

For Official Use

NEA/CRPPH/INEX(2005)14/REV1



Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

16-Jun-2005

English - Or. English

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

Working Party on Nuclear Emergency Matters

SUMMARY RECORD OF THE TWENTY-THIRD MEETING

**19-20 April 2005
NEA Headquarters, Issy-les-Moulineaux**

JT00186623

**Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format**

**NEA/CRPPH/INEX(2005)14/REV1
For Official Use**

English - Or. English

**WORKING PARTY ON NUCLEAR EMERGENCY MATTERS
SUMMARY RECORD OF THE TWENTY-THIRD MEETING**

Summary of Agreements and Commitments

Approval of the Summary Record of the 22nd Meeting

The Summary Record of the 22nd Meeting of the Working Party on Nuclear Emergency Matters, NEA/CRPPH/INEX(2005)9, was adopted without amendments.

CRPPH Update

At its 63rd meeting (March 2005), the CRPPH approved the INEX programme of work for 2005-06. The Committee elected Mr. Jacques Lochard, from France, to be its Chair for the coming 3 years.

INEX 3

The Working Party reviewed the INEX3 preparations in member countries, and agreed that the sharing of planning and conduct lessons and experiences would be of benefit to all participants. A new sub-group to deal with overall exercise evaluation and workshop development was created, the date of which will be chosen to allow back-to-back meetings with the Spring 2006 meeting of Working Party

CONVEX-3 (2005) in Romania Status of Preparation and Discussion

The IAEA reported on the CONVEX-3 exercise planning status. Exercise documents have been made available through the IAEA NCA Action Plan website. A review of the exercise results will be reported at the 3rd meeting of the National Competent Authorities in July.

NCACG Meeting and 3rd Meeting of the National Competent Authorities

An NCACG meeting was held in March 2005 at IAEA headquarters. Discussion included actions from the NCA Action Plan and the proposed agenda for the upcoming NCA meeting in July 2005. Members were encouraged to provide comments on the draft NCA documents as soon as possible if requested by their national authorities.

Compensation Issues in Emergency Management

The NEA Legal Affairs Division is finalising preparations for the 2nd international workshop on nuclear damage indemnification to be held in Bratislava (Slovak Republic) in May 2005. This workshop will involve signatory states to the Paris and Vienna Conventions, and will focus on how compensation mechanisms would be activated in the event of a nuclear emergency. Working Party members were encouraged to consider registration for the workshop to ensure a good representation from the emergency management community.

Strategy for Nuclear Emergency Exercises

The Secretariat presented proposed terms of reference and products for an INEX exercise strategies document which would build on the extensive experience of the Working Party, providing national emergency management authorities with policy-level guidance for emergency exercise programs. The group agreed that such a document would be useful, and tasked the Sub-Group to produce a first draft of the document by late summer for review by the Working Party.

Collaboration with CSNI; IAEA Documents

A status report on ongoing work of the NEA Committee on the Safety of Nuclear Installations on the use of PSA information in the sizing of emergency planning zones was presented. This work includes a questionnaire sent to member countries, for which a draft report has been produced for comment, as well as the EC/OECD seminar on “Emergency and Risk Zoning around NPPs” to take place April 2005. The Working Party requested a briefing on the seminar at its next meeting due to the important implications for emergency planning.

IAEA TECDOC-1432 (Development of a Framework for Extended Emergency Response Criteria), has been released as an interim report for comment. Following discussions on the role of numerical criteria within the broader range of criteria used by decision-makers, the Working Party requested that the Secretariat compile comments from the group members by end of May, and submit these collectively to the IAEA in advance the IAEA TECDOC-1432 review meeting, scheduled for July.

INEX Future Priorities

The current mandate of the Working Party runs through March 2006. In order to appropriately prepare for the Group’s work priorities post-INEX-3, it was agreed that the Future Priorities Sub-Group would develop a draft paper for discussion at the next Working Party meeting. The CRPPH has requested the Working Party to “work towards a full-spectrum understanding of all relevant technical and social issues in emergency management, from response planning and preparedness, through the urgent response phase to the rehabilitation phase.”

Other Business

Group members were requested to provide feedback to the Secretariat on whether the proposed INES system is heading in the right direction, as input into an upcoming INES meeting.

Date of the next meeting

The 24th meeting of the Working Party on Nuclear Matters will be held **13-15 December 2005** at the OECD Headquarters in Paris, France. Proposed topics include:

- Future priorities
- Exercise strategy
- INEX-3 evaluation and workshop preparations
- CONVEX-2005 review

All documents and presentations from this meeting are available on the INEX section of the CRPPH website, <http://home.nea.fr/html/rp/> under the CRPPH Member’s area that you will find at the bottom of the webpage.

MINUTES OF THE TWENTY-THIRD MEETING OF THE WORKING PARTY ON NUCLEAR EMERGENCY MATTERS

1. Opening of the meeting

The 23rd meeting of the CRPPH Working Party on Nuclear Emergency Matters (INEX) was held on 19-20 April 2005 at the NEA Headquarters, Issy-les-Moulineaux. Mr. Wim Molhoek from The Netherlands chaired the meeting. He noted the apologies of those not able to attend.

Hans Riotte, Head of the Radiation Protection and Radioactive Waste Management Division of the NEA, welcomed on behalf of the Nuclear Energy Agency the INEX members. He highlighted the importance of the Working Group, particularly in terms of the upcoming INEX-3 exercise and the feedback from the Finnish implementation of the exercise. Recent staff additions to the NEA Secretariat were also noted (B. Ahier, K.M. Lin, and S. Hara).

Brian Ahier (NEA Secretariat) instructed Working Party members to keep in mind the development of future priorities during the course of the meeting's discussions, particularly in light of direction from the CRPPH to begin a convergence of the various emergency management aspects being addressed by the group.

The opening remarks were followed by a round table introduction of members. A complete list of attendees is provided in Annex 1 to this summary record.

2. Adoption of the Agenda

The proposed agenda, NEA/CRPPH/INEX(2005)13 was adopted with minor changes to the schedule.

3. Approval of the Summary Record of 22nd Meeting

The summary record of the 22nd meeting of the Working Party on Nuclear Emergency Matters, NEA/CRPPH/INEX(2005)9, was adopted without amendments.

4. Update on CRPPH Activities

Brian Ahier reported on the 63rd meeting of the CRPPH, which was held in March 2005 in Paris, during which the Secretariat presented the accomplishments and proposed plans of the Working Party on Nuclear Emergency Matters on behalf of the Working Party Chair, who was unable to attend. The CRPPH suggested that with the INEX-3 exercise beginning to touch stakeholder involvement issues, a mid-term objective of the working party should be to work towards a full-spectrum understanding of all relevant technical and social issues, from response planning and preparedness through response and rehabilitation. The Committee thanked the Working Party for their accomplishments, and approved the proposed program of work for 2005.

With respect to ongoing work with the ICRP, it was agreed that the ICRP and NEA would continue their close collaboration on the new recommendations. The NEA will analyse the next draft, expected in late 2005, to be followed by a 3rd NEA/ICRP stakeholder forum. The final version of the new

recommendations is expected at the end of 2006. The incoming ICRP Chair, who attended the meeting, thanked the CRPPH for their valuable input to date.

The CRPPH agreed to create a new Expert Group on Radiological Protection Science at the Service of Stakeholders (EGSS). This group will develop a report on lessons learned from the rehabilitation of areas affected by the Chernobyl accident, drawing implications for long-term response to accidental or intentional radiological events. The ongoing INEX experience will be included in this report. Based on this work, the group will consider possible next steps. The EGSS Terms of Reference and proposed document outline were distributed to the Working Party. The INEX Chair recognised the importance of this new work, and encouraged members to be involved as appropriate, and to nominate members if interested.

The CRPPH elected Jacques Lochard, from France, to be its Chair for the coming 3 years.

The CRPPH Annual Report and Summary Record of the 63rd Meeting will be distributed to the Working Party when finalised, along with a CD-ROM of presentations, including the INEX program of work.

5. INEX-3

This session was opened with a presentation from Hannele Aaltonen on the experience from the February 2005 INEX-3 exercise in Finland, to which INEX members were invited as observers. Finland implemented a modified version of the INEX-3 scenario in order to meet its own national requirements. Exercise invitees included organisations having importance with respect to particular exercise issues, amongst which were representatives from agricultural and food manufacturing organisations. It was reported that important lessons were learned during exercise planning and conduct, and that the exercise materials were very useful and would be used again for future exercises. In light of the valuable experience gained by the exercise, all members were encouraged to hold their own national INEX-3 exercise. The Chair thanked Ms. Aaltonen for her presentation, and pointed out that all members will probably face similar challenges as they develop and implement their INEX-3 exercises.

The Secretariat reported on the INEX-3 status to date. The technical materials prepared by the INEX-3 Preparation Group were finalised and an invitation sent to a broad distribution of NEA and non-NEA countries in December 2004. To date, 19 countries have indicated their intent to hold an INEX-3 exercise, and have been sent the technical materials, as well as an information note based on Finland's INEX-3 experience. All participating countries were encouraged to submit to the Secretariat any observations or experiences they felt should be shared with other participating countries.

The Working Party reviewed the INEX-3 preparations to date in member countries, and agreed that the sharing of planning and conduct lessons and experiences would be of benefit to all exercise participants. These discussions were preceded by a reminder from the Chair that exercise planners should bear in mind any necessary 'nationalisation' of the scenario, and the amount of time required for this. A brief summary of national exercises status follows:

- Germany: will hold a joint exercise with Austria in mid-September based on a cross-border contamination scenario
- Sweden: will conduct a two-phase exercise in October and November, with an involvement of about 50-60 authorities, and possibly some involvement at the political level.
- Ireland: will hold an exercise sometime in late October/early November, involving RPII and possibly other agencies. A consultant will fulfil the role of National Exercise Organiser.

- Italy: has sent an invitation to several ministries to participate in an exercise planned for late November. A scenario is still to be decided, but it will be customised to make it more realistic.
- Canada: will use INEX-3 as an opportunity to focus on a non-reactor incident, with the possibility of playing with the US, as well as other stakeholders, in mid-October.
- Czech Republic: will conduct their exercise in mid-September, combined with an exercise for mobile groups, and with the possibility of cross-border contamination with the Slovak Republic.
- Hungary: will conduct their exercise in October
- France: will hold INEX-3 in the Oct-Nov timeframe, based on a fire scenario, and with focus on a few agricultural products but examining all related issues. A broad range of organisations have been invited.

Ted Lazo reminded the Working Party that with respect to the overall exercise evaluation, the objective is to extract common points for discussion from member's experience. The Working Party agreed to create a new sub-group (Mike Griffiths, Vince McClelland, Sonia Gravier) to deal with overall exercise evaluation and workshop development, including format and topics. The Secretariat will prepare a draft agenda for comment by the Working Party, and incorporate any suggestions submitted in advance by the members. The date of the evaluation workshop will be chosen to allow back-to-back meetings with the Spring 2006 meeting of Working Party.

6. CONVEX-3 (2005) in Romania: Status of Preparation and Discussion

Rafael Martincic of the International Atomic Energy Agency (IAEA) reported on the CONVEX-3 exercise planning status, informing the Working Party that 59 countries and 8 international organisations will be participating in the exercise that will simulate a general emergency and use real weather conditions. The exercise, coordinated through the IACRNA, will be conducted 11-12 May, and will be preceded a week earlier by an IAEA communications exercise. Exercise documents have been made available through the IAEA NCA Action Plan website (password required). A review of the exercise results will be reported at the 3rd meeting of the National Competent Authorities in July. The Chair thanked Mr. Martincic for his presentation, and encouraged all members to verify their contact information as posted on the IAEA ENAC website.

The Secretariat reported that a list of possible NEA CONVEX-3 objectives as prepared by the Working Party Sub-Group had been distributed to Working Party members for inclusion as appropriate in their own national exercises.

7. IAEA Developments

Recent developments in the IAEA on incident and emergency preparedness and response were also presented by Mr. Martincic. The IAEA has established a new Incident and Emergency Centre under the Director General, Nuclear Safety and Security. The IAEA has also released several new technical documents, including TECDOC-1432 as an interim report for comments. Several operational documents in the EPR series have also been updated and either released or prepared for release. A brief status report of the International Action Plan was presented. The 3rd NCA meeting to review the progress related to the Action Plan will take place 12-15 July at IAEA Headquarters. It was also reported that the ENAC website has been updated to improve effectiveness and simplify use.

8. NCACG Meeting and Action Plan Status

Wim Molhoek reported on the outcomes from the NCACG meeting held 30-31 March 2005 at IAEA headquarters. Discussion included actions from the NCA Action Plan and the proposed agenda for the

upcoming NCA meeting in July 2005. Mr. Molhoek encouraged all members to provide comments on the draft NCA documents as soon as possible if requested by their national authorities.

Vince McClelland reported on the Assistance Working Group, for which a key topic includes how countries will come together under IAEA for international emergency response. Five expert groups have been established on Radiation Sources, Radiation Detection, Atmospheric Modelling, Assessment Modelling and ER-NET.

Dominique Rauber also reported on the International Communications Working Group, whose goal is to develop an international harmonised communications system for all radiological-nuclear emergencies. It was reported that this Working Group is still looking for experts, and that nominations should be sent to Mr. Rauber.

Reports on all working groups will be presented at the July 2005 meeting of the IAEA competent authorities.

9. Compensation Issues in Emergency Management

Julia Schwartz from the NEA Legal Affairs Division presented an update on compensation issues in emergency management and preparations for the 2nd international workshop on nuclear damage indemnification to be held in Bratislava, Slovak Republic, in May 2005. This workshop will involve signatory states to the Paris and Vienna Conventions, and will focus on how compensation mechanisms would be activated in the event of a nuclear emergency, particularly amongst states party to different conventions. A questionnaire relating to two scenarios had been sent out to workshop participants, and copied to the Working Party members. In response to a question from the group concerning possible negative reaction to the use of highly unrealistic scenarios, Ms. Schwartz indicated that these were discussed in advance with members of the Nuclear Law Community for possible sensitivity, and that there has been no indication of negative feedback. She encouraged the Working Party to consider registration for the workshop in order to ensure a good representation from the emergency management community.

10. Strategy of Nuclear Emergency Exercises

Based on discussions from the last two meetings of the Working Party, the Secretariat presented proposal NEA/CRPPH/INEX(2005)11 outlining proposed terms of reference and products for an INEX exercise strategies document. This document would build on the extensive experience of the Working Party, providing national emergency management authorities with policy-level strategies and guidance for national emergency exercise programs. Such topics could include:

- Identification of key issues
- Reasons and objectives for exercises
- Types and frequency of exercises
- Maximising value and efficiency, and
- Types and levels of involvement.

The group agreed that such a policy-level document would be useful, and should be short and direct. It was also noted that the direction from the CRPPH concerning the convergence of various emergency management issues should also be kept in mind. The Chair reminded the group that the INEX-3 exercise and upcoming 3rd party liability workshop underlined a movement from the strict technical aspects of exercising to broader 'social' aspects that need to be kept in mind during the development of the document. Following a revision of timelines to allow a production of a first draft in late summer for review by the

Working Party, the members of the original Sub-Group (Helen Griffiths, Geza Macsuga, Sonia Gravier) confirmed their willingness to undertake this work.

11. Information Items: Collaboration with the Committee on Safety of Nuclear Installations; IAEA Documents

The Secretariat presented two information items. The first information item concerned the ongoing work of the NEA Committee on the Safety of Nuclear Installations (CSNI) on the possible use of PSA information in the sizing of emergency planning zones, as reported at the last two Working Party meetings. The Chair welcomed Barry Kaufer from the NEA Nuclear Safety Division, who presented a status report on a questionnaire sent to member countries on this issue, for which a draft report has been produced for comment, as well as the upcoming seminar on “Emergency and Risk Zoning around NPPs” to take place 26-27 April 2005 in Petten, The Netherlands. This workshop, co-sponsored by the EC/Joint Research Centre and the NEA is intended to see how PSA is currently being used in national emergency management programs. The Working Party stated that this work had important implications for emergency planning, and requested a briefing on the seminar outcomes at its next meeting.

The second item concerned two IAEA documents. The first of these, IAEA TECDOC-1432 (Development of a Framework for Extended Emergency Response Criteria), has been released as an interim report for comment. Ted Lazo summarised the document as an update to Safety Series 109, and noted that while the numerical approach outlined in the document is useful, several comments had been made by CRPPH members that this is not the main criteria to be considered in an emergency, and that in reality, a case-by-case approach would be used. The Working Party agreed that strict numerical criteria, while useful as a basis for harmonisation, are only one of many criteria for decision-makers. The Working Party requested that the Secretariat compile comments from the group members by end of May, and submit these collectively to the IAEA in advance the IAEA TECDOC-1432 review meeting, scheduled for July.

On request from Patricia Milligan, a point was raised concerning text in draft IAEA document DS-105 (Arrangements for Preparedness for a Nuclear or Radiological Emergency) where it is stated that one of the goals of emergency preparedness was to prevent stochastic effects. A concern was raised that this statement could lead to unrealistic planning and response actions. The Working Party requested that the Secretariat distribute the document so that they can respond as appropriate.

12. Lessons from the Hungarian 2004 National Exercise

Mr Geza Macsuga presented highlights and lessons learned from the Hungarian National Exercise held in 2004. This was the first national large-scale exercise since the Hungarian INEX-2 exercise in 1998.

13. Discussion of Future Priorities and Work of the Working party on Nuclear Emergency Management

The current mandate of the Working Party runs through March 2006; however in order to appropriately prepare for the Group’s work priorities post-INEX-3, it was agreed at the 22nd meeting that a discussion of relevant priorities should begin. Also of relevance is the direction from the CRPPH requesting the Working Party to “work towards a full-spectrum understanding of all relevant technical and social issues in emergency management, from response planning and preparedness, through the urgent response phase to the rehabilitation phase.” Based on this background, the Secretariat presented a draft proposal for Future Priorities, NEA/CRPPH/INEX(2005)12, as a basis for discussions. Possible areas of interest from the proposal and the subsequent discussions include:

- Development of a report on strategies for exercising;

- Review of international harmonisation efforts;
- Improvements in the co-ordination of work and priorities among international organisations;
- Implementation of lessons learned in national/international exercises and training programmes;
- Development of “best practices” applicable to a broad range of emergency situations;
- Identification of differences between “local” and “dispersed” incidents and implications with respect to response planning and implementation;
- Specific application of emergency planning and management to transportation accidents;
- Use of decision-support systems;
- Methods of approach to stakeholder involvement in emergency management issues;
- Strengthening links between NEA INEX and Nuclear Law Committee in terms of compensation issues;
- Convergence of findings and experience between the Working Party, other CRPPH initiatives and other related international activities.

The group also expressed the view that while the meaning of ‘social’ issues and their use in emergency management should be clarified and explicitly stated, it should work towards incorporating ‘social’ aspects into emergency management rather than treating it as a separate goal.

The Working Party agreed that the existing sub-group (Vince McClellan, Wim Molhoek, Finn Ugletveit, Ted Lazo), under the lead of Mr. McClelland would develop a draft paper for discussion at the next Working Party meeting.

14. Member Reports on Country / Organisation Specific Events

Papers of member reports, focusing mainly on the development of the national and local plans for emergency preparedness, were distributed to participants. Written reports from the EC, Canada, France, Germany, Hungary and Italy are contained in Annex 2 to this Summary Record. In addition, a *tour de table* allowed members to report on specific emergency management issues of broad interest to the group. Helen Griffiths presented the results of a Canadian inter-agency field team exercise. Vince McClelland provided a report on the large-scale TOPOFF-3 exercise in the US, as well as reports of other international activities. Wim Molhoek gave a brief presentation on the new nuclear emergency planning and advisory unit in The Netherlands.

15. Other Business and Date of Next Meeting

Ted Lazo reported that there is an upcoming INES meeting, and requested feedback from the group whether the proposed INES system is heading in the right direction. Mr Wim Molhoek made available an INES presentation for distribution to members. It was also reported that the ICRP has created a new group to revisit Publication 63 (Principles for Intervention for Protection of the Public in a Radiological Emergency), starting in September 2005.

Brian Ahier requested feedback from the group on use of the NEA restricted-access website for meeting documents. As the Working Party was generally unaware of this resource, relevant information will be distributed to members.

The Chair thanked all members for their participation, the Secretariat for the arrangements, and noted that the new meeting facilities at the NEA worked well. The Chair closed the 23rd meeting.

The **24th** meeting of the Working Party on Nuclear Matters will be held **13-15 December 2005** at the OECD Headquarters in Paris, France. Proposed topics include:

- Future priorities
- Exercise strategy
- INEX-3 evaluation
- INEX-3 workshop preparations
- CONVEX-2005 review

ANNEX 1: LIST OF PARTICIPANTS**Participants of the 23rd Meeting of the Working Party on Nuclear Emergency Matters (INEX)**

CANADA	GRIFFITHS, Helen PELLERIN, Eric
CZECH REPUBLIC	STAROSTOVA, Vera
FINLAND	AALTONEN, Hannele
FRANCE	GRAVIER, Sonia
GERMANY	GERING, Florian KUHLEN, Johannes
HUNGARY	MACSUGA, Geza
IRELAND	MCMAHON, Ciara
ITALY	MATTEOCCI, Lamberto
NETHERLANDS	MOLHOEK, Wim H.
SWEDEN	HOGLUND, Erik
SWITZERLAND	RAUBER, Dominique
UNITED STATES OF AMERICA	MCCLELLAND, Vince
International Organisations	MARTINCIC, Rafael (IAEA)
OECD/NEA	AHIER, Brian HARA, Shintaro LAZO, Ted LIN, Keng-Ming KAUFER, Barry RIOTTE, Hans SCHWARTZ, Julia
Apologies	
CANADA	AUCLAIR, Jean Patrice
DENMARK	HOE, Steen
NORWAY	UGLETVEIT, Finn
SLOVAK REPUBLIC	DURANOVA, Tatiana
SWITZERLAND	BAGGENSTOS, Martin
UNITED KINGDOM	GRIFFITHS, Mike
UNITED STATES OF AMERICA	MILLIGAN, Patricia
EUROPEAN COMMISSION	TANNER, Vesa

ANNEX 2: MEMBER REPORTS ON COUNTRY SPECIFIC EVENTS

EUROPEAN COMMISSION

Introduction

This report outlines briefly the main European Commission (EC) activity in radiological emergency preparedness. For more information, please feel free to contact Mr Vesa Tanner (Vesa.Tanner@cec.eu.int).

ECURIE emergency information exchange system

Romania joined the ECURIE system in early 2005. Membership has been offered also to Turkey. The Commission is preparing to offer membership to Croatia, as it is now officially an EU Candidate Country.

Exercises

The annual ECURIE level 3 exercise was carried out on 27 October 2004. The scenario was a small nuclear detonation in Maribor, Slovenia.

Due to the national/local scope of the INEX 3 exercise the EC has decided not to participate, but it fully supports the initiative and the States participation.

The EC will actively take part in the CONVEX 3 exercise on 11-12 May 2005. This exercise will also be the annual ECURIE level 3 exercise 2005.

Accession to IAEA emergency conventions by the EC

The Commission proposed to the European Council in 2004 that the European Community would formally accede to the IAEA Early Notification and Assistance Conventions. After rather lengthy discussions in the Council Atomic Questions Group it appears now that the proposal will be accepted (still subject to formal decision at the Coreper or ministerial meeting).

Research

The following items from the EC research field should be kept in mind. More information is available from V. Tanner.

- European seminar on Transparent and Traceable Decision Making in Off-site Nuclear Emergencies (EVATECH project) on 20 April 2005 in Brussels.

- Seminar on Emergency & Risk Zoning around Nuclear Power Plants, 26-27 April 2005 in Petten, NL.

Personnel

Mr Werner Kerschenbauer has moved to another Unit in the Commission. Mr Michel Maggi (Michel.Maggi@cec.eu.int) is the new administrative assistant working in the TREN H.4 emergency preparedness.

Other items

During 2004 both the EC Competent Authority in Luxembourg and the EC 24h Contact point in Brussels moved to another building. TREN H.4 is now located in the Euroforum building in Gasperich, Luxembourg and the Contact point in the Berleymont building, Brussels. The official contact information for these services has not changed.

CANADA

Planning Arrangements

National initiatives

In March 2005, the Department for Public Safety & Emergency Preparedness Canada (PSEPC) received Cabinet approval for the National CBRN Strategy that provides the federal approach to potential terrorist threats within Canada. The Strategy details the roles and responsibilities of the federal departments and agencies.

Canadian Radiological Monitoring Network

The Canadian Radiological Monitoring Network (CRMN) is a national network of environmental monitoring equipment that has been operating since the early 1960s. The network consists of high volume air samplers, tritium samplers, gamma dose rate (via passive thermoluminescent dosimeters), and precipitation collectors.

The high volume samplers (26 locations) operate routinely on a weekly sampling frequency (12,500 m³ of air weekly) which can be ramped up to a daily frequency in the case of an emergency. The air filters are returned to the Ottawa laboratory for analysis by high resolution gamma spectroscopy using high purity germanium detectors. These laboratory systems have resolution (FWHM) capabilities in the 1 Kev range, which allows multi-nuclide qualitative and quantitative analysis to be performed. These same air filter samples are also screened for gross beta activity in the laboratory.

The tritium (H-3) samplers (14 locations) trap moisture from the air samples drawn continuously through a pump for a period of one month, and the molecular sieve traps are returned to the lab on a monthly basis, whereby the water is thermally desorbed, collected, and analyzed for H-3 by liquid scintillation counting.

Thermoluminescent dosimetry analysis is employed on TLD plaques that are situated across the country (35 locations) and left in place for a period of 3 months. This furnishes an average dose rate (usually 40-70 nGy/h) result based on the 3 month period.

Water samples, milk samples, and various food samples are also analyzed annually by gamma spectroscopy and by some additional specialized radiochemical techniques for specific nuclides (Sr-89, Sr-90, Ra-226, total U).

Various results are regularly posted to our CRMN website (<http://www.hc-sc.gc.ca/hecs-sesc/crmn/index.htm>)

Fixed Point Surveillance Network

In 2002, Health Canada initiated a project to install a network of radiation detectors around the major Canadian nuclear facilities. The objective was to provide the Radiation Protection Bureau of Health Canada with the capability of monitoring the normal daily atmospheric releases of radioactive material from these facilities. The network would provide real time measurement of dose from atmospheric radiation.

Currently, 51 radiation detectors have been installed. Health Canada is also collecting data from an additional 17 detectors owned by industry partners. The network has been installed around the 5 nuclear power generating stations in Canada as well as a research site. Additional detectors have been installed in population centers near Canadian ports where nuclear powered vessels berth. Finally, most of Canada's major population centers have a single detector installed, at least one in each province and one in the Northwest Territories.

The data is downloaded to a central location, currently in Ottawa. As well as measurement and monitoring of daily emissions from nuclear facilities and long term health assessment, the data is currently available to the members of the Nuclear Emergency & Response Division of the Radiation Protection Bureau. During an incident this data would be one of the tools brought to the table to assist with decisions concerning appropriate response actions. Groups convened under the Federal Nuclear Emergency Plan that would have access to this data include several federal departments as well as provincial and regional personnel.

This network has improved the method of determining dose to the public by doing in-situ measurements in near real time. The system will be used both during normal nuclear facility operations for routine health impact assessment and as a tool in the event of an emergency, consistent with Health Canada's role as lead Department in the Federal Nuclear Emergency Plan. As this work progresses from installation phase to operations, the focus will be on developing the tools for analysis and reporting.

Exercises and Events

National and Provincial Exercises

A large scale federal radiological team field exercise was conducted in February 2005 to further Canada's ability to respond to potential terrorist activity within Canada and neighbouring countries. The exercise involved live radiological sources and contamination resulting from a simulated explosion of a RDD and the development of that device. A fictitious town was constructed on federal lands in Alberta, Canada, and aerial monitoring and field teams were deployed. The exercise ran for 24 hours using four distinct federal response teams. Aerial monitoring data and other emergency information was successfully transmitted from the exercise area to a Federal Nuclear Emergency Operations Centre in Ottawa, Ontario.

The tool used to capture and present the information was EMAP-nuclear, a GIS companion to the ARGOS system.

A number of other exercises were held in provinces with nuclear generating stations or with ports that host nuclear powered vessels. These exercises were used to test new equipment, verify procedures and to drill provincial and federal communications channels and response times.

Also, the ARGOS system was used as a preemptive action during a reactor incident in a neighbouring country in February 2005. Assessments of potential releases were initiated and results of potential scenarios were available to Canadian officials within one hour of notification. The modeling outputs were quality checked in collaboration with the Canadian Meteorological Center

Activities and Resources

Emergency Management Activities

Health Canada is completing the final implementation of the operational ARGOS Decision Support System as its national platform for emergency information management. The system has been configured to allow real-time access to Canadian weather prediction and modeling resources, and radiation surveillance and monitoring capabilities. New features were added to the operational system to allow direct source-term import from provincial emergency assessment codes, and a cross-platform data exchange under a US DOE NARAC information sharing project is currently underway.

The Department is also finalizing the setup of a secure web-based service for the exchange of emergency information. The web-enabled GIS capabilities between response partners are operational but technical issues regarding communications are being addressed. Issues involving operational information exchange requirements and information security requirements are in perpetual review to account for evolution of new technologies and potential threats.

CBRN Initiatives

A number of concurrent multi-agency initiatives are underway in Canada to enhance security and response needs for CBRN terrorist events. Representatives from various Canadian federal agencies have participated in the Nov 2004 Canada-US workshop on radiological responder tools and consequence management science and technology solutions under the auspices of the Canada-US Smart Border Action Plan and joint Public Security Technical Program. Following this, a number of project proposals were submitted and received approval in principle by authorities on both side of the Canadian-US border. One of the projects of interest involves the ARGOS DSS project that would enhance bi-national data exchange and interop

FRANCE

No significant events in emergency management in France.

Regulatory documents

In the frame of the updating of the inter-ministerial instructions on emergency preparedness and response in case of nuclear or radiological emergency that has been done since 2003, the inter-ministerial instruction on the national organisation was finally signed by the Prime Minister in early April:

Exercises

Since last October, 6 national exercises were conducted involving the local authorities in the departments where nuclear facilities (five NPP and a facility treating UF6) are situated.

Different types of scenarios were simulated : fire, quick or slow accident evolution, real or fictive meteorological conditions... During some of these exercises effective protective measures to the population were enforced, and an helicopter was used in order to map the contaminated area.

The feedback of these exercises highlights two problems:

- the delay for obtaining environmental measurements ; the authorities have difficulties to take decisions without this information,
- the problem that, even if the iodine tablets were pre distributed, part of the population don't have them for different reasons.

France participated to Swiss exercise KRONOS I last March.

France will participate to the international exercises : Convex 3, INEX 3 and to the workshop on indemnification of nuclear damage co-organised by NEA and the Slovak Nuclear Regulatory authority.

GERMANY

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

Federal Office for Radiation Protection (BfS)

Exercises:

INEX-3:

- INEX-3 exercise is planned for 13./14.September 2005 (both phases)
- Bi-lateral exercise together with Austria
- International observers will be invited (at least by Germany)
- Stakeholder participation intended in Germany

Participation in the Swiss CRONOS exercise in April 2005, information was provided to relevant authorities with the web-based document system ELAN.

In autumn 2005 a large field exercise is planned for a dirty bomb scenario in connection with the football world cup in Germany.

Nuclear power plants

The nuclear power plant Obrigheim (near Stuttgart) will probably be decommissioned in May 2005 after 36 years of operation.

HUNGARY

The National Nuclear Emergency Response Exercise 2004

The day long, full scope, tabletop exercise took place on 9-10 November 2004. The main objectives were:

- testing the national Emergency Response Plan (NERP)
- practising the Hungarian Nuclear Emergency Response System (HNERS)
- testing the Public Information Plan and practising public information related activities
- practising the international communication

No real field activities were practised during the exercise. More than 600 experts took part in the playing of the exercise. A sophisticated evaluation system was applied with the contribution of more than 60 evaluators. The exercise was evaluated successful, it contributed to the improvement of the HNERS. Good practices were identified and an exhaustive list of recommendations for further improvement was accomplished on the basis of the lessons learnt during the exercise.

Preparation for the CONVEX-3 (2005) exercise

Hungary takes part in the CONVEX-3 (2005) exercise. The preparation for the exercise started in January 2005. Five main objectives were identified:

1. practising the alert of the HNERS
2. performing specific role of the Hungarian Atomic Energy Authority (HAEA) in the early phase of a nuclear accident abroad
3. practising the long term protective action related activities
4. testing the public information related activities
5. practising the international communication

The dress rehearsal of the exercise will take place on 5 May 2005 with fixed meteorology and preliminary defined source term focusing on the first four objectives. The central organs of the HNERS, some ministerial emergency response organisations and their local organs and three County Defence Committees with their local organs will play on the exercise.

Preparation for the INEX-3 exercise

The preparation has been started in January 2005. The approximate date has been defined (October 2005). Hungarian observers took part in the INEX-3 FIN to collect experiences for the exercise.

ITALY

The following main activities are currently underway in the field of nuclear and radiological emergencies:

1) Upgrading of national automatic early warning and gamma dose rate monitoring networks

Two radiation monitoring networks are into operation to perform early warning function (REMRAD network – 7 stations) and to monitor airborne gamma dose rate in the aftermath of a transboundary nuclear accident (GAMMA network – 50 stations). REMRAD stations perform alpha, beta, gamma on line air monitoring, gamma spectrometry, and provide meteo data. GAMMA network stations monitor distribution of radioactive contamination in the national territory following an emergency.

Both networks are connected to a control centre, located at the premises of the National Agency for Environmental Protection and Technical Services (APAT) and equipped for real time data acquisition.

Following a few years of operation of the networks an upgrading and extraordinary maintenance programme has been launched, aimed at enhancing the overall networks reliability, as well as the degree of coverage of the national territory.

To this purpose the following technical activities are under implementation:

- renewal of both stations control centres, equipped with redundant hardware for data acquisition;
- upgrading of auxiliary systems configuration at stations sites;
- technological upgrading of on line gamma spectrometry systems at REMRAD stations;
- installation of additional gamma stations.

2) Revision of technical basis of national emergency plan for nuclear and radiological emergencies

The national emergency plan includes the consideration of nuclear accidents potentially affecting NPPs operating in neighbouring countries. According to the national legislation the plan is prepared by the Department of Civil Protection, while the technical bases are defined by APAT. The current version of the plan was established in 1997. A revision process has been recently started to assess if the technical bases established at that time are still valid, also taking into account the persistent international crisis characterized by an increased risk of malevolent actions against the installations.

To the purpose of this revision, interactions have been recently established with regulatory bodies of neighbouring countries to exchange views and information on technical bases assumed as reference for NPPs off-site emergency planning.

3) Revision of off-site emergency planning of ports with nuclear submarines transit.

Several ports in Italy can be interested by the transit of nuclear submarines. Classified emergency plans are in place since many years. A substantial revision process of these plans, also involving the removal of classification for off-site related aspects, is in progress. The issue is of particular concern, mainly for local authorities and public.