



SVP-98-316

October 23, 1998

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

Quad Cities Nuclear Power Station, Units 1 and 2  
Facility Operating License Nos. DPR-29 and DPR-30  
NRC Docket Nos. 50-254 and 50-265

**Subject: Submittal of Technical Information Concerning Containment Overpressure**

- Reference:
- (a) J. P. Dimmette, Jr. (ComEd) Letter, SVP-98-172, to USNRC, dated May 12, 1998, "Response to Questions Raised During NRC Design Inspection on Containment Overpressure"
  - (b) R.M. Pulsifier (USNRC) Letter to O.D.Kingsley (ComEd), dated July 9, 1998, "Summary of Meeting Concerning Quad Cities Use of Containment Overpressure."

As provided in Reference (a), Commonwealth Edison (ComEd) would complete appropriate analyses, revise the Updated Final Safety Analysis Report (UFSAR), and perform a 10CFR50.59 Safety Evaluation concerning the short-term containment overpressure response by September 30, 1998. Since the new short-term containment overpressure (COP) analyses will be incorporated into the UFSAR, a review of the analyses was performed in accordance with 10CFR50.59. An Unreviewed Safety Question was not identified during this review of the analyses for the short-term (< 600 seconds) period.

On June 19, 1998, Commonwealth Edison (ComEd) staff met with the NRC staff to discuss the use of COP at Quad Cities Nuclear Power Station. During this meeting the NRC requested that ComEd provide additional technical information related to the COP analyses performed for Quad Cities Nuclear Power Station. This request was also documented in Reference (b) and the specific information is summarized below.

9810290211 981023  
PDR ADOCK 05000254  
P PDR

Change LTR ENCL  
PDR 1 w/o prop

AP01

**Provide the containment overpressure response (i.e., short term and long term) and net positive suction head (NPSH) analyses.**

These analyses were performed by General Electric (GE) and ComEd, respectively. Note that only the short-term (<600 seconds) analyses are provided in Attachments A and B. The long-term (>600 seconds) containment response analysis is currently under review by ComEd. ComEd will provide the long-term analyses to the NRC upon completion of the ComEd review.

**Provide the applicability study for using specific Dresden Nuclear Power Station analysis for Quad Cities Nuclear Power Station.**

This applicability study has not been provided because it is no longer used and is now historical in nature. Attachment A to this letter provides the current applicable COP analyses for Quad Cities Nuclear Power Station. The current COP analyses do not include the Dresden Nuclear Power Station specific information. Our decision to not include this applicability study was discussed with R.M. Pulsifer (NRC) on October 8, 1998.

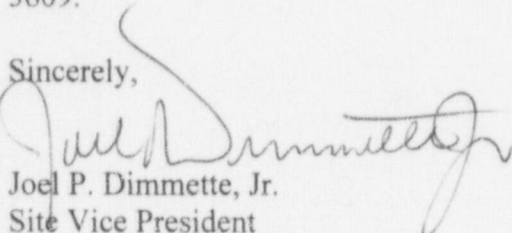
**Provide the GE "SHEX" code benchmarking results for Quad Cities Nuclear Power Station.**

The SHEX benchmarking results to the original Quad Cities Nuclear Power Station containment analysis is contained in Appendix C of enclosed Attachment C.

Attachment A contains General Electric (GE) Company proprietary information for which withholding is requested in accordance with 10 CFR 2.790(a)(4). In accordance with 10 CFR 2.790(b)(1), a GE affidavit is enclosed with Attachment A attesting to the proprietary needs for this document.

If there are any questions or comments concerning this letter, please refer them to Mr. Charles Peterson, Regulatory Assurance Manager, at (309) 654-2241, extension 3609.

Sincerely,



Joel P. Dimmette, Jr.  
Site Vice President  
Quad Cities Nuclear Power Station

- Attachments:
- A. GE Report and Affidavit, GE-NE-T2300750-00-03, DRF T23-00750, September, 1998, Quad Cities Nuclear Power Station, Units 1 and 2, "Containment Analysis for Short-Term NPSH Evaluation with ANS 5.1-1979+2 Sigma Decay Heat"  
- PROPRIETARY-
  - B. ComEd Calculation No, QDC-1000-M-0454, Rev.1, "Short-Term RHR/Core Spray Pump NPSH Analysis - Design Basis LOCA"
  - C. GE Report, GENE-637-022-0893, DRF T23-00711, September, 1993, Quad Cities Nuclear Power Station, Units 1 and 2, "Evaluation of the Minimum Post-LOCA Heat Removal Requirements to Assure Adequate NPSH for the Core Spray and LPCI/Containment Cooling Pumps"

cc: Regional Administrator - NRC Region III  
NRC Senior Resident Inspector - Quad Cities Nuclear Power Station

# General Electric Company

## AFFIDAVIT

I, **David J. Robare**, being duly sworn, depose and state as follows:

- (1) I am Technical Account Manager, Technical Projects, General Electric Company ("GE") and have been delegated 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 GE proprietary reports GE-NE-T2300750-00-02-R1, *Quad Cities Nuclear Power Station Units 1 and 2, Containment Analysis for Long-Term NPSH Evaluation with ANS 5.1-1979 + 2 Sigma Decay Heat, Class III* (GE Company Proprietary Information), dated September, 1998, and GE-NE-T2300750-00-03, *Quad Cities Nuclear Power Station Units 1 and 2, Containment Analysis for Short-Term NPSH Evaluation with ANS 5.1-1979 + 2 Sigma Decay Heat, Class III* (GE Company Proprietary Information), dated September, 1998. The specific proprietary information is delineated by marginal bars within the report.
- (3) In making this application for withholding of proprietary information of which it is the owner, GE relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and 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 person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which fit into the definition of proprietary information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by General Electric's competitors without license from General Electric constitutes a competitive economic advantage over other companies;

- b. Information which, if used 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 of a similar product;
- c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of General Electric, its customers, or its suppliers;
- d. Information which reveals aspects of past, present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;
- 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 NRC in confidence. The information is of a sort customarily held in confidence by GE, 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 GE, 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. Access to such documents within GE is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GE 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 design bases and methods and processes regarding the

use of analytical models, including computer codes, which GE has developed or modified, and applied to perform evaluations of containment pressurization and heat transfer capability for loss-of-coolant accidents for the BWR. This detailed level of information normally only is available for GE internal use, is not supplied even to our customers, and only is available for audit by customers and the NRC. This information shows in specific detail the processes, codes and methods employed to perform the evaluations.

The development and modification of this information and models for these BWR analysis computer codes was achieved at a significant cost, on the order of several hundred thousand dollars, to GE.

The development of the supporting processes, was at a significant additional cost to GE, in excess of a million dollars, over and above the large cost of developing the underlying individual proprietary report information.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE's comprehensive BWR safety and technology base, 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 NRC-approved methods.

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

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.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE 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 GE 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 GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

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

David J. Robare, 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 San Jose, California, this 30<sup>TH</sup> day of SEPTEMBER 1998.

*David J. Robare*

David J. Robare  
General Electric Company

Subscribed and sworn before me this 30<sup>TH</sup> day of SEPTEMBER 1998.

*Anna Hanlin*

Notary Public, State of California



## **ATTACHMENT B**

### **SVP 98-316**

ComEd Calculation No, QDC-1000-M-0454, Rev.1, "Short-Term  
RHR/Core Spray Pump NPSH Analysis – Design Basis LOCA"