

**CONVENTION ON
NUCLEAR SAFETY**

**NATIONAL REPORT BY
IRELAND**

October 2001

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IN ACCORDANCE WITH ARTICLE 5 OF THE CONVENTION

Introduction

1. This report gives an outline of the national policy, State institutional framework and general legislation governing nuclear matters in Ireland. It also sets out measures adopted by Ireland to implement the relevant obligations of the Convention. The report concludes with a brief overview of planned future activities designed to improve nuclear safety.

National Nuclear Policy

2. Ireland has rejected the use of nuclear power for energy requirements and does not therefore have any nuclear installations, research reactors or fuel storage/recycling facilities. Ireland's policy priorities concentrate therefore on improved nuclear safety and radiological protection generally. This involves close contact with regulatory authorities in other countries. Issues of particular concern include UK based nuclear installations as well as those in Eastern European countries which have applied for membership of the European Union. Ireland participates in a number of IAEA, NEA and EU committees and working groups on a range of issues relating to nuclear safety.

Ireland's Institutional Framework

Department of Public Enterprise

3. Responsibility for nuclear policy is vested in the Minister of State at the Department of Public Enterprise. The Department of Public Enterprise is responsible for:-
 - Implementing national policy in relation to nuclear matters,
 - The transposition into national legislation of all relevant EU and other international legal instruments,
 - Co-ordination of the national nuclear emergency plan,
 - Representation at EU, IAEA and other international organizations

Radiological Protection Institute of Ireland (RPII)

4. The RPII is a State sponsored body established under the Radiological Protection Act, 1991. The RPII, which is accountable to the Minister for Public Enterprise, carries out the following duties:

- provision of advice to the Government, the Minister for Public Enterprise and other Ministers on matters relating to radiological safety;
- provision of information to the public on any matter relating to radiological safety;
- maintenance and development of a national laboratory for the measurements of levels of radioactivity in the environment, and assessment of the significance of these levels for the Irish population;
- provision of a personnel dosimetry and instrument calibration service for those who work with ionizing radiation;
- control by licence the custody, use, manufacture, importation, transportation, distribution, exportation and disposal of radioactive substances, irradiating apparatus and other sources of ionising radiation;
- assisting in the development of national plans for emergencies arising from nuclear accidents and acting in support of such plans;
- provision of a radioactivity measurement and certification service;
- preparation of codes and regulations for the safe use of ionizing radiation;
- carrying out or promoting research in relevant fields;
- monitoring developments abroad relating to nuclear installations and radiological safety generally, and keeping the Government informed of their implications for Ireland;
- co-operating with the relevant authorities in other states and with appropriate international organisations;
- representing the State on international bodies;
- to be the competent authority under International Conventions on nuclear matters.

5. The RPII has also been made the national competent authority for the purposes of the IAEA Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency and the Convention on Early Notification of a Nuclear Accident and is the National authority responsible for the physical protection of nuclear material.

Legislative framework

6. The legislative framework governing nuclear safety and radiation protection in Ireland is the Radiological Protection Act 1991 (No. 9 of 1991). Other main legislation relevant to nuclear matters is as follows:-

- The Radiological Protection Act 1991 (Ionising Radiation) Order 2000 (S.I. No. 125 of 13 May 2000). (This Order incorporates the requirements of the European Communities (Ionizing Radiation) Regulations, 1991 and the European Communities Protection of Outside Workers from Ionizing Radiation) Regulations, 1994, which are now repealed)
- European Communities (Supervision and control of certain shipments of radioactive waste) Regulations 1994 (S.I. No. 276 of 1994);
- European Communities (Radiological Emergency Warning to Public) Regulations 1993 (S.I. No. 209 of 1993);

All practices involving sources of ionising radiation other than exempted sources are subject to control by licence issued by the RPII in accordance with the requirements set out in S.I. No. 125 of 13 May 2000 as referred to above.

7. In 2000 the IAEA carried out a Peer review mission of the RPII's licensing system. The licensing and inspection procedures are currently being reviewed in the light of the recommendations made in the report of this mission
8. In March of 2000 Ireland was the 25th State to ratify the Joint Convention on the Safety of Radioactive Waste and the Safety of Spent Fuel Management, thus bringing the Convention into force. As Ireland is a non-nuclear state, ratification of the Convention by Ireland did not require any additional measures to be taken in Irish national legislation.

Compliance with the Convention on Nuclear Safety

9. The measures for implementing the obligations of the Convention in Ireland are set out in this Section. As Ireland does not have any nuclear installations the only Article relevant to Ireland in Chapter 2 of the Convention is Article 16.3 which deals with emergency preparedness.

National Emergency Plan for Nuclear Accidents

10. Following the accident at Chernobyl, a national emergency plan for nuclear accidents was developed and has been in operation since 1992. Under the Plan, the Minister for Public Enterprise is designated as the Minister with overall responsibility for emergency planning for nuclear accidents. The RPII has a special responsibility for radioactivity monitoring and for the provision of advice on the potential consequences of any accident and on the measures to be taken. Other Government Departments and statutory organizations have responsibilities, within the Plan to establish appropriate procedures to implement measures within their particular fields of competence.

11. The main elements of the emergency arrangements in existence in Ireland are published in a booklet entitled "National Emergency Plan for Nuclear Accidents" which is available free of charge from the Department of Public Enterprise.
12. In the event that a nuclear accident or nuclear emergency has the potential to have serious consequences for Ireland, the national emergency plan would be put into operation. Depending on the urgency and the possible impact of the consequences of the accident or emergency for Ireland, an action committee chaired by the Department of Public Enterprise and consisting of representatives of the relevant government Departments and the RPII may be convened immediately. This committee is responsible, inter alia, for providing advice on countermeasures and for co-ordinating their implementation.

Notification of a Nuclear Incident

13. Early notification of a nuclear accident abroad would be received through either or both of the following:
 - Arrangements made under IAEA Convention for Early Notification of Nuclear Accidents.
 - The European Community Urgent Radiological Exchange system (ECURIE).
14. The accident notification message would be received at Ireland's national contact point (Garda Communications Centre in Dublin) and the on-call duty officer for the national competent authority, viz. the RPII, would be contacted immediately following receipt of the message.
15. In the case of incidents occurring at nuclear installations in the UK, informal arrangements have operated since 1992 whereby the UK Department of Environment, Food and Rural Affairs informs Ireland's Department of Public Enterprise when it is notified of an incident on UK territory involving a release of radioactivity into the environment. This is regardless of whether the incident has any radiological significance for Ireland.
16. Negotiations are ongoing between Irish and UK Government Officials in relation to formalising existing bilateral arrangements for nuclear incident notification and exchange of information on nuclear related matters.
17. In the case if an incident in Ireland, which would be expected to have only on-site or local consequences, the RPII would be notified by the relevant local authority. Under the RPII's licensing system, licence holders are required to notify the RPII of any incident involving any radioactive source which they are licensed to hold, use, transport etc.
18. As part of Ireland's emergency preparedness, the RPII operates 3 monitoring systems for the detection and measurement of radioactivity in the air and deposits on the ground:
 - A gamma dose rate monitoring system

- An air sampling system
- A rainwater collection system

19. The national gamma dose rate monitoring system consists of 12 sites at which gamma dose rate monitoring equipment is operating continuously. This system will provide the RPII with an automatic and immediate alert to any increase in the radiation levels across Ireland arising from the arrival of a radioactive cloud. At each site, the dose rate is measured using a GM detector linked to a data logger and an alarm unit. Routinely, dose rate measurements are recorded every 20 minutes, approximately, and are transferred to a database in the RPII. Data is automatically received at the RPII from each monitoring site. In the event of the alarm dose rate being exceeded, the RPII on-call duty officer will be notified immediately. Following an accident this system of detectors can be supplemented by a further 33 environmental dose rate detectors operated by the Irish Defence Forces. Civil Defence teams will also supply dose rate measurements and collect samples for radioanalysis, as requested.

Monitoring Systems

20. The air is sampled at 10 sites around Ireland for analysis of radioactive content. The sampling equipment at each site operates continuously, collecting particulate matter on filter paper. In the case of an iodine release, in vapour form, a charcoal cartridge can be fitted with the filter paper in the sampling head. The filter papers and charcoal cartridges are analysed for radionuclide identification and quantification. The rainwater collection is carried out at 12 sites. Measurement of these samples will provide an estimate of the radioactivity deposited on the ground. In addition to the above systems, after the passage of a radioactive cloud, an extensive programme of monitoring would be carried out on various foods and food products, vegetation, soil, etc.

Public Information

21. In keeping with the European Union Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about the health protection measures to be applied and the steps to be taken in the event of a radiological emergency, the Irish public would be rapidly and fully informed of any significant radiological accident. Under SI 209 of 1993, the RPII has primary responsibility for such information provision.

22. The public would be informed of the accident, its consequences and of any countermeasures that are to be implemented to reduce doses to the population. This information would be issued through media channels: radio, TV including teletext, internet, press statements and press conferences. Regular updates of the situation would be given.

Exercises of the emergency arrangements

23. The Irish communication systems are tested regularly. The ECURIE communication system, operated by the EU, for the early notification of a nuclear accident is tested regularly. A test of the physical communication lines is carried out daily and, at least once a

year, simulated radiological data is exchanged between Member States. There are also tests of the notification system operated by the IAEA (EMERCON).

24. It is recognized that keeping the public informed is crucial to achieving public re-assurance and effective implementation of emergency arrangements. The RPII participated in the two INEX-2 Exercises in Hungary (November 1998) and Canada (April 1999) and in the JINEX 2000 exercise in France in May 2001. These exercises involved close co-operation with the relevant UK authorities, in particular those in Northern Ireland.
25. In 1998 on the basis of a fundamental review of nuclear emergency planning undertaken by the Department of Public Enterprise and the RPII, a revised edition of the National Emergency Plan for Nuclear Accidents was submitted to Government for approval. The proposed changes to the Plan were aimed at improved decision making processes and enhanced provision of information to the public. This revised edition is undergoing final amendments and will be published in the near future incorporating the outcomes of recent Exercises of the plan as outlined below.
26. In March 2001 independent consultants with expertise in emergency planning were engaged by the Department of Public Enterprise to organise two comprehensive exercises of the National Emergency Plan for Nuclear Accidents. The first of these exercises was held in July 2001 and the second is scheduled for November 2001.

**Department of Public Enterprise
Dublin
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