

**AECL Technologies Inc.**

9210 Corporate Boulevard  
Suite 410  
Rockville, Maryland 20850  
USA  
1-800-USA-AECL  
(301) 417-0047  
Fax (301) 417-0746  
Telex 403-442

June 1, 1994

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Project 679

Dino C. Scaletti, Sr. Project Manager  
Advanced Reactors Project Directorate  
Associate Directorate for Advanced Reactors  
and License Renewal  
Office of Nuclear Reactor Regulation

*Proj 679*

Subject: Response to Request for Additional Material -  
CANDU 3 dated May 5, 1994

Reference: (1) AECL LTR (V.Snell) to NRC (D. Scaletti)  
dated May 12, 1994, "Request for Additional  
Material - CANDU 3, dated May 5, 1994."

Dear Mr. Scaletti:

Your letter, dated May 5, 1994, requested sixteen reports to support your contract with Science & Engineering Associates, Inc. Reference 1 provided two of the requested reports. This letter provides or disposes of twelve reports. The remaining two reports will be provided as soon as they are available.

Enclosed is one copy of the following reports:

Tamm, H., et al., "Overview of the Technical Basis for the Safety of CANDU Reactors," AECL Whiteshell Laboratories, AECL 9559, 1988.

C.E. Ells, W. Evans, "The Pressure Tubes in the CANDU Power Reactors," The Canadian Mining and Metallurgical Bulletin, 1981 July (AECL-7344).

Dolbey, M.P., "CIGAR - An Automated Inspection System for CANDU Reactor Fuel Channels," ASME 8th International Conference on NDE in the Nuclear Industry, Orlando, Florida, November 1988.

Kenchington, J.M., Ellis, P.J., and Meranda, D.G., "An Overview of the Development of Leak Detection Monitoring for Ontario Hydro Nuclear Stations," Proc. of the 8th Annual Conference, Canadian Nuclear Society, St. John, NB, 1987.

Tenakore, K.N., A.C. Vikis, G.M. Frescura and J. Blyth, "Canadian Program on the Behavior of Reactor Containment Atmospheres During Postulated Accidents," The 2nd International Conference on Containment Design and Operation, Toronto, Ontario, October 14 through 17, 1990.

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CANDU in the USA  
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B.H. McDonald and B.N. Hanna, "Integrated Aerosol and Thermal-hydraulics Modeling for CANDU Safety Analysis," presented at the CNS/ANS Conference, April 18 through 20, 1990, Montreal, Canada.

J.R. Theaker, R. Choubey, C.D. Moan, S.A. Aldridge, L. Davis, R.A. Graham, C.E. Coleman, "Fabrication of Zr-2.5Nb Pressure Tubes to Minimize the Harmful Effects of Trace Elements," AECL-10949, COG-93-375, March 1994.

AECL-10949 is included in place of one of the reports you requested, i.e., E.G. Price, "Fabrication, Inspection, and Properties of Current Production Pressure Tubes," AECL-CANDU Report TDV1 - 380, July 1982, which is currently being de-classified. The de-classified report will be forwarded when available.

One report you requested, i.e., Benton, D.J., "The SLAR System - An Overview," Proceedings of Canadian Nuclear Society 8th Annual Conference, St. John, NB, June 1987, is a one page report with little technical information. We have ordered the complete conference proceedings. They will be forwarded when available.

The following reports you requested have been previously sent to the NRC:

AECEB, 1987b, "Requirements for Reliability Analysis of Safety-Related Systems in Nuclear Reactors," Atomic Energy Control Board, Consultive Document C-98, Ottawa, Ontario, Canada, April 14.

"Power Pulse Break Study," Rev. O, AECL 74-03310-AR-001, October 1991.

Some of the requested information will be superseded by the CANDU 3 information in the Safety Analysis Report; therefore, the following reports are not included in our response:

Weaver, K.R., D.F. Torgerson, D.J. Wren, N. Garisto, and R.W. Holmes, "Behavior of Iodine in the Heat Transport System and Containment and Application to Loss-of-Coolant Accident Analysis for 600 MW(e) Reactors," TTR-41, June 1982.

Min, T.K., and T. Chan, "Hydrogen Mixing and Combustion in Reactor Vaults," TTR-91, Revision 1, July 1990.

M.A. Wright and M.S. Quraishi, "Analysis of the Consequences of an End Fitting Failure," AECL Report TTR-153, May 1985.

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Quraishi, M.S., et al., "Analysis Methods, Assumptions and Data for Assessment of Enhanced Leakage from Containment Following a Postulated Accident," TTR-168, Volume 1, March 1986.

Quraishi, M.S., et al., "Assessment of Higher Leakage From Containment Following a Postulated Accident," TTR-168, Volume 2, September 1986.

If there are any questions concerning the content of this letter, please contact me, or Louis Rib at (301)417-0047.

Sincerely,

*Rh Ferguson*

*for*

Victor G. Snell, Director  
CANDU 3U Safety and Licensing

Enclosures: As stated

cc: Document Control Room w/o attachments