

November 30, 2002

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U.S. Nuclear Regulatory Commission,
Document Control Desk,
Washington, D.C. 20555

Attention : Mr. R. Pascarelli,
Project Manager, ACR

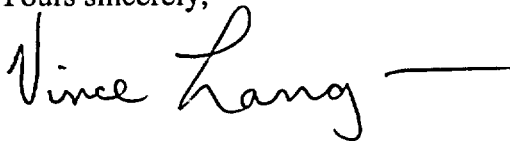
Reference: 1. Letter to S.J. Collins from R. Van Adel, June 19, 2002

Re: Physics Documentation in Support of the ACR Pre-Application Review

In support of the NRC's pre-application review of the ACR (Reference 1), you will find on the enclosed CD copies of conference papers (listed in Attachment 1) related to the computer codes used in the physics assessment of CANDU reactors, and the validation of these codes against experimental results.

If you have any questions regarding this letter and/or the enclosed information please contact the undersigned at (905) 823-9060 extension 6543.

Yours sincerely,



Vince J. Langman
ACR Licensing Manager

/Attachment

1. List of Physics Conference Papers in Support of ACR Pre-Application Review

/Enclosure

1. One CD containing copies of physics conference papers

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Attachment 1

List of Physics Conference Papers in Support of ACR Pre-Application Review

(Letter to R. Pascarelli from V. Langman, "Physics Documentation in Support of the ACR Pre-Application Review", November 30, 2002)

"Validation of RFSP-IST/WIMS-IST Time-Average Fuel Discharge Burnup Calculation", M.A. Shad, presented at the 23rd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2002 June 02-05; also AECL-CONF-1242.

"Recommended Delayed Photo-Neutron Data For Use in CANDU Reactor Transient Analysis", R.T. Jones, presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-348.

"Uncertainty in the Burnup to Lanthanum-Concentration Ratio for CANDU Fuel", R.E. Donders, presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-630.

"High Temperature Physics Experiments Using UO₂ and Simulated Irradiated CANDU-Type Fuel in the ZED-2 Reactor", M.B. Zeller, A. Celli, R.S. Davis, S.R. Douglas, R.T. Jones and G.P. McPhee, Presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-631.

"Reactor Physics of NG CANDU", P.S.W. Chan, K.T. Tsang and D.B. Buss, presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-634.

"Validation of the RFSP-IST Code Against Power-Reactor Measurements", M. Ovanes, D.A. Jenkins, F. Ardeshiri, A.C. Mao, M. Shad, T. Sissaoui, H.C. Chow, presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-635.

"Validation of DRAGON End-Flux Peaking and Analysis of End-Power-Peaking Factors for 37-Element, CANFLEX, and Next-Generation CANDU Fuels", W. Shen, presented at the 22nd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2001 June 10-13, also AECL-CONF-636.

"The Coolant Void Reactivity Program in ZED-2", A. Celli, R.S. Davis, S.R. Douglas, R.T. Jones, G.P. McPhee and M.B. Zeller, presented at the 21st Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2000 June 11-14.

"Photo-Neutron Experiment Performed in ZED-2", M.B. Zeller, A. Celli, R.T. Jones and G.P. McPhee, presented at the 21st Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2000 June 11-14.

"Validation of WIMS-IST", J.D. Irish and S.R. Douglas, presented at the 23rd Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2002 June 02-05.

"Validation of the Substitution Method for Measurement of Void Reactivity", R.S. Davis, A. Celli, S.R. Douglas, R.T. Jones, D.C. McElroy and M.B. Zeller, presented at the 21st

Annual Conference of the Canadian Nuclear Society, Toronto, Ontario, Canada, 2000 June 11-14.

“RFSP-IST, The Industry Standard Tool Computer Program for CANDU® Reactor Core Design and Analysis”, B. Rouben, presented at the International Conference on the New Frontiers of Nuclear Technology: Reactor Physics, Safety and High-Performance Computing (Physor 2002), Seoul, Korea, 2002 October 07-10.

“A Script for the Automated Coupling of Neutronics and Thermalhydraulics Codes for the Simulation of Fast Transients”, R.D. McArthur and S.Z. Snell, presented at the 21st CNS Simulation Symposium, Ottawa, Ontario, Canada, 2000 September 24.

“Validation of 3-Dimensional Neutron-Transport Calculations of CANDU Reactivity Devices”, M. Ovanes and J.V. Donnelly, presented at the 21st CNS Simulation Symposium, Ottawa, Ontario, Canada, 2000 September 24.

“CANDU Three-Dimensional Neutron Transport Calculations with DRAGON”, W. Shen, presented at the PHYSOR 2002: International Conference on the New Frontiers of Nuclear Technology – Reactor Physics, Safety and High-Performance Computing, Seoul, Korea, 2002 October 07-10.