

WORLD METEOROLOGICAL ORGANIZATION

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COMMISSION FOR BASIC SYSTEMS

EMERGENCY RESPONSE ACTIVITIES  
CO-ORDINATION GROUP

ITEM: 10

WASHINGTON, D.C, USA, 10-14 SEPTEMBER 2001

Original: ENGLISH

**ANY OTHER BUSINESS**

*(Submitted by the International Civil Aviation Organization)*

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**Summary and purpose of document**

Provision of information to aircraft in flight of the accidental release of Radioactive material into the atmosphere

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## **1. INTRODUCTION**

1.1 The nuclear accident at Chernobyl in 1986 caused a number of specific difficulties for civil aviation, and drew the attention of the aviation community to the potentially hazardous nature of trans-boundary “clouds” of radioactive materials to aircraft in flight. ICAO was requested by the International Air Transport Association (IATA) and International Federation of Air Line Pilots’ Associations (IFALPA) to develop requirements to ensure that information on the accidental release of radioactive materials into the atmosphere is provided to aircraft in flight through area control centres (ACCs). In this regard, ICAO focussed specifically on aircraft in flight because, excepting for airline company communication links to aircraft, the only contact with pilots is through air traffic services units. Aerodromes and aircraft on the ground are considered part of the general State infrastructure, which would be expected to be warned as part of the State emergency procedures.

1.2 As far as the radiation hazard to aircrew and passengers is concerned, it is acknowledged that this is unlikely to be immediate, or even short term, such as may be the case with volcanic ash or toxic chemicals. However, the possible long-term health hazard would be subject to considerable dispute and in any case flight through a radioactive cloud will not be accepted by aircrew and passengers. It must be expected that court cases could ensue if aircraft were knowingly routed through airspace contaminated by radioactive materials. Under these circumstances, ICAO is obliged to seek assistance from IAEA and WMO to institute the stated aeronautical requirement.

## **2. INTERNATIONAL ARRANGEMENTS**

2.1 Due to the fact that nuclear accidents involving the trans-boundary flow of radioactive materials are, thankfully, rare events and excellent international arrangements developed by the Inter-Agency Committee on Response of Nuclear Accidents (IACRNA) are already in place, ICAO had no intention of duplicating any part of these arrangements by attempting to establish a dedicated aviation warning system. Instead we arranged to tap into the existing Emergency Response System, through the WMO-designated Regional Specialized Meteorological Centres (RSMC) for Radiological Environmental Emergency Response.

2.2 In this context it was noted that every ACC has its associated meteorological watch office (MWO) which is in contact through the GTS directly or indirectly, with one or more of the RSMCs. Annex 3 and WMO Technical Regulations (C.3.1) were amended accordingly to reflect the requirements listed below.

- 2.3 Following receipt of an authorized request from the delegated authority for RSMC support:
- a) the lead RSMC, and subsequently other RSMCs to notify the ACCs in their respective States of the accident, giving details of location, date and time;
  - b) RSMCs to provide a copy of trajectory forecast issued under existing emergency response arrangements to the ACCs in their respective States;
  - c) RSMCs London and Washington to notify their respective WAFCs so that it is possible for the radiation symbol to be inserted on WAFS SIGWX charts;
  - d) States to arrange that MWO(s) for flight information regions for which they are responsible receive trajectory forecasts from RSMC in whose region they are located, as part of the normal distribution of RSMC output products to all national meteorological services in the region concerned;
  - e) MWOs to provide trajectory forecast output products received to their associated ACC;
  - f) ACC in the State in which the accident occurred and ACCs in adjacent FIRs inform aircraft in flight and activate rerouting contingency arrangements etc.; and
  - g) ACC in the State concerned initiates issuance of a NOTAM by State international NOTAM Office to a list of addresses agreed locally, but including adjacent ACCs.

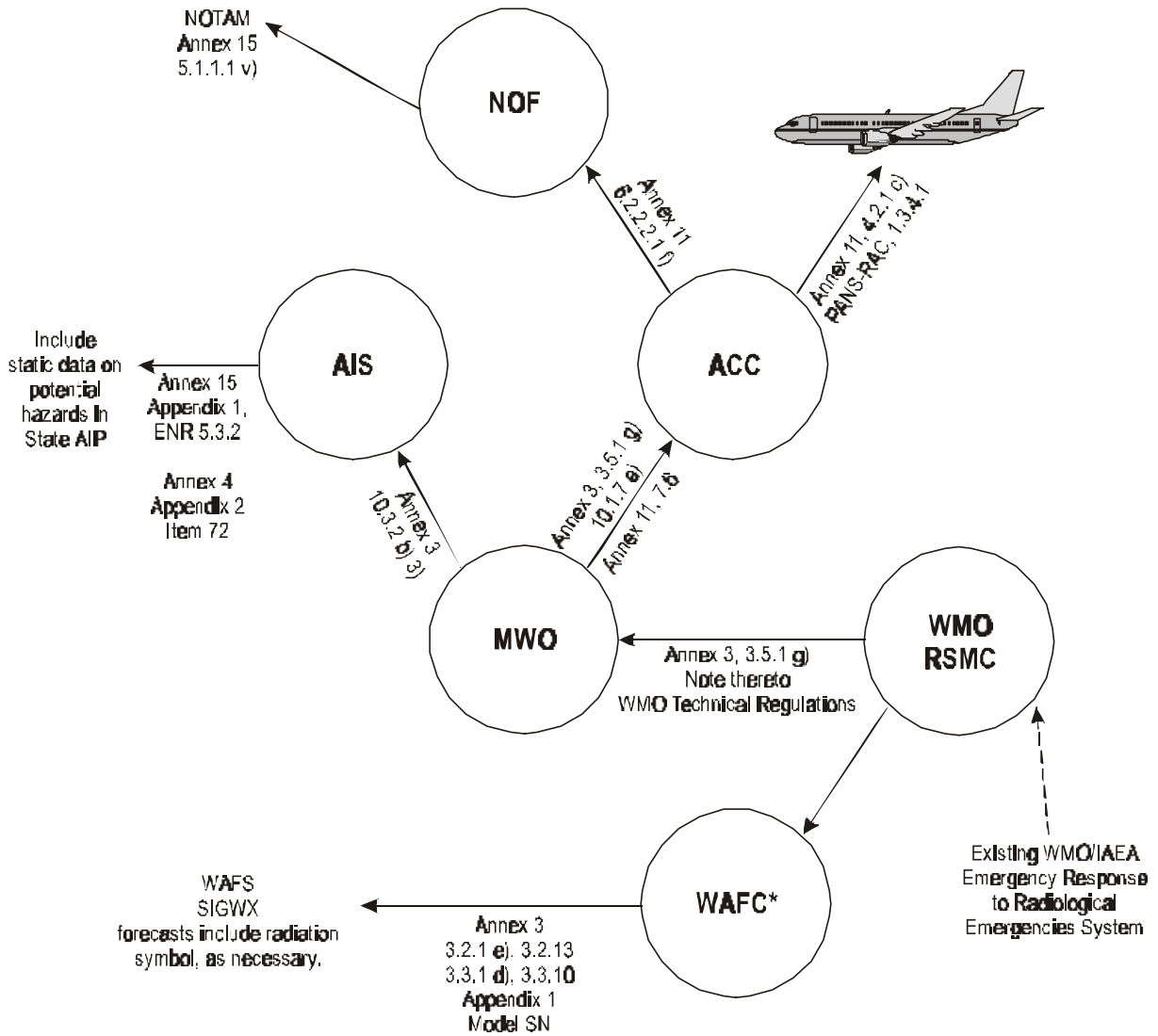
2.4 The actual arrangements for the provision of graphical RSMC output products to the ACC will have to be made locally in each State, and in places where the ACC and MWO are not co-located will likely involve business fax with e-mail back up. The sources of the regulatory provisions for the communication channels required are shown diagrammatically in the attachment to this paper.

### **3. Future international arrangements**

3.1 Currently ICAO is investigating the feasibility of direct notification of nuclear accidents involving trans-boundary transport of radioactive materials in the atmosphere to ACCs (or preferably one designated ACC) by IAEA. Moreover, consideration is being given to the need for tailor-made output products as an aeronautical requirements, including a decision as to which flight level trajectory forecasts should be provided.

### **4. Action by the Meeting**

4.1 The meeting is invited to note the foregoing information.



\*Also residual RAFCs until implementation of final phase of the WAFS.

Note.— Certain of the Annex 3 provisions form part of Amendment 72 to Annex 3 for applicability in November 2001.