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**NUCLEAR ENERGY AGENCY
COMMITTEE ON RADIATION PROTECTION AND PUBLIC HEALTH**

**NEA/CRPPH(2002)1
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ENHANCING PUBLIC HEALTH AND SAFETY

**Contributions of the OECD/NEA Committee on Radiation Protection
and Public Health (CRPPH) 2001-2003**

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English - Or. English

**Mandate of the
Committee on Radiation Protection and Public Health (CRPPH)**

(Updated: October 2000)

The general objective of the NEA in the field of radiation protection is to contribute to the adoption and the maintenance of high standards of protection for workers and members of the public in all practices involving the use of ionising radiations, and particularly in the field of nuclear energy.

In this context, the mandate of the Committee on Radiation Protection and Public Health (CRPPH) shall be:

1. to provide a forum for the exchange of information and the transfer of experience between national radiation protection and public health authorities on radiation protection policies and approaches and their implementation in the various practices and situations involving radiation exposures;
2. to seek international understanding and guidance, in support of national authorities, on questions of common concern regarding the interpretation and implementation of the ICRP recommendations and other international standards in the various fields of application of radiation protection, and to contribute to the development of harmonised positions in this field;
3. to keep under review and contribute to the advancement of the state-of-the-art in the field of radiation protection at the scientific and technical level and promote the preparation of authoritative advice and reference documents for use by national authorities and policy makers in those areas where international consensus on radiation protection concepts and practices is required; and
4. to advance concepts and policies which make the system of radiation protection more simple, transparent and adaptable to the broader social dimensions of decision making in complex radiological situations.
5. to promote and initiate international co-operative activities on specific radiation protection and radiation-related public health topics of interest to the NEA's Member countries in the framework of the NEA's Strategic Plan.

In the fulfilment of its mandate, the CRPPH will work in close co-operation with other NEA Committees as appropriate, as well as with the competent bodies within relevant OECD Directorates and other international organisations active in the field.

Strategic Direction and Priorities of the CRPPH (2002 - 2005)

The NEA's Committee on Radiation Protection and Public Health (CRPPH) is a valuable resource for its Member countries. The Committee is made up of regulators and radiation protection experts, with the broad mission to provide timely identification of new and emerging issues, to analyse their possible implications and to recommend or take action to address these issues to further enhance radiation protection regulation and implementation. The regulatory and operational consensus developed by the CRPPH on these emerging issues supports policy and regulation development in Member countries, and disseminates good practice.

The most significant challenge currently facing the radiation protection community is how to better integrate radiation protection within modern concepts of and approaches to risk governance. In response to this issue, the internationally accepted principles of radiation protection, upon which virtually all national legislation is based, are in the process of being reviewed and updated. The CRPPH goal is to ensure that consensus on directions for improvement is reached among radiation protection experts from national regulatory authorities, and that this consensus is taken into account during the development of new approaches and international recommendations. This will be the main focus of the Committee's work for the coming years. The CRPPH will also actively pursue collaborative efforts to address cross-cutting areas such as stakeholder involvement and environmental protection.

All components of the CRPPH Programme of Work (POW) will be oriented along these lines. The Expert Group on the Evolution of the System of Radiation Protection (EGRP), the Expert Group on the Process of Stakeholder Involvement (EGPSI), and the Expert Group on Release Options (EGRO), will focus on developing various aspects of a "modern" system of radiation protection. The Forum on the Radiological Protection of the Environment will address this new area of importance. The Working Party on Nuclear Emergency Matters (the INEX group) will orient its strategy towards the longer term management of contaminated territories, for example the use of (or need for) intervention levels at various stages of cleanup and recovery. The Information System on Occupational Exposure (ISOE) will continue its work on the operational and analytical aspects of exposures at nuclear power plants, but will be invited to address the issue of "worker empowerment" in terms of modern views of optimisation of exposures.

Specifically, growing stakeholder involvement in decision-making processes addressing human health and environmental risks, as well as interpretation and application difficulties with the current system of radiation protection, have led to a general review of the foundations of radiation protection. As part of this, the International Commission on Radiological Protection (ICRP) has undertaken the very broad task of updating its 1990 general recommendations (Publication 60) to better reflect modern societal needs. The CRPPH feels that much of the current system is well presented and is operationally workable. Several key areas of Publication 60, however, have been identified by the Committee as needing an alternative approach to better respond to the needs of regulators, practitioners and stakeholders. The objective of the CRPPH in this work is to develop consensus with regard to how these key areas of the ICRP general recommendations could be improved, and how stakeholder processes should be reflected in these recommendations. In developing this consensus, national examples of good practice in various areas will also be documented.

Work in all these areas is designed to assist CRPPH Members in addressing these issues within in their own national context. Results will be offered to the international community as the consensus of the regulators and experts of the CRPPH, with stakeholder input, for consideration and use in the development of a new, modern system of radiation protection.

Foreword

During the 58th Meeting (April 2000) of the NEA's Radiation Protection and Public Health Committee (CRPPH), the Chairman proposed that an annual summary report presenting activities, accomplishments and plans would substantially increase the transparency of the Committee's work, and would facilitate the communication of accomplishments within Member country governments. The Committee agreed that such a document would be a valuable communication tool, and charged the Chairman and the Secretariat to provide the Committee with a draft CRPPH Annual Report for its next meeting. The first edition of this report, document NEA/CRPPH(2001)11/Rev1, was seen as very useful by the Committee, and the Secretariat was charged with producing annual updates.

This report is the result of the efforts by the Bureau and Secretariat, and will be approved by the CRPPH at its March 2002 meeting. It provides a snapshot of the Committee's accomplishments since its last meeting (March 2001 - March 2002), and its planned activities for the subsequent 12 months (March 2002 - March 2003).

CRPPH Members are encouraged to use this document as a basis for national discussions of the results and directions of NEA work in the area of radiation protection. The annual CRPPH meeting will also use this document as its principal working paper.

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Summary of CRPPH Accomplishments and Planned Activities

Summary of Accomplishments for 2001 - 2002

The NEA's Committee on Radiation Protection and Public Health (CRPPH) contributed significantly to the advancement of radiation protection philosophy and application during the period from March 2001 to March 2002. The most significant accomplishments during this period include:

- The finalisation of the Committee's consensus views on how the system of radiological protection could be usefully and effectively improved.
- The development of policy-level lessons in stakeholder involvement in radiological-protection decision making based on experience from the 2nd Villigen Workshop.
- The completion and final analysis of the INEX 2 series of regional international nuclear emergency exercises. The preparation and conduct of the INEX 2000 exercise, which will serve as a bridging exercise between the INEX 2 series and the forthcoming INEX 3 programme. The preparation of a strategic approach to guide the detailed development of the INEX 3 programme.
- The continued expansion of participation in the ISOE system on occupational exposure at nuclear power plants, contributing to the world-wide improvement of occupational dose management and worker protection (e.g., 405 plants world-wide representing 74 utilities in 29 countries, with a demonstrated collective dose reduction of 50% over the last 10 years).
- The organisation of an NEA Forum on Radiological Protection of the Environment, in collaboration with the ICRP to support the development of a policy in this field.

Summary of Planned Activities for 2002 - 2003

While each Group or project will focus on addressing its own mandate, each will also increasingly contribute to the current central theme of the CRPPH programme of work, the evolution of the system of radiation protection. Most significantly, the direction of the various programmes will:

- Tie together the contributions of the EGRP and the EGPSI, though the exchange of presentations at upcoming workshops, to enhance the value of the CRPPH views on how the system of radiological protection should evolve.
- Add the dimension of emergency management to the RP system evolution theme by studying post-accidental aspects, including stakeholder interactions, of nuclear emergencies.
- Add operational stakeholder input to the RP system evolution theme by contributing hands-on expertise and experience to the development of CRPPH input to the ICRP.

Moreover, the CRPPH initiated a joint meeting with the RWMC in March 2001 to facilitate co-ordination on NEA crosscutting issues, focusing on the protection of the environment. The next joint meeting, in March 2002, focused on stakeholder involvement. These joint meetings are a catalyst to identify and better co-ordinate our Committee actions to optimise resources and focus efforts.

A detailed listing of recent accomplishments and future plans follows, organised by project. A complete list of all accomplishments and planned actions, organised by Working Party and Expert Group, is provided in Annex 1. A bibliography of recent CRPPH publications is available in Annex 4, and documents are available for purchase or for downloading at WWW.NEA.FR.

Enhancing Public Health and Safety

**Contributions of the OECD/NEA
Committee on Radiation Protection and Public Health
(CRPPH)**

**Accomplishments 2001 - 2002
Planned Activities for 2002 - 2003**

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1. Historical Introduction

The use of radiation has contributed greatly to the enhancement of the quality of life and the human endeavour. The beneficial uses of radiation in medicine, industry and energy production have resulted in the advancement of our society. To capitalise and maximise the benefits of activities involving radiation to society, governments take action to establish regulatory programs that promote and assure the appropriate safeguards are in place for the protection of workers, the public and environment from the possible deleterious effects from inappropriate use or handling of sources of radiation. One of the foundations of these efforts is a thorough understanding of radiation risks, including how these risks are assessed and managed, and how these risks are addressed in a societal context. Radiation protection is a cross-cutting discipline that establishes programmes for the protection of workers, the public and environment from the possible hazards of ionising radiation that then allows for the development and use of nuclear power, and other uses of radiation. The Committee on Radiation Protection and Public Health (CRPPH) has, within the OECD Nuclear Energy Agency (NEA), the responsibility to study various aspects of these issues and take actions to support National authorities in adoption and maintenance of high standards of protection in the use of ionising radiation.

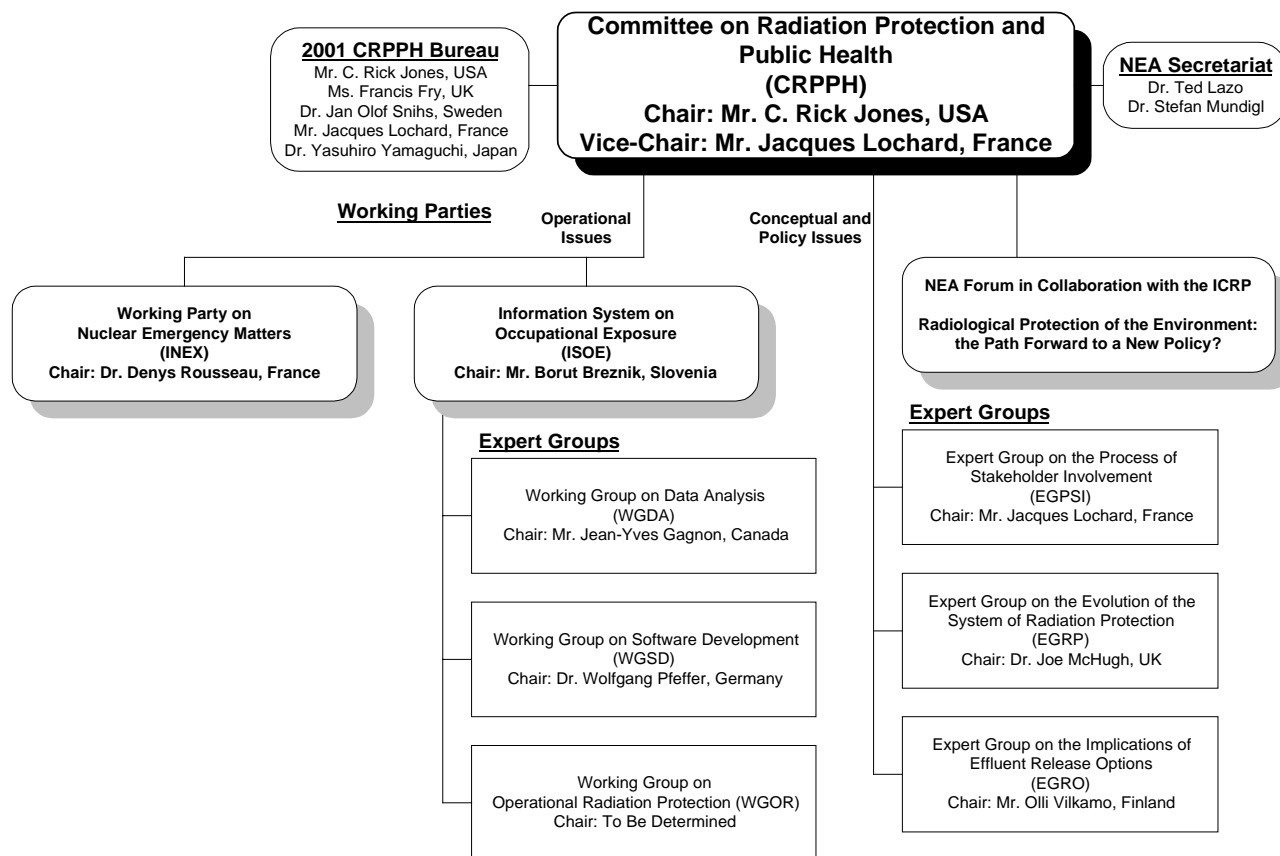
In July 1957, the Organisation for European Economic Co-operation (OECE) established the Health and Safety Sub-Committee, which was charged with the implementation of a programme in the field of radiation protection. Following the establishment of the European Nuclear Energy Agency in 1958, the Sub-Committee was attached to the Steering Committee for Nuclear Energy, and in 1973 the mandate of the Sub-Committee was revised, establishing the Committee on Radiation Protection and Public Health (CRPPH). This mandate was updated in 1981 to provide more specific objectives and to focus the Committee's work, and again in 1993, to better reflect the Committee's relationship with the International Commission on Radiological Protection (ICRP), as well as its joint international project co-ordination work in such areas as occupational exposure (the ISOE programme) and nuclear emergency exercises (the INEX programme). The current version of the CRPPH Mandate was approved by the OECD Council in October 2000. This revision was implemented to bring the Committee's mandate into harmony with the NEA's Strategic Plan, which was approved in 1999. Under this new Mandate, CRPPH is responsible for radiation protection studies and experience exchange in the light of the following goals:

- to provide its Members with a high-level, visible forum for exchange and discussion;
- to seek common understanding of identified issues;
- to advance the "state-of-the-art" in radiation protection theory and practice;
- to advance policies that bring the system of radiation protection more in line with modern societal needs, and;
- to promote international co-operative projects.

By addressing these goals, the CRPPH is helping to establish a safe working environment for nuclear power and waste management operations, as well as for medical, research and other industrial uses of ionising radiation. This is accomplished, in part, through the application of the ALARA principle to effectively manage public and worker exposures.

Performing this work in close collaboration with other international organisations, particularly the International Atomic Energy Agency (IAEA), the European Commission (EC) and the International Commission on Radiological Protection (ICRP), the International Radiation Protection Association (IRPA), the International Labour Organisation (ILO), The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), the World Health Organisation (WHO), the World Meteorological Organisation (WMO) and the United Nations Office for the Co-ordination of Humanitarian Assistance (UN-OCHA) assures that efforts are complimentary. Performing this work at the level of an internationally recognised committee of radiation protection experts, the CRPPH is also helping to promote international co-operation and discussion leading to more efficient and cost-effective resolution of these important radiation protection issues. Within the NEA, this work has contributed significantly to maintaining the appropriate equilibrium among all concepts necessary for full-bodied and mature discussion of the regulation and research associated with nuclear power.

The work of the CRPPH is divided into two broad areas: conceptual and policy issues; and operational radiation protection topics. This Summary Report lists achievements during the period since the last meetings of the CRPPH [March 2001], and future plans for the period until the next CRPPH meeting [March 2002 to March 2003]. The structure of the CRPPH and its sub-groups for 2002 to 2003 is shown below.



2. Detailed Working Party and Expert Group Accomplishments (March 2001 - March 2002) and Plans (March 2002 - March 2003)

Following the Statute of the OECD Nuclear Energy Agency, the CRPPH has focused its activities on radiation protection as it applies to nuclear fuel cycle installations. Because, however, radiation protection in all aspects (nuclear power, industrial, medical, research, etc.) is governed by the same philosophy, the work of the Committee is often equally applicable to many other radiation applications.

Within these bounds, in order to maximise the efficiency of its limited resources, the CRPPH has focused on only a few significant and specialised areas of work. In general, emerging issues in radiation protection are addressed, with the objective of achieving international understanding and, where possible and appropriate, consensus. To accomplish this, the CRPPH has established Working Parties, which address topical areas requiring a certain continuity of effort over time, and Expert Groups, which are very task oriented and term limited.

For the past several years, the Committee has spent considerable effort in discussing the internationally accepted system of radiation protection, as detailed in the recommendations of the ICRP, and its place and evolution in modern society. Various aspects of this broad topic have been addressed by three Expert Groups to enlighten and focus discussions and efforts to promote responsible evolution towards a new system of radiation protection. In terms of more operational concerns, two Working Parties have been addressing the issues of occupational exposure at nuclear power plants, and nuclear emergency planning, preparation and management.

Summary of Activities, Accomplishments and Plans For 2001 - 2003

Working Party on Nuclear Emergency Matters

Working Party Chairman: Dr. Denys Rousseau, IPSN, France
Member, CRPPH

Background and Strategy

The NEA has for some time been interested in nuclear emergency matters, as demonstrated by the number of publications produced in this area. Following the Chernobyl accident, the NEA developed and held, in 1993, the first International Nuclear Emergency Exercise (INEX 1) to study various international aspects of emergency communication, co-ordination and response. The success of this table-top exercise led the CRPPH to develop a more ambitious and realistic exercise to study these international aspects in more depth. Four INEX 2 series Regional, command-post exercises were held between 1996 and 1999, each with 30 to 35 countries, and 3 to 5 international organisations participating simultaneously in real-time. Based on experience from the INEX 2 exercises, the INEX 2000 exercise was organised and held during 2001. Lessons from these exercises are now fuelling further exploration of and improvement in this important area.

For 2002 - 2003 the Working Party will finalise a mid-term strategy document to guide its work, and will focus on the post-accident management of contaminated territories, and the development of an INEX 3 exercise.

Accomplishments and Products: 2001 - 2002

- **The INEX 2 series of exercises**

The national and international experience and lessons learned from the INEX 2 series of exercises were analysed and summarised in reports by the Working Party. As a result, improvements have been made in emergency preparedness at the national level - both in terms of country-specific changes, and national-level changes common to many countries - and at the international level. Directions for further improvement have also been identified.

Products:

- Experience from International Nuclear Emergency Exercises: The INEX 2 Series, OECD/NEA, 2001
- Second International Nuclear Emergency Exercise INEX 2: Final Report of the Hungarian Regional Exercise, OECD/NEA 2001
- Second International Nuclear Emergency Exercise INEX 2: Final Report of the Canadian Regional Exercise, OECD/NEA 2001

- **The INEX 2000 nuclear emergency exercise**

In order to validate the monitoring and data-management strategy developed based on experience from the INEX 2 exercises, and to see how well lessons from INEX 2 had been implemented, the Working Party developed the INEX 2000 exercise. Jointly sponsorship by the IAEA, the EC, the WHO, the WMO, who each developed their own organisation-specific exercise objectives, 38 countries participated. The INEX 2000 exercise was based on a simulated accident at the Gravelines nuclear power plant, in France. In January 2002, the NEA organised an INEX 2000 Follow-up meeting to evaluate the Exercise with respect to the NEA objectives, in which representatives from 27 countries, including 7 non-NEA Member countries, participated.

As part of the INEX 2000 exercise, the NEA Nuclear Law Committee and the CRPPH jointly organised a Workshop to explore, for the first time, various operational aspects of implementing the Paris and Brussels conventions on third-party liability. Policy-level conclusions, at the national and international level, were drawn regarding the application of these conventions. The INEX 2000 exercise results were used as the basis for realistic discussions.

Products:

- INEX 2000 Exercise held in May 2001
- INEX 2000 Exercise Summary Meeting held in January 2002
- Workshop: The Indemnification of Damage in the Event of a Nuclear Accident, Paris, 26 - 28 November 2001

• **Working Party Mid-term Strategy**

With the conclusion of the INEX 2000 exercise, the Working Party turned its primary focus to its future work. In order to position itself to most usefully address NEA Member country needs, and keeping in mind the NEA's collaborative role in the organisation of future international nuclear emergency exercises, the Working Party developed a strategic document defining its role and strategic objectives.

Products:

- Strategy Document: Defining the Role of the NEA Working Party on Nuclear Emergency Matters

• **The INEX 3 Programme of Work**

Based on INEX 2 and INEX 2000, and world affairs, the Working Party developed a draft work programme (2002 - 2005) for INEX 3, focusing on emerging issues in the field of international nuclear emergency preparedness and management. This will be finalised during 2002, but will be oriented towards the post-accidental short term management of contaminated territories.

In preparation for the INEX 2 exercises, a survey of short-term countermeasures in NEA Member countries was conducted and issued as an NEA document in 1994. Because much has changed as a result of the INEX 2 exercises, the survey was redone during 2001 and a preliminary analysis was developed.

Products:

- Draft Document: The Programme of Work for the Working Party on Nuclear Emergency Matters: Emerging Issues
- Draft Document: The INEX 3 Exercise
- Draft Document: Evaluation of the NEA Questionnaire on Short-Term Countermeasures

Activities and Planned Products: 2002 - 2003

1. **Implement the strategy:** In order to continue contributing to emergency preparedness improvement nationally and internationally, the Working Party will develop a detailed programme of work based on its new strategy, with emphasis on post-accident management.

Products:

- Detailed Working Party Programme of Work
- INEX 3 Exercise Proposal

2. **Analyse the results of the INEX 2000 exercise:** In order to help NEA Member countries to further improve their emergency preparation, Exercise results will be analysed in order to draw out and summarise the lessons learned and their policy-level implications. Emergency management issues emerging from the analysis will be identified. The Working Party will use national exercise reports and the results of the summary meeting as the basis for its work.

Products:

- INEX 2000 Exercise summary report
- Proceedings of the Joint Workshop on Third Party Liability issues.

3. **Short Term Countermeasures:** In order to provide NEA Member countries with a snap-shot of current national approaches to short-term countermeasures, the Working Party will analyse the results of its survey.

Products

- Final Evaluation of the NEA Questionnaire on Short-Term Countermeasures

Summary of Activities, Accomplishments and Plans For 2001 - 2003

Information System on Occupational Exposure (ISOE)

ISOE Steering Group Chairman: Mr. Borut Breznik, Krsko NPP, Slovenia

Background and Strategy

In response to pressures from deregulation and from the ageing of the fleet of nuclear power plants, radiation protection personnel have found that occupational exposures will be reduced by properly planning, preparing, implementing, and reviewing jobs, while applying work management techniques such that the exposures become “as low as reasonably achievable”(ALARA). To facilitate this global approach to work through the exchange of techniques and experiences in occupational exposure reduction, the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD) launched the Information System on Occupational Exposure (ISOE) on 1 January 1992 after a two-year pilot programme. Participation in ISOE includes representatives from both utilities (public and private) and from national regulatory authorities. Since 1993, the International Atomic Energy Agency (IAEA) co-sponsors the ISOE Programme, thus allowing the participation of utilities and authorities from non-OECD/NEA member countries. The ISOE Programme includes a series of occupational exposure databases, and a network of utility and authority radiation protection experts for the exchange of experience, information and lessons. The ISOE Programme supplies data to the European Commission and to UNSCEAR.

For the 2002 to 2003 period, the ISOE Programme will concentrate on the dissemination of good practice and experience in the area of occupational exposure reduction at nuclear power plants, using the newly issued database input, analysis and exchange software. The group will also specifically address the issue of worker empowerment in terms of modern views of exposure optimisation.

Accomplishments and Products: 2001 - 2002

- **The ISOE Programme**

As of the end of 2001, the ISOE Programme included occupational exposure data from a total of 405 operating commercial nuclear reactors, 93% of the World's 433 operating commercial nuclear reactors. In addition, 54 commercial nuclear reactors in cold-shutdown or some stage of decommissioning are included in the ISOE database. The reactors in the ISOE databases represent 74 utilities from 29 countries. Regulatory authorities from 25 countries participate in the ISOE Programme.

Products:

- Updated ISOE databases, distributed to all ISOE Participants
- Conduct Workshops/Synposia/Forum to facilitate the efficient and cost effective implementation of the updated ISOE databases.

- **ISOE Analyses and Databases**

One of the most important aspects of the ISOE Programme is data analysis, such as the tracking of annual occupational exposure trends. Using the ISOE database, which contains annual occupational exposure data supplied by all Participating Utilities, various exposure trends can be displayed by country, by reactor type, or by other criteria such as sister-unit grouping. The results of these data analyses are published in the ISOE Annual Reports, the latest of which shows that occupational exposures decreased by 50% between 1990 and 2000. A summary report demonstrating the value of the first 10 years of the ISOE programme was also developed and will be published in 2002. In

addition, the ISOE Technical Centres performed various data analyses, data research and experience exchange that were published as ISOE Information Sheets.

Improvements made to the ISOE database software during 2001 have streamlined data collection, management and evaluation for all three databases (ISOE 1, ISOE 2 and ISOE 3). This software package was quality approved and distributed for data collection and data analysis. In particular, the new capability to efficiently write and distribute ISOE 3 reports will enhance the quick exchange of experience in operational occupational radiation protection.

Products:

- ISOE Tenth Annual Report, Occupational Exposures at Nuclear Power Plants, 2000, OECD/NEA, 2001
 - Distribute the improved version of ISOE software
 - ISOE - 10 Years of Experience, OECD/NEA, 2002
- **ISOE ALARA Symposia**

In February 2001, the International 2001 ALARA Symposium was held in Anaheim, California. In addition, the third ISOE European Workshop on Occupational Exposure Management at Nuclear Power Plants, which will take place in Portoroz, Slovenia, 17 - 19 April 2002, was organised. The common objective of ISOE workshops is to communicate experience in ALARA implementation and occupational exposure issues, and to share lessons learned. The international and broad participation in these workshops shows the interest in ALARA and occupational exposure issues.

Products:

- Proceedings, International 2001 ALARA Symposium that collects and communicates best practices and lessons learned in the management and optimisation of occupational exposures.

Activities and Planned Products: 2002 - 2003

1. Using the ISOE databases, the Technical Centres and the Secretariat will collect data and perform data analyses to facilitate the sharing of benchmarking information and good practices.

Products:

- ISOE Eleventh Annual Report, Occupational Exposures at Nuclear Power Plants, 2001

2. The ISOE 2 database will be added to the suite of computer database products, and electronic formats will be developed to allow efficient data collection, management and evaluation to facilitate the exchange of plant-related operational radiation protection information.

Products:

- Finalised software package

3. In order to take advantage of the operational expertise of the ISOE Programme, to help assure that the evolution of the system of radiological protection will result in a system that can be efficiently and operationally implemented, and to increase the visibility of the ISOE Programme, the ISOE Steering Group agreed to develop input on operational radiation protection for the CRPPH discussions of the evolution of the system of radiation protection. An Expert Group will be created, and will place an emphasis on worker empowerment in optimisation.

Products:

- A Terms of Reference and work plan will be developed and approved for the new Expert Group, and work will begin.

4. Conduct the ISOE ALARA Symposium in Slovenia, April 2002.

Products:

- Symposium proceedings

Summary of Activities, Accomplishments and Plans For 2001 - 2003

Expert Group on the Evolution of the System of Radiation Protection (EGRP)

Expert Group Chairman: **Dr. Joe McHugh, Environment Agency, United Kingdom**
CRPPH Member

Background and Strategy

Since the publication of the last recommendations of the International Commission on Radiological Protection (ICRP Publication 60, 1990) many areas have been identified that are somewhat unclear, or that are seemingly incoherent. While the CRPPH has, in general, found the ICRP system to be robust, the Committee has continued to focus its attention on those aspects of the system that it judges to need further refinement. Recognising the need for modernisation, Professor Roger Clarke, the Chair of the ICRP, has published several papers in the open literature (1999, 2001) suggesting an evolution that could be followed for the development of the next set of ICRP recommendations, due in the 2005 timeframe, and asking for comments. The CRPPH has been actively involved in developing its own consensus thoughts on how the system of radiation protection could be made more responsive to decision makers, regulators and practitioners, and has provided these directly to the ICRP and the international community for consideration. The Working Party on Controllable Dose and the Use of Collective Dose (WPCD) published the first reflections of the CRPPH on this subject in mid 2000. To further refine these thoughts, the CRPPH created the Expert Group on the Evolution of the System of Radiation Protection (EGRP) at its March 2000 annual meeting, and charged the Group with the development of some practical suggestions that could improve the clarity and coherence of the system of radiological protection.

For 2002 - 2003 the EGRP will publish its reflection document, and will focus on the development of case studies to "validate" that its suggestions would result in practical improvements to the system.

Accomplishments and Products: 2001 - 2002

- **The Way Forward: Evolution of the System of Radiological Protection**

The EGRP produced and submitted to the CRPPH for approval a document recommending several specific areas where the system of radiological protection, as described in Publication 60 of the International Commission on Radiological Protection (ICRP), could be improved to better meet modern governmental and social needs. This document, representing the consensus of the CRPPH, will be published and offered directly to the ICRP, but also to the international radiation protection community for consideration in the development and application of international and national recommendations and regulations.

Products:

- The Way Forward: Evolution of the System of Radiological Protection: A report for the OECD Nuclear Energy Agency's Committee on Radiation Protection and Public Health (CRPPH), OECD/NEA, 2002

- **Road Testing the Way Forward**

Based on the above mentioned document, the EGRP has identified a series of case studies that will be developed to show whether its suggestions for improvement will actually improve the system of radiological protection. The Group has identified the case studies it would like to perform.

Products:

- Terms of Reference for Case Studies

- **Dialogue with the ICRP on the development of new recommendations**

Continuing with the series of dialogue meetings with the Chair of the ICRP, representatives from 3 of the NEA's Standing Technical Committees (CRPPH, RWMC, CNRA) met in November 2001 to discuss the latest direction being taken by the ICRP. Written comments from Members of the CRPPH and other NEA Standing Technical Committees were collected and passed to the ICRP for consideration. Oral discussions during the meeting were of value to NEA Committee Members, who better understood the details of the various ICRP proposals, and who felt their direct influence on the ICRP recommendation development process.

Products:

- Written Comments on the ICRP approach to the evolution of the system of radiological protection, distributed within the NEA family of Standing Technical Committees, and submitted to the ICRP for consideration

Activities and Planned Products: 2002 - 2003

1. In order to make the CRPPH consensus views on the evolution of the system of radiological protection more visible, and to continue discussions outside of the CRPPH community, opportunities to publicise the work of the CRPPH in this area will be sought.

Products:

- Presentation of "The Way Forward" during the IRPA Regional Conference in Florence, October 2002.

2. In order to evaluate the consensus views of the CRPPH on the evolution of the system of radiological protection, the case studies that were defined by the EGRP will be completed and evaluated by the EGRP on behalf of the CRPPH.

Products:

- Reports summarising the results of the EGRP case studies

3. In order to discuss the views of the CRPPH in a forum beyond the CRPPH community, a workshop will be organised in Japan to discuss the improvements presented in "The Way Forward", as well as the results of the case studies that were performed.

Products:

- Regional workshop in Japan in late 2002, to present results of the case studies, and to gather regional experience and views.

Summary of Activities, Accomplishments and Plans For 2001 - 2003

Expert Group on the Process of Stakeholder Involvement in Radiation Protection Decision Making (EGPSI)

Expert Group Chairman: Mr. Jacques Lochard, CEPN, France
CRPPH Vice-chair

Background and Strategy

In its 1994 Collective Opinion, the CRPPH identified the societal aspects of radiation protection, focusing at that time on post-accidental situations, as an important area to monitor. The growing area of comparative risk assessment and management, studying various risks to optimise resource allocation, was also identified. In 1996, the CRPPH created the Working Group on Risk Management (WGRM), and the Working Group on Societal Aspects of Radiation Protection (WGSA) to investigate these important areas. The WGRM completed its work in 1998, but part of that group continued investigating the area independently, reporting its results to the CRPPH in 1999. The WGSA organised the 1st Villigen Workshop, *Societal Aspects of Decision Making in Complex Radiological Situations*, in January 1998. As a follow-up to these two actions, the CRPPH created the Working Group on Stakeholder Involvement in 1999, which organised and held the 2nd Villigen Workshop in January 2001. To carry this work forward, the CRPPH identified stakeholder involvement process aspects as key areas. To focus on this aspect, at its March 2001 meeting the CRPPH created the Expert Group on the Process of Stakeholder Involvement (EGPSI).

For the 2002 - 2003 period, the EGPSI will analyse existing case studies to identify commonalities in the processes that were used to involve stakeholders in the decision-making processes. This work will be in support of the national needs of CRPPH Members. Stakeholder aspects also form an essential element in the evolution of the system of radiological protection, thus the work of the EGPSI will also serve as input to the work of the EGRP, and will contribute to the CRPPH input to the ICRP.

Accomplishments and Products: 2001 - 2002

- **Analyse the results of the 2nd Villigen Workshop**

The first two Villigen workshops provided a wealth of information on policy and practical aspects of stakeholder involvement in radiation protection decision making. To assist CRPPH Members address national questions of stakeholder involvement, the 2nd Villigen workshop was held, and its results were analysed and summarised under the guidance of the EGPSI and the CRPPH Bureau. The policy-level summary report, and the Workshop Proceedings, were published and widely distributed within the NEA family of Standing Technical Committees.

Products:

- Policy Issues in Radiological Protection Decision Making: Summary of the 2nd Villigen (Switzerland) Workshop, January 2001, OECD/NEA 2001
- Better Integration of Radiation Protection in Modern Society, Proceedings of the 2nd Villigen Workshop, Villigen, Switzerland, 23 - 25 January 2001, OECD/NEA, 2002

- **Analysis of Case studies to identify similarities in stakeholder involvement processes**

The case studies presented during the 1st and 2nd Villigen Workshops represent a wealth of detailed information that can be studied to learn more about the procedural aspects of how stakeholders are involved in the decision making process, and what are the keys to successful involvement. The EGPSI developed the terms of reference for three analyses of regional case studies to address these

details, and has identified consultants to carry out this work under their guidance. The terms have been reviewed and approved by the CRPPH Bureau. Preliminary results of these analyses are expected by the end of 2002, and will be finalised after the 3rd Villigen Workshop.

Products:

- Terms of Reference for Case Studies

- **Preliminary organisation of the 3rd Villigen Workshop**
The EGPSI initiated discussions for the 3rd Villigen Workshop, which will be based around the case study analyses mentioned above, and will include input from the EGRP work. The workshop will be held in mid 2003.

Products:

- Preliminary planning structure for the 3rd Villigen Workshop

Activities and Planned Products: 2002 - 2003

1. Finalise the regional case study analyses for presentation at the 3rd Villigen Workshop.

Products:

- Case Studies completed and documented.

2. Hold the 3rd Villigen Workshop (mid-2003).

Products:

- Workshop proceedings and analysis of policy-level implications.

Summary of Activities, Accomplishments in 2001 and Plans for 2002

Expert Group on the Implications of Effluent Release Options (EGRO)

Expert Group Chairman: Mr. Olli Vilkkamo, STUK, Finland
Member, CRPPH

Background and Strategy

Radioactive effluent releases from nuclear installations, in normal operation, have been reduced in recent years, but are still subject to discussions. The demand for further reductions is generally driven by societal concerns about the protection of the environment. Regarding the optimisation of effluent releases, there are several different approaches, such as the concept of the “Best Available Technology (BAT)”, or the ALARA approach that is well known in radiation protection. The OSPAR Commission, a body concerned with the pollution of the marine environment, introduced a strategy with regard to radioactive substances which calls for a reduction of radioactive emissions to a level that would result in concentrations of artificial radionuclides in the environment that are “close to zero”. In order to assist experts and decision makers to fully understand the technical implications and feasibility of the various effluent release options being discussed, the CRPPH agreed to launch an Expert Group on this subject. The results of this Group’s work will serve as decisional background information for CRPPH Members and other experts faced with such choices, as well as input to the CRPPH views on the evolution of the system of radiation protection.

For 2002 - 2003, the focus of the EGRO will be to finalise its report and to submit it to the CRPPH for approval prior to publication.

Accomplishments and Products: 2001 - 2002

- **The Expert Group Terms of Reference**

Following guidance from the CRPPH, the Expert Group developed and approved Terms of Reference, which were subsequently approved by the CRPPH Bureau.

Products:

- Document NEA/CRPPH/EGRO(2001)1: Expert Group on the Implications of Effluent Release Options, Terms of Reference

- **Develop Draft Report**

The Expert Group held two meetings which served mainly to collect relevant national and international information and to outline and draft a document with factual information on various effluent release options in order to allow informed further discussions of technical and policy level implications. The preliminary outline of the main elements of the report was prepared.

Products:

- Document NEA/CRPPH/EGRO(2001)3: Expert Group on the Implications of Effluent Release Options, Summary Record of the First Meeting

Activities and Planned Products: 2002 - 2003

1. Gather further factual information on various effluent release options, and finalise a report discussing technical and policy level implications for submission to the CRPPH for review and approval at its March 2003 meeting in order to allow informed discussions on a policy level.

Products:

- Report: Implications of Effluent Release Options (late 2002)
2. Begin developing a workshop to discuss, with reactor manufacturers and regulators, the technical aspects of emission reduction.

Summary of Activities, Accomplishments in 2001 and Plans for 2002

Radiological Protection of the Environment: Series of NEA Fora held in collaboration with the ICRP

Background and Strategy

In recent years, member countries of the OECD have shown an increasing interest in identifying opportunities to enhance protection of the environment as part of their initiatives for sustainable development. One aspect of the protection of the environment of relevance to the NEA is radiological protection of the environment. This issue has gained renewed attention recently, leading to special interest within the NEA membership to contribute to the international activities being conducted to develop a rationale for radiological protection of the environment that is comprehensive and which can be implemented in an efficient manner. In order to promote and establish a process of developing a policy for radiological protection of the environment that is as broadly informed as possible, and to foster information exchange between various initiatives, the NEA, in close collaboration with the ICRP, has developed a series of fora and supporting workshops on radiological protection of the environment. The CRPPH is interested in seeing that any policy developed in this area represents international consensus and can be practically implemented, nationally as well as internationally.

During the 2002 - 2003 period, the results of the first forum will be analysed and summarised. Preparations will also begin for the second forum, which will follow the completion by the ICRP of a draft recommendation concerning the radiological protection of the environment.

Accomplishments and Products: 2001 - 2002

- **The first NEA Forum on Radiological Protection of the Environment**

The NEA Secretariat organised the first forum, "Radiological Protection of the Environment, The Path Forward to a New Policy?", in Taormina, Sicily, Italy, 12 - 14 February 2002, hosted by the Italian "Agenzia Nazionale per la Protezione dell' Ambiente (ANPA)". The meeting experienced presentations from high-level representatives of regulatory bodies, industry, science, humanities, politics, media, intergovernmental and non-governmental organisations. The meeting focused on panel discussions to address the key questions to be answered on the way to a new policy.

Products:

- The first forum will be conducted.

Activities and Planned Products: 2002 - 2003

1. Prepare and publish the proceedings of the first forum as well as a brief policy level document summarising the CRPPH view on radiological protection of the environment.

Products:

- Radiological Protection of the Environment, The Path Forward to a New Policy?", in Taormina, Sicily, Italy, 12 - 14 February 2002, Proceedings of an NEA Workshop

2. Begin the preparation of appropriate follow-up activities, including a second forum on radiological protection of the environment to be held in the 2003/2004 time frame following the release of the first draft of the ICRP position for consultation.

Products:

- Draft Forum Agenda and Speakers list for the Second Forum.
- Conduct Second Forum upon publication of draft recommendations by the ICRP.

Other Work of the CRPPH Accomplishments for 2001 - 2002 and Plans for 2002 - 2003

In addition to the work carried out by Working Parties and Expert Groups, the Bureau of the CRPPH works closely with the Secretariat to accomplish tasks agreed upon by the CRPPH, but not requiring development by a dedicated group. Several such actions were accomplished, are underway or are planned. Significant activities include:

Survey of University-level Programmes in Radiation Protection

As part of the Committee's ongoing commitment to address questions of infrastructure, in 1997 a survey of universities offering degrees in radiation protection was performed and published. This reference document contained information on 71 universities in 19 countries, allowing potential students or visiting faculty to have a broad view of possible universities and study programmes. At that time, it was agreed to update the survey periodically. New results were collected during 2000, and published in 2001 [document **NEA/CRPPH(2001)8**] including responses from 68 universities, as well as from the International Atomic Energy Agency. This information will be distributed widely to participating universities, will be put on the NEA's web page as a free document, and will also be posted on the American Health Physics Society's web page as a free document. It is hoped that this survey will help to inform policy discussions of nuclear infrastructure issues.

SILENE

Since the criticality accident at Tokai Mura in Japan, there has been heightened interest in accident dosimetry, particularly for mixed gamma/neutron fields. The CRPPH agreed that it would be extremely useful to co-sponsor an accident dosimetry inter-comparison that had been proposed by the French, using their SILENE reactor. Planning for this inter-comparison has been completed, and will take place in June 2002. Approximately 40 laboratories from 25 countries plan to participate. The results of the inter-comparison will be used by these laboratories to improve their accident dosimetry approaches. Irradiation scenarios will include mixed gamma/neutron and pure gamma fields, and both biological and physical dosimetry will be tested. The NEA Secretariat is supporting the organisation of this inter-comparison, and will publish its results and distribute them to the CRPPH upon completion (late 2002 or early 2003).

CRPPH Participation in the NEA's Decommissioning Activities

Decommissioning is an issue of rising importance in many of the NEA's Member countries, and is being addressed in a broad sense within the NEA. The Chairmen of the NEA's seven standing technical committees endorsed, in May 2000, and an updated version in May 2001, a Secretariat paper describing 5 significant issues in decommissioning, and proposing cooperative mechanisms to address the issues in a cross-cutting fashion. These issues are:

- Decommissioning Policy and Strategies
- Waste Management and Material Reuse Considerations
- Authorised Release of Sites and Facilities
- Securing Long-Term Funding and Responsibility
- Framework for Safety Regulation of Decommissioning

The CRPPH and the NEA's other standing technical committees were requested by the NEA Director General to address these issues in their future programme of work. The CRPPH discussed these issues at its March 2001 meeting and agreed that these areas are largely addressed through the existing Expert Group on the Evolution of the System of Radiation Protection (EGRP). CRPPH Members also nominated experts to participate in specific tasks being managed by other NEA Standing Technical Committees. Progress on the work of these other groups will be reported to the CRPPH during annual Committee meetings, and further action will be defined as necessary.

ANNEX 1
Summary of CRPPH Accomplishments for 2001 - 2002
and Planned Activities for 2002 - 2003

Accomplishments for 2001 - 2002

The Working Party on Nuclear Emergency Matters (INEX) has:

1. Published a report titled: "Experience from International Nuclear Emergency Exercises: the INEX 2 Series".
2. Published the reports on the Regional INEX 2 exercises in Hungary and Canada.
3. Prepared and conducted the INEX 2000 exercise in May 2001 in France. The exercise was part of a joint exercise internationally co-ordinated with the IAEA, the EC, the WMO, the WHO, and UN-OCHA.
4. Jointly with the NEA Nuclear Law Committee, held a Workshop on the Indemnification of Damage in the Event of a Nuclear Accident, using the INEX 2000 exercise results as a realistic case-study discussion (26 - 28 November 2001).
5. Developed a document defining the role of the Working Party.
6. Developed a proposal for "The Work Programme of the Working Party on Nuclear Emergency Matters: Emerging Issues"
7. Proposal for an INEX 3 Exercise
8. Performed a survey of national approaches to short-term countermeasures

The Information System on Occupational Exposure (ISOE) has:

9. Developed, tested, approved and distributed new ISOE software to allow efficient distribution of experience in operational radiation protection (ISOE 3 reports).
10. Published the 10th ISOE Annual Report.
11. Introduced an e-mail re-mailing system to facilitate direct communication and experience exchange between ISOE participants.
12. Published report "Information System on Occupational Exposure: 10 years experience".
13. Noted that the focus on ALARA, and on the plant inter-comparisons possible through the ISOE Programme has resulted in falling occupational exposures.

The Expert Group on the Evolution of the System of Radiation Protection (EGRP) has:

14. Finalised a report titled: "The Way Forward: Evolution of the System of Radiological Protection", and submitted this to the CRPPH for approval and publication.
15. Developed a series of case studies to "road test" its ideas to assure that their implementation would result in a system of radiological protection that is more clear and coherent, and is easier to implement.
16. Organised and held another open dialogue meeting between the Chairman of the ICRP and representatives of 4 NEA Standing Technical Committees concerning the regulatory viewpoint on the development of new ICRP recommendations. Comments resulting from the dialogue were submitted to ICRP for consideration.

The Expert Group on the Process of Stakeholder Involvement (EGPSI) has:

17. Analysed the results of the 2nd Villigen Workshop and published a document discussing their policy-level implications.
18. Developed and initiated a series of studies to draw out the procedural aspects of the various case studies presented at the 1st and 2nd Villigen Workshops
19. Initiated planning for the 3rd Villigen Workshop, to be held in mid-2003

The Expert Group on the Implications of Effluent Release Options (EGRO) has:

20. Developed Terms of Reference and had them approved by the CRPPH Bureau.
21. Organised and held two meetings, collected relevant information and drafted an information and background document.

The CRPPH, the Bureau and the Secretariat have:

22. Organised the first forum “Radiological Protection of the Environment, The Path Forward to a New Policy?” in Taromina, Sicily, Italy, 12 - 14 February 2002
23. Updated and published the survey of university-level programmes in radiation protection.

Planned Activities for 2002 - 2003

The Working Party on Nuclear Emergency Matters (INEX) will:

1. Analyse the results of the INEX 2000 exercise and publish a summary report.
2. Further development of a detailed INEX 3 Work Programme following the Working Party's strategy to focus on post-accident issues.
3. Finalise and publish the analysis of national approaches to short-term countermeasures.

The Information System on Occupational Exposure (ISOE) will:

4. Publish the 11th ISOE Annual Report to facilitate effective management of occupational exposure at nuclear power plants.
5. Provide a mature finalised software package to allow efficient and easy data collection, management and evaluation.
6. Further promote the use of the ISOE system and enhance its visibility.
7. Create an ISOE Expert Group to develop input on operational radiation protection for the CRPPH discussions of the evolution of the system of radiation protection.

The Expert Group on the Evolution of the System of Radiation Protection (EGRP) will:

8. Publish the CRPPH consensus developed by the EGRP, "The Way Forward: Evolution of the System of Radiological Protection".
9. Complete two case studies to test whether the recommended improvements would result in a better system of radiation protection.
10. Hold a workshop in Japan to discuss the recommended improvements and case study results.

The Expert Group on the Process of Stakeholder Involvement (EGPSI) will:

11. Finalise the regional case study analyses for presentation at the 3rd Villigen Workshop. Will this be accomplished prior to March 2003?
12. Organize, promote and conduct the 3rd Villigen Workshop (mid-2003).
13. Publish Workshop proceedings to document and summarise the policy-level implications of the issues discussed.

The Expert Group on the Implications of Effluent Release Options (EGRO) will:

14. Further develop document with factual information on various effluent release options in order to allow informed discussions on a policy level.

In the area of Radiological Protection of the Environment, the Bureau and the Secretariat will:

15. Prepare and publish the proceedings of the first forum as well as a brief policy level document summarising the CRPPH view on radiological protection of the environment.
16. Prepare appropriate follow-up activities including a second forum on radiological protection of the environment to be held in the 2003/2004 time frame to discuss the implications of ICRP draft recommendations on radiological protection of the environment once they are published.

ANNEX 2
LIST of CRPPH Members
(March 2002)

Members of the Committee on Radiation Protection and Public Health (CRPPH)

AUSTRALIA

Dr. Wayne GARRETT	Australian High Commission
Mr Stuart PROSSER	Australian Radiation Protection and Nuclear Safety Agency (ARPNSA)
Mr. Daniel WESTALL	Australian Radiation Protection and Nuclear Safety Agency (ARPNSA)

AUSTRIA

Mr. Johann-Klaus HOHENBERG	Federal Ministry for Agriculture and Forestry, the Environment and Water Management
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BELGIUM

Mr. Erik COTTENS	Min. de la Santé Publique et de l'Environnement, SPRI,
Mr. Jean-Paul SAMAIN	Agence Fédérale de Contrôle
Dr. Patrick SMEESTERS	Min. de la Santé Publique et de l'Environnement - SPRI
Mr. Pierre STALLAERT	Ministère de l'Emploi et du SSTIN
Dr. L.G. THIERS	Min. de la Santé Publique

CANADA

Mr. Larry CHAMNEY	Canadian Nuclear Safety Commission (CNSC)
Dr. Anthony WAKER	Atomic Energy of Canada Ltd. (AECL)

CZECH REPUBLIC

Ms. Dana DRABOVA	State Office for Nuclear Safety
Mr. Zdenek PROUZA	State Office for Nuclear Safety

DENMARK

Mr. Per HEDEMANN JENSEN	RISO National Laboratory
Mr. Kaare ULBAK	National Institute of Radiation Hygiene

FINLAND

Dr. Riitta HANNINEN	Radiation and Nuclear Safety Authority (STUK)
Mr. Olli VILKAMO	Radiation and Nuclear Safety Authority (STUK)

FRANCE

Mr. Jacques LOCHARD	Centre d'étude sur l'Evaluation de la Protection dans le domaine Nucléaire (CEPN)
Mr. George MONCHAUX	Institut de Protection et de Sûreté Nucléaire (IPSN)
Mr. André OUDIZ	Institut de Protection et de Sûreté Nucléaire (IPSN)
Mr. Jean-Luc PASQUIER	Office de Protection contre les Rayonnements Ionisants (OPRI)
Mr. Denys ROUSSEAU	Institut de Protection et de Sûreté Nucléaire (IPSN)
Dr. Pierre-Nöel LIRSAC	CEA Institut des Science et Techniques Nucléaires (INSTN)

GERMANY

Dr. Hans LANDFERMANN	Bundesministerium für Umwelt, Naturschutz und Reaktor-
Dr. Herwig PARETZKE	Forschungszentrum für Umwelt und Gesundheit
Dr. Wolfgang WEISS	Bundesamt für Strahlenschutz (BfS)

GREECE

Dr. Constantine HOURDAKIS Greek Atomic Energy Commission

HUNGARY

Dr. Laszlo KOBLINGER Hungarian Atomic Energy Authority

ICELAND

Mr. Sigurdur M. MAGNUSSON Icelandic Radiation Protection Institute

IRELAND

Ms. Ann MCGARRY Radiological Protection Institute of Ireland (RPII)

Dr. Tom O'FLAHERTY Radiological Protection Institute of Ireland (RPII)

ITALY

Dr. Luigi FRITTELLI Agenzia Nazionale Protezione dell'Ambiente (ANPA)

Dr. Salvatore FRULLANI Istituto Superiore di Sanita

Mr Enrico SGRILLI Agenzia Nazionale Protezione dell'Ambiente (ANPA)

JAPAN

Mr. Minoru HAKAMAGI Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Mr Masanori HIROTA Ministry of International Trade and Industry (METI)

Mr. Hiroshi KATAOKA Japanese Delegation to the OECD

Mr. Madaharu ISHIADA Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Mr Hirohide KOBAYASHI Japan Nuclear Cycle Development Institute (JNC)

Mr. Naoyuki MURATA Nuclear Power Engineering Corporation (NUPEC)

Mr. Toshiyuki SUTO Japan Nuclear Cycle Development Institute (JNC)

Dr. Yasuhiro YAMAGUCHI Japan Atomic Energy Agency Research Institute (JAEARI)

REPUBLIC OF KOREA

Mr. Jae-ok CHANG MOST

Dr. Si Young CHANG Korea Atomic Energy Research

Mr. Seog-Geun KWON Korea Institute of Nuclear Safety (KINS)

Mr. Myong-Kuk MOON Korea Electric Power Corp.

LUXEMBOURG

Dr. Michel FEIDER Direction de la Santé

MEXICO

Mr. Hermenegildo National Commission of Nuclear

MALDONADO MERCADO Safety & Safeguards

Mr. José Raul ORTIZ MAGANA National Commission of Nuclear Safety & Safeguards

THE NETHERLANDS

Dr. Ciska ZUUR Ministry of Housing Spatial Planning & Environment

NORWAY

Mr. Gunnar SAXEBOL Norwegian Radiation Protection Authority

PORTUGAL

Dr Fernando CARVALHO	Instituto Tecnológico e Nuclear
Mr. Antonio FERRO DE CARVALHO	Instituto Tecnológico e Nuclear

SLOVENIA

Mr. Borut Breznik	Krsko Nuclear Power Plant
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SPAIN

Mr. Jose L. BUTRAGUENO	Consejo de Seguridad Nuclear (CSN)
Mr. David CANCIO PEREZ	CIEMAT
Mr. José GUTIERREZ LOPEZ	CIEMAT
Mr. Carlos SANCHO LLERADI	CIEMAT
Mr. Pedro CARBONERAS	ENRESA

SWEDEN

Mr. B. Ake PERSSON	Swedish Radiation Protection Institute (SSI)
Dr. Jan Olof SNIHS	Swedish Radiation Protection Institute (SSI)

SWITZERLAND

Dr. R. ANDRES	Institut Paul Scherrer (PSI)
Dr. Johannes HAMMER	Swiss Nuclear Safety Authority (HSK)
Dr Bernard MICHAUD	Office Fédéral de la Santé Publique
Mr. Dominique RAUBER	Nationale Alarmzentrale (NAZ)

TURKEY

Dr. Ibrahim USLU	Turkish Atomic Energy Authority
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UNITED KINGDOM

Miss Frances A. FRY	National Radiological Protection Board (NRPB)
Dr. Joe MCHUGH	Environment Agency
Mr. Ian ROBINSON	Health & Safety Executive, Nuclear Installations Inspectorate

UNITED STATES OF AMERICA

Mr. C. Rick JONES	Department of Energy (DOE)
Ms. Cheryl TROTTIER	Nuclear Regulatory Commission (NRC)
Mr. Michael BOYD	Environmental Protection Agency (EPA)

OBSERVERS FROM INTERNATIONAL ORGANISATIONS

Dr. Abel J. GONZALEZ	International Atomic Energy Agency (IAEA)
Mr. Stephen KAISER	European Commission, DG Environment
Dr. Jack VALENTIN	International Commission on Radiological Protection (ICRP)
Dr. Guennadi SOUCHKEVITCH	World Health Organisation (WMO)
Mr. Jacques LOCHARD	International Radiation Protection Association (IRPA)

ANNEX 3
Mandates and Members
Of Working Parties and Expert Groups

The Working Party on Nuclear Emergency Matters (WPEM, formerly the INEX)

Terms of Reference

Created:	April 1993
Revised:	April 2000
Next Review:	March 2003
Chair (until September 2002):	Dr. Denys Rousseau, France
Vice-Chair (Until September 2002):	Dr. Horst Miska, Germany
Chair-Elect:	Mr. Wim Mulhoek, The Netherlands
Vice-Chair Elect:	Mr. Vince McClelland, United States

The Terms of Reference of this Group are as follows:

- To develop and periodically update a strategy document for the Working Party on Nuclear Emergency Matters;
- To initiate further studies based on lessons learned to date from international nuclear emergency exercises, e. g. INEX 1, INEX 2 and INEX 2002, and their related workshops;
- To initiate and study the organisation of the INEX 2000 exercise, to be carried out in the beginning of 2001, together with other international agencies such as the IAEA, the EC, the WHO and the WMO;
- To co-ordinate the overall INEX 2000 exercise assessment and post-exercise analysis of lessons learned, and to publish the results jointly with other international agencies such as the IAEA, the EC, the WHO and the WMO;
- To co-ordinate the organisation of INEX 2000 follow-up exercises;
- To develop an exercise validation process and validate past lessons learned;
- To address the societal aspects of nuclear emergencies;
- To initiate and study the organisation of a third generation of nuclear emergency exercises called INEX 3, according to the strategy for the Working Party on Nuclear Emergency Matters;
- To organise workshops and working groups, as appropriate, to identify further advancements in nuclear emergency planning, preparedness and management; and
- To report periodically to the CRPPH on progress of the programme.

INEX Members**AUSTRIA**

Mr. Johann-Klaus HOHENBERG Federal Ministry for Agriculture and Forestry, the Environment and Water Management

CANADA

Mr. Jean Patrice AUCLAIR Health Canada

DENMARK

Mr. Steen HOE DEMA, Nuclear Safety Division

FINLAND

Ms. Hannele AALTONEN Radiation and Nuclear Safety Authority (STUK)
Dr. Riitta HANNINEN Radiation and Nuclear Safety Authority (STUK)

FRANCE

Mr. Bruno DUFER Institut de Protection et de Sûreté Nucléaire (IPSN)
Dr. Denys ROUSSEAU (Chair) Institut de Protection et de Sûreté Nucléaire (IPSN)

GERMANY

Ms. Sabine BITTNER Bundesamt für Strahlenschutz (BfS)
Dr. Horst MISKA (Vice-Chair) Ministerium des Innern und für des Landes Rheinland-Pfalz

HUNGARY

Dr. Ivàn LUX Hungarian Atomic Energy Authority

ICELAND

Mr. Sigurdur Emil PALSSON Icelandic Radiation Protection Institute

IRELAND

Dr. Tony COLGAN Radiological Protection Institute of Ireland (RPII)

ITALY

Dr. Sergio MANCIOPPI Agenzia Nazionale Protezione dell'Ambiente (ANPA)

JAPAN

Dr. Tsutomu ISHIGAMI Japan Atomic Energy Research Institute (JAERI)

NETHERLANDS

Mr. Wim H. MOLHOEK Ministry of Housing, Spatial Planning and the Environment
Dr. Ciska Zuur Ministry of Housing, Spatial Planning and the Environment

NORWAY

Mr. Finn UGLETVEIT Norwegian Radiation Protection Authority

SWEDEN

Mr. Stig HUSIN Swedish Radiation Protection Institute (SSI)

SWITZERLAND

Dr Martin A. BAGGENSTOS	Swiss Nuclear Safety Authority (HSK)
Mr. Dominique RAUBER	Nationale Alarmzentrale (NAZ)

UNITED KINGDOM

Mr. Keith BINFIELD	DETR
Mr. Colin PATCHETT	Nuclear Safety Directorate

UNITED STATES OF AMERICA

Mr Vince MCCLELLAND	Department of Energy (DOE)
Ms Ann HEINRICH	Department of Energy (DOE)
Ms. Deborah KOPSICK	Environmental Protection Agency (EPA)
Ms. Patricia MILLIGAN	Nuclear Regulatory Commission (NRC)

INTERNATIONAL ORGANISATIONS

Dr. Carlos Alberto NOGUEIRA	International Atomic Energy Agency (IAEA)
Dr. Vesa TANNER	European Commission, DG Environment

The Information System on Occupational Exposure (ISOE)

Terms and Conditions

Created: April 1992
 Revised: April 2000
 Next Review: March 2004

Chair: Mr. Borut Breznik, Slovenia
 Chair Elect: Mr. Karl-Goran Lindvall, Sweden
 Past Chair: Mr. Pio Carmina, Spain
 Regulator Vice-Chair: Ms. Cheryl Trotter, United States

As of the 1st January 1995, the participation in ISOE was renewed with a new period of validity for the ISOE Terms and Conditions of four years (NEA/ISOE/DOC(95)1). This period ended on 31st December 1998. At the 8th meeting of the ISOE Steering Group in October 1998, draft revised ISOE Terms and Conditions have been discussed. As there have been some comments concerning the role of the Joint NEA/IAEA Secretariat, the approval of the new Terms and Conditions has been postponed.

Since that meeting, the following changes have been made compared to the Terms and Conditions, version October 1996:

- a. The Terms and Conditions now reflect that the IAEA and the OECD/NEA form a Joint Secretariat. This includes two new Articles:
 - (1) New Article 8 explains the role of the ISOE Joint Secretariat
 - (2) New Article 10 reflects the role of the International Atomic Energy Agency, comparable to Article 9 that explains the role of the OECD Nuclear Energy Agency.
- b. There is a new Article 7 on the role of the ISOE Steering Group Bureau.
- c. The ISOE Technical Centres are no longer referred to as “regional”. In addition, the explicit citation of the four Technical Centres had been deleted in the first paragraph of the preamble as well as in Article 2 (d). The Technical Centres are now explicitly listed in Annex 1 of the ISOE Terms and Conditions.

At its 9th meeting on 27 - 29 October 1999, the ISOE Steering Group unanimously approved the new ISOE Terms and Conditions, and each participant in the ISOE programme renewed his participation. With the renewal of participation in ISOE, the adopted ISOE Terms and Conditions will be valid for a period of four years, ending 31st December 2003.

The full text of the ISOE Terms and Conditions is available as document NEA/CRPPH/ISOE(2000)4REV2.

ISOE MEMBERS

ARMENIA

Mr Vovik ATOYAN
Ms Aida AVETISYAN

Armenian Nuclear Power Plant
Armenian Nuclear Regulatory (ANRA)

BELGIUM

Mr. Philippe LAURENT
Mr. Paul HAVARD
Mr. P. LIBOTTE
Mr. Pierre STALLAERT

S.A ELECTRABEL
S.A. ELECTRABEL
Service de la Sécurité des Installations/Nucléaires
(SSTIN)

BRAZIL

Mr. Ronaldo N. VIANA

Angra 1 Nuclear Power Plant

CANADA

Mr. M.J. HAYNES
Mr. Rick BELL
Mr. Rod UTTING

Ontario Hydro Nuclear
Ontario Power Generation Inc.
Canadian Nuclear Safety Commission (CNSC)

CZECH REPUBLIC

Mr. Zdenek HUBACEK
Mr. Zdenek PROUZA
Mr. Peter RYDLO

CEZ, a.s
State Office for Nuclear Safety
Dukovany Nuclear Power Plant

FINLAND

Mrs Kirsi ALM-LYTZ
Mr Esko HYTÖNEN
Mr. Veli RIIHILUOMA
Mr Jukka SOVIJÄRVI
Mr. Björn WAHLSTRÖM

Radiation and Nuclear Safety Authority (STUK)
Loviisa Power Plant
Radiation and Nuclear Safety Authority (STUK)
Olkiluoto Power Plant
Posiva Oy

FRANCE

Mr. Philippe COLSON
Mr Yves GARCIER
Mr. Gerard Cordier
Mr. Bruno CORGNET
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The Expert Group on the Evolution of the System of Radiation Protection (EGRP)

Terms of Reference:

Created: April 2000
Next Review: March 2002

Chair: Dr. Joe McHugh, United Kingdom

The Terms of Reference of this Group are as follows:

1. The Expert Group should identify the areas of the current system of radiation protection that are, in the Group's opinion, most in need of further elaboration. The starting point for this work should be the CRPPH report, "A Critical Review of the System of Radiation Protection: First Reflections by the OECD Nuclear Energy Agency's Committee on Radiation Protection and Public Health". A prioritised list of areas should be developed.
2. The Expert Group should develop more detailed discussions of the top five priority issues, and prepare a report for the CRPPH with suggestions as to what changes should be made, or which direction discussions should pursued.
3. The Expert Group should engage with Professor Clarke and others to participate at meetings and fora, on behalf of the CRPPH, that discuss and further activities to address and advance this dialogue.
4. The Expert Group should use a case-study approach to "road test" its proposed changes, to assure that the changes move the system of radiation protection towards a more understandable, easy to apply, and acceptable system.
5. The Expert Group should report on its progress during the March 2001 meeting of the CRPPH, and should submit a summary report of its recommendations to the CRPPH for review and approval at the latest during the 2002 meeting of the CRPPH. The report should include recommendations as to where further work could be usefully pursued by the CRPPH.

The resulting CRPPH issues paper should be submitted to the international community, and particularly to the ICRP, as a contribution to the debate to advance the future evolution of the system of radiation protection.

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The Expert Group on the Process of Stakeholder Involvement (EGPSI)

Terms of Reference:

Created: March 2001

Next Review: March 2003

Chair: Mr. Jacques Lochard, France

The Terms of Reference of this Group are as follows:

1. The Expert Group will develop a document summarising the policy-relevant aspects of the process of stakeholder involvement. This document should be presented during the 3rd Villigen Workshop and, based on discussions there, be finalised for review and approval by the CRPPH no later than the 2004 CRPPH meeting.
2. In support of this first task, the Expert Group will analyse, with the help of consultants, good practice in stakeholder involvement in radiological protection decision making and resulting policy implications based on recent national experiences, such as those presented during Villigen 1 and Villigen 2 workshops. A report of this work should be completed by early 2003 and presented at the 3rd Villigen Workshop.
3. The Expert Group will be responsible for the development of the programme for the 3rd Villigen Workshop based on an enlarged meeting of the EGPSI that will include relevant stakeholders. This programme will be submitted to the CRPPH for review and approval during the Committee's March 2002 meeting. The 3rd Villigen Workshop should take place in the late Spring or early Summer of 2003.

The Expert Group will be responsible for the preparation of Workshop proceedings that will be published, after approval by the CRPPH, within approximately 6 months following the workshop.

4. The results of this CRPPH Expert Group should be presented to the international community, including timely submittal of a paper for the IRPA-11 Congress, and particularly to the ICRP so that the policy-relevant aspects of stakeholder involvement will be considered as the Commission develops new recommendations.
5. The Expert Group should report on its progress during the 2002 and 2003 meetings of the CRPPH, and should plan to complete its mandate no later than the 2004 meeting of the CRPPH.

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Expert Group on the Implications of Effluent Release Options (EGRO)

Terms of Reference:

Created: March 2001

Next Review: March 2003

Chair: Mr. Olli Vilkamo, Finland

The Terms of Reference of this Group are as follows:

1. Identify various options for the routine release of low-level radioactive substances from nuclear installations, including the option of “close to zero” gaseous and liquid releases.
2. Discuss the technical implications of the options identified.
3. Compare the concepts of “Best Available Technology (BAT)” and “As Low As Reasonable Achievable (ALARA)” as underlying principles for the optimisation process regarding radioactive effluent releases. Investigate whether these approaches lead to the same result.
4. Based on this work, develop a draft document with factual information on various effluent release options, in co-operation with other NEA committees such as the CNRA, NDC and RWMC. The document may be used to assist future discussions, nationally and internationally. Submit the draft document to CRPPH members for review and comment, with the aim of publication by the end of 2002.

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ANNEX 4
Bibliography of Recent Publications
BIBLIOGRAPHY of CRPPH PUBLICATIONS

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