

NUCLEAR WASTE CONSULTANTS INC.

8341 So. Sangre de Cristo Rd., Suite 6
Littleton, Colorado 80127
(303) 973-7495

August 18, 1986

009/PM/5.005
RS-NMS-85-009
Communication No. 89

U.S. Nuclear Regulatory Commission
Division of Waste Management
Geotechnical Branch
MS 623-SS
Washington, DC 20555

Attention: Mr. Jeff Pohle, Project Officer
Technical Assistance in Hydrogeology - Project B (RS-NMS-85-009)

Re: Task 5 - 2nd International Conference on Radioactive Waste Management

Dear Mr. Pohle:

Nuclear Waste Consultants requests permission for Mark Logsdon to attend the 2nd International Conference on Radioactive Waste Management, September 7-11, in Winnipeg, Manitoba, Canada. The conference is sponsored jointly by the Canadian Nuclear Society and the American Nuclear Society. A copy of the Conference Program is attached for your reference. Major topics to be discussed at the conference include:

- o Site Hydrogeology and Geochemistry;
- o Site Investigations and Geomechanics;
- o Regulatory Requirements and Licensing of Radioactive Waste Facilities;
- o HLW Hydrogeologic and Biosphere Modeling;
- o Tour of the Whiteshell NRE Underground Research Laboratory.

Additional technical and plenary sessions will address a variety of other relevant HLW topics. For details of the technical sessions, please see the attached program.

NWC proposes that Mr. Logsdon attend the conference under Task 5 of Contract RS-NMS-85-009. Cost estimates include:

- o Registration: \$321.90 US;
- o Airfare: \$246.25 US;
- o Hotel/Meals: Actual expenses.

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If permission is granted under the current contract, NWC will provide the NRC with a copy of the conference proceedings and a trip report, per the terms of the contract.

If you have any questions about this matter, please contact me immediately.

Respectfully submitted,
NUCLEAR WASTE CONSULTANTS, INC.


Mark J. Logsdon, Project Manager

Att: Summary of Conference Program

MONDAY, SEPTEMBER 8

08:30 - 10:00 PLENARY SESSION: Opening of the Conference by E.L.J. Rosinger, Conference Chairperson and welcoming remarks by S. Hatcher, Honourary Chairman of the Conference. Keynote Address by W.T. Hancox, Vice President Waste Management AECL and overview presentation by Dr. S. Mann, Department of Energy, USA on the Crystalline Rock Project

FIVE PARALLEL TECHNICAL SESSIONS

SESSION 1A - STORAGE AND DISPOSAL OF RADIOACTIVE WASTES

- 10:15 The Hades Demonstration Project for Radwaste Disposal in Deep Clay
L.H. Baetsle, A. Bonne, P. Dejonghe, SCK/CEN Mol, Belgium
- 10:45 Disposal of Low and Intermediate Level Waste in Rock Caverns
N.L. Mansson, M. Bechai, P.K.M. Rao, Ontario Hydro, Toronto
- 11:15 Design and Performance Assessment of an Above-Grade Low Level Waste Disposal Structure
R.R. Blickwedehl, Dames & Moore, New York
- 12:00 Lunch
- 13:30 Inground Storage Containers at BNWP
P.J. Armstrong, Ontario Hydro, Toronto
- 14:00 The Concept Assessment Engineering Study (CAES) of Nuclear Fuel Waste Disposal Centres (NFWDC): Study Plan and Technical Specifications
P. Baumgartner, AECL, Whiteshell
- 14:30 The Development of Radioactive Waste Disposal Sites in the United Kingdom
H. Beale, Nirex Limited, U.K.
- 15:00 Disposal Concepts for Radioactive Wastes in Clay or Till Deposits
M. Bechai, N.L. Mansson, P.K.M. Rao, Ontario Hydro, Toronto

15:30 Development of Waste Containment Structure for Niagara Falls Storage Site
M.G. Jones, P.E. Barber, R.B. Barber, Bechtel National, Inc., Oak Ridge, Tennessee

16:00 Radioactive Waste Management at the Nevada Test Site
N.E. Rothermich, Reynolds Electrical & Engineering Co. Inc., Las Vegas

16:30 A Concrete Cask Design for Storage, Transportation and Disposal
J. Freire-Canosa, S.J. Naqvi, G.S. Kellay, G.A. Mentas, Ontario Hydro, Toronto

this should be interesting!

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SESSION 1B - SITE HYDROGEOLOGY AND GEOCHEMISTRY

- 10:15 Vertical Migration of Iodine, Technetium and Neptunium in Pea
M.I. Sheppard, D.H. Thibault, AECL, Whiteshell
- 10:45 Hydrogeologic Studies for CRNL's Proposed Shallow Land Burial Site
R.W.D. Killey, J.S. Devgun, AECL, Chalk River
- 11:15 Geotomography to Map Water Movement in a Nuclear Waste Repository
W. Daily, A. Ramirez, Lawrence Livermore National Laboratory, California
- 12:00 Lunch
- 13:30 Hydrogeologic Setting of the Cluff Mining Tailings Management Area
W.A. Meneley, W.A. Meneley Consultants Ltd.
T.M.R. Meadley, Amok Limited, Saskatchewan
- 14:00 Investigations in Radionuclide Retardation at ASSE Salt Mine
W. Bode, Institut fuer Tieflagerung, Germany
- 14:30 Surface Chemistry of Radionuclide-Mineral Interactions
R.I. Haines, D.G. Owen, D.C. Doern, AECL, Whiteshell
- 15:00 On Groundwater Travel Times in Granite and Gneiss
O. Brotzen, FBAB, Sweden

- 15:30 Comparison of Surface and Downhole Electrochemical Measurements in Canadian Shield Groundwaters
J.D. Ross, M. Gascoyne, AECL, Whiteshell
- 16:00 Radionuclide Migration Studies in the Laboratory
T.T. Vandergraaf, D.M. Grondin, P. Vilks, D.J. Drew, AECL, Whiteshell
- 16:30 Carbonate Sorption Capacity of Iron Hydroxide and Soil Material
E.J. Reardon, R.D. Kelleman, R.W. Gillham, H. Johnston
University of Waterloo, Ontario

SESSION 1C - TRANSPORTATION OF HIGH LEVEL RADIOACTIVE WASTE

- 10:15 Transuranic Package Transporter (TRUPACT) - Large Volume Shipments of Transuranic Waste Will Begin in 1988
L.H. Harmon, J.M. McGough, U.S. Department of Energy
- 10:45 Design and Testing of a Cask for Transporting Irradiated CANDU Fuel
K.E. Nash, Ontario Hydro, Toronto
- 11:15 Rail Transport of Commercial Spent Fuel in the United States
J.E. Van Hoomissen, B.F. Judson, General Electric Company, San Jose, California
- 12:00 Lunch
- 13:30 Systems for Transporting Used CANDU Fuel by Road, Rail and Water
A.P. Shetler, Ontario Hydro, Toronto
- 14:00 Transuranic Waste Transporter Tracking System
J.J. Tappen, Westinghouse Electric Corporation, Albuquerque, New Mexico
- 14:30 Radioactive Materials Packaging (RAMPAC)
K.L. Driscoll, Westinghouse Electric Corporation, Albuquerque, New Mexico

- 15:00 Spent Fuel Storage and Transportation Experience for the Idaho National Engineering Laboratory
C.P. Gertz, D.H. Schoonen, U.S. Department of Energy, Idaho Falls, Idaho

SESSION 1D - BUFFER AND BACKFILL MATERIALS

- 10:15 Strength of and Volume Changes in a Sand-Bentonite Buffer
J. Graham, B.C. Sun, University of Manitoba, Winnipeg, Manitoba
M.N. Gray, D.A. Dixon, AECL, Whiteshell
- 10:45 Erosion of Clay-Based Grouts in Simulated Rock Fractures
H.T. Chan, Ontario Hydro, Toronto
- 11:15 Backfill Formulations for a Nuclear Waste Disposal Vault
R.N. Yong, P. Boonsinsuk, G. Wong, McGill University, Quebec
- 12:00 Lunch
- 13:30 Evaluation of Backfill Materials for a Shallow-Depth Repository
L.P. Buckley, G.M. Arbique, N.B. Tosello, B.L. Woods
AECL, Chalk River
- 14:00 Pneumatic Emplacement of Basalt-Bentonite Packing
M.J. Leroch, J.M. Markowitz
Westinghouse Electric Corporation, Madison, Pennsylvania
- 14:30 Ionic Diffusion in Compacted Bentonite-Based Materials
S.C.H. Cheung, D.W. Oscarson, M.N. Gray, AECL, Whiteshell
- 15:00 Pressures Acting on Waste Containers in Bentonite-Based Materials
D.A. Dixon, M.N. Gray, P. Baumgartner, G.L. Rigby
AECL, Whiteshell
- 15:30 Hydraulic Compression of a Shaft Backfill at the Backfill/Rock Interface
H.T. Chan, H.S. Radhakrishna, Ontario Hydro, Toronto

SESSION 1E - PUBLIC ATTITUDES

- 10:15 Ideology, Risk and Public Consultation: Planning for Canada's Nuclear Waste
P. Falconer
- 10:45 Public Consultation and the Canadian Nuclear Fuel Waste Management Program
Anderson
- 11:15 The Ontario Public's Opinion About Nuclear Fuel Waste Management
M.A. Greber, AECL, Whiteshell
- 12:00 Lunch
- 13:30 Tale of Three Cities
D.J. Lechel, Roy F. Weston, Inc., Albuquerque, New Mexico
- 14:00 Social Considerations Relative to the Siting of a Low-Level Radioactive Waste Disposal Facility in Canada
B. Franklin, AECL, Ottawa

SESSION 1E(i) - ENVIRONMENTAL AND SAFETY ISSUES

- 14:30 Research into the Long-Term Environmental Effects of Uranium Tailings
R.D. John, CANMET, Ottawa
- 15:00 Approaches to Risk Assessment for Canadian Uranium Mill Tailings
R.W. Holmes, Energy, Mines and Resources Canada, Ottawa
D.B. Chambers, R.A. Knapp, M.L. Murray
Senes Consultants Limited, Ontario
- 15:30 Radionuclide and Heavy Metal Concentrations in Water, Sediments and Biota in the Vicinity of Cluff Mining Operations
T.P. Hynes, T. Meedley, N.A. Thompson, R.M. Schmidt
Amok Ltd, Saskatoon, Saskatchewan
- 16:00 Uranium Tailings Management and Waste Waters Control at Key Lake
L.S. Price, Key Lake Mining Corporation, Saskatoon, Saskatchewan

TUESDAY, SEPTEMBER 9, 1986

- 08:30 - 10:00 PLENARY SESSION:
Overview presentations by speakers from:
J.P. Olivier, Organization for Economic Cooperation and Development/Nuclear Energy Agency (OECD/NEA) on International Cooperation on Nuclear Waste Management
M. Ginnif, Nirex, UK on Progress on Developing Low Level Waste Management Facilities
K.D. Closs, K. Einfeld, Federal Republic of Germany on Activities on Spent Fuel Disposal

5 PARALLEL TECHNICAL SESSIONS

SESSION 2A - SITE INVESTIGATIONS AND GEOMECHANICS

- 10:15 Site Investigation for Intermediate and High Level Waste Disposal
H. Issler, C. McCombie, National Genossenschaft fur die Lagerung Radioaktiver (NAGRA) Switzerland
- 10:45 Evaluation of the Irad Flexible Probe Sonic Extensometer
H.D. Glenn, W.C. Patrick, N.L. Rector, L.S. Butler
Lawrence Livermore National Laboratory, California
- 11:15 Mechanical and Thermomechanical Behaviour of Lac du Bonnet Granite: Some Laboratory Observations
A. Annor, CANMET and R. Jackson, AECL, Ottawa
- 12:00 Noon
- 13:30 Testing of Methods and Equipment for Deep Borehole Studies
T. Aikas, Saanio & Laine Ltd., Finland
A. Nikula, V. Ryhanen, Industrial Power Company Ltd., Finland
- 14:00 In-Situ Experiments in Fractured Granite
M. Kumata, H. Kimura, K. Shimooka, A. Nakagoshi, S. Muraoka, H. Nakamura, Japan Atomic Energy Research Institute, Japan
- 14:30 Rock Displacements Measured During URL Shaft Sinking
P.M. Thompson, P.A. Lang, AECL, Whiteshell

- 15:00 Effects of Explosives on Mineby Gauges Used at Spent Fuel Test - Climax
T.R. Butkovich, Lawrence Livermore National Laboratory, California
- 15:30 An Exact Similarity Solution for Coupled Deformation and Fluid Flow in Discrete Fractures
A.M. Wijesinghe, Lawrence Livermore National Laboratory, California
- 16:00 Structural Discontinuity Mapping by Geophysical Methods
N.M. Soonawala, J.G. Hayles, AECL
- 16:30 Sensitivity Studies of Rock Mass Parameters Around Repository Underground Openings in Basalt
W.W. Chen, E.J. Dempster
Rockwell International, Richland, Washington, U.S.A.

SESSION 2B - TRANSPORTATION OF LOW LEVEL RADIOACTIVE WASTE

- 10:15 Safe and Compact Storage and Transportation of Tritium as Titanium Tritide
J.M. Miller, W.J. Holtslander, W.R. Taylor, AECL, Chalk River
- 10:45 Impact of Transportation Considerations in the Selection of Low Level Waste Repositories
A.K. Bhattacharyya, R. Janati
Department of Environmental Resources, Harrisburg, PA
- 11:15 Preparations to Transport, Receive, and Store the Damaged TMI-2 Core
R.C. Schmitt, H.W. Reno, Idaho National Engineering Laboratory, Idaho Falls, Idaho
- 12:00 Lunch
- 13:30 The Impacts from a Monitored Retrievable Storage Facility on Transportation
G.W. McNair, Pacific Northwest Laboratory, Richland, Washington

- 14:00 An Historical Summary of Transportation Accidents and Incidents Involving Radioactive Materials
C.E. Coppin, Westinghouse, Albuquerque, New Mexico
- 14:30 The Projected Impacts of Transportation of Radioactive Material to the First United States Repository Site - An Overview
J. Cashwell, S. Neuhauser, Sandia National Laboratories, Albuquerque, New Mexico
P.C. Reardon, Science Applications Inc., Albuquerque, NM
G. McNair, Battelle Pacific Northwest Labs, Richland, WA

- 15:00 Ocean Transportation of Low-Level Radioactive Waste Off Taiwan
C. Chung, Institute of Nuclear Science, Taiwan
C.M. Tsai, Atomic Energy Council, China

SESSION 2C - CONCRETE APPLICATIONS AND TECHNOLOGY

- 10:15 Characterization of Radioactive Wastes Incorporated in a Cement Matrix
E.R. Merz, D. Dyckerhoff, Institute of Chemical Technology, Germany
- 10:45 Immobilization of Cladding-Removal Waste in a Cement-Based Grout
T.L. Sams, E.W. McDaniel, O.K. Tallent, T.M. Gilliam
Oak Ridge National Laboratory, Oak Ridge, Tennessee
- 11:15 Development of Concrete Mixtures for Radioactive Waste Disposal
R.D. Hooton, Ontario Hydro, Toronto
- 12:00 Lunch
- 13:30 Effect of Cement on Radioactive Waste-Form Performance in Multi-Component Systems Tests at 200 C
R.B. Heimann, AECL, Whiteshell
- 14:00 Radionuclide Isolation Efficiency of Normal and High Density Concrete
N.C. Burnett, Ontario Hydro, Toronto

SESSION 2C(i) - ECONOMIC ASSESSMENT OF WASTE FACILITIES

14:30 Computer Modeling of the Central Storage of Used Fuel
B.R. Reynolds, Ontario Hydro, Toronto

15:00 Safety and Cost Assessments for Disposal in a Prototype
Shallow Land Burial Facility
D.G. Hardy, D.F. Dixon, AECL, Chalk River

15:30 Cost Calculations for the Swedish Waste Management System
H. Forsstrom, Swedish Nuclear Fuel and Waste Management Co.

SESSION 2D - REGULATORY REQUIREMENTS AND LICENSING OF
RADIOACTIVE WASTE FACILITIES

10:15 Regulatory Criteria for the Long-Term Management of
Radioactive Wastes
K.P. Wagstaff, AECB, Ottawa

10:45 Regulatory Compliance at the Durango, Colorado Umtra Project
Site
D.J. Lechel, Roy F. Weston, Inc., Albuquerque, New Mexico

11:15 Various Strategies in the Management of Wastes from Uranium
Mining and Milling
L. Farges, J. Pradel

12:00 Lunch

13:30 Criteria for Remedial Works at Inactive Uranium Mill Tailings
Piles
J.A. Caldwell, Jacobs Engineering, Albuquerque, New Mexico
T.R. Wathen, Morrison-Knudsen Engineering

14:00 Licensing of Uranium Mine and Mill Waste Management Systems
L.G. Channey, AECB, Ottawa

14:30 Application for Alternative Disposal of Very Low Level
Radioactive Waste
C. Lan, Duke Power Company, Charlotte, North Carolina

15:00 Environmental Regulation of Uranium Mining in Saskatchewan
R.G. Barsi, Saskatchewan Environment, Prince Albert

15:30 Decommissioning of Uranium Mines and Mills - Canadian
Regulatory
Approach and Experience
W. Whitehead, AECB, Ottawa

SESSION 2E - LOW LEVEL WASTE MODELLING

10:15 Preliminary Dose Assessment of On-Site Burial of
Decommissioning Waste
S.B. Russell, Ontario Hydro, Toronto

10:45 A User-Friendly Approach to Dosimetry Modelling: The Use of
a Commercial Spreadsheet to Determine the Radiological
Impact of Municipal Radioisotope Waste Disposal
W. Eedy, P. McKee, W. Snodgrass, Beak Consultants Limited,
Mississauga, Ontario
R. Maloney, AECB, Ottawa

11:15 Safety Assessment for A Double-Barrier In-Ground Waste
Storage Container
L.L. Wang, Ontario Hydro, Toronto

12:00 Lunch

13:30 The Cosmos Assessment Code for a SLB Repository at CRNL
C.I. Bretzlaff, R.G. Jarvis, J-M. Laurens, S.R. Wilkinson
AECL, Chalk River

14:00 Modelling the Long-Term Evolution of Radioactive Waste
Disposal Environments for Use in Post-Closure Probabilistic
Risk Assessment
C.J.G. Frizelle, J.E. Mutton, P.S. Upton, Dames & Moore,
London, UK
B.G.J. Thompson, Department of the Environment, London, UK

SESSION 2E(i) - MINE AND MILL TAILINGS MODELLING

14:30 Probabilistic Model for Performance Assessment of Long-Term
Effects of Uranium Tailings
R.W. Holmes, Energy, Mines and Resources Canada, Ottawa
D.B. Chambers, B.E. Halbert, D.I. Beals
SENEC Consultants Limited, Ontario

15:00 Seepage and Transport Modelling for a Uranium Tailings Dam in Northern Saskatchewan
L. Lam, S.L. Barbour, University of Saskatchewan
W.A. Meneley, W.A. Meneley Consultants Ltd, Saskatoon, Saskatchewan

15:30 Acidification and Radionuclide Leaching in Unsaturated Uranium Mill Tailings
T.W. Constable, Environment Canada, Ontario
W.J. Snodgrass, IEC Beak Consultants Ltd., Ontario

16:00 A Modelling Study of Alternatives for the Management of Uranium Refinery Wastes
A. Buchnea, MacLaren Plansearch Inc., Ontario
J.B. Davis, Golder Associates Ltd
D. Moffett, Eldorado Resources Ltd

16:30 The Practical Application of Variance Reduction Techniques in Probabilistic Assessments
J.R. Walker, AECL, Whiteshell

WEDNESDAY, SEPTEMBER 10, 1986

08:30 - 10:00 PLENARY SESSION:
Overview presentations by speakers from:
H. Forsstroem, SKB, Sweden on Progress of the Swedish Waste Management Program
J.A. Turi, Office of Nuclear Energy, USA on Uranium Mill Tailings Remedial Action Project
A.R. Morrish, Eldor Mines, Canada on In-Pit Tailings Disposal

5 PARALLEL TECHNICAL SESSIONS

SESSION 3A - MATRIX MATERIALS AND CONTAINERS DESIGN

10:15 Investigations of Metal Matrices for Nuclear Fuel Waste Disposal
P. Mani Mathew, AECL, Whiteshell

10:45 Localized Corrosion of Nickel Alloys in Chloride Environments
J. Postlethwaite, R.J. Scouler, M.H. Dobbin
University of Saskatchewan, Saskatoon, Saskatchewan

11:15 Welding and Inspection of Nuclear Fuel Waste Disposal Container
P.Y.Y. Maak, M.D.C. Moles, Ontario Hydro, Toronto

12:00 Lunch

13:30 The SYNROC Demonstration Plant
D.M. Levins, K.D. Reeve, E.J. Ramm, J. Kable, G. Tapsell
Australian Atomic Energy Commission
A.E. Ringwood, S.E. Kesson, Australian National University

14:00 Hydrothermal Dissolution of Non-Metallic Materials for Nuclear Fuel Immobilization Containers
M. Onofrei, D.K. Raine, AECL, Whiteshell

14:30 Structural Performance Assessment of Supported-Shell Fuel Isolation Containers
L.J. Hosaluk, AECL, Whiteshell

15:00 The Corrosion Behaviour of Copper under Simulated Waste Disposal Conditions
F. King, C.D. Litke, AECL, Whiteshell

15:30 Evaluation of Synroc-C as a Second Generation Waste Form
J.W. Shade, Battelle, Richland, Washington

16:00 Titanium Corrosion under Canadian Nuclear Fuel Waste Disposal Conditions
B.M. Ikeda, AECL, Whiteshell

SESSION 3B - ANALYTICAL CHEMISTRY AND FUEL DURABILITY

10:15 Computer Modelling of Alpha-Radiolysis of Aqueous Solutions in Contact with Used UO₂ Fuel
J.C. Tait, L.H. Johnson, AECL, Whiteshell

10:45 Storage of Irradiated CANDU Fuel in Dry and Moist Air
K.M. Wasywich, AECL, Whiteshell
J. Freire-Canosa, Ontario Hydro, Toronto

11:15 Effect of Alpha Radiolysis of Water on CANDU Fuel Oxidation
S. Sunder, D.W. Shoemith, L.H. Johnson, M.G. Bailey,
G.J. Wallace, AECL, Whiteshell

12:00 Lunch

13:30 Solubility of Unirradiated Uranium Oxide in Granitic
Groundwater
K. Ollila, Technical Research Centre of Finland, Finland

14:00 Chemistry of Uranium Colloids in Groundwater Environments
C.H. Ho, N.H. Miller, AECL, Whiteshell

14:30 Reducing Radiation Doses from I29I Disposal by Isotopic
Dilution
L.H. Johnson, D.M. LeNeveu, AECL, Whiteshell

15:00 Characterization of Corrosion Deposits and the Assessment of
Fission Products Released from used CANDU Fuel
J.D. Chen, R. Taylor, D.G. Hartrick, N.L. Pshyshlak,
K.M. Wasysich, A. Rochon, AECL, Whiteshell
P.A. Beeley, Queen's University, Kingston, Ontario
K.I. Burns, AECL, Chalk River

SESSION 3C - HIGH LEVEL WASTE HYDROGEOLOGIC MODELLING

10:15 Finite-Element Thermohydrogeological Modelling for Canadian
Nuclear Fuel Waste Management
T. Chan, N.W. Scheier, J.A.K. Reid, AECL, Whiteshell

10:45 Groundwater Flow and Radionuclide Transport Analyses for a
Crystalline Reference Area
A. Brandstetter, A. Andrews, J.M. Doesburg, A.B. Gureghian,
L.L. Loebel, C.J. Noronha, S.B. Steidl
Battelle Project Management Division, Columbus, Ohio

11:15 The Effect of Precipitation on Radionuclide Release from Used
Fuel
F. Garisto, N.C. Garisto, AECL, Whiteshell

12:00 Lunch

13:30 The Effect of Colloids on Actinide Migration
P. Vilks, D.J. Drew, AECL, Whiteshell

14:00 A Conceptual Hydrogeologic Model for Performance Assessment
in the Southeastern USA
K. Wilson, J. Harris, A. Severini
The Earth Technology Corporation, Long Beach, California
M. Deyling, Battelle Project Management

14:30 Mechanism of Oxidation and Dissolution of CANDU Fuel in
Groundwater Environments
S. Sunder, D.W. Shoemith, M.G. Bailey, G.J. Wallace
AECL, Whiteshell

SESSION 3C(i) - HIGH LEVEL WASTE BIOSPHERE MODELLING

15:00 A Time-Dependent Biosphere Model for Assessing Nuclear Fuel
Waste Disposal
P.A. Davis, AECL, Whiteshell

15:30 Predicting Human Food and Water Ingestion Rates and
Inhalation Rates for Use in Environmental Assessment Models
R. Zach, AECL, Whiteshell

16:00 Pathway-II: A Computer Code for Radiological Environmental
Pathways Analysis
R.M. Zimmermann, T.F. Kempe, K.J. Donnelly, Ontario Hydro

16:30 Refining Generic Plant/Soil Concentration Ratios
S.C. Sheppard, AECL, Whiteshell

SESSION 3D - HIGH LEVEL WASTE MISCELLANEOUS MODELLING

10:15 A Natural Analog for a Fuel Waste Disposal Vault
J.J. Cramer, AECL, Whiteshell

10:45 A Probabilistic Risk Assessment of an Underground Radioactive
Waste Disposal Facility
B.G.J. Thompson, Department of the Environment, London, UK

- 11:15 Modelling Aspects in Vault Chemistry
N.C. Garisto, AECL, Whiteshell
- 12:00 Lunch
- 13:30 Effect of Joints on Uplift Above a Nuclear Waste Repository
B.W. Dial, D.E. Maxwell, Science Applications International Corporation, California
E.G. McNulty, Office of Nuclear Waste Isolation
M. Reeves, INTERA Technologies, Inc.

SESSION 30(i) - RADIOACTIVE WASTE PROCESSING

- 14:00 Management of Combustible Radioactive Wastes in Ontario Hydro
L.S. Krochmalnek, R. Kohout, Ontario Hydro, Toronto
- 14:30 Development and Operation of Radium 226 Removal
Hynes
- 15:00 Demonstration of a Continuous Pyrohydrolysis Waste Volume Reduction System
C.D. Desjardins, Research and Productivity Council, Fredericton, N.B.
L.P. Buckley, AECL, Chalk River
- 15:30 Design Considerations for a Hot Cell Overpack Welder for the Waste Isolation Pilot Plant
B.R. Nair, R.V. Richardson
Westinghouse Electric Corporation, Madison, Pennsylvania
J. Mullally
Westinghouse Electric Corporation, Carlsbad, New Mexico
- 16:00 Studies on Tritiated Waste Management System
H. Amano, Institute of Plasma Physics, Nagoya, Japan
T. Okamoto, T. Utsunomiya, T. Moriya, T. Shimbo
Mitsui Construction Co., Ltd., Japan
- 16:30 Geological Investigation for High Level Radioactive Waste Isolation in Japan
K. Doi, M. Yamakawa
Power Reactor & Nuclear Fuel Development Corporation, Tokyo

SESSION 3E - DECOMMISSIONING WASTE FACILITIES:

- 10:15 Proposed Decommissioning Strategy for the Cluff mining Tailings Management Area
T.M. R. Meadley, Amok Limited, Saskatoon, Saskatchewan
W.A. Meneley, W.A. Meneley Consultants Ltd
- 10:45 Geotechnical Considerations of the Salt Lake City Umtra Project
R.E. Rager, Sergeant Hauskins and Beckwith, Albuquerque, NM
M.W. Roshek, Utah Dept of Transportation, Salt Lake City, Utah
- 11:15 Conceptual Design of Remedial Actions at Three Navajo Sites
S.C. Knight, V. Fry, Jacobs Engineering, Albuquerque, NM
R. Sena, US Department of Energy
- 12:00 Lunch
- 13:30 Design Considerations for Stabilization of Inactive Uranium Mill Tailings Piles
M.J. Bone, Jacobs Engineering Group Inc., Albuquerque, NM
- 14:00 Alternative Site Cover Design Comparisons for the Gunnison Umtra Project
M.J. Bone, Jacobs Engineering Group Inc., Albuquerque, NM
- 14:30 Cost Benefit Analysis of Close-out Options for a Uranium Mill Tailings Area
M.J. Roberts, A. Buchnea, MacLaren Plansearch Inc., Ontario
M.P. Fillion, Eldorado Resources Ltd.

SESSION 3E(i) - FUTURE OPTIONS FOR WASTE MANAGEMENT

- 15:00 Proposed Management Procedure for Low-Level Radioactive Wastes from Italian Facilities
L. Petrella, A. Russo, National Research Council, Rome, Italy
- 15:30 Ontario Hydro's Options for Long Term Management of Radioactive Wastes
P.K.M. Rao, Ontario Hydro, Toronto
- 16:00 An Analysis of the Need for Low-level Radioactive Waste Disposal in Canada and the Alternatives for Establishing Disposal Facilities
D.J. Cameron, B.J. Franklin, R.W. Pollock, R.L. Zelmer
AECL, Ottawa