

GUIDELINES ON REPORTABLE EVENTS, INTEGRATED PLANNING AND INFORMATION EXCHANGE IN A TRANSBOUNDARY RELEASE OF RADIOACTIVE MATERIALS

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FOREWORD

1. In September 1982, the Board of Governors authorized the Director General to implement the recommendations of a group of experts on nuclear safety co-operation and mutual emergency assistance which had met in June 1982. As a first step, Guidelines for Mutual Emergency Assistance Arrangements in Connection with a Nuclear Accident or Radiological Emergency, prepared by another group of experts in April 1983, were published in document INFCIRC/310 in January 1984.

2. One recommendation of the group of experts which met in June 1982 related to the need for prior arrangements among States to cope with transboundary aspects of a nuclear emergency; in the experts' view, such arrangements would have to cover matters such as the establishment of a threshold for reportable events, integrated planning and information exchange. Consideration of these matters was entrusted to a group of experts which met in May 1984.^{*/} The group's recommendations, which are reproduced here for the information of Member States, may serve as guidelines for bilateral or multilateral arrangements among neighbouring States wishing to co-ordinate their response to any emergency which may involve a transboundary radiological release.

^{*/} Experts and observers from the following 19 Member States and three international organizations took part in the meetings: Member States - Argentina, Austria, Canada, Czechoslovakia, Finland, France, the German Democratic Republic, Hungary, the Islamic Republic of Iran, the Netherlands, Pakistan, South Africa, Spain, Switzerland, Turkey, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, the United States of America and Yugoslavia; international organizations - the United Nations Office of the Disaster Relief Co-ordinator, the European Atomic Energy Community and the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development.

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I. INTRODUCTION

1.1. The Report of the Group of Experts that met in June 1982 to study the most appropriate means of responding to the need for mutual assistance in connection with nuclear accidents^{1/} stated, inter alia, that:

"A nuclear accident in border areas could have serious radiological effects in the territories of neighbouring countries. Especially, in cases where the neighbouring country has no nuclear installation of its own, its capability to deal with the situation would be limited" - and

"In cases where serious accidents at nuclear power plants may have significant radiological impact in other States, special planning considerations need to be recognized and resolved. Issues such as establishing a threshold of reportable events, integrated planning and information exchange need prior arrangements".

1.2. The aforementioned Group of Experts agreed that "there should be provisions for specification by participating States of the appropriate initial points of contact and, if different, of the appropriate channels for subsequent communications. There should also be provisions for advance notification of competent national authorities". It is recognized that such provisions will entail a willingness among Member States to come to arrangements for protection of man and his environment, along the lines of the IAEA Guidelines for Mutual Emergency Assistance Arrangements in Connection with a Nuclear Accident or Radiological Emergency^{2/}.

1.3. The Expert Group convened in May 1984 assumed that in emergency response planning use will be made of the relevant IAEA documents.^{3/}

^{1/} Reproduced in document N5-TC-478, IAEA, 2 July 1982.

^{2/} Reproduced in document INFCIRC/310, IAEA, January 1984.

^{3/} See IAEA Safety Series No. 55, "Planning for Off-Site Response to Radiation Accidents in Nuclear Facilities", Vienna, 1981; No. 50-SG-06, "Preparedness of the Operating Organization (Licensee) for Emergencies at Nuclear Power Plants", Vienna, 1982; and No. 50-SG-G6, "Preparedness of Public Authorities for Emergencies at Nuclear Power Plants", Vienna, 1982.

1.4. The Expert Group also took note of the activities of the IAEA with respect to intervention levels^{4/}. It concluded that for those notifications where the threshold for reporting is based upon a categorization of emergency conditions (see paragraph 3.3), such notifications will normally have been initiated in advance of any need to introduce protective measures due to exceeding the intervention levels. The introduction of measures for the protection of individual members of the public, based upon these intervention levels, is not, however, the only threshold for the initiation of transboundary notifications.

11. FORMAL ARRANGEMENTS

2.1. Neighbouring States may wish to consider entering into bilateral or multilateral arrangements setting out their mutual willingness to co-operate and co-ordinate their response to any emergency which might involve a trans-boundary radiological release. The purpose of such arrangements is to facilitate the exchange of information, integrated planning and notification of an emergency among neighbouring States.

2.2. Such arrangements should identify the authorities responsible for advance emergency response planning and for action during an emergency. They should specify the type of information and the ways in which this information can be most speedily exchanged. Definitions of basic terms and concepts, the designation of liaison officers, an agreed language or code to be used in case of an emergency and plans concerning information to the public should also be included.

2.3. There should be provisions to compare the means and methods to be used for calculating radiological consequences. The basis for any preplanned protective measures and for their implementation should be indicated.

2.4. The potential for cross-border movement of evacuees and emergency response personnel and equipment should be taken into account.

^{4/} See the Report of the Consultant Group on Intervention Levels for Controlling Radiation Doses to the Public in the Event of a Nuclear Accident or Radiological Emergency, IAEA, January 1984.

III. REPORTABLE EVENTS

3.1. The Expert Group was of the opinion that in formal arrangements among States an event should be considered to be reportable if there is the potential for, or actual occurrence of, a release of radioactive material which might transcend or has transcended an international boundary and which could be of radiological safety significance. The event might require the implementation of measures to protect the public.

3.2. The Expert Group recommended that in establishing a threshold for reportable events a spectrum of accidents should be taken into account instead of a single reference accident.

3.3. For the purpose of practical reporting, the Expert Group assumed that the operating organization of a nuclear facility has an emergency plan that categorizes emergency conditions.^{5/} In cases where the off-site authorities are alerted according to this plan and where the Emergency Planning Zones^{6/} would extend beyond the boundary with a neighbouring State, the competent national authorities of that State should be notified forthwith of the situation.

3.4. It was recognized that States may wish to include other events in their notification arrangements which do not fall within the categories referred to in paragraph 3.3.

3.5. It is recommended that intervention levels for the introduction of protective measures such as sheltering and evacuation be set in advance by the competent national authorities. It will remain for these authorities in the neighbouring States to decide on the actual level of radiological impact at which actions are to be taken, taking into account prevailing circumstances. The Expert Group was of the opinion that the implementation of actions resulting from such notifications should not normally lead to protective measures being introduced in the neighbouring State at an earlier stage, or being more stringent, than in the State in which the accident has occurred or is occurring.

^{5/} Emergency conditions are discussed in Section 3 of IAEA Safety Series No. 50-SG-06, "Preparedness of the Operating Organization (Licensee) for Emergencies at Nuclear Power Plants", Vienna, 1982.

^{6/} The concept of Emergency Planning Zones is discussed in Sections 4.05 and 4.06 of IAEA Safety Series No. 55, "Planning for Off-Site Response to Radiation Accidents in Nuclear Facilities", Vienna, 1981.

IV. INFORMATION EXCHANGE

4.1. Purpose

4.1.1. The timely exchange of adequate information between the competent national authorities of the State in which the nuclear facility is situated and those in the neighbouring State(s) should allow adequate protection of the public which could be affected by the consequences of an emergency transcending international boundaries.

4.1.2. The information to be communicated will comprise data related to the site, the facility, the emergency response plan and the response to an emergency.

4.2. Organization of Information Exchange

4.2.1. Procedures for Communication

The States concerned should identify and make known to each other their competent national authorities and points of contact for the exchange of technical information and emergency response planning information. Points of contact should be identified as having primary responsibility for issuing or receiving notification of a potential or actual emergency. Procedures for verification of the notification received should be established.

4.2.2. Means of Communication

Reliable and diverse means of communication should be identified and the points of contact should be available on a 24-hour basis. If appropriate points of contact for subsequent communications are different from those for the initial notification, they should be specified. There may be several communication links, for example, to update information on the event, to exchange information on consequence assessment and information to be released to the public, and to offer or request assistance.

4.2.3. Identification and Testing of Communication Links

Lists should be prepared and exchanged with the names, telephone numbers (or means of contact on a 24-hour basis) and addresses of all points of contact and alternates. This information should be checked at regular intervals and updated immediately following any change. The channels of communication for initial notification and subsequent communications should be tested frequently.

4.2.4. Language Problems

In many cases national borders may also correspond to language borders. To avoid, in such cases, misunderstandings and time delays in information exchange in case of an emergency, practical solutions should be agreed during the advance emergency response planning stage.

4.3. Information to be Exchanged

4.3.1. Information needed for advance emergency response planning may include data such as:

- Characteristics of the facility and its possible radiological impact;
- Relevant regulations, plans and procedures on environmental protection and radiation protection in case of an emergency;
- Site-dependent characteristics influencing the dispersion of radioactive releases (e.g. topographical, hydrological, meteorological data);
- Technical information on monitoring equipment, sampling techniques, interpretation of measurements and other issues which may affect the assessment of the situation in case of an off-site emergency;
- Demographic and other relevant information for the Emergency Planning Zones.

4.3.2. Information needed in the event of an off-site emergency should contain all available facts of importance for assessing the situation, such as:

- Identification of the facility involved;
- The nature of the accident, the time at which it occurred and its possible development;
- The characteristics of the release;
- Information on meteorological and hydrological conditions, necessary for forecasting the dispersion and dilution of the release;

- Off-site protective measures taken or recommended;
- Results of environmental monitoring;
- Information on the development and termination of the emergency.

4.3.3. Both the advance emergency response planning and the emergency response data should be updated as necessary.

4.3.4. The confidentiality of any information provided in accordance with paragraphs 4.3.1 and 4.3.2 should be preserved.

4.4. Liaison Groups

4.4.1. To facilitate information exchange at the advance emergency response planning stage, the competent national authorities of the States involved in transboundary emergency response planning should meet periodically.

4.4.2. Consideration should be given to allow the competent national authorities of the States involved at the emergency response stage to exchange liaison groups.

4.5. Public Information

4.5.1. Dissemination of information to the public is an important responsibility of the appropriate authorities in each State. Particular arrangements ensuring the necessary co-ordination across international borders should be established.

4.5.2. Special attention should be given to the consistency of the guidance given to the public in the States involved.

4.5.3. It is important that notification of an emergency and broadcast of initial and subsequent information be made simultaneously, as far as possible, in the States involved.

V. INTEGRATED PLANNING

5.1. Purpose

The purpose of integrated planning is to provide for a co-ordinated response involving all the authorities and organizations having responsibilities in the event of an emergency requiring a transboundary response.

5.2. Transboundary Considerations Related to Emergency Response Planning

The competent national authorities of the States concerned should be consulted in the preparation of the relevant parts of the emergency response plans dealing with transboundary considerations.

5.3. Some Considerations for Integrated Planning

5.3.1. Range of Off-Site Consequences

The range (type and extent) of off-site consequences needs to be considered in procedures established by the competent national authorities of neighbouring States.

5.3.2. Updating Plans and Procedures

Following the establishment of emergency response plans and procedures, provisions should be made for their joint review and updating on a regular basis.

5.3.3. Testing of Emergency Preparedness

The integrated plan should be tested by exercises. Any deficiencies in the plan or in the emergency response as revealed by these exercises should be mutually corrected.

5.3.4. Consistency in Monitoring and the Interpretation of Measurements

5.3.4.1. Consistency in both the measurements made to quantify the radiological hazard and their interpretation is highly desirable.

5.3.4.2. As a part of the advanced emergency response planning, it would be advantageous for involved States to exchange information on such aspects as sampling techniques and the types, characteristics and quantities of their radiological monitoring equipment, and to participate in intercomparison exercises. Similarly, it is considered desirable to compare the methods used for interpretation of radiological measurements.

5.3.4.3. During an emergency, direct contact between the emergency monitoring team controllers could minimize any difficulty in interpretation of measurements.

5.3.5. Compatibility of Protective Measures

Consideration should be given to the actions to be taken on both sides of an international border arising from an emergency. It would be of mutual benefit to harmonize the degree of protection for affected populations and the environment by the adoption of compatible standards for protective measures.

5.3.6. Emergency Monitoring Teams

Particularly during the early and intermediate phases of an emergency, the prompt movement of emergency monitoring teams (possibly including those of the nuclear facility operator) across borders may be essential to obtain the necessary information on which to base response actions. The competent national authorities of the States involved should be aware of any limitations of dose established for members of emergency monitoring teams.

5.3.7. Evacuation of Persons Across Borders

The possibility exists that the most appropriate way of protecting the public of the States involved in an emergency may be the evacuation of affected persons across the borders. The provision of facilities such as food, reception centres, transport, decontamination facilities, medical aid and identification passes should be considered.

5.3.8. Consistency in Emergency Planning Zones

The extent of Emergency Planning Zones should be consistent and agreed among the involved States.