Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609

October 18, 1996

10 CFR 2.790(a)(4)
10 CFR 2.790(b)(1)

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - REVISED CALCULATIONS FOR TECHNICAL SPECIFICATION (TS) 356 AND COST BENEFICIAL LICENSING ACTION (CBLA) 08 - INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

This letter provides revised calculations to support proposed TS 356, Increase in Allowable MSIV Leakage Rate. TS 356 originally was submitted on December 22, 1995, with supporting calculations provided on April 12, 1996. A revision to the calculations was necessary due to an error in the calculation of the mean free path of steam which also resulted in an error in the rate of deposition of particulate in the steam lines. The revised calculations resulted in no change in assumed MSIV leak rate with no credit for additional plant systems, structures, and/or components. Enclosure 1 contains the revision to the calculations. These calculations contain information proprietary to Polestar Applied Technology Inc. Polestar requests that these calculations be withheld from public disclosure in accordance with 10 CFR 2.790(a)(4). Enclosure 2 contains an affidavit supporting this request in accordance with 10 CFR 2.790(b)(1). The non-proprietary calculations are provided as Enclosure 3.

240064

Change: PDR LTR ENCL 1 INP APD 1/1

There are no new commitments contained in this letter. If you have any questions, please contact me at (205) 729-2636.

Sincerely,

T. E. Abney
Manager of Licensing
and Industry Affairs

cc (Enclosures):
Mr. Johnny Black, Chairman (Enclosure 3 only)
Limestone County Commission
310 West Washington Street
Athens, Alabama 35611

Mr. Mark S. Lesser, Section Chief
U.S. Nuclear Regulatory Commission
Region II
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NRC Resident Inspector
Browns Ferry Nuclear Plant
Route 12, Box 637
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Mr. Joseph F. Williams, Project Manager
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Dr. Donald E. Williamson (Enclosure 3 only)
State Health Officer
Alabama State Department of Public Health
434 Monroe Street
Montgomery, Alabama 36130-3017

ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

TECHNICAL SPECIFICATIONS (TS) 356, INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

CONTROL ROOM OPERATOR AND OFFSITE DOSE PROPRIETARY CALCULATIONS - REVISION 2

(SEE ATTACHED)

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

TECHNICAL SPECIFICATIONS (TS) 356, INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

CONTROL ROOM OPERATOR AND OFFSITE DOSE PROPRIETARY CALCULATIONS - REVISION 2 - AFFIDAVIT

(SEE ATTACHED)

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

TECHNICAL SPECIFICATIONS (TS) 356, INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

CONTROL ROOM OPERATOR AND OFFSITE DOSE CALCULATIONS - REVISION 2 (NON-PROPRIETARY VERSIONS)

(SEE ATTACHED)

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

TECHNICAL SPECIFICATIONS (TS) 356, INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

CONTROL ROOM OPERATOR AND OFFSITE DOSE PROPRIETARY CALCULATIONS - REVISION 2 - AFFIDAVIT

(SEE ATTACHED)

Polestar Applied Technology, Inc.

AFFIDAVIT

DAVID E. W. LEAVER

I, David E.W. Leaver, being duly sworn, depose and state as follows:

(1) I am a Principal and an Officer of Polestar Applied Technology, Inc. ("Polestar") and am responsible for the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.

(2) The information sought to be withheld is contained in the following Polestar reports and calculations prepared for TVA in support of the Browns Ferry application of the revised design basis accident source term:

(a) The Polestar proprietary report PSAT 04000U.04, "Calculation Package for Application of the Revised DBA Source Term to the Browns Ferry Nuclear Power Plant," dated February, 1995, including the following:

- Attachment 1, Calculation of Containment Leakage Doses for Browns Ferry, pages 8-11, pages 14-25, page 37, Appendices A-D
- Attachment 3, PSAT 04011H.01, pages 9-17, pages C2-C4, pages C8-C11
- Attachment 4, PSAT 04001H.02, pages 8-10, Appendices A-D
- Attachment 6, PSAT 04011H.04, page 4
- Attachment 10, PSAT 04002H.08, pages 8-10, Appendices A-C

(b) The Polestar proprietary calculation PSAT 04101F.02, Calculation of Fraction of Containment Aerosol Deposited in Water, pages 5-6

(c) The Polestar proprietary calculation PSAT 04101F.03, The ppm Boron in Browns Ferry containment Water Pool, pages 4-6

(d) The Polestar proprietary calculation PSAT 04101F.04, Browns Ferry Containment Water Pool pH, pages 5-41

(3) In making this application for withholding of proprietary information of which it is the owner, Polestar relies upon the exemption from disclosure set forth in the NRC regulations 10 CFR 9.17(a)(4), 2.790(a)(4), and 2.790(d)(1) for "trade secrets and commercial or financial information obtained from a

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person and privileged or confidential" (Exemption 2.790(a)(4)). The material for which exemption from disclosure is here sought is all "confidential commercial information".

(4) Some examples of categories of information which fit into the definition of proprietary information are:

a. Information that discloses a process or method, including supporting data and analyses, where prevention of its use by Polestar's competitors without license from Polestar constitutes a competitive economic advantage over other companies.

b. Information which, if used by a competitor, would significantly reduce his expenditure of resources or improve his competitive position in the analysis, design, assurance or quality, or licensing of a similar product;

c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of Polestar, its customers, or its suppliers;

d. Information which reveals aspects of past, present, or future Polestar customer-funded development plans and programs, of potential commercial value to Polestar;

e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in both paragraphs (4)a and (4)b, above.

(5) The information sought to be withheld is being submitted to TVA (and, we trust, to NRC) in confidence. The information is of a sort customarily held in confidence by Polestar, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by Polestar, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.

(6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to

industry knowledge. Distribution of such documents within Polestar is limited to those with a need to know.

(7) The approval of external release of such a document typically requires review by the project manager, and the Polestar Principal closest to the work, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside Polestar are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.

(8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed information on models in current software which were developed by Polestar and are justified from numerous benchmark exercises and applications, detailed results of these models and analytical methods, and computer codes which Polestar has developed, documented, and is maintaining under the Polestar 10 CFR 50, Appendix B Quality Assurance Program. The model results are from applications of the revised DBA source term to the Browns Ferry Nuclear Plant in support of TVA.

The development and documentation of the methods, models, and associated Polestar computer codes used in these analyses was achieved at a significant cost to Polestar, on the order of $50,000, which is a significant fraction of internal research and development resources available to a company the size of Polestar.

The development of the models and methods, along with the interpretation and application of the results, is derived from the extensive experience database that constitutes a major Polestar asset.

(9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to Polestar's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of Polestar's comprehensive technology base on application of the revised source term to operating plants and advanced light water reactors, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with methods which have been developed and are being maintained in accordance with 10 CFR 50, Appendix B requirements.

The research, development, engineering, analytical and review costs comprise a substantial investment of time and money by Polestar.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

Polestar's competitive advantage will be lost if its competitors are able to use the results of the Polestar experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to Polestar would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive Polestar of the opportunity to exercise its competitive advantage to seek an adequate return on its relatively large investment in developing these very valuable analytical tools.

STATE OF CALIFORNIA)
) ss:
COUNTY OF SANTA CLARA)

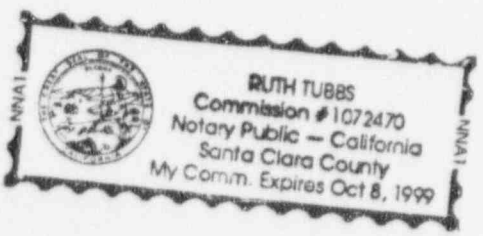
David E.W. Leaver, is being duly sworn, deposes and says:

That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at Los Altos, California, this 18th day of July, 1996.

David E.W. Leaver
Polestar Applied Technology, Inc.

Subscribed and sworn before me this 18th day of July 1996.



Notary Public, State of California

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

TECHNICAL SPECIFICATIONS (TS) 356, INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAKAGE RATE

CONTROL ROOM OPERATOR AND OFFSITE DOSE CALCULATIONS - REVISION 2 (NON-PROPRIETARY VERSIONS)

(SEE ATTACHED)