

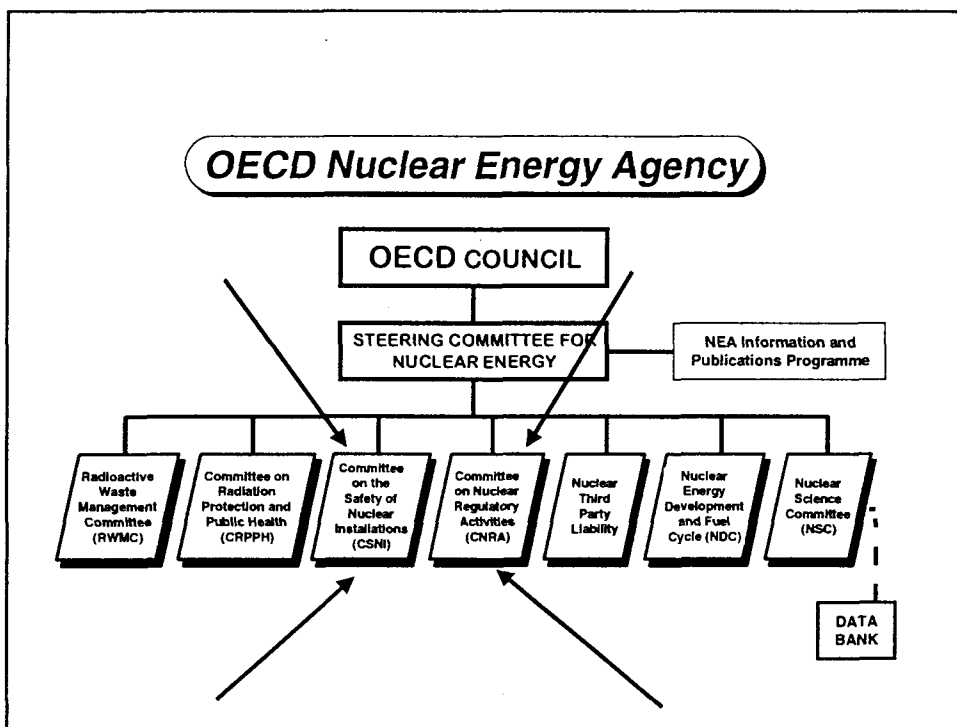


On-going and Some Future Safety Related Activities of the OECD/NEA

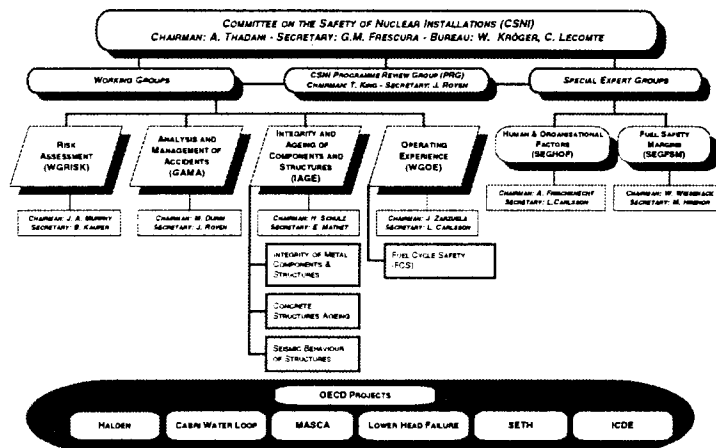
Presentation by G. M. Frescura

OECD/NEA Nuclear Safety Division

G.M. Frescura, VVER Regulators Meeting, July 2001



CSNI Structure



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Selected Recent CSNI Reports of Direct Relevance to VVERs

- Status of the Bubbler Condenser Containment System for the Reactors of the VVER-440/213 Type, NEA/CSNI/R(1998)13
- VVER: Specific Features Regarding Core Degradation, NEA/CSNI/R(1998)20
- Bubbler Condenser Related Research Work, Present Situation, by H.Karwat, H.Wolf- September 2000, NEA/CSNI/R(2001)3
- Validation Matrix for the Assessment of Thermal-Hydraulic Codes for VVER LOCA and Transients, A Report by the OECD Support Group on the VVER Thermal-Hydraulic Code Validation Matrix, NEA/CSNI/R(2001) 4

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Current CSNI Activities of Direct Relevance to VVERs

- Consideration of a proposal to organise an OECD project to validate VVER-1000 thermal-hydraulic codes
- Support group on bubbler condenser research

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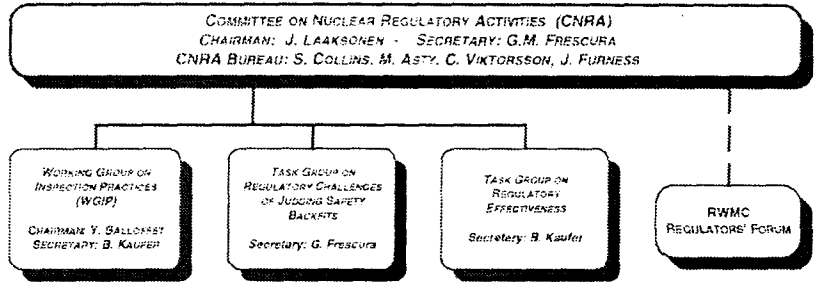
CNRA General

- *Chairman and Bureau*: Prof. Laaksonen + four Members
- *Strategic Plan*: Issued May 2000
- *Programme of Work*: Largely based on report "Future Regulatory Challenges" and recent review by the Bureau

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CNRA Structure



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Recent Reports

- The Role of the Nuclear Regulator in Promoting and Evaluating Safety Culture
- Regulatory Response Strategies for Safety Culture Problems
- Nuclear Regulatory Challenges Arising From Competition in Electricity Markets
- Assuring Future Nuclear Safety Competence
- Improving Nuclear Regulatory Effectiveness

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Current and On-going Activities

- Regulatory Effectiveness: developing indicators
- Regulatory Communication: Working Group to be established
- Criteria and process of backfits
- Decommissioning issues
- Safety concept of future plants
- Role of research in the regulatory context
- Fuel safety criteria for high burn-up fuel (including VVER's fuel)
- Regulator/industry interface

The Nuclear Regulatory Challenges Arising from Economic Deregulation

General

- Regulatory oversight of economic matters minimum in the past (stability, waste, decommissioning)
- Price now driving cost - no longer guaranteed income
- Increased and persistent pressure to reduce cost
- Too early to judge how safety balance will go

Governance Issues

- Dilution of responsibility for safety
- De-coupling between business managers and tech managers
- Greater use of low-price contractors
- Reduced financial qualification of licensee
- Less than adequate funds for decommissioning and waste

Direct Safety Challenges

- Management focused on economics
- More pressure, perhaps overstress on workers
- Lower quality of work
- Reduced maintenance
- Ageing Problems - pressure for life extension
- Reduced safety margins
- Reduced equipment reliability
- Decreased electrical grid stability and reliability

Infrastructure Issues

- Less expertise available
- Diffusion of design authority
- Less cooperation
- Less safety research and technical support
- Pressure to reduce independent regulatory safety research programme

Increased Pressure on Regulatory Bodies

- New competencies needed
- less expertise available to the regulator
- more aggressive relations with the licensee
- reduced information flow (sensitive economic info)
- legislative basis for enforcement inadequate
- Pressure on regulator to avoid requiring shutdown (long shutdown means decommissioning)
- More international consistency
- Pressure to reduce "burden"

Possible New Approach

- The regulator must understand the economic conditions
- Must maintain technical skill sets and add competencies (market, management, etc.)
- Inspection programme reviewed to detect early signs of declining performance
- Regulator might have to define what research info. is needed
- Continue to share information - extra effort may be needed

Assuring Nuclear Safety Competence

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OECD/NEA Initiatives

- Workshop on Assuring Nuclear Safety Competence (Oct. 99)
- Report on specific actions issued recently
- Managing nuclear safety research facilities and capabilities
- Survey and analysis of education in the nuclear field

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Some Regulatory Concerns (1)

- Teaching diluted
- Some disciplines becoming rare e.g., reactor physics
- Basis for safety criteria being forgotten
- Regulators may not be able to hire from research and industry

What Can Be Done (2)

- In-house training
- PSR, PSA etc. provide training on “design” work
- Maintaining competence included as part of nuclear Kwh?
- R&D

CNRA Report Recommendations

- Act now
- Government Agencies to set up national committees to identify essential education and training facilities and take action
- Develop generic competence framework for operators
- Share best practices
- Assemble information on mentoring schemes

Conclusions

- The CNRA is a forum to exchange information and review developments which could affect regulatory requirements
- The CSNI and other NEA Committees provide the necessary technical support
- Our prime obligation is to NEA Member countries but reports and information generally available

CNRA REPORTS

- NEA/CNRA/R(1992)1, CNRA Review on Regulatory Approaches to Accident Management of Containment, 1992
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- NEA/CNRA/R(1997)2, Licensing of Computer-Based Systems Important to Safety - Workshop and CNRA Special Issues Meeting on Technical Support, (1996 : CNRA Paris, Special Issues), also referenced as: OCDE/GD(97)90
- NEA/CNRA/R(1997)3, Status Report on Inspection Philosophy, Inspection Organisation and Inspection Practices, also referenced as: OCDE/GD(97)140
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- NEA/CNRA/R(1999)2, Regulatory Inspection Activities related to Older Operating NPPs,Risk Evaluation and Licensee Resource Commitment - Workshop Proceedings - Prague, Czech Republic 8-11 June 1998
- NEA/CNRA/R(1999)3, Proceedings of the International Workshop on the Impact of the Year 2000 on Nuclear Industry Ottawa 08-10/02/1999
- NEA/CNRA/R(2000)1, Workshop on Assuring Nuclear Safety Competence into the 21st Century - Summary and Conclusions - Budapest, Hungary 12-14 October 1999
- ISBN 92-64-18517-8, Assuring Nuclear Safety Competence into the 21st Century – Workshop Proceedings - Budapest, Hungary 12-14 October 1999
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- NEA/CNRA/R(2000)3, The Strategic Plan for the Committee on Nuclear Regulatory Activities

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NEA/CNRA/R(2001)x	Inspection of Maintenance during Operation

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