Co-operative Programme on Decommissioning Projects CPD

Jean-Guy Nokhamzon CEA/DEN/DPA

OECD Nuclear Energy Agency (NEA)

Member Countries and Mission

Australia
Canada
Czech Republic
EU 15 countries
Hungary
Iceland
Japan
Mexico
Norway
Republic of Korea
Slovak Republic
Switzerland
Turkey
United States

Russia (observer)
EC
IAEA, Observer

... developing the scientific, technological and legal bases for a safe, environmentally friendly and economical use of nuclear energy ...

... provide authoritative assessments and to forge common understandings as input to government decisions and policy analyses…

Co-operative Programme on Decommissioning

Programme

Lessons Learned

Future Challenges

Co-operative Programme on Decommissioning

Twenty years of exchange of information amongst participating projects

- Joint Undertaking (specific Agreement) between participants
- Established in 1985 (on request from USA)
- Agreement renewed every 5 years (currently ’04 -’09)
- Sharing “Give & Take” of technical and scientific information amongst major international decommissioning projects:
  - Project description and design
  - Data from decommissioning project execution
  - R&D results
- Confidentiality provisions

Co-operative Programme on Decommissioning

42 Projects, 24 Organisations from 12 Countries

- **29 Reactors research and NPP's**
  - PWR, BWR, D_2O
  - GCR, AGR, HTGR, VVER,
  - FBR (sodium cooled)
- **13 Fuel Cycle Facilities**
  - Radio-chemical labs, fuel storage bay, isotope handling
  - Processing
  - Fuel material plants
- Planned, ongoing, dormant, terminated
- All stages of decommissioning
- **New Projects (2007)**
  - Barsebäck NPP
  - Studsvik research reactors

Co-operative Programme on Decommissioning

Modus operandi

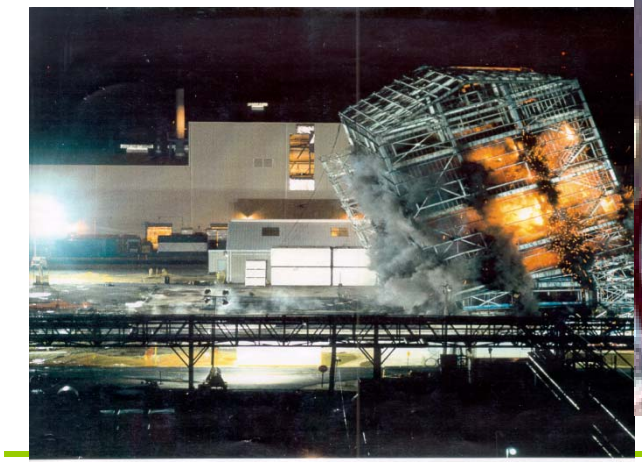
- Management Board (LC/MB), once a year
  - Chair Jean-Guy Nokhamzon (CEA)
  - Co Chair Guy Collard (CEN/SCK)
- Technical Advisory Group (TAG) is main vehicle for information exchange, twice a year
  - Chair Luis Valencia (FzK)
  - Co chair Jan Carlsson (SKB)
- Co-ordinator
  - Bob Burton
- Task Groups
- Networking, Special Arrangements
  - JAERI/UKAEA
  - JAERI/CEA
  - SSI / USDOE(ANL) / CEA (IPSN) / Studsvik / AkerAB / Belgoprocess
    - Validation of dose calculation programmes

      RESRAD (USA) / CERISE (France)

Co-operative Programme on Decommissioning

Information exchange, recent issues

- Utilisation of Remote Systems and Robotics
- Release of Alpha Contaminated Areas
- Dismantling of Large Components
- Stepwise De-licensing
- Partial Dismantling of Plants
- Industrial/Project Re-organisation
- Contract management



Co-operative Programme on Decommissioning

Decommissioning Costs

Standardised List of Items for Costing Purpose ("Yellow Book")

- Jointly published by NEA, IAEA, EC (1999)
- Is used by various decommissioning project internally
- Attempt to fill structure with "reference" costs failed so far (2000-2002)
- **Cost Issue recently taken up by WPDD (Decommissioning Cost Estimation Group)**
  - CPD ready to collaborate in this study

Co-operative Programme on Decommissioning

Recent Task Group Work

- Decontanimation Techniques in Decommissioning Activities
- Radioactive Measurements at Regulatory Release Levels
- Recycling and Reuse of Scrap Metals (TGRR)

  Decommissioners/Implementers' views

  - TENORM issue demonstrates nuclear industry as comparatively minor source of public exposure
  - Lack of consistency and internationally accepted criteria for recycling and reuse of materials

Co-operative Programme on Decommissioning

Current work

- Exchange of project information at TAG meetings
  - October 2007 (Greifswald, Germany) and
  - May 2008 (BR3, Belgoprocess, Belgium)

- Following earlier activities of the CPD and discussions at the TAG, two new items have been proposed that will be addressed by specific Task Groups:
  - Remote Handling Techniques
  - Decontamination and Dismantling of Concrete Structures

Feedback from CPD participants

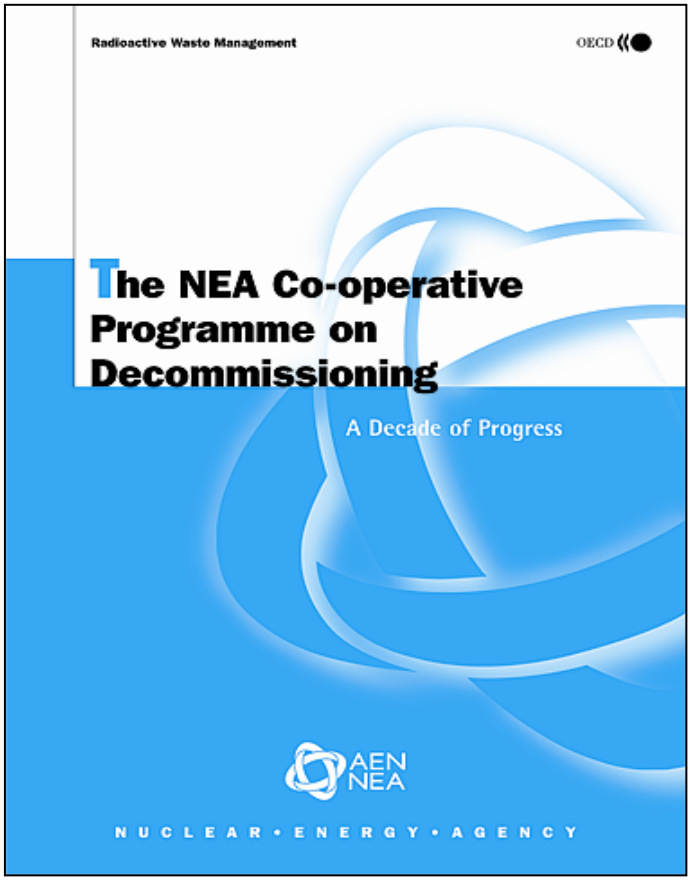
- Increased dialogue among regulators, implementers and international standards organisations is necessary, such as takes places in the WPDD and RWMC
- CPD has proven to be a good basis for an effective cooperation and support, to master new challenges on decommissioning projects
- CPD has worked to avoid discrepancies, to save money and helped in reliable planning, cost evaluation, and safety

Co-operative Programme on Decommissioning

CPD 20 years of Progress

All institutions are welcome to join the CPD and sign the Agreement (confidentiality), provided

- they manage a decommissioning project
- their accession is supported by their Government



Achievements, lessons learned of Cooperative Programme 1

- **Radiological risks very small in comparison to non-radiological** (Important for decommissioning safety case and public communication)
- **Non-radiological risks much lower for recycling because product manufacture starts from scrap** (Mining/refining risks avoided)
- **Demonstrated that nuclear decommissioning can be done:**
  - **safely,**
  - **with acceptable costs,**
  - **in environment friendly manner**
- **Other industries than nuclear power to assume responsibility for end-of-life liabilities (TGDC)**
- **TENORM issue demonstrates nuclear industry as comparatively minor source of public exposure (TGRR)**

Achievements, lessons learned of Co-operative Programme 2

A consistent, internationally accepted rationale is necessary for the elaboration of concepts and for the derivation of numerical values on clearance, exemption and authorised releases.

In a global economy, internationally accepted standards are essential.

With decommissioning moving towards being a fully mature industrial process, increased dialogue among regulators, implementers and international standards organisations is necessary.

Achievements, lessons learned of Cooperative Programme 3

Broad range of reactors and fuel facilities, unique forum

Exchange of technical and scientific information

Exchange based on « give and take » principle

Knowledge and gleaned information applicable for common interest (multi and bi-lateral)

Feedback experience on design, construction and operation
Considerable help in:

- **reliable planning,**
- **cost evaluation,**
- **and safety.**

Achievements, lessons learned of Co-operative Programme 4

Decommissioners, implementers, belong to a very active group (national and international)

Result of studies available through OECD/NEA
CPD Web site http://www.nea.fr/html/jointproj/decom.html

CPD has worked to avoid discrepancies, to save money and to share experience

Complementarity between CPD and WPDD
(CPD focus on implementation issues; WPDD focus on strategic and policy issues)

Good basis for effective cooperation

Future Challenges for Decommissioners[1]

- **Important to gain benefit of earlier experience and spread it at a larger scale**
  - **Training courses, workshops, conferences and handbooks/reports should be shared internationally to accelerate development of new disposal facilities**
  - **Expert consultants or groups should be used to avoid repetition of roadblocks and problems**
  - **Developing improved technologies for dismantling and demolition**
  - **Continued research on technologies should be encouraged**

Future Challenges for Decommissioners2

- **Addressing social impacts of decommissioning large facilities**
- **Formerly abandoned techniques should be re-examined and re-evaluated for applicability in a changing technological and economic environment**
- **Attention to the social impacts is becoming a consideration for early planning**
- **Precedents set for one nation may not work in all situations**
- **Loss of employment at large facilities has long-lasting and economic impacts on local communities**

Conclusions

- **Current technologies have demonstrated their effectiveness and robust performance in numerous decommissioning activities**

- **The dissemination of best practices and sharing of information in international workshops, conferences and specially within the CPD has proven to be a good basis for an effective cooperation and support to master new challenges on decommissioning projects**

- **Future challenges will require further international cooperation to establish sustainable regulations and guidance to achieve objectives without being burdensome or overly conservative**

- **The CPD is ready to assist the RWMC by sharing its experience and to help create a renewed spirit of optimism that can pave the way for dealing with these challenges**

END

Thank you for your attention

FIRST ANNOUNCEMENT

Les défis du démantèlement : une réalité industrielle ?

Decommissioning Challenges: an Industrial Reality?

new

Palais des Papes • AVIGNON (France) • September 28 to October 2, 2008

The Pope's Palace, the biggest Gothic Palace of Europe

The French Nuclear Energy Society (SFEN) is preparing the 2008 Avignon international conference on decommissioning, dismantling, decontamination and reutilization which will be held in Avignon, France, September, 28th to October, 2nd, 2008. "Decommissioning challenges: an industrial reality?" is a five-yearly forum, for the discussion of the regulatory, social, scientific and technical aspects of decontamination, decommissioning and associated material and waste management and site/building reuse. The 2008 conference programme will include commercial, government and international projects updates as well as present project management, technology and regulatory developments and improvements and the feedback experience.

Avignon, the "City of the Popes", is a medieval city situated near the Mediterranean. The conference will be held at the prestigious Palais des Papes, the ancient residence of the popes at Avignon*, ranked by UNESCO, with excellent facilities of international standing for technical sessions and exhibits. Avignon is a popular tourist area in Provence, near the French and Italian Rivieras and close to Spain, Italy and Switzerland. The temperate September climate and the charming surroundings offer to the interested visitor the ideal conditions for leisure and discovery.

*check www.palais-des-papes.com

Hotel Information:

A suitable contingent in hotels of different price categories, provided special reduced rates for the conference participants has been booked (from 5 to 15 mn walking distance).

Information on Avignon, trip and tourism is available at: www.ot-avignon.fr/pages-en/home.htm

MARK YOUR CALENDARS!

Think ahead of your trip to Avignon ! We count on your participation for the success of this meeting.

*ORGANIZERS

Presidents of the conference

Catherine Lecomte, CEA (France)
Bernard Salha, EDF (France)

General Chairs

Noël Camarcat, Bertrand Vielliard-Baron, SFEN (France)

Technical Program Chair

Jean-Guy Nokhamzon, CEA (France)

International Program Committee

Michel Dutzer, ANDRA (France) - Guy Decobert, AREVA (France) - Robert Walthery, BELGOPROCESS (Belgium) - Steve Morgan, BNG (UK) - Marc Butez, CEA (France) - Jean-Louis GARCIA, CEA (France) - Jean-Pierre ROZAIN, CEA (France) - Paloma Diaz Arocas, CIEMAT (Spain) - Régis Dalmas, EDF (France) - Alexandro Rodriguez, ENRESA (Spain) - Axel Bäker, EWN GmbH (Germany) - Jan-Marie Potier, IAEA - Tom Laguardia, LA GUARDIA (USA) - Guy Collard, SCK-CEN (Belgium) - Janet Wilson, NDA (UK) - Hans Riotte, OECD/NEA - Jan Carlsson, SKB (Sweden) - Gustafson Lennart, STUDSVIK (Sweden) - Joseph E. Carrignan, TLG Services Inc (USA) - Colin Bayliss, UKAEA (UK) - WENRA

(some members to be confirmed)

Any questions regarding the Congress and the Exhibition, contact:

* SFEN • Sylvie Delaplace • decommissioning2008@sfen.fr
tel: +33 (0)1 53 58 32 16 • fax: +33 (0)1 53 58 32 11
• www.sfen.org • Address: 5 rue des Mathurins, F75015 PARIS

* CEA • Jean-Guy Nokhamzon • jean-guy.nokhamzon@cea.fr

CALL FOR PAPERS AND POSTERS

Les défis du démantèlement : une réalité industrielle ?

Decommissioning Challenges: an Industrial Reality?

new

Palais des Papes • AVIGNON (France) • September 28 to October 2, 2008

An International Conference

Meeting Organizer: SFEN
(Société Française d'Energie Nucléaire)

Sponsoring Organizations
*ANS (American Nuclear Society)
ENS (European Nuclear Society)

International Co-sponsors
IAEA (International Atomic Energy Agency)
OECD/NEA (Nuclear Engergy Agency)

Submit your abstract electronically at:
decommissioning2008@sfen.fr
Abstract Deadline: December 15, 2007

FORMAT

Sunday 28 September
From 4:00 pm, opening of: the Registration area, and the speakers and chairs' preview room

Monday 29 September to Wednesday 1 October, 9 am/6 pm
- ✓ Plenary Sessions
- ✓ Technical Sessions in parallel
- ✓ Technology Expo

Monday 29 September, 6:30 pm
- ✓ Special Poster Session

Tuesday 30 September, 8:00 pm
- ✓ Dinner of the conference

Thursday 2 October
- ✓ Technical visits

IMPORTANT DATES

DECEMBER 15, 2007
Electronic submission of 900 to 1300 words abstracts.
JANUARY 30, 2008
Author Notification of acceptance for a presentation in an oral session or in a special poster session.
MARCH 30, 2008
Electronic submission of full-lenght papers for CD-Rom publication.

Questions regarding the technical program should be sent to:
decommissioning2008@sfen.fr

- Papers are solicited in all areas about aspects of decommissioning, dismantling, decontamination and reutilization.
- Contributors are invited to submit summaries on the conference topics list. The summary should contain sufficient details to allow the merit of the paper to be judged.
- The Technical Program Committee will decide whether the paper will be presented at a technical session or as a poster. Summaries may cover technical accomplishments as well as key policy success but should represent information that has not been reported previously.
- The full-lenght papers will be published on a CD-Rom, available at the meeting.
- Papers of archival quality will be recommended for publication in special issues of Revue Generale Nucléaire (RGN).
- At least one author is required for the congress and present his or her paper in oral session or poster session.
- Once abstracts have been accepted, authors may then send their full-lenght papers for review and publication on a CD-Rom.

Conference Topics and Tracks

- Strategy and programme development
- Regulation evolution
- Techniques and process improvements
- Project feedback experience
- Material Management, recycling, reuse & site release
- Economic and financial aspects
- Stakeholders, public involvements, decommissioning projects (commercial and public owned)
- Regulatory infrastructure for decommissioning implementation
- Technologies used and needed for dismantlement
- Improved and innovative technologies for decontamination and cutting
- Improved and innovative technologies for measuring radiation
- Dose matching
- Lessons learned - industry experience
- Management of materials and wastes
- Records management
- Teaching and training in decommissioning

Abstract Instructions

Abstracts should be typed, in Microsoft Word or PDF formats. Length: - Text - 900 to 1300 words, English only, with name, affiliation, address, phone, fax and email information. Three figures and/or tables maximum to be provided separately, GIF or JPEG formats, in high definition.

The famous Saint-Benezet Bridge