



June 30, 2000
JPN-00-022

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn: Document Control Desk

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Response to NRC Questions
Regarding the FitzPatrick Suppression Pool

References: 1. NRC letter, G. S. Vissing (USNRC) to J. Knubel dated
June 22, 2000 regarding phone call of May 25, 2000.

Dear Sir:

The attachments to this letter provide a partial response to the NRC staff's information request (Reference). This information request was emailed to the Authority on May 23, 2000 and discussed during a May 25, 2000 telephone conversation with Authority personnel. The balance of the information will be submitted by July 21, 2000.

Three of the attached documents contain information prepared by the General Electric Company that should be withheld from public disclosure pursuant to 10 CFR 2.790(1)(4) and 10 CFR 9.17(a)(4). Affidavits from General Electric in support of this request are included as Attachments 3, 4 and 5.

Attachment 2 summarizes the commitment made in this letter. If you have any questions, please contact Ms. C. Faison.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. A. Josiger', written over a large, stylized circular flourish.

William A. Josiger
Vice President
Special Activities

cc: Next page

cc: w/o att

Regional Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Office of the Resident Inspector
James A. FitzPatrick Nuclear Power Plant
U.S. Nuclear Regulatory Commission
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w/att

Mr. Guy Vissing, Project Manager
Project Directorate I
Division of Licensing Project Management
U.S. Nuclear Regulatory Commission
Mail Stop 8 C2
Washington, DC 20555

Attachments:

1. Response to NRC Request for Information dated June 22, 2000
2. Summary of Commitments
3. Affidavit of General Electric Company, Mr. David J. Robare, for NEDC-24361-P, dated June 28, 2000
4. Affidavit of General Electric Company, Mr. David J. Robare, for GE-NE-T23-00737-01, dated June 28, 2000
5. Affidavit of General Electric Company, Mr. David J. Robare, for GE-NE-187-45-1191, dated June 28, 2000
6. NEDC-24361-P, "James A. FitzPatrick Nuclear Power Plant Suppression Pool Temperature Response," General Electric Company, August 1981, proprietary.
7. GE-NE-187-45-1191, "Engineering Report Section 4.1, Containment Systems Evaluation for the James A. FitzPatrick Nuclear Power Plant, "November 1991, proprietary.
8. GE-NE-T23-00725-01, "James A. FitzPatrick Nuclear Power Plant LOCA Drywell Temperature Analysis at Power Uprate Conditions," March 1995.
9. GE-NE-T23-00737-01, "James A. FitzPatrick Nuclear Power Plant, Higher RHR Service Water Temperature Analysis, August 1996, proprietary.
10. NYPA calculation, "EOP/SAOG Support Calculations," JAF-CALC-MISC-03116, Rev. 0
11. FitzPatrick Emergency Operating Procedure (EOP) 4, "Primary Containment Control," Revision 5, 13 Dec 98.
12. FitzPatrick Emergency Operating Procedure (EOP) 4a "Primary Containment Gas Control," Revision 5, 13 Dec 98.
13. FitzPatrick Procedure EP-1, "EOP Entry and Use*," Revision 4.
14. FitzPatrick Procedure EP-10, "Fire Water Crosstie to RHRSW Loop A When Directed by EOP-4 or SAOGs*," Revision 1.
15. FitzPatrick Procedure AOP-30, "Loss of Shutdown Cooling*," Revision 11.
16. FitzPatrick Procedure OP-13, "Residual Heat Removal System*," Revision 87.
17. FitzPatrick Procedure OP-13B, "RHR – Containment Control*," Revision 3.
18. FitzPatrick Procedure OP-13C, "RHR Service Water*," Revision 3.
19. FitzPatrick Emergency Operating Procedure (EOP) OP-13D "RHR - Shutdown Cooling*," Revision 12.

20. FitzPatrick drawing FM-25A "Flow Diagram, High Pressure Coolant Injection, System 23," Revision 60.
21. FitzPatrick drawing FV-1J "Drywell & Suppression Chamber Penetrations - Location & Details - Sh. 9," Revision 12.
22. Fitzpatrick drawing 11825-3.74-014 "Modification to Existing 24" HPCI Line (X-214)," Revision A.
23. FitzPatrick drawing FM-25B "Flow Diagram, HPCI Lube Oil System, System 23," Revision 29.
24. FitzPatrick drawing FM-20A "Flow Diagram, Residual Heat Removal, System 10," Revision 57.
25. FitzPatrick drawing FM-20B "Flow Diagram, Residual Heat Removal, System 10," Revision 55.
26. FitzPatrick Procedure EOP-2, "RPV Control," Revision 5, 13 Dec 1998.
27. FitzPatrick Procedure EOP-3, "Failure to Scram," Revision 5, 13 Dec 1998.
28. FitzPatrick Procedure EP-11, "Alternate Depressurization Using SRVs from 02ADS-71*," Revision 0.
29. FitzPatrick Procedure OP-13G, "RHR-Steam Condensing*," Revision 4.
30. FitzPatrick System Component Evaluation Worksheet for 10 MOV-17, Revision 6.
31. FitzPatrick System Component Evaluation Worksheet for 10 MOV-18, Revision 5.

Response to NRC Request for Information dated June 22, 2000

Note: Responses are numbered to correspond to the items in the attachment to the NRC's June 22, 2000 letter.

1. A copy of General Electric Report NEDC-24361P (proprietary) is attached as Attachment 6.
2. No calculations were performed in response to NEDC-24361P. This report was prepared by General Electric for the Authority in response to questions from the NRC in a letter to Mark I utilities on December 12, 1977.
3. General Electric performed evaluations for both power uprate and higher lake water temperature. The following reports are enclosed.
 - GE-NE-187-45-1191, Section 4.1, November 1991 - Proprietary (Attachment 7)
 - GE-NE-T23-00725-01, March 1995 (Attachment 8)
 - GE-NE-T23-00737-01, August 1996 - Proprietary (Attachment 9)
4. A copy of FitzPatrick calculation JAF-CALC-MISC-03116, Rev. 0 is included as Attachment 10.
5. Copies of the following FitzPatrick Emergency Operating Procedures (EOPs), Abnormal Operating Procedures (AOPs), or Operating Procedures (OPs) are enclosed as Attachments.
 - EOP-4, "Primary Containment Control," (Attachment 11)
 - EOP-4a, "Primary Containment Gas Control," (Attachment 12)
 - EP-1, "EOP Entry and Use," (Attachment 13)
 - EP-10, "Fire Water Crosstie to RHRSW Loop A when Directed by EOP-4 or SAOGs," (Attachment 14)
 - AOP-30, "Loss of Shutdown Cooling," (Attachment 15)
 - OP-13, "Residual Heat Removal System," (Attachment 16)
 - OP-13B, "RHR – Containment Control," (Attachment 17)
 - OP-13C, "RHR Service Water," (Attachment 18)
 - OP-13D, "RHR – Shutdown Cooling," (Attachment 19)
6. This information will be provided by July 21, 2000.
7. Copies of the following FitzPatrick drawings are enclosed.
 - FM-25A "Flow Diagram, High Pressure Coolant Injection, System 23," (Attachment 20)
 - FV-1J "Drywell & Suppression Pool Chamber Penetrations - Location % Details - Sh. 9," (Attachment 21)
 - 11825-3.74-014 "Modification to Existing 24" HPCI Line (X-214)," (Attachment 22)
 - FM-25B "Flow Diagram, HPCI Lube Oil System" (Attachment 23)
8. Copies of FitzPatrick drawings FM-20A and FM-20B are enclosed as Attachments 24 and 25, respectively.

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9. Yes, analyses have been performed to confirm the ability of the plant to operate in the alternate shutdown-cooling mode to respond to some 10 CFR 50, Appendix R events. The results of the analyses demonstrate that loads on SRV discharge lines due to liquid discharge after RPV flooding by a low pressure ECCS are acceptable. Adequate margin in NPSH for the low-pressure ECCS pumps is maintained when the suppression pool is at peak temperature and pressure.

- 10a. Copies of the following FitzPatrick procedures are enclosed.

- EOP-2, "RPV Control" (Attachment 26)
- EOP-3, "Failure to Scram" (Attachment 27)
- EP-11, "Alternate Depressurization Using SRVs from 02ADS-71" (Attachment 28)
- OP-13G, "RHR – Steam Condensing" (Attachment 29)

There is only one shutdown cooling line at FitzPatrick. The shutdown cooling line is attached to the 'B' recirculation line inside the drywell and can provide a suction to either the A or B train of RHR. The power supplies are different for the common RHR shutdown cooling suction line inboard and outboard isolation valves. The outboard valve, 10 MOV-17 is powered from the 125 VDC 'B' battery. The inboard valve, 10 MOV-18 is powered from MCC 156, from the 10500 bus, and the A & C emergency diesel generators. A single failure of either of the shutdown cooling isolation valves, MOV 17 or MOV 18 can disable the shutdown cooling system. This could be caused by a failure of either the 'B' DC power system or the 'A' emergency AC system. The loss of the 'B' DC system would result in the loss of shutdown cooling and one half of the RHR system.

- 10b. Copies of the following FitzPatrick procedures are enclosed.

- EOP-4, "Primary Containment Control" (Attachment 11)
- EP-1, "EOP Entry and Use" (Attachment 13)
- EP-10, "Fire Water Crosstie to RHRSW Loop A when Directed by EOP-4 or SAOGs" (Attachment 14)
- OP-13, "Residual Heat Removal System" (Attachment 16)
- OP-13B, "RHR – Containment Control" (Attachment 17)
- OP-13C, "RHR Service Water" (Attachment 18)

- 10c. The answer to this question is event-specific, depending on actual (compared to design) equipment performance and instrument field settings, and cannot be answered either yes or no. However, in the event that it is not possible to enter the shutdown-cooling mode of RHR, EOP-2, "RPV Control," specifies what actions are to be taken. RPV low water level and drywell high pressure (parameters which cause isolation of the shutdown cooling mode of RHR) are among the entry conditions for EOP-2.

- 10d. Attached are the environmental qualification component worksheets for inboard and outboard RHR shutdown cooling containment isolation valves (Attachments 30 and 31). Both shutdown cooling isolation valves are environmentally qualified for 180 days post LOCA.

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11. Thermowells for suppression pool temperature monitoring are shown on drawing FV-1J (Attachment 21). The suppression pool temperature monitoring system is described in Section 5.2.3.10 of the FitzPatrick UFSAR. Operator actions based on torus temperature are described in:
 - EOP-2, "RPV Control" (Attachment 26)
 - EOP-3, "Failure to Scram" (Attachment 27)
 - EOP-4, "Primary Containment Control" (Attachment 11)
 - EP-1, "EOP Entry and Use" (Attachment 13)

Summary of Commitments

Identification	Description	Due Date
JPN-00-022-001	Submit balance of information requested by NRC staff during May 25, 2000 telephone call, and confirmed by June 22, 2000 letter.	July 21, 2000

General Electric Company

AFFIDAVIT

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

- (1) I am Technical Projects Manager, 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 a proprietary GE report NEDC-24361-P, entitled, *James A. Fitzpatrick Nuclear Power Plant Suppression Pool Temperature Response*, Class III, dated August 1981.
- (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 results of analytical models, methods and processes, including computer codes, which GE has developed, discussed with the NRC, and applies in the Containment analyses for the BWR.

The development and approval of the containment computer code was achieved at a significant cost, on the order of several million dollars, to GE.

The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

- (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, analytical and NRC 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.

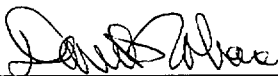
The value of this information to GE would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GE of 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)
)
COUNTY OF SANTA CLARA) ss:

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.

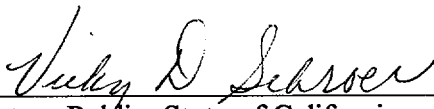
Executed at San Jose, California, this 28th day of JUNE 2000.



David J. Robare
General Electric Company

Subscribed and sworn before me this 28th day of June 2000.





Notary Public, State of California