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July 31, 1998

Docket Nos. 50-321
50-366

HL-5660

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

Edwin I. Hatch Nuclear Plant
Request for Additional Information:
Extended Power Uprate License Amendment

Gentlemen:

By letter dated August 8, 1997, Southern Nuclear Operating Company (SNC) submitted a Technical Specifications amendment request for the Edwin I. Hatch Nuclear Plant Units 1 and 2. The proposed amendment increases the authorized maximum power level of the units from the current limit of 2558 MWt to 2763 MWt.

By letters dated March 9, 1998, May 6, 1998 and July 6, 1998, SNC provided responses to NRC requests for additional information. Enclosure 1 provides a supplement to the July 6, 1998 submittal, specifically SNC's response to NRC Question 60.

Enclosure 2 provides a page change to the July 6, 1998 submittal for NRC Question 91. Enclosure 2 also provides the requested page change to the August 8, 1997 submittal reflecting the results of the containment analysis as provided in the July 6, 1998 submittal (SNC response to NRC Question 56). Table 4-1 of Enclosure 6 in the August 8, 1997 submittal was revised to reflect the steam line break and peak bulk pool temperature analyses results. The page is included in General Electric Nuclear Energy Safety Analysis Report NEDC-32749P, which contains proprietary information. In accordance with the provisions of 10 CFR 2.790, SNC requests the proprietary information be withheld from public disclosure. The proprietary information is so designated, and a copy of the required General Electric Affidavit for NEDC-32749P is included in Enclosure 3.

Should you have any questions in this regard, please contact this office.

Sincerely,

H. L. Sumner, Jr.

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U.S. Nuclear Regulatory Commission
July 31, 1998

Page 2

Enclosures:

1. Supplement to NRC Question 60
2. Page Changes Related to NRC Questions 56 and 91
3. GE Affidavit

TWL/eb

cc: Southern Nuclear Operating Company
Mr. P. H. Wells, Nuclear Plant General Manager
SNC Document Management (R-Type A02.001)

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. L. N. Olshan, Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. J. T. Munday, Senior Resident Inspector - Hatch

ENCLOSURE 3

GENERAL ELECTRIC COMPANY

AFFIDAVIT

General Electric Company

AFFIDAVIT

I, **George B. Stramback**, being duly sworn, depose and state as follows:

- (1) I am Project Manager, Regulatory Services, 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 Licensing Topical Reports NEDC-32749P, *Extended Power Uprate Safety Analysis Report for Edwin I. Hatch Plant Units 1 & 2*, Class III (GE Proprietary Information), dated July 1997. This document, taken as a whole, constitutes a proprietary compilation of information, some of it also independently proprietary, prepared by the General Electric Company. The independently proprietary elements are delineated by bars marked in the margin adjacent to the specific material.
- (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 by bars in the margin is classified as proprietary because it contains either detailed processes or detailed results and conclusions from these

evaluations, utilizing analytical models and methods, including computer codes, which GE has developed and obtained NRC approval. The development and / or approval of these system, component, and thermal hydraulic models and computer codes and processes was achieved at a significant cost to GE, on the order of several million dollars.

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, including justifications for not including certain analyses in applications to change the licensing basis.

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)
) ss:
COUNTY OF SANTA CLARA)

George B. Stramback, 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 5th day of August 1997.

George B. Stramback
George B. Stramback
General Electric Company

Subscribed and sworn before me this 5th day of August 1997.

[Signature]
Notary Public, State of California



Enclosure 1

Edwin I. Hatch Nuclear Plant Request for Additional Information Extended Power Uprate License Amendment

Supplement to NRC Question 60

By letter dated July 6, 1998, Southern Nuclear Operating Company (SNC) requested containment overpressure credit of 10 feet for the Unit 1 emergency core cooling systems (ECCS) pumps net positive suction head (NPSH) available in response to NRC Question 60. The 10 feet represents an additional 5 feet of margin, over the calculated amount required, to ensure adequate pump NPSH considering the potential impact of future issues. SNC will provide an information-only notification to the NRC if future issues, singularly or collectively, require utilization of 1 foot or more of the requested additional margin.

SNC's July 6, 1998 submittal provided Figures 60-1 and 60-2 which show the NPSH margin profiles for the RHR and CS pumps respectively. From examination of the figures, containment overpressure plus the requested additional margin is available throughout the event. SNC therefore requested containment overpressure credit of 10 feet throughout the event for simplification of Unit 1 NPSH available considerations. Tables I1-1 and I1-2 present a time history of the DBA LOCA minimum pressures as shown in the July 6th submittal figures. The following is a description of the applicable pressures.

Containment Overpressure Available (psi) - The containment pressure calculated utilizing the minimum containment pressure analysis presented in response to NRC Question 59, submitted July 6, 1998.

Containment Overpressure Calculated Minimum (psi) - The amount of containment overpressure available required to assure adequate NPSH. A negative number in this column indicates that adequate NPSH is available without containment pressure present.

Containment Overpressure Additional Margin (psi) - The amount of containment overpressure available with the requested overpressure margin.

Enclosure 1

Request for Additional Information:

Extended Power Uprate License Amendment

Table II-1 (Sheet 1 of 3)
Unit 1 RHR Pump

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
0.00	0.0	-1.2	0.9
.0136	22.0	-2.3	-0.2
.0232	22.7	-2.2	-0.1
.0333	23.2	-2.2	-0.1
.042	23.0	-2.1	-0.0
.051	22.7	-2.1	0.1
.0595	22.4	-2.0	0.1
.0682	22.0	-2.0	0.2
.0768	21.7	-1.9	0.2
.0855	21.3	-2.0	0.2
.0942	20.9	-1.9	0.2
.103	20.5	-1.9	0.3
.1115	20.2	-2.0	0.2
.120	20.2	-1.8	0.3
.129	20.2	-0.8	1.6
.139	20.0	-1.7	0.4
.147	19.5	-1.6	0.5
.157	19.2	-1.9	0.2
.166	18.7	-1.5	0.7
.181	10.9	-5.1	-3.0
.199	8.9	-5.1	-3.0
.282	6.7	-5.0	-2.9
.3775	6.6	-4.8	-2.7
.475	6.6	-4.4	-2.3
.573	6.6	-4.1	-2.0
.669	6.6	-4.1	-2.0
.765	6.6	-3.7	-1.6
.851	6.7	-3.3	-1.2
.903	6.7	-3.3	-1.2
.955	6.7	-3.1	-1.0
1.03	6.8	-3.0	-0.9
1.10	6.9	-2.8	-0.7
1.20	6.9	-2.5	-0.4
1.31	7.0	-2.3	-0.2
1.41	7.1	-2.1	-0.0
1.51	7.0	-2.1	0.0
1.61	7.3	-1.7	0.4
1.72	7.3	-1.6	0.5
1.82	7.3	-1.6	0.5
1.93	7.5	-1.2	0.9
2.03	7.5	-1.2	0.9
2.13	7.7	-0.9	1.2

Enclosure 1
Request for Additional Information:
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Table II-1 (Sheet 2 of 3)

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
2.24	7.8	-0.9	1.2
2.34	7.9	-0.7	1.4
2.45	7.9	-0.5	1.6
2.55	8.0	-0.4	1.7
2.65	8.1	-0.0	2.1
2.75	8.0	-0.4	1.6
2.94	8.1	-0.2	1.9
3.14	8.3	0.1	2.2
3.35	8.5	0.2	2.3
3.55	8.6	0.5	2.6
3.76	8.8	0.6	2.7
3.97	8.9	0.7	2.8
4.17	9.0	1.0	3.1
4.38	9.1	1.0	3.1
4.58	9.2	1.2	3.3
4.79	9.3	1.3	3.4
4.99	9.4	1.4	3.5
5.20	9.4	1.6	3.7
5.40	9.5	1.7	3.8
5.60	9.5	1.6	3.7
5.81	9.6	1.7	3.8
6.01	9.6	1.9	4.0
6.21	9.7	2.1	4.2
6.42	9.7	2.0	4.0
6.62	9.7	2.1	4.2
6.82	9.7	2.1	4.1
7.02	9.7	2.1	4.2
7.23	9.7	2.0	4.1
7.43	9.7	2.0	4.1
7.64	9.7	2.1	4.2
7.84	9.7	2.1	4.2
8.05	9.6	2.1	4.1
8.25	9.6	2.0	4.1
8.46	9.6	2.1	4.2
8.66	9.5	2.1	4.2
8.87	9.5	2.0	4.1
9.07	9.5	2.0	4.1
9.28	9.4	2.1	4.2
9.49	9.4	1.8	3.9
9.69	9.3	1.8	3.8
9.90	9.3	1.8	3.9
10.20	9.2	1.8	3.9
10.55	9.1	1.8	3.9

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Table II-1 (Sheet 3 of 3)

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
10.90	9.0	1.6	3.7
11.26	8.9	1.7	3.8
11.62	8.8	1.4	3.5
11.99	8.7	1.5	3.5
12.36	8.7	1.2	3.3
12.73	8.6	1.3	3.4
13.12	8.5	1.0	3.1
13.53	8.4	1.0	3.1
13.95	8.3	0.8	2.9
14.38	8.2	0.8	2.9
14.82	8.1	0.6	2.7
15.25	8.0	0.5	2.6
15.65	7.9	0.4	2.5
15.98	7.8	0.2	2.3
16.34	7.7	0.2	2.3
16.70	7.7	-0.0	2.1
17.07	7.6	0.0	2.1
17.43	7.5	-0.2	1.9
17.80	7.4	-0.2	1.9
18.16	7.3	-0.4	1.7
18.53	7.3	-0.4	1.6
18.89	7.2	-0.6	1.5
19.26	7.1	-0.5	1.6
19.63	7.1	-0.7	1.4
20.00	7.0	-0.8	1.3
20.37	6.9	-1.0	1.1
20.75	6.8	-1.0	1.1
21.13	6.8	-1.0	1.1
21.51	6.7	-1.1	1.0
21.90	6.6	-1.1	1.0
22.30	6.6	-1.3	0.8
22.70	6.5	-1.3	0.8
23.12	6.4	-1.5	0.6
23.53	6.3	-1.5	0.6
23.95	6.2	-1.6	0.5
24.38	6.2	-1.6	0.5
24.80	6.1	-1.7	0.4
25.24	6.0	-1.7	0.4
25.67	6.0	-1.9	0.2
26.11	5.9	-1.9	0.2
26.55	5.8	-2.2	-0.1
26.99	5.8	-2.2	-0.1
27.43	5.7	-2.3	-0.2
27.78	5.6	-2.2	-0.1

Enclosure 1

Request for Additional Information:

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Table II-2 (Sheet 1 of 3)
Unit 1 CS Pump

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
0.00	0.0	-6.7	-4.6
.0136	22.0	-5.2	-3.1
.0232	22.7	-4.9	-2.8
.0333	23.2	-4.8	-2.7
.042	23.0	-4.7	-2.6
.051	22.7	-4.6	-2.5
.0595	22.4	-4.6	-2.4
.0682	22.0	-4.5	-2.4
.0768	21.7	-4.4	-2.3
.0855	21.3	-4.5	-2.4
.0942	20.9	-4.4	-2.3
.103	20.5	-4.4	-2.3
.1115	20.2	-4.5	-2.4
.120	20.2	-4.4	-2.2
.129	20.2	-3.6	-1.2
.139	20.0	-4.2	-2.1
.147	19.5	-4.2	-2.0
.157	19.2	-4.3	-2.2
.166	18.7	-3.8	-1.7
.181	10.9	-5.6	-3.5
.199	8.9	-5.5	-3.4
.282	6.7	-5.4	-3.3
.3775	6.6	-5.2	-3.1
.475	6.6	-4.8	-2.7
.573	6.6	-4.4	-2.3
.669	6.6	-4.4	-2.3
.765	6.6	-3.9	-1.8
.851	6.7	-3.6	-1.5
.903	6.7	-3.5	-1.4
.955	6.7	-3.4	-1.3
1.03	6.8	-3.2	-1.1
1.12	6.9	-3.0	-0.9
1.20	6.9	-2.8	-0.7
1.31	7.0	-2.5	-0.4
1.41	7.1	-2.3	-0.2
1.51	7.0	-2.3	-0.2
1.61	7.3	-1.9	0.2
1.72	7.3	-1.8	0.3
1.82	7.3	-1.8	0.3
1.93	7.5	-1.4	0.7
2.03	7.5	-1.3	0.7
2.13	7.7	-1.1	1.0

Enclosure 1

Request for Additional Information:

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Table II-2 (Sheet 2 of 3)

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
2.24	7.8	-1.1	1.0
2.34	7.9	-0.8	1.2
2.45	7.9	-0.7	1.4
2.55	8.0	-0.5	1.6
2.65	8.1	-0.2	1.9
2.75	8.0	-0.6	1.5
2.94	8.1	-0.3	1.8
3.14	8.3	0.0	2.1
3.35	8.5	0.1	2.2
3.55	8.6	0.4	2.4
3.76	8.8	0.5	2.6
3.97	8.9	0.6	2.6
4.17	9.0	0.9	3.0
4.38	9.1	0.9	3.0
4.58	9.2	1.2	3.3
4.79	9.3	1.2	3.3
4.99	9.4	1.3	3.4
5.20	9.4	1.6	3.6
5.40	9.5	1.6	3.7
5.60	9.5	1.6	3.7
5.81	9.6	1.6	3.7
6.01	9.6	1.9	3.9
6.21	9.7	2.0	4.1
6.42	9.7	1.9	4.0
6.62	9.7	2.0	4.1
6.82	9.7	2.0	4.1
7.02	9.7	2.0	4.1
7.23	9.7	2.0	4.0
7.43	9.7	2.0	4.1
7.64	9.7	2.1	4.1
7.84	9.7	2.0	4.1
8.05	9.6	2.0	4.1
8.25	9.6	2.0	4.1
8.46	9.6	2.0	4.1
8.66	9.5	2.0	4.1
8.87	9.5	2.0	4.1
9.07	9.5	1.9	4.0
9.28	9.4	2.0	4.1
9.49	9.4	1.7	3.8
9.69	9.3	1.7	3.8
9.90	9.3	1.7	3.8
10.20	9.2	1.7	3.8
10.55	9.1	1.8	3.8

Enclosure 1
Request for Additional Information:
Extended Power Uprate License Amendment Request

Table 11-2 (Sheet 3 of 3)

Time (hrs)	Containment Overpressure Available (psi)	Containment Overpressure Calculated Minimum (psi)	Containment Overpressure Additional Margin (psi)
10.90	9.0	1.6	3.7
11.26	8.9	1.6	3.7
11.62	8.8	1.3	3.4
11.99	8.7	1.4	3.4
12.36	8.7	1.1	3.2
12.73	8.6	1.2	3.3
13.12	8.5	0.9	3.0
13.53	8.4	0.9	3.0
13.95	8.3	0.7	2.8
14.38	8.2	0.7	2.8
14.82	8.1	0.5	2.6
15.25	8.0	0.3	2.4
15.65	7.9	0.3	2.4
15.98	7.8	0.1	2.2
16.34	7.7	0.0	2.1
16.70	7.7	-0.2	1.9
17.07	7.6	-0.1	2.0
17.43	7.5	-0.3	1.8
17.80	7.4	-0.3	1.8
18.16	7.3	-0.6	1.5
18.53	7.3	-0.6	1.5
18.89	7.2	-0.8	1.3
19.26	7.1	-0.7	1.4
19.63	7.1	-0.9	1.2
20.00	7.0	-0.9	1.2
20.37	6.9	-1.1	1.0
20.75	6.8	-1.2	0.9
21.13	6.8	-1.2	0.9
21.51	6.7	-1.3	0.8
21.90	6.6	-1.3	0.8
22.30	6.6	-1.5	0.6
22.70	6.5	-1.5	0.6
23.12	6.4	-1.7	0.4
23.53	6.3	-1.7	0.4
23.95	6.2	-1.8	0.3
24.38	6.2	-1.8	0.2
24.80	6.1	-1.9	0.2
25.24	6.0	-2.0	0.1
25.67	6.0	-2.2	-0.1
26.11	5.9	-2.2	-0.1
26.55	5.8	-2.4	-0.3
26.99	5.8	-2.4	-0.3
27.43	5.7	-2.6	-0.5
27.78	5.6	-2.5	-0.4

Enclosure 2

Request for Additional Information: Extended Power Uprate License Amendment

Basis for Revision to Table 4-1

The following discussion is applicable to Section 4.1.1.2 of NEDC-32749P and addresses the maximum gas temperature in the containment due to the steam line break.

Drywell temperature response analyses were performed for a series of small steam line breaks. Steam line breaks produce higher drywell gas temperatures than the DBA-LOCA. The calculated peak drywell gas temperatures for the steam line breaks are shown in Table 4-1 for Units 1 and 2. The peak drywell gas temperature of 324° was calculated at 102% of the extended uprate power level with containment parameters that bound Units 1 and 2. Therefore, this temperature applies to both Units 1 and 2.

The peak drywell gas temperature of 324°F for the steam line break is below the drywell shell design temperature of 340°F for Unit 2, but exceeds the drywell shell design temperature of 281°F for Unit 1. However, the peak drywell shell temperature determined by the steam line break analyses was 271°F. This temperature is within the drywell shell design temperature of 281°F for Unit 1. Analysis of the drywell gas temperature response for the extended power uprate has confirmed no significant effect on the containment structure for both Units 1 and 2.

The containment response analysis was revised as discussed in the July 6, 1998 submittal. Therefore, the response to NRC Question 56 in the July 6, 1998 submittal, supersedes the discussion in the August 8, 1997 submittal sections 4.1.1.1 and 4.1.1.3, Long-Term Suppression Pool Temperature Response and Short-Term Suppression Pool Temperature Response respectively. Table 4-1 of NEDC-32749P has also been revised to incorporate the peak drywell gas temperature due to steam line breaks. In addition to adding the peak drywell gas temperature for the steam line break, the Table 4-1 peak bulk pool temperatures for Units 1 and 2 have also been updated to incorporate results obtained with the ANS 5.1+2 sigma decay heat. The revised long-term containment response analysis was performed separately for Unit 1 and Unit 2, resulting in slightly difference peak pool temperature for the two units. The revised peak pool temperature for Unit 1 is 1°F higher than Unit 2. This is mainly because Unit 1 has a slightly smaller pool than Unit 2.

Section 10.2.1.1 of NEDC-32749P states that the drywell gas temperature response from the small steam line break analyses at extended power uprate conditions exceeds the current drywell temperature environmental qualification (EQ) analysis profile by up to 7°F during the time period from 35,000 seconds to 70,000 seconds. During this time period, the calculated drywell gas temperature dropped to the 210°F-200°F range from a peak value of 324°F as discussed above. The peak drywell gas temperature of 324°F is below 330°F, which is the peak temperature presently assumed in evaluating the adequacy of environmental qualification tests for drywell

Enclosure 2

Request for Additional Information:

Extended Power Uprate License Amendment

Basis for Revision to Table 4-1

equipment. The Unit 1 and 2 drywell temperature EQ analysis profiles were provided in the July 6, 1998 SNC response to NRC Question 91 as Figures 91-1 and 91-2.

The changed pages for the August 8, 1997 and July 6, 1998 submittals are included in this enclosure. Please replace the applicable pages in the submittals as appropriate.

ENCLOSURE 2

PAGE CHANGE TO

SNC RESPONSE TO ADDITIONAL NRC QUESTIONS

from power uprate will be minimal, if any, and will not exceed the limits established prior to extended power uprate.

NRC QUESTION 91

Section 10.2.1.1 states that the accident temperature profile at extended power uprate conditions exceeds the current accident profile by up to 7°F during the time period from 35,000 sec to 70,000 sec and this will have no effect on qualification of any equipment. For each component on the EQ Master List, does the existing qualification test data envelope the accident temperature profile at extended power uprate conditions with the required margin?

SNC RESPONSE

Yes, the existing qualification test data do envelope the accident temperature profile at extended power uprate conditions.

The qualification test data for each component on the EQ Master List envelopes the extended power uprate accident temperature profile. The drywell temperature profile for extended power uprate shows that the peak temperature under worse case accident conditions is less than 330°F which is the presently assumed peak temperature. Figures 91-1 and 91-2 are the Unit 1 and 2 drywell temperature EQ analysis profiles. GE has re-evaluated the drywell profiles at extended power uprate conditions. The re-analysis results show that the peak drywell temperature under worst-case accident conditions is below 330°F, which is the peak temperature presently assumed in evaluating the adequacy of environmental qualification tests for drywell equipment. Therefore, the extended power uprate accident temperature profile will have no effect on the environmental qualification of equipment.

Degraded equivalency analysis, documented in SCS Calculation SINH 97-004, shows that the present worst case design basis accident (DBA) profile envelopes the new accident profile at extended power uprate conditions. Therefore, qualification of the drywell components to the present worst case DBA profile also demonstrates qualification to the new accident profile under power uprate conditions. For this particular qualification program, it is also evident by observation that the minor change in the accident profile has no impact of qualification.