



February 3, 1994

Project 679  
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U.S. Nuclear Regulatory Commission  
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APPLICATION FOR WITHHOLDING PROPRIETARY  
INFORMATION FROM PUBLIC DISCLOSURE

Subject: Update of the CATHENA Computer Code, Version 3.5

Gentlemen:

The purpose of this letter is twofold: (1) to transmit the subject proprietary information, and (2) to apply for withholding from public disclosure the subject information pursuant to 10 CFR 2.790 of the Commission's regulations. In accordance with the requirements of 10 CFR 2.790, the affidavit (Enclosure 1) which accompanies this letter sets forth the basis for the Commission's withholding the information from the public and addresses, with specificity, each of the five considerations identified in 2.790(b)(4).

The subject information, which is fully described in the accompanying affidavit, is being submitted in conjunction with Preapplication review of the CANDU 3 design for the certification of the CANDU 3 design in accordance with the provisions of 10 CFR Part 52.

Transfer of this information to the NRC for the stated purpose is in accordance with the terms of an Export Permit issued by the Canadian Secretary of State for External Affairs. Disclosure which would enable use by a third party for a purpose other than the stated purpose would constitute a breach of the intent for which the permit was issued.

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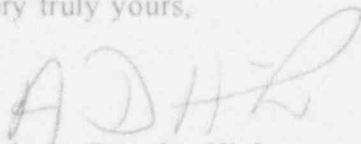
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Correspondence with respect to the proprietary aspects of this application for withholding, or the accompanying affidavit, should reference this letter and should be sent to me:

Anthony Douglas Hink  
President AECL Technologies Inc.  
9210 Corporate Boulevard  
Suite 410  
Rockville, Maryland 20850

Very truly yours,



Anthony Douglas Hink  
President, AECL Technologies Inc.

Enclosures:

1. Affidavit
2. CATHENA Computer Code, Mod 3.5/Rev. 1 (Magnetic Tape)

cc: D. Scalletti, NRC/NRR w/o enclosures  
D. Ebert w/o enclosures

AFFIDAVIT

State of Maryland

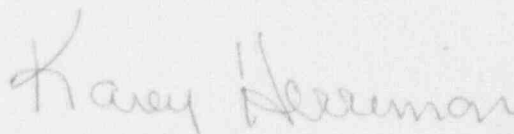
Montgomery County

Before me, the undersigned authority, personally appeared Anthony Douglas Hink, who, being by me duly sworn according to law, deposes and says that he is authorized to execute this Affidavit on behalf of Atomic Energy of Canada Limited (AECL), and that the averments of fact set forth in this Affidavit are true and correct to the best of his knowledge, information, and belief:



Anthony Douglas Hink  
President, AECL Technologies Inc.

Sworn to and subscribed  
before me this 3 day  
of 2, 1994.



KARY FAIRMAN  
NOTARY PUBLIC STATE OF MARYLAND  
My Commission Expires August 4, 1997

- (1) I am a President of AECL Technologies Inc. I have been specifically delegated the function of reviewing the proprietary information sought to be withheld from public disclosure in connection with the review of the CANDU 3 design by the U.S. Nuclear Regulatory Commission (NRC or Commission), and have been authorized to apply for its withholding.
- (2) I am making this Affidavit in conformance with the provisions of 10 CFR Section 2.790 of the Commission's regulations and in conjunction with the AECL Technologies Inc. application for withholding accompanying this Affidavit.
- (3) I have personal knowledge of the criteria and procedures used to designate information as a trade secret, privileged or as confidential commercial or financial information.
- (4) Information to be Withheld

CANDU 3 technical information transmitted to AECL Technologies Inc. for retransmission to the NRC under the terms of an Export Permit issued by the Canadian Secretary of State for External Affairs in conjunction with preapplication of the CANDU 3 for a certified design under 10 CFR Part 52.

The information has been held in confidence by AECL Technologies Inc.. The information has been provided to the utilities which own and operate CANDU reactors and to a university, subject to restrictions upon public disclosure. The information has also been provided in confidence to governmental bodies having nuclear safety responsibilities for plants of CANDU design. In all cases, agreements are in place to restrict the transfer of information to third parties. The restrictions also restrict use of the information to the purpose for which the named organization must have access to and use of the documents.

The organizations and their restrictions include:

ORGANIZATION	RESTRICTION
Ontario Hydro, Canada	Ontario Hydro analysis only
Hydro-Quebec, Canada	Gentilly Analysis only
CNEA National Atomic Energy Commission, Argentina	Argentina analysis only
Intrepcindevea, Nucleovelectricei Cernavoda, Romania	Romanian analysis only
Korean Electric Power Co. Seoul, Korea	Fuel Management Design Program only
Ecole Polytechnique, Montreal, Canada	Assistance in the Design of the KFA Research Reactor
New Brunswick Electric Power, Canada	Point Lepreau analysis only
Korean Atomic Energy Research Institute, Seoul, Korea	Analysis for CANDU plants in Korea under a joint cooperative agreement
Atomic Energy Control Board, Canada	Code evaluation only in connection with the licensing and regulation of CANDU plants in Canada
KFA, Julich, Germany	Assistance in the design of KFA research reactor

The information is being provided in accordance with the conditions of an Export Permit issued by the Canadian Secretary of State for External Affairs which authorizes transfer of this information to AECL Technologies for retransfer to the Commission. The Export Permit restricts use of the information to the preapplication review of CANDU 3. Disclosure which would enable use by a third party for a different purpose would constitute a breach of the intent for which the permit was issued.

(5) Pursuant to the provisions of paragraph (b)(4) of Section 2.790 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

(i) The information sought to be withheld from public disclosure has been held in confidence as described above in paragraph (4).

(ii) The information is of a type customarily held in confidence by AECL and not customarily disclosed to the public. AECL has a rational basis for determining the types of information customarily held in confidence by it and, in that connection, utilizes a system to determine when and whether to hold certain types of information in confidence. The application of that system and the substance of that system constitutes AECL's policy and provides the rational basis required.

Under that system, information is held in confidence if it falls in one or more of several categories. The release of the information in these categories might result in the loss of an existing or potential competitive advantage, as follows:

(a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of AECL's competitors without license from AECL constitutes a competitive economic advantage over other companies.

- (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage, e.g., by optimization or improved marketability.
- (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
- (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of AECL, its customers or suppliers.
- (e) It reveals aspects of past, present, or future AECL or customer-funded development plans and programs of potential commercial value to AECL.
- (f) It contains patentable ideas, for which patent protection may be desirable.
- (g) The information provided is subject to conditions of an Export Permit issued by the Canadian Secretary of State for External Affairs which restricts use of the information.

There are sound policy reasons behind the AECL system, which include the following:



- (a) The use of such information by AECL gives it a competitive advantage over its competitors. It is, therefore, withheld from disclosure to protect the competitive position.
- (b) It is information which is marketable in many ways. The extent to which such information is available to competitors diminishes AECL's ability to sell products and services involving the use of the information.
- (c) Use by a competitor would put AECL at a competitive disadvantage by reducing his expenditure of resources at our expense.
- (d) Each component of proprietary information pertinent to a particular competitive advantage is potentially as valuable as the total competitive advantage. If competitors acquire components of proprietary information, any one component may be the key to the entire puzzle, thereby depriving AECL of a competitive advantage.
- (e) Unrestricted disclosure would jeopardize the position of prominence of CANDU technology in the world markets, and thereby give a market advantage to the competition in the world markets.
- (f) AECL's continued capability to invest corporate assets in CANDU research and development depends upon the success in obtaining and maintaining a competitive advantage.
- (g) Restriction of access is required by Canadian law.



- (iii) The information is being transmitted to the Commission and, under the provisions of 10 CFR Section 2.790, is to be received in confidence by the Commission. The conditions of the Export Permit authorizing transmission to the Commission preclude use of the information except insofar as necessary to carry out the stated purpose for which the information is transmitted.
- (iv) These documents have never been made available in public sources such as Atomic Energy Control Board Reading Room, conference proceedings, or in public libraries.
- (v) The protected proprietary information sought to be withheld in this submittal is the information described above in paragraph (4). This information has very substantial commercial value. Over \$100 million (U.S.) has been spent on the design of this system and \$40 million more is committed and in place, assuring its completion.
  - a. The information contained in this information cannot be duplicated from available public information. The information is based largely on experimental information from heavy water research reactors and operating CANDU heavy water reactors. Replication of a sizeable fraction of the experimental work (50%) would be needed to supplement published work to produce equivalent information.
  - b. The information is a valuable competitive tool as part of the continuing development of the CANDU for the international market. Public disclosure of the information would place at risk the ability to obtain an adequate return on the investment to develop information and unfairly place AECL at a competitive disadvantage on the world reactor market.
  - c. The information has been made available only when necessary and

otherwise unavoidable to further business purposes. In such instances, restrictions have been imposed which strictly limit the information's uses to those specified in the restriction. To allow use of these codes without the imposition of such restrictions will expose AECL to loss of the original investment and to future business arising out of that original investment, potentially billions of dollars. In sum, disclosure is likely to cause substantial harm to AECL's competitive position in the world market.

Further the deponent sayeth not.