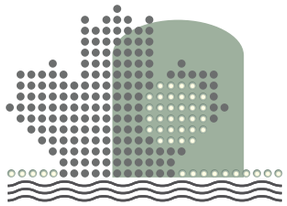
24th Annual Canadian Nuclear Society Conference

and the 28th Annual CNS/CNA Student Conference

2003 June 8-11, Toronto, Ontario, Canada



Sunday June 8

19:00-21:00
Conference Reception

Monday June 9

07:30-08:30
Speakers' Breakfast & Delegates' Continental Breakfast

08:30-12:00
Session 1: Plenary I:
Overseas and Domestic Opportunities
Co-Chairs: W. Clarke (CNA),
K. Routledge (Nuclear Safety Solutions)

11:30
Panel Discussion on Potential Markets for Advanced Reactor Designs

12:00-14:00
CNS Luncheon
Presentation of ANS Historical Landmark Award to NPD by Larry Foulke, President, American Nuclear Society, followed by his invited talk "The Status and Future of Nuclear Power in the U.S."

14:00-17:00
Session 2A: Student Session I
Co-Chairs: H.W. Bonin (Royal Military College),
H. Huynh (Hydro-Québec)

Session 2B: The Future
Co-Chairs: J.M. Hopwood (AECL),
M. Wash (Organization of CANDU Industries)

Session 2C: Safety I
Co-Chairs: P.K. Chan (Bruce Power),
V.G. Snell (AECL)

Session 2D: Control Room / Operations I
Co-Chairs: E. Davey (Crew Systems Solutions),
J. Popovic (AECL)

Session 2E: Physics
Co-Chairs: J. Donnelly (Nuclear Safety Solutions),
D.A. Jenkins (AECL)

17:00 CNS Annual General Meeting

Tuesday June 10

07:30-08:30
Speakers' Breakfast & Delegates' Continental Breakfast

08:30-12:00
Session 3A: Student Session II
Co-Chairs: E. Hussein (University of New Brunswick),
D. Shoesmith (University of Western Ontario)

Session 3B: Plant Aging and Life Extension
Co-Chairs: G. Balog (Nuclear Safety Solutions),
P.D. Thompson (New Brunswick Power)

Session 3C: Probabilistic Safety Assessment
Co-Chairs: K.S. Dinnie (Nuclear Safety Solutions),
R.K. Jaitly (AECL)

Session 3D: Control Room / Operations II
Co-Chairs: M. Léger (AECL),
M. Rhéaume (Hydro-Québec)

Session 3E: Reactors and Components I
Co-Chairs: M. Gabbani (GEC Nuclear),
E. Khon (Nuclear Safety Solutions)

Session 3F: Thermalhydraulics & Radiation
Co-Chairs: P. Gulshani and M. Stephens (AECL)

10:00-10:30 CNA Annual General Meeting followed by CNA Board Meeting

12:00-13:30
Young Generation Network's 2003 Professional Development Seminar Led by: M. McIntyre (Atlantic Nuclear Services Ltd.) Guest Speakers: Mark McIntyre: "NA-YGN – Making a Difference" and Chip Horton: "Training in Today's Nuclear Environment"

13:30-17:00
Session 4: Plenary II:
Current Issues and Future Developments
Co-Chairs: R. Osborne (GEC), J.E. Wilson (CNS)

18:00
Pre-Banquet Cocktails Followed by Nuclear Achievement Awards Banquet

Wednesday June 11

07:30-08:30
Speakers' Breakfast & Delegates' Continental Breakfast

08:25-12:00
Session 5: Plenary III:
Utility Reports and Future Expectations
Chair: B. MacTavish (CANDU Owners' Group)

11:10
Panel Discussion on Open Electricity Market, Decontrol, and Privatization,
A. Johnson (Bruce Power), B. Campbell (IMO),
B. Boland (OPG)
Chair of Panel: K. Talbot (Bruce Power)

12:00-14:00
CNS Luncheon – Presentation of CNA International Award, followed by Recipient's luncheon address

14:00-17:00
Session 6A: Student Session III
Co-Chairs: G. Evans (University of Toronto),
D. Meneley (AECL, retired)

Session 6B: Advanced CANDU Reactor
Co-Chairs: J. Koclas (École Polytechnique de Montréal), A.C.D. Wright (AECL)

Session 6C: Safety II
Co-Chairs: R. Chun (Bruce Power),
B. Shalaby (AECL)

Session 6D: Control Room / Operations III
Co-Chairs: E. Hinchley (AECL, retired),
G. Hotte (Hydro-Québec)

Session 6E: Reactors & Components II
Co-Chairs: J. Luxat (Nuclear Safety Solutions),
W. Schneider (Babcock & Wilcox Canada).

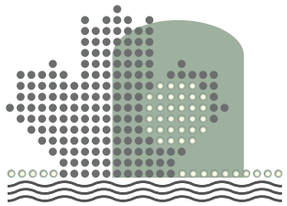
Nuclear Revival

An Environmentally Responsible Option

24ième Conférence annuelle de la Société Nucléaire Canadienne

et 28ième Conférence annuelle étudiante SNC/ANC

8–11 juin 2003, Toronto, Ontario, Canada



Dimanche 8 juin

19 h 00 - 21 h 00
Réception

Lundi 9 juin

7 h 30 - 8 h 30
Petit déjeuner des présentateurs et petit déjeuner continental des délégués

8 h 30 - 12 h 00
Session 1. Plénière I: Au Canada et dans le monde
Présidents : W. Clarke (ANC), K. Routledge (Nuclear Safety Solutions)

11 h 30
"Panel Discussion on Potential Markets for Advanced Reactor Designs" (anglais)

12 h 00 - 14 h 00
Déjeuner SNC. Présentation du prix historique de l'ANS à NPD par Larry Foulke, président, American Nuclear Society, suivie de son allocution "The Status and Future of Nuclear Power in the U.S."

14 h 00 - 17 h 00
Session 2A. Session étudiante I
Présidents : H.W. Bonin (Collège militaire royal), H. Huynh (Hydro-Québec)

Session 2B. L'avenir
Présidents : J.M. Hopwood (EACL), M. Wash (L'Association des industries CANDU)

Session 2C. Sûreté I
Présidents : P.K. Chan (Bruce Power), V.G. Snell (EACL)

Session 2D. Salle de commande/Exploitation de centrales I. Présidents : E. Davey (Crew Systems Solutions), J. Popovic (EACL)

Session 2E. Physique
Présidents : J. Donnelly (Nuclear Safety Solutions), D.A. Jenkins (EACL)

17 h 00 Assemblée générale annuelle de la SNC

Mardi 10 juin

7 h 30 - 8 h 30 Petit déjeuner des présentateurs et petit déjeuner continental des délégués

8 h 30 - 12 h 00
Session 3A. Session étudiante II
Présidents : E. Hussein (University of New Brunswick), D. Shoesmith (University of Western Ontario)

Session 3B. Vieillissement des centrales et prolongation de vie. Présidents : G. Balog (Nuclear Safety Solutions), P.D. Thompson (New Brunswick Power)

Session 3C. Analyse probabiliste de sûreté
Présidents : K.S. Dinnie (Nuclear Safety Solutions), R.K. Jaitly (EACL)

Session 3D. Salle de commande/Exploitation de centrales II. Présidents : M. Léger (EACL), M. Rhéaume (Hydro-Québec)

Session 3E. Réacteurs et composantes I
Présidents : M. Gabbani (GEC Nuclear), E. Khon (Nuclear Safety Solutions)

Session 3F. Thermohydraulique et rayonnements
Présidents : P. Gulshani et M. Stephens (EACL)

10 h 00 - 10 h 30 Assemblée générale annuelle de l'ANC suivie de la réunion du conseil d'administration de l'ANC

12 h 00 - 13 h 30
Jeune Génération – Atelier 2003 de développement professionnel. Conférenciers invités: Mark McIntyre: "NA-YGN – Making a Difference" et Chip Horton: "Training in Today's Nuclear Environment"

13 h 30 - 17 h 00
Session 4. Plénière II: Questions courantes et développement professionnel
Présidents : R. Osborne (GEC), J.E. Wilson (SNC)

18 h 00 Cocktails pré-banquet suivi du banquet "Prix canadiens pour contributions nucléaires exceptionnelles"

Mercredi 11 juin

7 h 30 - 8 h 30 Petit déjeuner des présentateurs et petit déjeuner continental des délégués

8 h 25 - 12 h 00
Session 5. Plénière III: Rapports d'exploitation et attentes futures
Président : B. MacTavish (CANDU Owners' Group)

11 h 10
"Panel Discussion on Open Electricity Market, Decontrol, and Privatization" (anglais),
A. Johnson (Bruce Power), B. Campbell (IMO), B. Boland (OPG).
Président du panel : K. Talbot (Bruce Power)

12 h 00 - 14 h 00
Déjeuner SNC – Présentation du prix international de l'ANC suivie d'une allocution du gagnant du prix

14 h 00 - 17h 00
Session 6A. Session étudiante III
Présidents : G. Evans (University of Toronto), D. Meneley (EACL, retraité)

Session 6B. Le réacteur CANDU avancé
Présidents : J. Koclas (École Polytechnique de Montréal), A.C.D. Wright (EACL)

Session 6C. Sûreté II
Présidents : R. Chun (Bruce Power), B. Shalaby (EACL)

Session 6D. Salle de commande / Exploitation de centrales III. Présidents : E. Hinchley (EACL, retraité), G. Hotte (Hydro-Québec)

Session 6E. Réacteurs et composantes II
Présidents : J. Luxat (Nuclear Safety Solutions), W. Schneider (Babcock & Wilcox Canada).

Le renouvellement nucléaire
un choix environnemental éclairé

PLENARY I: OVERSEAS AND DOMESTIC OPPORTUNITIES
PLÉNIÈRE I: AU CANADA ET DANS LE MONDE

Co-chairs/Présidents:
W. Clarke (Canadian Nuclear Association), K. Routledge (Nuclear Safety Solutions Limited)

Construction of CANDU in China: A China – Canada Success Story
K. Petrunik (Atomic Energy of Canada Limited)

Value-Added Services to CANDU Plants
B. Kakaria (Atomic Energy of Canada Limited)

Additional Nuclear Capacity for Finland
A. Toivola (Teollisuuden Voima Oy, Finland)

Presentations on New Reactor Designs:

- **The Advanced CANDU Reactor,** *D. Torgerson, (Atomic Energy of Canada Limited)*
- **Westinghouse AP 1000 Advanced Passive Plant: Design Features and Benefits**
  S.J. Walls (British Nuclear Fuels plc) and E.W. Cummins (Westinghouse Electric Company)
- **The Framatome ANP Advanced Reactor Portfolio,** *G. Hudson (Framatome ANP)*
- **Advanced Boiling Water Reactors for a New Nuclear Era**
  A. Rao (General Electric Nuclear Energy)

Co-chairs / Présidents:
H.W. Bonin (Royal Military College of Canada/Collège Militaire Royal du Canada),
H. Huynh (Hydro-Québec)

Cosmic and Solar Radiation Exposure for Aircrew Over a Solar Cycle
Marc Desormeaux (M.A.Sc.) (Royal Military College of Canada/Collège militaire royal du Canada)
Supervisor: Dr. B.J. Lewis

Le Multidétecteur HERACLES
Josiane Moisan (Maîtrise) (Université Laval); Superviseur: Dr. René Roy

Prototype de détection avec photomultiplicateur à position
Guy-Philippe Gélinas (Maîtrise) (Université Laval); Superviseur: Dr. René Roy

Développement d'un détecteur au BaF2 avec résolution isotopique
Jérôme Gauthier (Maîtrise) (Université Laval); Superviseur: Dr. René Roy

The formation of Organic Iodides from the Radiolytic Decomposition of Paint Solvents
Sarah Attia (M.A.Sc.) (University of Toronto); Supervisor: Dr. Greg Evans

Investigation of the Bruce B Delayed-neutron Detection System
O. Carrière (Undergraduate) (University of Ottawa); Supervisor: Dr. J. Roberts

Co-chairs/Présidents:
J.M. Hopwood (Atomic Energy of Canada Limited), M. Wash (Organization of CANDU Industries)

Strategic Directions for CANDU Product Development: Optimizing the CANDU Design Worldwide, *R.B. Duffey, B. Shalaby, P. Fehrenbach, R. Speranzini, P. Tighe, J. Hopwood and A.I. Miller (Atomic Energy of Canada Limited)*

A Way Forward: The Supercritical CO_2 – Molten Salt Reactor Power Plant – Part 1: The Molten Salt Reactor, *R.S. Hart (R.S. Hart & Associates), V. Dostal (Massachusetts Institute of Technology)*

A Way Forward: The Supercritical CO_2 – Molten Salt Reactor Power Plant – Part II : Super Critical CO_2 Secondary Cycle, *V. Dostal, M.J. Driscoll and P. Hejzlar (Massachusetts Institute of Technology), R.S. Hart (R.S. Hart & Associates)*

Preservation and Dissemination of CANDU Technical Knowledge (The CANTEACH Project)
W.J. Garland (McMaster University), Y. Kosarenko and M. Lightfoot (CANDU Owners' Group) D. Meneley (Atomic Energy of Canada Limited, retired)

Decommissioning ITER at Clarington, *R.L. Hemmings (CANATOM NPM), A. Bull (Acres International), M. Grey (CANATOM NPM), P. Hewitt (Aecon Construction), B. Savage (CANATOM NPM)*

PTR-1000: The Next Step, *R.S. Hart (R.S. Hart & Associates)*

Co-chairs/Présidents:
P.K. Chan (Bruce Power), V.G. Snell (Atomic Energy of Canada Limited)

Investigation of Criticality Safety for CANDU Reactor of DUPIC, Recycled Uranium, and Enriched Uranium Fuel, *J.G. Ahn, H.R.Hwang (Korea Power Engineering Company)*

Effect of the Local Air Coolers and Dousing Spray System during a Large LOCA at the Wolsong Plants, *S.D. Kim, D.H. Kim and S.Y. Park (Korea Atomic Energy Research Institute)*

Three Mile Island, Bhopal and Chernobyl: Causes and Consequences
J.V. Jovanovich (University of Manitoba)

Advanced CANDU Passive Emergency Core Cooling Using the Moderator: Review and Status, *H.F. Khartabil and G. Cheema (Atomic Energy of Canada Limited)*

Validation of TUF Modeling of the Channel Voiding Phenomenon During a Large Break LOCA Using RD-14M Experiments
P.T. Wan and W.C. Bowman (Nuclear Safety Solutions Limited) and P. Chan (Bruce Power)

CONTROL ROOM – OPERATIONS I
SALLE DE COMMANDE – EXPLOITATION DE CENTRALES I

Co-chairs/Présidents:
E. Davey (Crew Systems Solutions), J. Popovic (Atomic Energy of Canada Limited)

Incorporation of Human Factors into Design Change Processes – A Regulator's Perspective, *L. Staples and H. McRobbie (Canadian Nuclear Safety Commission)*

Experimental And Analytical Studies on CANDU Fuel Handling Control System For Operational Improvement, *J.M. Kim, B.R. Jung, Y.B. Kim, Y.H. Kim, S.J. Baik and T.S. Ro (Korea Power Engineering Company), W.K. Park and S.H. Park (Korea Hydro & Nuclear Power Company)*

Annunciation - Building Product Team Capabilities to Support Utility Operational Improvement, *R. Doucet, R. Brown, D. Trask, R. Leger, G. Mitchel and R. Judd (Atomic Energy of Canada Limited), E. Davey (Crew Systems Solutions)*

DCC Replacement Initiative - System Design Process and Standards Framework
E. Echlin Harmer, G. Mitchel and A. Hepburn (Atomic Energy of Canada Limited)

Darlington Non-licensed Operator Station Systems Training
G. Cornett and D. Burke (Ontario Power Generation)

Monte Carlo Computation of Neutron Overpower Protection Trip Set-Points Using Extreme Value Statistics, *P. Sermer, G. Balog, D. Novog, E.A. Attia and M. Levine (Nuclear Safety Solutions Limited)*

Co-chairs/Présidents:
J. Donnelly (Nuclear Safety Solutions Limited),
D.A. Jenkins (Atomic Energy of Canada Limited)

Implementation of a Full P1 Method in the Diffusion Code DONJON/NDF
B. Forget and J. Koclas (École Polytechnique de Montréal)

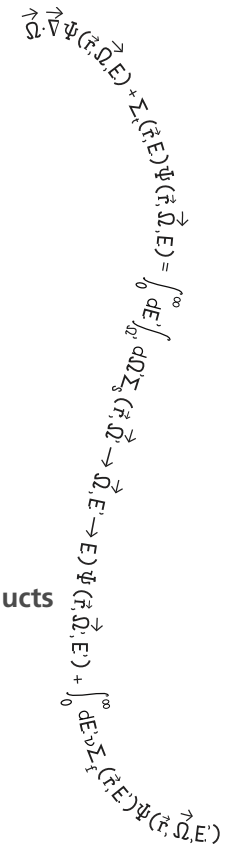
Flux Solution Improvements in DONJON
A. Hébert (École Polytechnique de Montréal)

Approximate Discontinuity Factor Evaluations in DRAGON
G. Marleau (École Polytechnique de Montréal)

Nonlinear Nodal Diffusion Theory Solver Incorporated into CANDU-PHWR Neutronics Code: SCAN, *I.S. Hong and C.H. Kim (Seoul National University)*

Reactor Power Computation Using a Model with Three Pseudo-fission Products
P. Dufour, J. Koclas and G. Marleau (École Polytechnique de Montréal)

Qinshan CANDU Project Simulation of Reactor Physics Tests at Low Power
C. Banica and E.S.Y. Tin (Atomic Energy of Canada Limited),
Chen Mingjun (Third Qinshan Nuclear Power Co.),
M.A. Shad, P. Schwanke and D.A. Jenkins. (Atomic Energy of Canada Limited)



STUDENT SESSION II / SESSION ÉTUDIANTE II

Co-chairs/Présidents:
E. Hussein (University of New Brunswick), D. Shoesmith (University of Western Ontario)

Corrosion of Carbon Steel Liners within Failed Nuclear Waste Containers
Charmaine Lee (Ph.D.) (University of Western Ontario), Z. Qin, J.J. Noël and D. Shoesmith (University of Western Ontario); Supervisor: Dr. David Shoesmith

Properties of the Passive Films on Ni-Cr-Mo Alloys,
Amy Lloyd (Ph.D.), J.J. Noël, N.S. McIntyre and D.W. Shoesmith (University of Western Ontario); Supervisor: Dr. David Shoesmith

Analysis of Film Formation on Anodically Oxidized Uranium Dioxide (UO2)
Billy Santos (Ph.D.), J.J. Noël, D.W. Shoesmith and H.W. Nesbitt (University of Western Ontario); Supervisor: Dr. David Shoesmith

Surface Electrochemistry of SIMFUEL in Dilute Alkaline Hydrogen Peroxide Solutions
Jon Goldik (Ph.D.) (University of Western Ontario), J.J. Noël, D.W. Shoesmith and H.W. Nesbitt; Supervisor: Dr. David Shoesmith

The Corrosion of Copper Nuclear Waste Containers in Aqueous Sulphide Solutions
Jared Smith (Undergraduate) (University of Western Ontario) , Z. Qin and D.W. Shoesmith; Supervisor: Dr. David Shoesmith

Polymer-Based Composite Materials for the Fabrication of Containers for the Disposal of Radioactive Waste
Laura-lee Brown (Ph.D.) (Royal Military College of Canada / Collège militaire royal du Canada); Supervisors: Dr. H.W. Bonin and Dr. V.T. Bui

Simulation of the Response Function of Bubble Detectors by Monte Carlo Methods
Martin Pierre (Ph.D.) , B.J. Lewis, L.G.I. Bennett, A.R. Green (Royal Military College of Canada/ Collège militaire royal du Canada); Supervisors: Dr. B.J. Lewis and Dr. L.G.I. Bennett

PLANT AGING & LIFE EXTENSION
VIELLISSEMENT DES CENTRALES ET PROLONGATION DE VIE

Co-chairs/Présidents:
G. Balog (Nuclear Safety Solutions Limited), P.D. Thompson (New Brunswick Power)

Assessment of the Impact on Safety with Regard to Change in Outage Interval from 12 to 18 or 24 Months at Gentilly-2 Nuclear Generating Station
R. Vaillancourt, M. Croteau, D. Komljenovic and M. Royer (Hydro-Québec), A. Bellil and K. Joober (ENAQ), G. Abdulnour and D. Messaoudi (Université du Québec à Trois-Rivières)

Planning of the Retubing of the Point Lepreau CANDU 6 Nuclear Generating Station
L. Nosella, J.M. King and D. Poff (Atomic Energy of Canada Limited) and R. Baker (New Brunswick Power)

Point Lepreau Refurbishment Project Programmable Digital Comparison (PDC) Replacement for SDS1 and SDS2, *N.M. Ichiyen and D. Chan (Atomic Energy of Canada Limited) and P.D. Thompson (New Brunswick Power)*

Life Cycle Management De-mystified
W. Schneider, W. Reinhardt, P. King and M. Addario (Babcock & Wilcox Canada)

The Chemistry of Preservation and Degradation
W. Schneider (Babcock & Wilcox Canada)

PROBABILISTIC SAFETY ASSESSMENT / ANALYSE PROBABILISTE DE SÛRETÉ

Co-chairs/Présidents:
K.S. Dinnie (Nuclear Safety Solutions Limited), R.K. Jaitly (Atomic Energy of Canada Limited)

CONTROL ROOM – OPERATIONS II
SALLE DE COMMANDE – EXPLOITATION DE CENTRALES II

Co-chairs/Présidents:
M. Léger (Atomic Energy of Canada Limited), M. Rhéaume (Hydro-Québec)

Aggregate Assessments Support Improved Operational Decision Making
R. Bauer (Ontario Power Generation)

Predictable Response from MCR Operators
R. Adams (Ontario Power Generation)

Operational Procedures - Industry Observations and Opportunities for Improvement
E. Davey (Crew Systems Solutions)

Designing for Human Performance - CANDU Electrical Panels - Then and Now
B.K. Patterson (Human Factors Practical Incorporated)

Facilitating Information Management and Access Through Process Based Navigation
P. Lafrenière, L. Lupton and R. Judd (Atomic Energy of Canada Limited)

Interim Storage of CANDU Spent Fuel
J. Mohindra (Ontario Power Generation)

REACTORS & COMPONENTS I / RÉACTEURS ET COMPOSANTES I

Co-chairs/Présidents:
M. Gabbani (General Electric of Canada Nuclear), E. Kohn (Nuclear Safety Solutions Limited)

An Approach to the CANDU Generic Component Reliability Database
B. Karimi, H. Shapiro, R.E.B. Henderson and N. Popov (Atomic Energy of Canada Limited)

North American Nuclear Maintenance Best Practices Compared to Japanese Utility Maintenance Practices, *M.L. Harazim (Framatome ANP) and B.J. Ferguson (Bruce Power)*

Modelling CANFLEX-LVRF with FACTAR and FACTAR_SS
J. Ling and P. Reid (CANDESCO), M. Tabatabai (Nuclear Safety Solutions Limited), T. Tran (Atomic Energy of Canada Limited), F. Iglesias (Bruce Power)

Laboratory and In Situ Testing of Filter Charcoal: A Reassessment of Concepts and Objectives
K.R. Weaver (Ontario Power Generation), J. C. Wren (Atomic Energy of Canada Limited)

Innovation in Nuclear Technology for the Least Product Price and Cost
R.B. Duffey (Atomic Energy of Canada Limited)

Governing Factors for Delayed Hydride Cracking in Zr-2.5Nb Tubes
Y.S. Kim (Korea Advanced Institute of Science and Technology), S.S. Kim and Y.M. Cheong (Korea Atomic Energy Research Institute), I.S. Kim (Korea Advanced Institute of Science and Technology)

Co-chairs/Présidents:
P. Gulshani (Atomic Energy of Canada Limited), M. Stephens (Atomic Energy of Canada Limited)

Low-Dose Irradiation for Controlling Prostate Cancer
J.M. Cuttler (Cuttler & Associates Inc.)

Estimate of Particle Deposition in the Sampling Line from the Stack to the Gaseous Effluent Monitor for a CANDU 6 Reactor, *K. Aydogdu (Atomic Energy of Canada Limited)*

Neutron Dose Measurement Using Tooth – An Application of Modified-Zero-Added-Dose Method
R.F.H. Khan, D.R. Boreham and W.J. Rink (McMaster University)

Development of a Predictive Code for Aircrew Radiation Exposure (PCAIRE)
B.J. Lewis, L.G.I. Bennett, A.R. Green, M.J. McCall, B. Ellaschuk, M. Pierre, A. Butler and M. Desormeaux (Royal Military College of Canada/Collège militaire royal du Canada)

Numerical Simulation of Turbulent Flow in a Rod Bundle Geometry
Y.K. Suh and M.F. Lightstone (McMaster University)

PLENARY II: CURRENT ISSUES AND FUTURE DEVELOPMENTS
PLÉNIÈRE II: QUESTIONS COURANTES ET DÉVELOPPEMENTS FUTURS

Co-chairs/Présidents:
R. Osborne (General Electric of Canada), J.E. Wilson (Canadian Nuclear Society)

Recent Developments and Future Plans re Nuclear Waste Management in Canada
E. Dowdeswell (Nuclear Waste Management Organization)

Advancing Global Health Through Innovation, *G.R. Malkoske (MDS Nordion)*

Safety Culture, *L.J. Keen (Canadian Nuclear Safety Commission)*

What's Happening at the Canadian Nuclear Association (CNA): Current Priorities
W.L. Clarke (Canadian Nuclear Association)

Opportunities for CANDU for the Alberta Tar Sands
J.M. Hopwood, D. Bock, A. Miller, S. Kuran, H. Keil, L. Fiorino, K. Hau, X.Zhou (Atomic Energy of Canada Limited) and R.B. Dunbar (Canadian Energy Research Institute)

The Evolution of the Uranium Market, *J.R. Britt (Cameco Inc.)*

Brief Updates on Topical Issues:
– Fusion and the ITER Project – The Opportunity for Canada, *M.J. Stewart (Iter Canada Host Inc.)*
– Union Innovation in Ontario's Nuclear Industry, *D. MacKinnon (Power Workers' Union)*

Canada's Neutron Beam Laboratory, *J. Root (National Research Council of Canada)*

PLENARY III: UTILITY REPORTS AND FUTURE EXPECTATIONS
PLÉNIÈRE III: RAPPORTS D'EXPLOITATION ET ATTENTES FUTURES

Chair/Président: *B. MacTavish (CANDU Owners' Group)*

OPG Nuclear Performance – Status & Outlook
P.R. Charlebois (Ontario Power Generation)

Bruce Power - The First 24 Exciting Months
R. Mottram (Bruce Power)

New Brunswick Power Business and Operations Update
R.M. White, E.R. Eagles, J.J. McCarthy and W.S. Pilkington (New Brunswick Power)

Possible Refurbishment of Point Lepreau – Update 3
R.M. White, E.R. Eagles, C.N. Hickman, R. Baker and P.D. Thompson (New Brunswick Power)

Gentilly-2 Refurbishment Pre-project, *R. Pageau (Hydro-Québec)*

Plant Life Extension of First Generation CANDU Plant (KANUPP) - Experience and Challenges
A. Zia, W.M. Butt and M.Q. Hoda (Pakistan Atomic Energy Commission)

Panel Discussion on Open Electricity Market, Decontrol, and Privatization
A. Johnson (Bruce Power), B. Campbell (IMO), B. Boland (Ontario Power Generation)
Chair of Panel: K. Talbot (Bruce Power)

Co-chairs/Présidents: *G. Evans (University of Toronto), D. Meneley (AECL, retired)*

Design of a Small Nuclear Reactor for Extending the Operational Envelope of the Victoria Class Submarine, *C.J.P. Cole (Ph.D.) (Royal Military College of Canada/ Collège militaire royal du Canada); Supervisor: Dr. H.W. Bonin*

Optimal Design of CANDU Advanced Fuel Bundles for the Recycling of Weapon-grade Plutonium from Discarded Warheads, *Francis G. Martel (MASc) (Royal Military College of Canada/ Collège militaire royal du Canada); Supervisor: Dr. H.W. Bonin*

The Fouling of Alloy-800 Heat Exchanger Tubes by Nickel Ferrite
Jennifer Cossaboom (MASc) and Dr. D.H. Lister (University of New Brunswick)
Supervisor: Dr. D.H. Lister

Dynamic Modeling and Controller Parameter Analysis of a Recirculating Cooling Water System, *Yang Yang, (MASc) and Dr. Jin Jiang (University of Western Ontario)*

Probabilistic Safety Assessment for Digital Instrumentation and Control Systems in Nuclear Power Plants – A Review, *Lixuan Lu (Ph.D.) and Dr. Jin Jiang (University of Western Ontario)*

A Literature Review on New Reactor Control Methods
Hooman Javidnia (Ph.D.) and Dr. Jin Jiang (University of Western Ontario)

ADVANCED CANDU REACTOR / RÉACTEUR CANDU AVANCÉ

Co-chairs/Présidents:
J. Koclas (École Polytechnique de Montréal), A.C.D. Wright (Atomic Energy of Canada Limited)

Licensing the ACR-700 in the USA
V. Langman (Vince Langman and Associates for Atomic Energy of Canada Limited), R. Ion (Atomic Energy of Canada Limited), C. Reid (Bechtel Power Corporation for Atomic Energy of Canada Limited), V.G. Snell (Atomic Energy of Canada Limited)

Development and Qualification of AECL Computer Codes for ACR Safety Analysis Applications
N. Popov, D. Wren, V.G. Snell, A. White and P. Boczar (Atomic Energy of Canada Limited)

Classification and Ranking of Fundamental Phenomena for Validation of ACR Computer Codes, *A. Abdul-Razzak, A.C.D. Wright, N.K. Popov and D. Wren (Atomic Energy of Canada Limited)*

Validation Matrices for the Computer Codes Used for ACR Safety Analysis
A.C.D. Wright, A. Abdul-Razzak, N. Popov, D. Wren, H. Chow and S. Girgis (Atomic Energy of Canada Limited)

ACR-700 Core Calculations with Various Numbers of Energy Groups
M. Boubcher and H. Chow (Atomic Energy of Canada Limited), R. Chambon (École Polytechnique de Montréal)

Advanced CANDU Reactor (ACR-700) Heat Transport System Design Assessment
M.A. Aamir, J.W. Love, K.F. Hau and A. Lai (Atomic Energy of Canada Limited)

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Reactor Safety Training for Decision Makers
C.K. Scott (Atlantic Nuclear Services Limited)

Bruce Power's Approach to the Baseline Implementation of a Safe Operating Envelope Program
V. Costiuc (Bruce Power)

Estimation of System Reliability in Hostile Environment Using Simulation
T. Houasnia, G. Abdulnour and D. Messaoudi (Université du Québec à Trois-Rivières), R. Vaillancourt and D. Komljenovic (Hydro-Québec)

GOTHIC-IST 6.1b Code Validation Exercises Relating to Heat Removal by Dousing and Air Coolers in CANDU Containment,
S. Ramachandran, M. Krause and T. Nguyen (Atomic Energy of Canada Limited)

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Darlington Reactivity Management Improvement Plan
R. Bauer (Ontario Power Generation)

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Constructability – from Qinshan to ACR
M. Elgohary and N. Fairclough (Atomic Energy of Canada Limited)

Qinshan CANDU Project – Open Top Construction Model
K. Petrunik, K. Wittann, A. Khan, R. Ricciuti, A. Ivanov and S. Chen (Atomic Energy of Canada Limited)

Advanced CANDU Reactor – Emergency Core Cooling System
B. Lekakh, M.R. Lin, K.F. Hau, M. Bonechi, M.A. Aamir, S. Ford and J. Yan (Atomic Energy of Canada Limited)

Improving the Reliability Modeling Concerning the Emergency Core Cooling System at Gentilly-2 Nuclear Generating Station, *D. Komljenovic, R. Vaillancourt and M. Croteau (Hydro-Québec), G. Abdulnour and D. Messaoudi (Université du Québec à Trois-Rivières)*

Pre-Service Proof Pressure and Leak Rate Tests for the Qinshan CANDU 6 Project Reactor Buildings, *K. Petrunik, A. Khan, R. Ricciuti, A. Ivanov and S. Chen (Atomic Energy of Canada Limited)*