

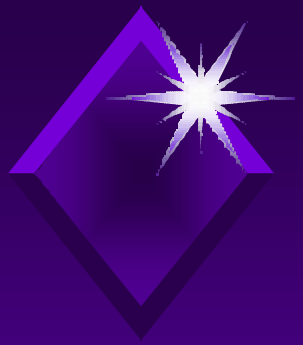
# *Impact of the Year 2000 on the Nuclear Industry*



**NEA International Workshop - Ottawa, Canada**

**8 to 10 February 1999**

**Hosted by Atomic Energy Control Board of Canada**



# *Contents*

- ◆ OECD Nuclear Energy Agency (NEA)
  - ◆ NEA Nuclear Safety Division
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  - ◆ Exchange of Information
  - ◆ Future Activities



# ***What is the NEA ?***

- ◆ Semi-autonomous body within the OECD. Established February 1958 under the name of the OEEC European Nuclear Energy Agency.
- ◆ NEA today comprises 27 Member countries and represents ~ 85% of world's installed nuclear capacity.
- ◆ Contributes to the development of nuclear energy as a safe, environmentally-acceptable and economical energy source through co-operation among its participating countries.
- ◆ The Commission of the European Communities takes part in the work of the Agency.
- ◆ Co-operation agreement with IAEA for collaboration as well as other international agencies.

For more information see The NEA Web Site:

<http://www.nea.fr>



# *NEA Member Countries*

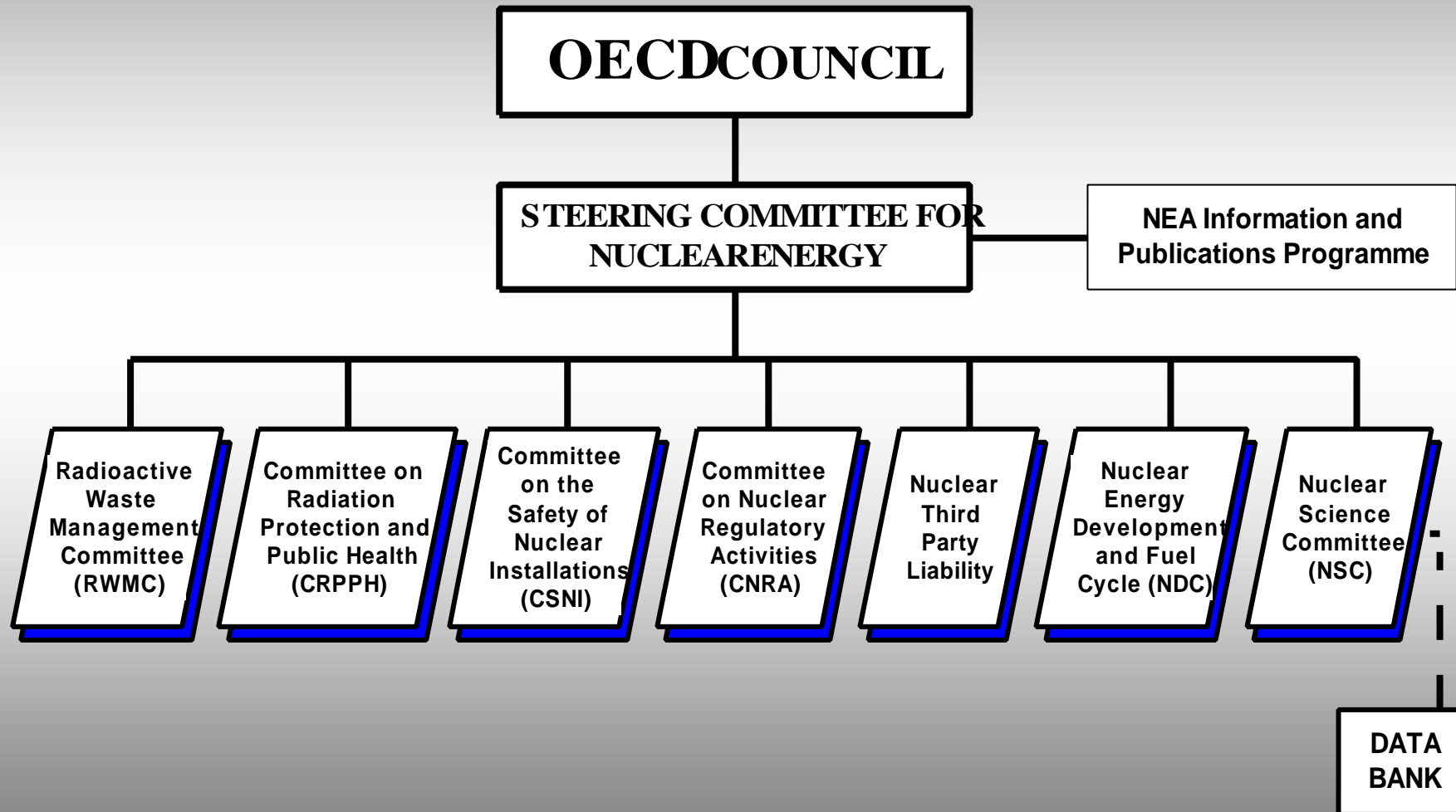
- ◆ *Australia*
- ◆ *Austria*
- ◆ *Belgium*
- ◆ *Canada*
- ◆ *Czech Republic*
- ◆ *Denmark*
- ◆ *Finland*
- ◆ *France*
- ◆ *Germany*
- ◆ *Greece*
- ◆ *Hungary*
- ◆ *Iceland*
- ◆ *Ireland*
- ◆ *Italy*
- ◆ *Japan*
- ◆ *Korea*
- ◆ *Luxembourg*
- ◆ *Mexico*
- ◆ *The Netherlands*
- ◆ *Norway*
- ◆ *Portugal*
- ◆ *Spain*
- ◆ *Sweden*
- ◆ *Switzerland*
- ◆ *Turkey*
- ◆ *United Kingdom*
- ◆ *United States*



## ***NEA – Background***

- ◆ Staff is approximately 80 people with an annual budget of 75 million French Francs (about US\$ 12.5 million).
- ◆ International Co-operation aimed at bringing together expertise, disseminating information and developing consensus opinions on important issues.
- ◆ Seven major international technical committees comprised of highly qualified experts from Member countries.

# ***OECD Nuclear Energy Agency***





# ***NEA Safety Activities***

## ◆ Nuclear Safety & Regulation

- ◆ Committee on the Safety of Nuclear Installations (CSNI)
  - ◆ Principal Working Groups (1 thru 5)
  - ◆ Expert & Other Groups
- ◆ Committee on Nuclear Regulatory Activities (CNRA)
  - ◆ Working Groups and Special Issues
  - ◆ Expert & Other Groups



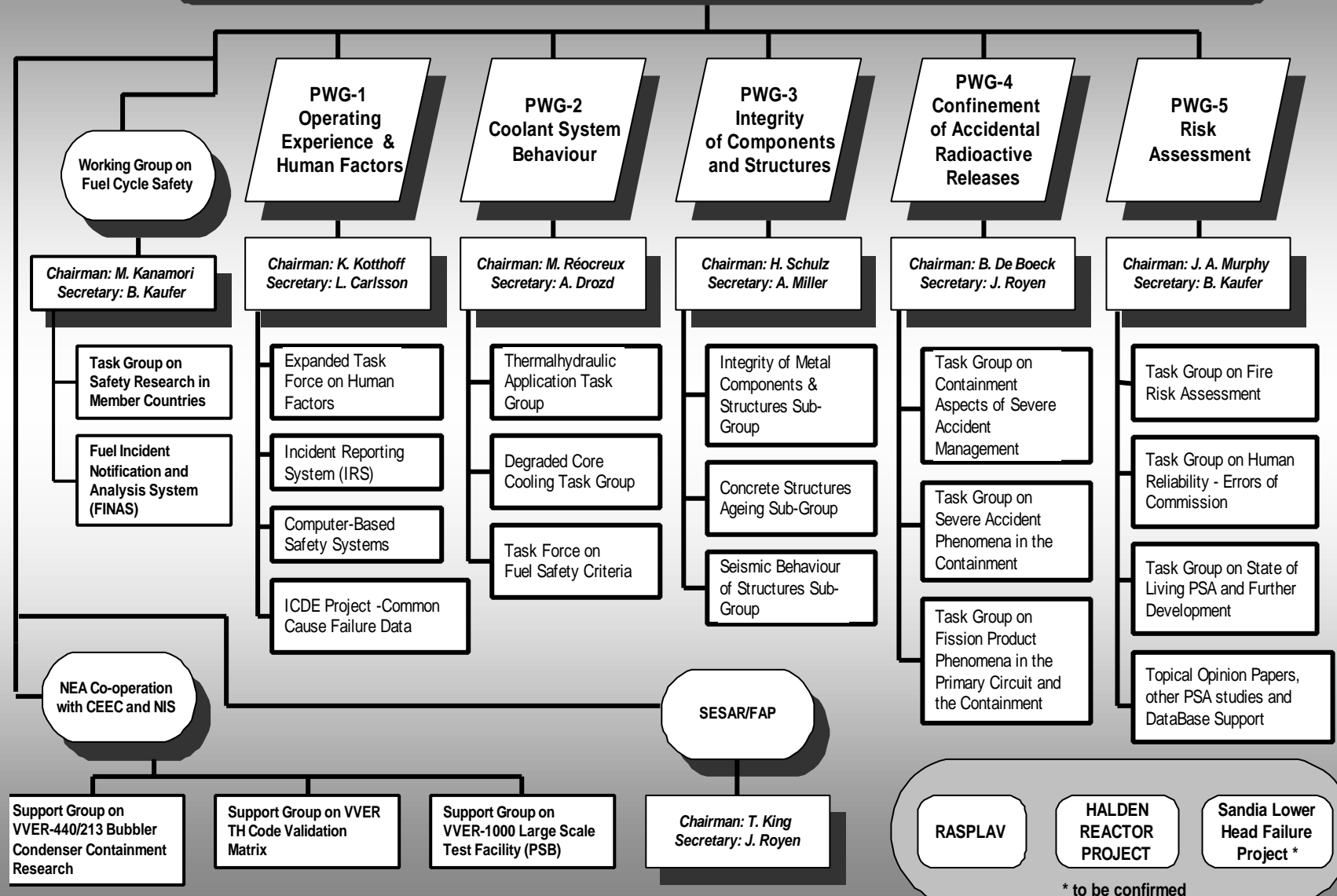
# CSNI

- ◆ Set-up in 1973, CSNI is an international committee made up of senior scientists and engineers, with broad responsibilities for safety technology and research programmes. Main tasks of CSNI include:
  - ◆ exchange of technical information and to promote collaboration between research, development, engineering and regulatory organisations;
  - ◆ review state of knowledge on selected topics in nuclear safety technology and safety;
  - ◆ assessment, including operational experience; initiate and conduct programmes to overcome discrepancies, and develop improvements and reach consensus on technical issues; and
  - ◆ to promote co-ordination of work including the establishment of joint undertakings. The technical field of nuclear reactor safety is so broad, the committee determined it was most efficient to separate activities into different principal working groups (PWGs) and other expert teams as deemed necessary..



# COMMITTEE on the SAFETY OF NUCLEAR INSTALLATIONS (CSNI)

Chairman: M. Livolant - Secretary: G.M. Frescura





# CSNI

## ◆ *Principal Working Groups*

- *PWG1* – Operating Experience and Human Factors
- *PWG2* – Coolant System Behaviour
- *PWG3* – Integrity of Components and Structures
- *PWG4* – Confinement of Accidental Radioactive Releases
- *PWG5* – Risk Assessment

## ◆ *Other Groups*

- Working Group on Fuel Cycle Safety
- NEA Co-operation & Assistance w/ CEEC & NIS



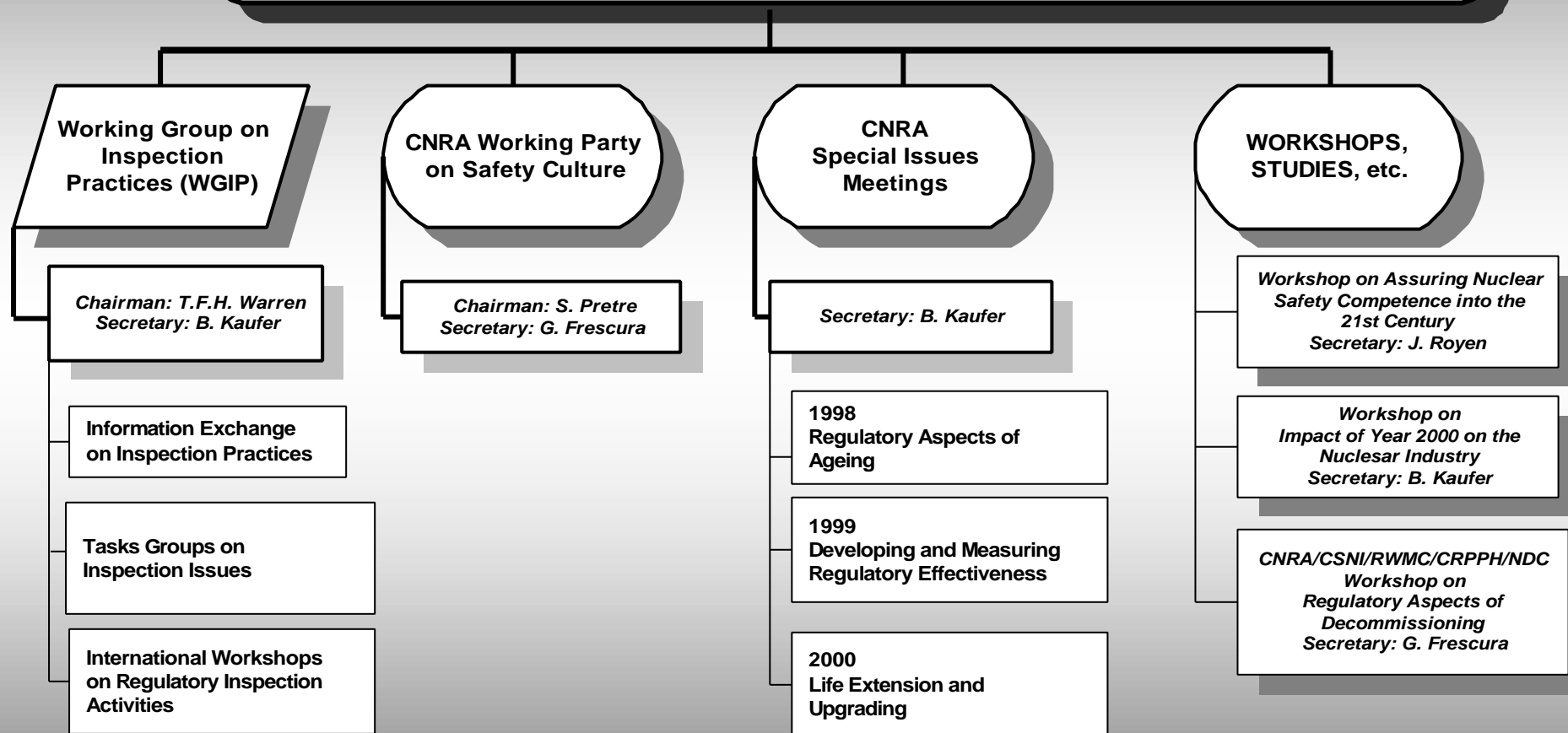
# ***CNRA***

- Created in 1989 to guide NEA's programme regarding regulation, licensing and inspection of nuclear installation with regard to safety. Main tasks include:
  - continuing exchange of information and experience among regulatory organisations;
  - ◆ review of developments which could affect regulatory requirements with the objective of providing better understanding of motivation for making changes and improvements and
  - ◆ to review current practices and operating experiences in the Member countries
- The Committee has established one specialised group Working Group on Inspection Practices (WGIP)

# **COMMITTEE on NUCLEAR REGULATORY ACTIVITIES (CNRA)**

**Chairman: J. Laaksonen - Secretary: G.M. Frescura**

**Bureau: S. Collins, S. Pretre, M. Asty and C. Viktorsson**





# ***CNRA - Special Issues***

- ◆ **Significant 'special' issues are selected each year for an in-depth discussion by the senior regulators. Issues covered include:**
  - Regulatory Approaches to Human Factors in Operational Safety (1990)
  - Regulatory Requirements and Experience Related to Low-Power and Shutdown Activities (1991)
  - Regulatory Requirements and Experience Related to Steam Generators (1992)
  - Dealing with the Safety Case for Ageing Plants (1993)
  - Regulatory Approaches to Severe Accidents (1994)
  - Regulatory Approaches to PSA (1995)
  - Technical Support for Licensing of Computer-Based Systems Important to Safety (1996)
  - Review Procedures and Criteria for Different Regulatory Applications of PSA (1997)
  - Regulatory Aspects of Ageing Reactors (1998)
  - Developing and Measuring Regulatory Effectiveness (1999)
  - Life Extension and Upgrading (2000)



## ***CNRA - Year 2000***

- ◆ Survey of Member countries
- ◆ International Workshop
- ◆ Exchange of Information
- ◆ Future Activities



## *Year 2000 - International*

- ◆ Does not only concern the date 01-01-2000
  - 22.08.1999                      - 09.09.1999                      - 01.01.2000
  - 03.01.2000                      - 04.02.2000                      - 29.02.2000
  - 01.03.2000                      - 31.12.2000                      - 01.01.2001
- ◆ High public and media concern shown
- ◆ NEA Press Releases Issued
- ◆ IAEA Action Plan and other (bilateral) international efforts underway



## *CNRA Survey on Y2K*

- ◆ Survey was conducted in early 1998
- ◆ Questionnaire issued to solicit Member countries Y2K status
- ◆ Results presented at June 1998 CNRA Meeting





# *Survey - Questionnaire*

- ◆ What specific steps taken or planned to ensure problem is addressed by licensees?
- ◆ What information received to date on actions taken or planned?
- ◆ Specific problems found to date?
- ◆ Steps taken by Regulatory Authority internally?
- ◆ Enforcement / requirements set by Regulatory Authority
- ◆ CNRA - Topics for future discussion



## *Survey Results - June 1998*

### *Specific Steps Taken "To Date"*

- ◆ Pro-active steps taken by all Member countries requesting information or actions taken to assure Y2K problems will not effect safety.
- ◆ Identification, prioritisation, analysis, corrective actions, testing and verification
- ◆ Response times vary from spring 1998 through 1999.



## ***Survey Results - June 1998***

### ***Specific Problems***

- ◆ No significant problems reported to date on safety related systems
- ◆ Examples of reported problems found:
  - ◆ Process systems that contain a date stamp
  - ◆ Plant security computer
  - ◆ Communications systems
  - ◆ Feedwater chemistry monitoring system
  - ◆ Fire alarm system



## *Survey Results - June 1998*

### *Enforcement and Future Actions*

- ◆ Most responses indicate that Member countries will apply normal regulatory means to identify and rectify Y2K problems.
- ◆ Additionally, most indicate the need for wide dissemination of information, especially on problems areas that are revealed.



## *Survey Conclusions - June 1998*

- ◆ Regulatory Authorities in most Member countries are ADDRESSING the Y2K problem,
- ◆ Licensees in most Member countries are ADDRESSING Y2K and identifying potential concerns
- ◆ Final assessment and evaluation of Y2K impact is dependent on timing of licensee responses and therefore in most cases still needs to be ADDRESSED but is FORESEEN by the end of 1998 or early 1999.



# *International Workshop Impact of Year 2000 on the Nuclear Industry*

- To discuss regulatory and industry strategies on Y2K issues
- To discuss lessons learned and corrective actions taken and planned
- Contingency planning – what still needs to be done
- International and global implications



# *International Workshop Impact of Year 2000 on the Nuclear Industry*

## Programme Highlights

- ◆ Monday, 8 February 1998
  - ◆ Opening Remarks – Dr. Agnes Bishop, President AECB
  - ◆ Special Presentations – Mr. Guy McKenzie and Dr. David L. Parnas
- ◆ Tuesday, 9 February 1998
  - ◆ Dinner Speaker – Dr. Shirley A. Jackson, Chairman, US NRC
- ◆ Wednesday, 10 February 1998
  - ◆ Presentation of Group Discussion Results
  - ◆ Final Panel Session and Closing Session



# *Exchange of Information*

- ◆ NEA Mailbox Initiated in September
- ◆ Responses to-date
- ◆ Other systems - IAEA / WANO
- ◆ Examples of inputs received to-date:
  - ◆ Sweden
  - ◆ United Kingdom
  - ◆ United States





# *Exchange of Information*

- ◆ Electronic Mailbox (16 countries plus IAEA)  
**Initiated in September 1998**

- |                  |                  |
|------------------|------------------|
| - Belgium        | - Korea          |
| - Canada         | - Netherlands    |
| - Czech Republic | - Portugal       |
| - Finland        | - Spain          |
| - France         | - Sweden         |
| - Germany        | - Switzerland    |
| - Hungary        | - United Kingdom |
| - Japan          | - United States  |



# *Exchange of Information*

- ◆ Other International Exchanges:
  - ◆ IAEA Web Site ([www.iaea.org](http://www.iaea.org))
    - ◆ Readiness Guidance (in English & Russian)
    - ◆ Seminars and workshop
  - ◆ WANO
    - ◆ Exchanges of Y2K information
  - ◆ Member countries
    - ◆ Web sites in most countries providing Y2K information



# ***CNRA Future Activities***

- ◆ Exchange of Information
  - ◆ Continues through 1999
  - ◆ Further discussions in June and December meetings
- ◆ Contingency Planning
  - ◆ International exercise being discussed this week
  - ◆ Decide on steps to be taken during millennium period
- ◆ Proceedings and Report on Lessons Learned
  - ◆ To be prepared following workshop



# ***Workshop Information***

- ◆ Dinner - Tickets Required
  - ◆ Additional Dinner Tickets for guests can be obtained this morning (\$ 40.00)
- ◆ Colour Dots on Name Badges
  - ◆ The colour dots represent which discussion group you will in on Wednesday morning. Participants are encouraged to meet with other members from their group prior to Wednesday
  - ◆ Workshop Co-ordinator: Lucie A. Beauvais