Radiological Protection

Committee on Radiation Protection and Public Health (CRPPH)

The CRPPH is contributing to the definition of new directions and approaches for the international system of radiological protection in order to achieve a clearer and more streamlined framework. The ultimate objective is to achieve a system that will better address regulator and practitioner needs, and will more appropriately position scientific radiological protection considerations within the broader context of social judgement and risk governance.

Highlights

- The most significant questions and issues in radiological protection, which will or could impact radiological protection policy, regulation and application in the coming 10 to 15 years, have been identified.
- Three NEA/ICRP stakeholder dialogue meetings have been planned with the International Commission on Radiological Protection (ICRP) to provide direct feedback from regulators and practitioners on the next draft recommendations.
- The most significant lessons for radiological protection professionals interacting with stakeholders affected by large-scale contamination have been identified, focusing on post-Chernobyl lessons, but applicable to any large-scale contamination situations.
- A total of 17 countries have participated in the Third International Nuclear Emergency Exercise (INEX 3), which should generate significant national and international lessons in consequence management.
- The Information System on Occupational Exposure (ISOE) databases were successfully transferred to a web-based access and analysis platform, forming the core of an ALARA manager web portal being created by the ISOE programme.

Emerging challenges

The CRPPH began, in 2004, a study of emerging issues in radiological protection, and of ongoing issues whose management could evolve to remain better in line with social changes. Two parallel paths were followed in 2005: one looking at risk management issues of relevance to radiological protection (e.g. social/political, policy, regulation and application), and another looking at risk assessment issues (such as the possible results of ongoing radiological protection scientific research) and their implications. Similar to the CRPPH Collective Opinion that was published in 1995, these new CRPPH studies have documented the Committee's view on the trends and issues that will be the most significant over the next 10 to 15 years. Possible implications of these issues, and possible approaches to their handling, are being discussed. Two documents will be reviewed for approval by the CRPPH in March 2006, and subsequently provided to member countries as advice on these issues, and as guides for defining the Committee's programme of work for the coming years.

Development of a new radiological protection framework

The CRPPH has, since its inception, taken an interest in the development of recommendations by the International Commission on Radiological Protection (ICRP). In recent years, the work of several of the CRPPH Expert Groups (notably those on Controllable Dose, the Evolution of Radiation Protection, the Processes of Stakeholder Involvement, the Implications of ICRP Recommendations, and Regulatory Authorisation) has been aimed at developing evolutionary ideas and suggestions that the ICRP can take into account in its work. Through this work, which has been sent directly to the ICRP for its consideration, the CRPPH has become an active partner with the ICRP, providing the views of regulators and experts from the NEA's 28 member countries.

The ICRP spent much of 2005 analysing and assessing comments that it had received on the draft recommendations it released in June 2004. As such, no further draft recommendations were released in 2005. However, the ICRP did release for comment two foundation documents that are of relevance to the work of the CRPPH: Optimisation of Radiological Protection; and Assessing Dose to the Representative Individual. No formal CRPPH commenting process was initiated for these draft documents. However, because it seems likely that the ICRP will release a new draft of its general recommendations during 2006, the CRPPH has made plans for three dialogue workshops with the ICRP (in Europe, Asia and North America), and has foreseen that a CRPPH Expert Group will perform a complete analysis of the draft and its implications.

Another document that will be affected by new ICRP recommendations is the International Basic Safety Standards (BSS). In view of the ongoing revision of the ICRP's recommendations, of experience with implementing the 1996 Basic Safety Standards (BSS), and of new IAEA standards developed since 1996, the six BSS co-sponsoring organisations agreed during a meeting hosted by the NEA in Paris in October 2005, that the current BSS should be reviewed by each of the co-sponsoring organisations.

As a co-sponsor of the current BSS, the NEA will take an active role in the development of the new standards. It is anticipated that the review of the current BSS will be completed by mid-2006, and that the process to develop text for the new BSS will begin in late 2006 or early 2007.

Radiological protection science at the service of stakeholders

The recognition of the need for, and usefulness of, stakeholder involvement in decision making has enlarged the focus of radiological protection in recent years. The CRPPH has devoted a significant part of its programme of work to stakeholder involvement, primarily through the series of workshops held in 1998, 2001 and 2003 in Villigen, Switzerland. A key finding of these workshops suggests that when stakeholders are involved in radiological risk assessment and management, and science is brought to the service of "inclusive" decision-making processes, the resulting decisions can be of higher quality and greater sustainability than had stakeholders and radiological protection scientists and professionals not worked together.

The rehabilitation of contaminated lands and facilities often involves significant stakeholder concerns. Work to rebuild the lives of those living in the areas affected by the Chernobyl accident is a prime example of this, and with 2006 marking 20 years since the accident, the CRPPH revisited the case. While clearly not all of the experience is applicable to other circumstances in other countries, much has been gained by studying the stakeholder involvement aspects. Particular areas of interest include the interaction of stakeholders with radiological protection specialists, and the development of practical radiological protection approaches (a radiological protection culture) for all those living in a contaminated environment. A broad overview of the situation in the Chernobyl-contaminated areas has yielded detailed understanding of the magnitude and varieties of problems and issues that would arise in any large-scale contamination situation.

Countermeasures in follow-up to a nuclear accident can be numerous. Gathering reindeer is the most commonly applied countermeasure to obtain lower contamination levels in reindeer meat.

Skuterud-NRPA and Reindeer Husbandry Administration, Norway

Nuclear emergency and recovery management

Following the INEX 2 series of exercises, which were completed in 2001, and the INEX 2000 exercise, the CRPPH Working Party on Nuclear Emergency Matters (WPNEM) summarised a series of urgent response lessons and experience for national response organisations to assess and implement as appropriate within their own contexts. The next phase of a nuclear emergency – consequence and recovery management – is currently under study. For this, the INEX 3 table-top exercise was developed, based on a serious radiological contamination scenario which may or may not be accidental in nature. The exercise begins with the contamination in place, but not yet fully characterised. The broad objectives of the exercise focus on agricultural countermeasures and food restrictions; decision making on soft countermeasures, such as travel, trade and tourism; recovery management; and public information. Exercise preparation and evaluation documents were developed and made available to national exercise co-ordinators. A total of 17 countries organised their national exercises during 2005. The international INEX 3 evaluation workshop, to be held in May 2006, will provide the opportunity to collectively assess the results, share experiences and lessons learnt, and identify opportunities for further improvements in emergency management systems and rehabilitation strategies.

Occupational exposure at nuclear power plants

Occupational exposure at nuclear power plants continues to be an important issue for the members of the CRPPH. The sharing of lessons and experience, as well as the collection, analysis and exchange of occupational exposure data continues to be addressed by the NEA joint project: the Information System on Occupational Exposure (ISOE). In support of CRPPH efforts to facilitate improvement of members' operational radiological protection capabilities, the ISOE continued to collect, evaluate and disseminate occupational exposure data and trends, and to share operational experience through its information exchange network and international ALARA symposia. Further details on the ISOE are provided on page 35.

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