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THE AGENCY'S PROGRAMME FOR 1975-80 AND BUDGET FOR 1975

Modifications

The Board of Governors wishes to inform the General Conference that on 13 September it decided to make the following modifications to the document containing the Agency's programme for 1975-80 and budget for 1975 (GC(XVIII)/526):

(a) Paragraph 10 is replaced by the following:

10. There will be an intensification of the work connected with the growth of nuclear power generation including that on the collation and development of recommendations, as far as possible and necessary, for the safety of nuclear power plants, together with the reliability requirements directly related to safety, which would serve as a standard frame of reference for analysing nuclear plant safety and reliability. In carrying out these tasks the Agency will be assisted by a standing group of highly qualified international experts. Another subject to which increasing attention will be given is the technology and practice of treating high-level and alpha-bearing radioactive wastes.

(b) The penultimate sentence of paragraph J.144 is revised to read:

Tentative plans for it are set forth in Annex VII hereto; it is to be noted from the last sentence thereof that it is hoped that the objectives of the first phase could be attained by completing the work on priority codes and guides in a period of about two years.

(c) The material attached hereto is added to the end of the document.

ANNEX VII

THE AGENCY'S PLANS FOR ESTABLISHING SAFETY CODES AND GUIDES FOR NUCLEAR POWER PLANTS

Introduction

1. The safety of nuclear power plants in any country rests on many requirements. One is an adequate supply of trained personnel for the work involved and to staff a regulatory agency. Another is the ability to conduct a careful and detailed safety evaluation of a nuclear power plant project from its inception and at all stages throughout its life. A third is the ability to conduct an appropriate quality assurance programme including control and inspection. If these requirements are met, it is possible for the authorities of the country to assure themselves that nuclear power plants can be built and operated safely. Formalized safety criteria in the form of codes, guides, etc. can be of considerable assistance in ensuring that these basic requirements are understood and met. It must be emphasized, however, that safety criteria cannot be treated in isolation, and can only be used effectively by qualifed personnel. Similarly, it is essential that regulatory and project personnel of a country proposing to build a nuclear power plant obtain in-depth knowledge of the characteristics of the type of plant it plans to build and operate and of the available body of pertinent information related to safety and regulatory activities, particularly in the country of origin of the plant.

2. The rapid growth of nuclear power projected both in industrialized and developing Member States has led to a re-evaluation of the role the Agency should play pursuant to Article III.A.6 of the Statute in the area of nuclear power plant safety. Accordingly the Agency is developing a programme responding to all the safety requirements referred to above. Only the part concerned with safety codes and guides is dealt with in this Annex, which is based on paragraph J.144 of the covering document. It is clearly understood that such codes and guides can only be in the nature of recommendations, except when otherwise provided for in the Agency's Statute, as decisions on safety matters are, in the last resort, a matter for national authorities. During the initial period of the development of nuclear power the Agency was not in a position to develop safety criteria except in a few fields. Hence, a case-by-case approach to matters of nuclear power plant safety and safety-related reliability was often adopted by the Agency, an approach more time-consuming and less consistent in its results than if such criteria were available.

3. It is clear that such a case-by-case treatment of safety is not adequate in the context of rapidly expanding world-wide use of nuclear power and the associated international trade. As in several other fields, it is desirable to collate and prepare safety codes and guides that could be used by regulatory bodies, utilities, designers and constructors, especially in view of the number of countries embarking for the first time on nuclear power programmes and in the process of setting up their own regulatory procedures. It is now possible to collate existing safety criteria and experience and to begin to prepare such safety codes and guides as could be used by the Agency in advising interested Member States. Although these codes and guides establish an essential basis, they may not be sufficient or entirely applicable. In some cases, in response to particular circumstances, additional requirements may be established. Moreover, there will be special topics which have to be judged by experienced experts on a case-by-case basis.

4. The Agency, therefore, has put forward plans to accelerate its work on codes and guides for nuclear power plant safety foreseen for the period 1975-80 and intends to collate and develop a comprehensive set of recommendations, as far as possible and necessary, for the safety of nuclear power plants, together with the reliability requirements directly related to safety, which would serve as a standard frame of reference for analysing nuclear power plant safety and reliability. These recommendations should be supplemented to the extent possible by detailed guidance related to specific topics for their practical implementation.

Outline of the programme

5. In order to reflect the different approaches which are possible, the programme for this work should take into account national standards, guides, practices, the contributions which could be made by Member States having experience in the matter of nuclear power plant safety, and the activities of other organizations. The objective of the programme is to collate and develop recommendations, as far as possible and necessary, for the safety of thermal neutron power plants.

(a) In evaluating what is possible the following items should be taken into account:

  (i) The amount of relevant knowledge and experience accessible as a basis for useful recommendations; and

  (ii) The expert manpower and other means available for implementation of the procedures of this programme.

(b) In evaluating what is necessary the following items should be taken into account:

  (i) The types of recommendations which are most important for the safety of nuclear power plants;

  (ii) The types of recommendations which are requested by Member States soliciting advice or assistance from the Agency; and

  (iii) The types of recommendations which the Agency needs for Agency projects.

(c) In pursuit of the objective of the programme the Secretariat has drawn up a plan of action aiming at the development of three types of documents as outlined below. Maximum use would be made of existing documentation and experience available in national systems.

  (i) Codes of Practice for thermal neutron nuclear power plants which would establish the objectives and minimum requirements which must be fulfilled to provide adequate safety for these plants, their systems and components.

  (ii) Safety Guides which would recommend a procedure or procedures that might be followed to implement the Codes of Practice. In order to provide for Agency safety guides, the various existing national guides, standards and practices should be collated. This collation will be made to ensure that Agency guides are fully representative of relevant national practices. Such a fully representative picture is a prerequisite to the drafting of an Agency safety guide.

  (iii) Users' Manuals which would be directed primarily to nuclear power plant operators and would normally present one or several possible methods and techniques to solve specific problems. As regards Users' Manuals the Agency might, at an appropriate time, provide for an evaluation of the need and possibility for their development.

6. Five main fields have been identified on which work could be started immediately, namely governmental organization, siting, design, operation and quality assurance.

7. Work on codes and guides would be initiated by small working groups consisting of two or three experts and Agency staff members. The groups will prepare working documents and should have available relevant documents relating to national and international standards and practices collated by the Agency.

8. Technical review committees specialized in each of the five main fields mentioned in paragraph 6 above should be established. Each working document should be submitted to the appropriate technical review committee. These committees should review the documents submitted by the working groups and prepare draft codes and guides. Each committee should include four to six experts from Member States.

9. The Agency should be advised in this programme by a senior advisory group. This group should exercise general surveillance over the development and direction of the programme, define the priorities to be established and advise on the acceptability of the draft codes and guides. The group should consist of about ten eminent experts from Member States in which the regulation of nuclear power plants has reached a level of relatively high development.

10. All draft codes and guides prepared by the technical review committees should be reviewed by the senior advisory group. The recommended drafts should then be submitted to Member States for comment which should be provided within three months. Any comments provided should be taken into account in the preparation of the final version of Agency codes and guides.

11. The programme should be initiated in a first stage, during which work is conducted on a limited number of codes and guides selected by the senior advisory group. The group should follow the programme closely during this first stage, paying particular attention to the development of the fully representative collation of national practices which is required as a prerequisite to the drafting of an Agency safety guide, in order to ensure that the requirement set out in paragraph 5(c)(ii) above is met and that the work could usefully proceed on the guide. The group should meet to review the state of development of codes and guides as frequently as deemed necessary. The group should prepare reports to the Director General at such intervals as may be appropriate, providing an evaluation of the effectiveness of the programme and, in particular, reporting difficulties encountered in preparing suitable codes and guides. It is recommended that these reports be submitted by the Director General to the Board of Governors as soon as possible thereafter, together with any observations he may wish to make, with a view to permitting the Board to take appropriate action on a timely basis if deemed necessary. Subsequently, the senior advisory group should continue this activity in such detail as it deems necessary in the light of the experience gained.

12. It is felt that the difference in the nature of the types of documents proposed, as well as the step-by-step process of collating and developing safety codes and guides by the Agency with the aid of experts from Member States, would provide a flexible and progressive approach. It is hoped that the objectives of the first phase of the programme could be attained by completing the work on priority codes and guides in a period of about two years.