside the normal working hours of operation for TC firefighters, and DND firefighters are not yet prepositioned, TC will attempt to call off-duty firefighters and advise DND if their requirements can be met. Incremental costs will be borne by DND.

41. The following constitutes operational response authority:

- a. The TC Fire Chief will be in charge of firefighting operations involving incidents with civilian aircraft;
- b. The DND Fire Chief will be in charge of firefighting operations involving incidents with military aircraft; and
- c. notwithstanding the above, the military or civilian designated Fire Chief (as coordinated and determined beforehand between TC and DND) has the ultimate authority over all duty firefighting personnel.

42. DND is authorized to share TC facilities (firehalls and workshops) and to utilize TC equipment in the conduct of their duty including the training of personnel and recharging of equipment. All such activities will be approved by the TC Manager in charge prior to access or utilization.

43. TC and DND are responsible for training their ERS/CFR (Crash/Fire/Rescue) personnel to the acceptable and required level to cover all contingencies.

44. Training for DND firefighters must include airfield familiarity, radio call signs, infield and outfield avoidance areas, standby locations, crash routes, hot cargo areas, weapons safety areas, hot brake areas, etc. Training on available TC crash vehicles must be given to DND firefighters before the start of an exercise or deployment. In return, DND will teach TC firefighters the safety aspects of Defence aircraft and aircraft arrestor systems. Cost of all training and repairs required as a result of training will be borne by DND.

REVIEW

45. This MOU will be reviewed jointly by TC and DND personnel on an annual basis and amendments made in accordance with paragraph 48. Annexes outlining amended scope of responsibilities and/or adjusted incremental and other costs will be reviewed/rewritten at this time or as necessary in the interim.

46. SOPs will be reviewed at least annually, approximately six (6) months in advance of the start of each new fiscal year, for operational/financial adjustments effective in the new and succeeding fiscal years.

RESOLUTIONS OF DISAGREEMENTS

47. Disputes regarding interpretation or application of this Agreement will be resolved, as much as is possible, through consultation between the Parties.

AMENDMENTS

48. Amendments to this MOU will be initiated in writing by either party and will, upon mutual agreement between the authorized officers as detailed in paragraph 50 hereof, be incorporated in this MOU on its anniversary date. In the interim period, an exchange of correspondence documenting agreed upon changes between authorized officers shall suffice to effect implementation. Pursuant to mutual agreement, and as necessary, annexes and SOPs may be amended at any time.

SURVIVORSHIP

49. This Agreement enures to the benefit of and is binding upon TC and its successors and assigns, and DND and its successors and assigns.

AUTHORIZED OFFICERS

50. The authorized officers for this MOU shall be as follows:

a. TC:

(1) for negotiations overall and final approval of annexes:

- Regional Director, Air Traffic Services; and
- Regional Director, Airport Operations; and

(2) for final approval:

- Regional Director General Aviation; and
- Regional Director General Airports.

b. DND:

(1) for negotiations overall and final approval of annexes:

- Fighter Group Headquarters; and

(2) for final approval:

- National Defence Headquarters.

EFFECTIVE DATE

51. This MOU will come into effect as of JANUARY 11th 1995

AMENDMENTS

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AUTHORIZED OFFICERS

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a. TC:

(1) for negotiations overall and final approval of annexes:

- Regional Director, Air Traffic Services; and
- Regional Director, Airport Operations; and

(2) for final approval:

- Regional Director General Aviation; and
- Regional Director General Airports.

b. DND:

(1) for negotiations overall and final approval of annexes:

- Fighter Group Headquarters; and

(2) for final approval:

- National Defence Headquarters.

EFFECTIVE DATE

51. This MOU will come into effect as of JANUARY 11TH 1995

TERM OF AGREEMENT

52. This MOU will be effective for a period of one (1) year and be self renewing from year to year thereafter to a maximum period of five (5) years. Either Party may terminate this MOU at any time upon giving the other Party twelve (12) months prior written notice of intention to terminate.

IN WITNESS WHEREOF this MOU has been signed on behalf of the Minister, Transport Canada, Government of Canada and the Minister, Department of National Defence, Government of Canada.

SIGNED, SEALED AND DELIVERED)
this 11th day of January 1995
for the Minister of)
Transport in the presence)
of:)

A. L. Cloutier
Witness)

Maclaine J. J. J. J.
Witness)

Marc Segre
Regional Director General Aviation)

[Signature]
Regional Director General Airports)

SIGNED, SEALED AND DELIVERED)
this 5th day of September
for the Minister, (Department)
of National Defence in the)
presence of:)

A. M. A. P.
Witness)

[Signature]
Department of National Defence)

Director General
Properties and Utilities

ANNEX A
TO MEMORANDUM OF UNDERSTANDING
DATED: ~~JAN 11 1995~~

IQALUIT SITE PLAN SHOWING LAND
ADMINISTRATION AND CONTROL BY TC AND DND

N
↑

(TO BE DEVELOPED)

ANNEX B
TO MEMORANDUM OF UNDERSTANDING
DATED: ~~JAN 11 1995~~

IQALUIT - LIST OF FACILITIES AND SERVICES OF ONE PARTY
LOCATED ON THE LAND AREA OF THE OTHER PARTY

(TO BE DEVELOPED)

FUNCTIONAL RESPONSIBILITIES OF TC AND DND
AT THE IQALUIT AIRPORT

Purpose

1. The following summary identifies the functional responsibilities of TC and DND that will come into effect upon the execution of this MOU.
2. These responsibilities may be amended in accordance with paragraphs 48 and 50 of the MOU.

Functional Responsibilities

A. <u>TC Functional Responsibilities</u>	B. <u>DND Functional Responsibilities</u>
A1. Overall administration within the airport boundaries including security, operational control and provision of support services required by DND.	B1. Administration of those areas and facilities identified as the FOL site, including security.
A2. Repairing, maintenance, FOD control measures, and snow removal of aircraft manoeuvring areas including taxiways and public apron areas. Cost recovery will be made from DND for the above services that are in excess of the original level of service provided prior to the construction of the FOL.	B2. Payment for services provided by TC for repairing, maintenance, FOD and snow removal of aircraft operating areas including taxi-ways and public areas that are in excess of the original level of service provided prior to the construction of the FOL.
A3. Providing access to the TC portion of the airport in accordance with TC regulations and Standing Operating Procedures (SOPs) as may be necessary for DND or contractor vehicles and personnel to perform their routine or emergency duties.	B3. Providing access to the FOL site and other DND facilities on the airport in accordance with applicable DND regulations, to such TC vehicles and personnel as may be necessary for the routine or emergency conduct of their duties.

- | A. <u>TC Functional Responsibilities</u> | B. <u>DND Functional Responsibilities</u> |
|--|--|
| A4. Airport Emergency Response Services (ERS) shall meet category 5 criteria. | B4. Provision of Crash Fire Rescue (CFR) services to military standards required for military aircraft during periods when the FOL is activated. |
| A5. Establishing SOPs applicable to the operation of the airport, consulting with DND as required in preparation of SOPs. | B5. Participating with TC in the development of SOPs as required for the joint operation of the FOL and the civil airport. |
| A6. Ensuring that TC personnel and commercial operators using the airport manoeuvring surfaces comply with regulations, orders and SOPs governing the operation of the airport as may be made from time to time. | B6. Ensuring that DND and/or contractor personnel using the airport operating surfaces comply with regulations and orders and SOPs governing the operation of the FOL site and the civil portion of the airport, as may be made from time to time. |
| A7. a. Providing security for the airport; and

b. Co-ordinate airport security activities with DND. | B7. a. Entering into SOPs with TC concerning the security of the FOL site; and

b. Co-ordinate FOL security activities with TC. |
| A8. Jointly plan with DND those measures required to deal with special circumstances or requirements that may arise from time to time. | B8. Jointly plan with TC, measures required to deal with special circumstances or requirements that may arise from time to time. |
| A9. Co-ordinate airport development planning as outlined in pertinent sub-paragraphs of paragraph 32 of this MOU. | B9. Advise TC of any plans to provide new facilities; or revise, relocate existing facilities so that the impact on the airport long range plan can be evaluated. |

ANNEX C
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

- | <u>A. TC Functional Responsibilities</u> | <u>B. DND Functional Responsibilities</u> |
|--|--|
| A10. Designate an area for hi-jack, bomb scare and dangerous cargo conditions. | B10. Designate an aircraft parking area for hi-jack, bomb scare and dangerous cargo conditions. |
| A11. Snow removal of:
a. all approach, runway, taxiway, and apron high/low intensity lights excluding the FOL site;
b. Distance-To-Go Markers; and
c. Radar reflectors. | B11. Snow removal of:
a. FOL site. |
| A12. Advise DND of incremental costs. | B12. a. Payment for incremental costs; and
b. Provide TC with the use of DND vehicles. |
| A13. Advise current hours of operation on request. | B13. Contact TC for hours of operation. |
| A14. Ensure airport services and appropriate aircraft operating surfaces are ready to accept deploying aircraft in accordance with Annex F to this MOU. | B14. Provide maximum notification to APM/ATC/FSS of the activation of the FOL and compensate TC for related overtime and standby expenses if incurred. |
| A15. a. Provide SNIC/FOD services on a 24/7 basis only during FOL activation;
b. Direct the SNIC/FOD program; | B15. a. Preposition additional mobile equipment to the site to supplement TC mobile equipment;
b. Deploy a sufficient number of qualified airport support special purpose vehicle operators to handle the time periods in excess of the normal hours of operation of the airport; |

ANNEX C
TO MEMORANDUM OF UNDERSTANDING

DATED: ~~JAN 11 1995~~

- | A. <u>TC Functional Responsibilities</u> | B. <u>DND Functional Responsibilities</u> |
|--|---|
| c. Prepare SNIC/FOD priorities in consultation with DND for FOL active and inactive periods;
d. Familiarize DND personnel regarding operation of vehicles on the airport; and
e. Provide familiarization training to DND personnel on the operation of TC SNIC/FOD mobile equipment. | c. Input to the SNIC/FOD priorities developed by TC for FOL active and inactive periods;
d. Ensure DND personnel are directed to TC for appropriate familiarization training for vehicle operation on the airport;
e. Provide familiarization training to TC personnel on the operation of DND SNIC/FOD equipment; and
f. Assume training/familiarization costs. |
| A16. TC will coordinate the movement/placement of all aircraft on non-DND manoeuvring surfaces. | B16. DND will provide appropriate notification for use of non-DND manoeuvring surfaces. |
| A17. TC will operate, repair and maintain:
a. TC aids to navigation; -
b. all approach lights, runway lights, taxiway and apron edge lighting; and
c. Distance-To-Go Markers to military standards. | B17. DND will bear:
a. all the cost of those aids associated with its apron and taxiway;
b. all incremental costs for any upgraded lighting on the airport; and
c. all costs associated with Distance-To-Go Markers. |
| A18. a. During the inactive period TC will conduct functional PMIs on the HF and UHF systems; and | B18. a. DND will operate and maintain an HF and UHF system; and |

ANNEX C
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

A. TC Functional
Responsibilities

- b. Upon notification of deployment, TC will power-up the HF and UHF systems and associated support facilities and conduct a voice verification test.
- A19. a. TC will maintain the DND-funded VHF/AM mobile radios and absorb all costs;
- b. The VHF/AM mobile radios may be used day-to-day by TC as spares, but they must be made available to DND in accordance with Annex F to this MOU; and
- c. TC is responsible for shipping unserviceable VHF/AM mobile radios to the designated repair facility and providing replacement units to DND when advised of unit failures.
- A20. TC is responsible for the provision of Visual Flight Rules (VFR) services to DND aircraft during FOL active periods.

B. DND Functional
Responsibilities

- b. DND will bear all associated costs.
- B19. DND will pay all shipping costs associated with repair of the VHF/AM mobile radios and provide TC with a charge account for these costs.
- B20. DND will provide Terminal Radar Instrument Flight Rules (IFR) service to civilian and military aircraft. This service will be provided by a Mobile Radar Control Unit deployed to Yellowknife and operated by military controllers.

ANNEX D
TO MEMORANDUM OF UNDERSTANDING
DATED: ~~JAN 11 1995~~

IQALUIT - SCHEDULE OF INCREMENTAL COSTS AND RATES OF PAY

1. TC Incremental Costs Recoverable from DND:
 - a. Airport Operating Surfaces
Unit Cost: \$1.30 per square meter
 - b. Overtime and Standby Pay
Estimated and to be adjusted at the end of each fiscal year based on actual costs as per rates below.
 - c. Airport Maintenance Charges
Estimated and to be adjusted at the end of each fiscal year based on actual cost relating to the percentage use per annum.
Cost: \$0.398 per square meter

2. DND Incremental Costs Recoverable from TC: TBD

3. TC Standby And Overtime Rates Of Pay:

Effective up to 31 March, 1994:

- a. Overtime
 - (1) Airport Manager

Time and a half (x 1.5)	\$37.50 per hour
Double Time (x 2.0)	\$50.00 per hour
 - (2) Maintainer (median level)

Time and a half (x 1.5)	\$28.50 per hour
Double Time (x 2.0)	\$38.00 per hour
 - (3) Electronic Technician (median level)

Time and a half (x 1.5)	\$37.50 per hour
Double Time (x 2.0)	\$50.00 per hour
 - (4) FSS/Air Traffic Control (median level)

Time and a half (x 1.5)	\$39.00 per hour
Double Time (x 2.0)	\$52.00 per hour
- b. Standby

ANNEX D
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

(1) Airports Group

Regular day of work:	\$10.00 per 8 hours to max of \$20.00 per day
Day of rest/stat Holiday	As per overtime pay above

(2) Aviation Group

Regular day of work	\$12.00 per 8 hours to max of \$36.00 per day
Day of rest/stat Holiday	As per overtime pay above

4. Approximate Cost to Clear Snow for DND:

a. Taxiway "G"

50' x 1300' = 65,000 sq ft

- 75 times using plow and sweeper @ .5 hrs each

Plow truck @ \$ 50.00 per hour
Sweeper @ \$100.00 per hour
Operator @ \$ 21.75 per hour

Cost per hour \$ 171.75
Cost per year \$6,440.63

- 25 times using snow blower @ .5 hrs each

Snow blower @ \$ 77.00 per hour
Operator @ \$ 21.75 per hour

Cost per hour \$ 98.75
Cost per year \$1,234.38

Total Cost per year	\$7,675.38
Total Cost per sq ft	\$0.12

b. Distance-To-Go Markers

50' x 7500' x 2 sides = 750,000 sq ft

- 35 times using plow @ 3 hrs each

Plow truck @ \$ 50.00 per hour
Operator @ \$ 21.75 per hour

Cost per hour \$ 71.75
Cost per year \$7,481.25

ANNEX D
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

Total Cost per year \$7,533.75
Total cost per sq ft \$ 50.01

c. TAG Pads

40' x 100' x 4 pads = 16,000 sq ft

- 35 times using snow blower @ .5 hrs each

Snow blower @ \$ 77.00 per hour
Operator @ \$ 21.75 per hour

Cost per hour \$ 98.75
Cost per year \$6,912.50

Total Cost per year \$6,912.50
Total Cost per sq ft \$0.43

5. Hydro for Distance-To-Go Markers and TAG Pads:

a. Distance-To-Go Markers

12 x 180 watts = 2160 watts

b. TAG Pads

4 x 270 watts = 1080 watts

Total wattage = 3.24 Kw

Total Cost per hour of use @ \$0.96 per KwHr = \$3.11

ANNEX E
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

**IQALUIT - PROVISION OF PETROLEUM, OIL AND LUBRICANTS
TO THE FORWARD OPERATING LOCATIONS**

Purpose

1. This annex outlines the specific arrangements made at FOL Iqaluit for the provision of petroleum, oil and lubricants.

**IQALUIT - CONCEPT OF OPERATIONS
AND AVAILABILITY CRITERIA**

Purpose

1. To facilitate changes that may occur as a result of a fluid situation in the world geo-political situation, a separate annex has been set aside to delineate the operational and availability criteria for FOL Iqaluit.

PROVISION OF MILITARY AIR TRAFFIC CONTROL
TERMINAL CONTROL SERVICES AT IQALUIT

1. The provision of Military ATC Terminal Control Services at Iqaluit is governed by the following agreements that are held at Air Command Headquarters by the Deputy Chief of Staff Support Operations (DCOS Sp Ops):

- a. Agreement between Department of Transport and Department of Defence for the Coordination of Military Flight Activity at Designated Forward Operating Locations, effective 1 July, 1989.
- b. Agreement between Department of National Defence, Flight Service Station Operations, Quebec Region and IFR Operations, Air Traffic Services. effective 25 April, 1990.

ANNEX H
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

ANNEX/APPENDIX APPROVAL FORM

MEMORANDUM OF UNDERSTANDING BETWEEN TRANSPORT CANADA AND THE
DEPARTMENT OF NATIONAL DEFENCE RELATIVE TO CIVIL/MILITARY
OPERATIONS AT THE IQALUIT AIRPORT IN THE NORTHWEST TERRITORIES

DATED: _____ ANNEX: _____

IN WITNESS WHEREOF this Annex/Appendix has been signed on behalf
of the Regional Directors of Air Traffic Services, Airport
Operations and Technical Services, Transport Canada, Government
of Canada and the Commander, Fighter Group, Department of
National Defence, Government of Canada.

SIGNED, SEALED AND DELIVERED)
this _____ day of _____)
for the Regional Directors,)
Air Traffic Services, Airport)
Operations and Technical)
Services in the presence of:)
)
)
)

Witness)
)

Regional Director
Air Traffic Services)
)

Witness)
)

Regional Director
Airport Operations)
)

Witness)

Regional Director
Technical Services)

SIGNED, SEALED AND DELIVERED)
this _____ day of _____)
for the Commander, Fighter)
Group in the presence of:)
)
)
)

Witness)

Commander, Fighter Group)

ANNEX I
TO MEMORANDUM OF UNDERSTANDING
DATED: JAN 11 1995

GLOSSARY OF TERMS

AOC	Area Operations Centre (TC)
APM	Airport Manager
ATC	Air Traffic Control
CFR	Crash/Fire/Rescue
DND	Department of National Defence
DoT	Department of Transport (referred throughout this document as "Transport Canada")
ERS	Emergency Response Services
FOD	Foreign Object Damage
FOL	Forward Operating Location
FSS	Flight Service Station
HF	High Frequency
IFR	Instrument Flight Rules
MOU	Memorandum of Understanding
NORAD	North American Aerospace Defence
PMI	Preventive Maintenance Inspection
POL	Petroleum, Oil and Lubricants
SNIC	Snow and Ice Control
SOP	Standing Operating Procedure (also Standard Operating Procedure)
TC	Transport Canada (also referred to as "Department of Transport")
UHF	Ultra-High Frequency
VHF/AM	Very-High Frequency/Amplitude Modulated
VFR	Visual Flight Rules

"traffic control instruction" means a directive issued by an air traffic control unit for air traffic control purposes; (instructions du contrôle de la circulation aérienne)

"air traffic control service" means a service as specified in Part VI, provided for the purposes of

- (a) preventing collisions
 - (i) between aircraft; and
 - (ii) on the manoeuvring area between aircraft and obstructions, and
- (b) expediting and maintaining an orderly flow of air traffic; (service du contrôle de la circulation aérienne)

"air traffic control unit" means

- (a) an area control centre established to provide air traffic control service to IFR flights;
 - (b) a terminal control unit established to provide air traffic control service to IFR flights operating within a terminal control area; or
 - (c) an airport control tower unit established to provide air traffic control service to airport traffic,
- as the circumstances require; (organe du contrôle de la circulation aérienne)

"Airworthiness Manual" means the Airworthiness Manual published pursuant to section 211; (manuel de navigabilité)

"airworthy" means, in respect of an aeronautical product, in a fit and safe state for flight and in conformity with the applicable standards of airworthiness; (état de navigabilité)

"alternate airport" means an aerodrome specified in a flight plan to which a flight may proceed when a landing at the intended destination becomes inadvisable; (aéroport de dégagement)

"amateur built aircraft" means any aircraft designated by the Minister as an amateur built aircraft pursuant to subsection 211 (3); (aéronef de construction amateur)

"appliance" means any instrument, mechanism, equipment, apparatus or accessory that is

- (a) used or intended to be used in operating or controlling an aircraft in flight,
- (b) installed in or attached to or intended to be installed in or attached to an aircraft, and
- (c) not part of the airframe, engine or propeller of an aircraft; (appareillage)

* "apron" means the part of an aerodrome, other than the manoeuvring area, intended to accommodate the loading and unloading of passengers and cargo, the refuelling, servicing, maintenance and parking of aircraft, and any movement of aircraft, vehicles and pedestrians necessary for such purposes; (aire de trafic)

"balloon" means a motorless lighter-than-air aircraft; (ballon)

"Canada Air Pilot" means the publication referred to in Section 554; (Canada Air Pilot)

"Canadian air carrier" means an air carrier that

- (a) is a Canadian citizen,
- (b) is a permanent resident, as defined in subsection 2(1) of the Immigration Act, 1976, or
- (c) carries on business principally in Canada and
 - (i) is incorporated or registered in Canada, or
 - (ii) has its head office in Canada; (transporteur aérien canadien)

"Canadian aircraft" means an aircraft registered in Canada under Part II; (aéronef canadien)

"Category II minima" in respect of an aerodrome, means the minima specified in the Canada Air Pilot for a Category II precision approach to a runway at that aerodrome; (minima de catégorie II)

"ceiling" means the lowest height at which a broken or overcast condition exists, or the vertical visibility when an obscured condition such as snow, smoke or fog exists, whichever is the lower; (plafond)

- "i. e", in respect of any document, includes any renewal, endorsement or validation thereof as provided in these Regulations; (délivrance)
- "landing", in respect of an aircraft, means the act of coming into contact with a supporting surface and includes the immediately preceding and following acts and, in respect of an airship or free balloon, means the act of bringing the airship or balloon under restraint and includes the immediately preceding and following acts; (atterrissage ou amérissage)
- "launch weight" means the total weight of a hang glider or an ultra-light aeroplane when it is ready for flight including any equipment, instruments and the maximum quantity of fuel and oil that it is designed to carry, but does not include
- the weight of any float equipment to a maximum weight of 34 kg,
 - the weight of the occupant, or
 - the weight of any ballistic parachute installation; (poids au départ)
- "lighter-than-air aircraft" means any aircraft supported by its buoyancy in the air; (aérostât)
- "making way" means the state of being under way on the surface of the water and having a velocity relative to such surface; (avoir de l'erre)
- * "manoeuvring area" means that part of an aerodrome intended to be used for the taking off and landing of aircraft and for the movement of aircraft associated with take-off and landing, excluding aprons; (aire de manoeuvre)
- "minimum descent altitude", in respect of an aircraft on a non-precision approach to a runway, means the altitude specified in the Canada Air Pilot for a non-precision approach of an IFR aircraft to the runway or, where no such altitude is specified in the Canada Air Pilot,
- in the operations specifications for the operator of the aircraft where the operator is an air carrier, or
 - in the operations manual of the operator of the aircraft where the manual is required under the Private Aeroplane Passenger Transportation Order; (altitude minimale de descente)
- "Minister" means the Minister as defined in the Aeronautics Act; (Ministre)
- "model rocket" means a rocket
- constructed of balsa wood, paper and plastics and containing no substantial metal parts,
 - equipped with model rocket engines that will not generate a total impulse exceeding 80 newton-seconds,
 - of a gross weight, including engines, not exceeding 500 grams, and
 - equipped with a parachute or other device capable of retarding its descent so that no hazard is created to persons or property on the ground; (modèle réduit de fusée)
- "model rocket engine" means a commercially manufactured device designed and used for the propulsion of model rockets; (moteur de modèle réduit de fusée)
- * "movement area" means that part of an aerodrome intended to be used for the surface movement of aircraft and includes the manoeuvring area and aprons; (aire de mouvement)
- "new owner" means a person who has accepted, by means of a certificate of transfer of ownership, transfer of ownership of an aircraft registered in Canada under Part II; (nouveau propriétaire)
- "night" means, in respect of any place in Canada, the period of time when the centre of the sun's disc is more than 6° below the horizon, and, in any place where the sun rises and sets daily, may be considered to be the period of time commencing 1/2 hour after sunset and ending 1/2 hour before sunrise; (nuit)
- "night VFR" means, in respect of the flight of any aircraft in Canada, a flight conducted in accordance with VFR during the hours of night; (vol VFR de nuit)