



CHEM-NUCLEAR SYSTEMS, INC.

140 Stoneridge Drive • Columbia, South Carolina 29210

September 21, 1992
611-0623-92

Mr. Frederick C. Sturz
Section Leader, Irradiated Fuel Section
Source Containment and Device Branch
Division of Industrial and Medical Nuclear Safety
US Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

RE: (1) Project No. M-50
(2) Letter from F. Sturz, US NRC, to V. Barnhart, GNSI,
dated May 22, 1991
(3) Letter 611-0320-92 from P. Paquin, GNSI, to F. Sturz,
US NRC, dated May 13, 1992.

Dear Mr. Sturz:

SUBJ: TOPICAL SAFETY ANALYSIS REPORT FOR THE GNSI CASTOR X
STORAGE CASK

Enclosed for your review are three reports on thermal analyses of the CASTOR X/33, and one on the X/28. Five reports were originally prepared on the X/33 to address comments in your May 22, 1991, letter (Reference 2), and from our meeting held at LLNL on May 23, 1991. These five reports were submitted to you on May 13, 1992 (Reference 3). As agreed to in our June 11, 1992, meeting at LLNL to review these reports, we have revised three of them to incorporate LLNL comments. These revised reports are included as Enclosures 1 through 3 of this letter.

As was also agreed to at the June 11th meeting, we have prepared an analysis of maximum permissible cladding temperature for the CASTOR X/28 using a DCCG model. It was our understanding that performing this analysis will resolve the remaining thermal issues on the X/28. This analysis is included as Enclosure 4.

Enclosures 2, 3, and 4 of this submittal are proprietary to GNSI, and are marked accordingly. An affidavit attesting to this is attached.

In order to assist your review, I have forwarded copies of these reports directly to Mr. Carlson at LLNL. If you have any questions on these reports, please contact Charles Witt at (803)758-1890.

Sincerely,

Patrick L. Paquin
Program Manager

Handwritten notes: Ltr Encl. NFPI 1/

9210010186 920921
PDR PROJ
M-50

PDR

Handwritten notes: Change: MC PDR 1 INP

Attachment: "Affidavit Submitted to the US Nuclear Regulatory Commission by General Nuclear Systems, Inc. Concerning Confidential Information and Trade Secrets," attested by R. Anderson, September 21, 1992

Encl. (3 copies each):

- (1) GNS B 112/91E Rev. 2, July 1992. "Calculation of Temperatures within the Wall of CASTOR X/33 Cask as a Function of Cask Thermal Power."
- *(2) GNS B 92/91E Rev. 1, August 1992. "Maximum Permissible Cladding Temperatures for CASTOR X/33."
- *(3) GNS B 24/87E Rev. 4, July 1992. "Calculation of Fuel Rod Temperatures in the CASTOR X/33 Cask."
- *(4) GNS B 177/92E Rev. 0, July 1992. "Maximum Permissible Cladding Temperatures for CASTOR X/28."

* Proprietary to GNSI

cc: Dr. Roger Carlson, LLNL (w/ 5 copies of enclosures)

AFFIDAVIT

SUBMITTED TO THE U.S. NUCLEAR REGULATORY COMMISSION
BY

GENERAL NUCLEAR SYSTEMS, INC.

CONCERNING CONFIDENTIAL INFORMATION AND TRADE SECRETS

STATE OF SOUTH CAROLINA;

) SS

COUNTY OF RICHLAND

I, Robert T. Anderson, depose and say that I am the Vice President, Engineering of General Nuclear Systems, Inc. (GNSI) duly authorized to make this affidavit, and have reviewed or caused to have reviewed the information which is identified as proprietary and referenced in the paragraph immediately below. I am submitting this affidavit in conformance with the provisions of 10CFR2.790 of the Commission's regulations for withholding this information from public disclosure.

The information for which proprietary treatment is sought is the following reports:

GNS B 92/91E Rev. 1, August 1992. "Maximum Permissible Cladding Temperatures for CASTOR X/33."

GNS B 24/87E Rev. 4, July 1992. "Calculation of Fuel Rod Temperatures in the CASTOR X/33-Cask."

GNS B-177/92E Rev. 0, July 1992. "Maximum Permissible Cladding Temperatures for CASTOR X/28."

These documents have been appropriately designated as proprietary.

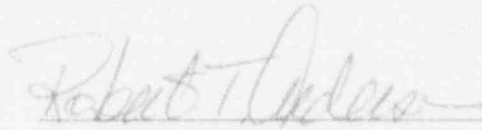
I have personal knowledge of the criteria and procedures utilized by GNSI in designating information as a trade secret or as privileged/confidential information of a commercial or financial nature.

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

1. The information sought to be withheld from public disclosure consists of design details which are owned and held in confidence by GNSI, and not disclosed to any third party without first obtaining that party's written agreement to hold the information in confidence.
2. The ownership of this information results in a substantial economic advantage to GNSI, over its competitors who do not know or use it.
3. The information is of a type customarily held in confidence by GNSI and not customarily disclosed to the public. GNSI has a rational

basis for determining the type of information to be held in confidence.

4. The information is being transmitted to the Commission under the provisions of 10CFR2.790 with the understanding that it is to be received and held in confidence by the Commission.
5. The information, to the best of my knowledge and belief, is not available in public sources, and any disclosure to third parties has been made pursuant to regulatory provisions or proprietary agreements which provide for continuing the confidentiality of the information and only to those parties who need to know the information.
6. Public disclosure of the information is likely to cause substantial harm to the competitive position of GNSI because development of this information by GNSI required thousands of man-hours of effort and hundreds of thousands of dollars. To the best of my knowledge and belief, other parties including competitors would have to undergo similar expense in generating equivalent information. Public disclosure of the information would enable a competitor to avoid the effort and expense to develop a similar product at a significant cost savings, thereby impairing the competitive position of GNSI.



Robert T. Anderson
Vice President, Engineering
General Nuclear Systems, Inc.

STATE OF SOUTH CAROLINA)
COUNTY OF RICHLAND) SS

On this 21st day of September, 1992, before me, a Notary Public in and for the State of South Carolina duly commissioned and sworn, personally appeared Robert T. Anderson, to me known to be the Vice President, Engineering for General Nuclear Systems, Inc., and on oath stated that he was authorized to make this affidavit on behalf of the corporation.

IN WITNESS WHEREOF, I have set my hand and affixed my official seal the day and year first above written.

 , L.S.

Sharra L. Arnold
My Commission Expires: March 1, 2000