

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8411070076 DOC. DATE: 84/11/01 NOTARIZED: YES DOCKET # 05000400  
 FACIL: 50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina  
 AUTH. NAME: AUTHOR AFFILIATION  
 CUTTER, A. B. Carolina Power & Light Co.  
 RECIP. NAME: RECIPIENT AFFILIATION  
 DENTON, H. R. Office of Nuclear Reactor Regulation; Director

SUBJECT: Forwards Amend 17 to FSAR for Shearon Harris Nuclear Power Plant. Amend incorporates info submitted in response to draft SER open items.

DISTRIBUTION CODE: B001D COPIES RECEIVED: LTR 3 ENCL 60 SIZE: 27350  
 TITLE: Licensing Submittal: PSAR/FSAR Amdts & Related Correspondence

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	NRR/DL/ADL	1 0	NRR LB3 BC	1 0
	NRR LB3 LA	1 0	BUCKLEY, B 01	1 1
INTERNAL:	ADM/LFMB	1 0	ELD/HDS1	1 0
	IE FILE	1 1	IE/DEPER/EPB 36	1 1
	IE/DEPER/IRB 35	1 1	IE/DGASIP/QAB21	1 1
	NRR ROE, M. L	1 1	NRR/DE/AEAB	1 0
	NRR/DE/CEB 11	1 1	NRR/DE/EHEB	1 1
	NRR/DE/EQB 13	2 2	NRR/DE/GB 28	2 2
	NRR/DE/MEB 18	1 1	NRR/DE/MTEB 17	1 1
	NRR/DE/SAB 24	1 1	NRR/DE/SGEB 25	1 1
	NRR/DHFS/HFEB40	1 1	NRR/DHFS/LQB 32	1 1
	NRR/DHFS/PSRB	1 1	NRR/DL/SSPB	1 0
	NRR/DSI/AEB 26	1 1	NRR/DSI/ASB	1 1
	NRR/DSI/CPB 10	1 1	NRR/DSI/CSB 09	1 1
	NRR/DSI/ICSB 16	1 1	NRR/DSI/METB 12	1 1
	NRR/DSI/PSB 19	1 1	NRR/DSI/RAB 22	1 1
	NRR/DSI/RSB 23	1 1	<u>REG FILE</u> 04	1 1
	RGN2	3 3	RM/DDAMI/MIB	1 0
EXTERNAL:	ACRS 41	6 6	BNL (AMDTs ONLY)	1 1
	DMB/DSS (AMDTs)	1 1	FEMA-REP DIV 39	1 1
	LPDR 03	1 1	NRC PDR 02	1 1
	NSIC 05	1 1	NTIS	1 1





Carolina Power & Light Company

NOV 01 1984

SERIAL: NLS-84-429

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT  
UNIT NO. 1 - DOCKET NO. 50-400  
AMENDMENT NO. 17

Dear Mr. Denton:

Carolina Power & Light Company hereby transmits three (3) originals and sixty (60) copies of Amendment No. 17 to the Shearon Harris Nuclear Power Plant (SHNPP) Final Safety Analysis Report.

This amendment incorporates information submitted in response to the Draft Safety Evaluation Report (DSER) open items from the following NRC Review Branches:

- Instrumentation and Control Systems
- Materials Engineering
- Mechanical Engineering
- Meteorological and Effluents Treatment
- Power Systems

These five NRC Review Branches will be supplied FSAR and Figure update information associated with the following open items in a future FSAR amendment: Open Item Nos. 84, 98, 99, 112, 155, 160, 161, 163, 166, 167, 180, 181, 223, 245, 343, and 345.

Additionally, FSAR changes associated with the following SHNPP Open and SER Confirmatory Item responses are included:

- Open Item 2 - Missiles Outside Containment (Section 3.5.1.1)
- Open Item 10 - Estimating Noble Gas Activity (Section 11.5.2.7.2.16)
- Confirmatory Item 12 - Steam Generator Modifications (partial response) (Chapter 15)
- Confirmatory Item 18 - Low Temperature Overpressure Protection (Section 7.6.1.11)
- Confirmatory Item 22 - Pressure Differential Alarms (Section 9.5.4)
- Confirmatory Item 23 - Emergency Lighting (Sections 9.5.3.2 and 9.5.3.3)

Finally, changes to the SHNPP Quality Assurance Program (Chapter 17, Section 2), as described in our letter dated October 1, 1984, and changes to the SHNPP organization (Chapter 1, Section 8; Chapter 13, Sections 1 and 2), along with minor editorial changes, have also been included in this amendment.

8411070076 841101  
PDR ADDCK 05000400 PDR  
K

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

Boo  
5/10



[The body of the page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. The text is scattered across the page and cannot be transcribed accurately.]

Each revised page bears the amendment number. Technical changes are noted by vertical bars in the page margins. Instructions for entering the revised pages are also included.

If you have any questions concerning this amendment, please contact Ms. Carol Love of our Nuclear Licensing Unit staff at (919) 836-8166.

Yours very truly,



A. B. Cutter - Vice President  
Nuclear Engineering & Licensing

CGL/ccc (658CGL)

Attachments

- |                                 |                            |
|---------------------------------|----------------------------|
| cc: Mr. B. C. Buckley (NRC)     | Mr. Wells Eddleman         |
| Mr. G. F. Maxwell (NRC-SHNPP)   | Mr. John D. Runkle         |
| Mr. J. P. O'Reilly (NRC-RII)    | Dr. Richard D. Wilson      |
| Mr. Travis Payne (KUDZU)        | Mr. G. O. Bright (ASLB)    |
| Mr. Daniel F. Read (CHANGE/ELP) | Dr. J. H. Carpenter (ASLB) |
| Chapel Hill Public Library      | Mr. J. L. Kelley (ASLB)    |
| Wake County Public Library      |                            |

A. B. Cutter, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

  
\_\_\_\_\_  
Notary (Seal)

My commission expires:

My Commission Expires 6-8-86



CAROLINA POWER & LIGHT COMPANY  
 SHEARON HARRIS NUCLEAR POWER PLANT  
 DOCKET NO. 50-400  
 FINAL SAFETY ANALYSIS REPORT - AMENDMENT NO. 17  
INSTRUCTION SHEET

This amendment contains additional or revised technical information and editorial changes in the form of replacement pages for the SHNPP FSAR. Each revised page bears the notation "Amendment No. 17" at the page bottom. Vertical bars with the number "17" beside them have been placed in the margins of revised pages to indicate the location of technical revisions on the page.

Since many SHNPP FSAR pages are printed double-sided, the replacement pages in this amendment may consist of original information on one side of the page and revised information on the other side. Reference to the amendment identification number in the lower right corner of the page will enable the user to determine the amendment status of the page (whether it is original or revised material). Unchanged material located on the reverse side of a revised page will not contain an amendment identification number or amendment bars.

The following page removals and insertions should be made to incorporate Amendment No. 17 into the FSAR:

REMOVE  
EXISTING PAGES

INSERT  
REPLACEMENT PAGES

VOLUME 1

VOLUME 1

EFFECTIVE PAGE LIST:

EPL-1 / EPL-2  
 EPL-4 / EPL-5  
 EPL-6 / EPL-7  
 EPL-9 / EPL-10  
 EPL-39 / EPL-40  
 EPL-41 / EPL-42  
 EPL-54 / EPL-55  
     through EPL-65  
 EPL-73 / EPL-74  
     through EPL-114 / EPL-115  
 EPL-120 / EPL-121  
 EPL-122 / EPL-123

EPL-1 / EPL-2  
 EPL-4 / EPL-5  
 EPL-6 / EPL-7  
 EPL-9 / EPL-10  
 EPL-39 / EPL-40  
 EPL-41 / EPL-42  
 EPL-54 / EPL-55  
     through EPL-65  
 EPL-73 / EPL-74  
     through EPL-114 / EPL-115  
 EPL-120 / EPL-121  
 EPL-122 / EPL-123

GENERAL TABLE OF CONTENTS:

xxi / xxii

xxi / xxii

CHAPTER 1

CHAPTER 1

1-vi

1-vi

SHNPP FSAR

REMOVE  
EXISTING PAGES

1.8-8 / 1.8-9  
1.8-10 / 1.8-11  
1.8-12 through 1.8-15  
1.8-46  
1.8-139

CHAPTER 2

2.3.1-5 / 2.3.1-6  
2.3.3-3 / 2.3.3-4

CHAPTER 3

3-ix / 3-x  
3-xxiii / 3-xxiv  
3.1-35 / 3.1-36  
3.2.1-37  
3.5.1-16  
-  
3.6.2-1 / 3.6.2-2  
3.6.2-17 / 3.6.2-18  
-  
3.9.3-2a  
-  
3.9.3-3 / 3.9.3-4  
-  
3.9.3-9 / 3.9.3-10

CHAPTER 4

4-xi / 4-xii  
4.2.2-1 / 4.2.2-2  
4.5.1-1 / 4.5.1-2  
-  
4.5.2-1

INSERT  
REPLACEMENT PAGES

1.8-8 / 1.8-9  
1.8-10  
1.8-11 through 1.8-15  
1.8-46  
1.8-139

CHAPTER 2

2.3.1-5 / 2.3.1-6  
2.3.3-3 / 2.3.3-4

CHAPTER 3

3-ix / 3-x  
3-xxiii / 3-xxiv  
3.1-35 / 3.1-36  
3.2.1-37  
3.5.1-16  
3.5.1-19a  
3.6.2-1 / 3.6.2-2  
3.6.2-17 / 3.6.2-18  
3.6.2-18a  
3.9.3-2a / 3.9.3-2b  
3.9.3-2c  
3.9.3-3 / 3.9.3-4  
3.9.3-4a  
3.9.3-9 / 3.9.3-10

CHAPTER 4

4-xi / 4-xii  
4.2.2-1 / 4.2.2-2  
4.5.1-1 / 4.5.1-2  
4.5.1-3  
4.5.2-1



SHNPP FSAR

REMOVE  
EXISTING PAGES

CHAPTER 5

5-1 / 5-ii  
5-v / 5-vi  
5-xiv / 5-xv

5.2.3-1 / 5.2.3-2  
5.2.3-3 / 5.2.3-4  
5.2.3-5 / 5.2.3-6

5.2.3-13

5.3.1-1 / 5.3.1-2  
5.3.1-3 / 5.3.1-4  
5.3.1-5 / 5.3.1-6  
5.3.1-7 / 5.3.1-8

5.4.10-1 / 5.4.10-2

CHAPTER 6

6.3.1-1 / 6.3.1-2  
6.3.1-2a

CHAPTER 7

7-iii / 7-iv  
7-vii / 7-viii  
7-xv / 7-xvi

7.2.1-11 / 7.2.1-12

7.2.2-1 / 7.2.2-2

7.2.2-9 / 7.2.2-10

7.2.2-13 / 7.2.2-14  
7.2.2-15

7.2.3-1

Fig. 7.2.1-1  
Sh. 7 of 15

INSERT  
REPLACEMENT PAGES

CHAPTER 5

5-1 / 5-ii  
5-v / 5-vi  
5-xiv / 5-xv

5.2.3-1 / 5.2.3-2  
5.2.3-3 / 5.2.3-4  
5.2.3-5 / 5.2.3-6

5.2.3-6a  
5.2.3-13

5.3.1-1 / 5.3.1-2  
5.3.1-3 / 5.3.1-4  
5.3.1-5 / 5.3.1-6  
5.3.1-7 / 5.3.1-8  
Fig. 5.3.1-3

5.4.10-1 / 5.4.10-2  
5.4.10-2a

CHAPTER 6

6.3.1-1 / 6.3.1-2  
6.3.1-2a

CHAPTER 7

7-iii / 7-iv  
7-vii / 7-viii  
7-xv / 7-xvi

7.2.1-11 / 7.2.1-12

7.2.2-1 / 7.2.2-2  
7.2.2-2a  
7.2.2-9 / 7.2.2-10  
7.2.2-10a

7.2.2-13 / 7.2.2-14  
7.2.2-15

7.2.3-1

Fig. 7.2.1-1  
Sh. 7 of 15

SHNPP FSAR

REMOVE  
EXISTING PAGES

7.3.1-9 / 7.3.1-10  
7.3.1-10a  
7.3.1-11 / 7.3.1-12  
7.3.1-13 / 7.3.1-14  
7.3.1-14a  
7.3.1-21 / 7.3.1-22  
7.3.1-23 / 7.3.1-24  
7.3.1-24a  
7.3.1-35 / 7.3.1-36  
7.3.1-43  
7.3.1-44  
-  
7.3.1-45a

7.3.2-3 / 7.3.2-4  
-  
-

7.4.1-11 / 7.4.1-12

7.5.1-34

7.6.1-5 / 7.6.1-6

7.7.2-1 / 7.7.2-2  
-

CHAPTER 8

8-i / 8-ii  
8-v / 8-vi  
8-vii

8.3.1-3 / 8.3.1-4  
through 8.3.1-8a  
8.3.1-10a / 8.3.1-10b  
8.3.1-15 / 8.3.1-16  
8.3.1-20c / 8.3.1-20d  
through 8.3.1-27 / 8.3.1-28  
8.3.1-39 / 8.3.1-40  
8.3.1-43 / 8.3.1-44  
through 8.3.1-45b  
-

8.3.2-3 / 8.3.2-4  
-

INSERT  
REPLACEMENT PAGES

7.3.1-9 / 7.3.1-10  
7.3.1-10a  
7.3.1-11 / 7.3.1-12  
7.3.1-13 / 7.3.1-14  
7.3.1-14a  
7.3.1-21 / 7.3.1-22  
7.3.1-23 / 7.3.1-24  
7.3.1-24a  
7.3.1-35 / 7.3.1-36  
7.3.1-43  
7.3.1-44  
7.3.1-44a  
7.3.1-45a

7.3.2-3 / 7.3.2-4  
7.3.2-4a

Fig. 7.3.1-15a

7.4.1-11 / 7.4.1-12

7.5.1-34

7.6.1-5 / 7.6.1-6

7.7.2-1 / 7.7.2-2  
7.7.2-2a

CHAPTER 8

8-i / 8-ii  
8-v / 8-vi  
8-vii / 8-vii-a

8.3.1-3 / 8.3.1-4  
through 8.3.1-8a  
8.3.1-10a / 8.3.1-10b  
8.3.1-15 / 8.3.1-16  
8.3.1-20c / 8.3.1-20d  
through 8.3.1-27 / 8.3.1-28  
8.3.1-39 / 8.3.1-40  
8.3.1-43 / 8.3.1-44  
through 8.3.1-45b / 8.3.1-45c  
8.3.1-68 through 8.3.1-72

8.3.2-3 / 8.3.2-4  
8.3.2-4a

REMOVE  
EXISTING PAGES

CHAPTER 9

9-v / 9-vi  
9-ix / 9-x

-  
9-xvii / 9-xviii  
9-xxiii / 9-xxiv  
9-xxiv-a

9.3.2-3 / 9.3.2-4

-  
9.3.2-7

9.3.4-5 / 9.3.4-6  
9.3.4-31 / 9.3.4-32  
through 9.3.4-36a

-  
-  
Fig. 9.3.2-1

9.4.4-3 / 9.4.4-4

9.5.2-3 / 9.5.2-4

-  
9.5.3-1 / 9.5.3-2

9.5.4-1 / 9.5.4-2  
through 9.5.4-6a / 9.5.4-6b

9.5.5-3 / 9.5.5-3a

9.5.6-1 / 9.5.6-2  
9.5.6-3 / 9.5.6-3a

9.5.7-1 / 9.5.7-2  
through 9.5.7-4a

9.5.8-1 / 9.5.8-2  
9.5.8-3 / 9.5.8-4

-  
-

INSERT  
REPLACEMENT PAGES

CHAPTER 9

9-v / 9-vi  
9-ix / 9-x

9-x-a  
9-xvii / 9-xviii  
9-xxiii / 9-xxiv  
9-xxiv-a

9.3.2-3 / 9.3.2-4

9.3.2-4a  
9.3.2-7

9.3.4-5 / 9.3.4-6  
9.3.4-31 / 9.3.4-32  
through 9.3.4-36a

9.3.7-1 / 9.3.7-2  
9.3.7-3 / 9.3.7-4

Fig. 9.3.2-1  
Fig. 9.3.2-1a

9.4.4-3 / 9.4.4-4

9.5.2-3 / 9.5.2-4  
9.5.2-4a  
9.5.2-9

9.5.3-1 / 9.5.3-2  
through 9.5.3-5

9.5.4-1 / 9.5.4-2  
through 9.5.4-6e / 9.5.4-6f

9.5.5-3 / 9.5.5-3a  
9.5.5-3b

9.5.6-1 / 9.5.6-2  
9.5.6-3 / 9.5.6-3a

9.5.7-1 / 9.5.7-2  
through 9.5.7-4a

9.5.8-1 / 9.5.8-2  
9.5.8-3 / 9.5.8-4

Fig. 9.5.3-1  
Fig. 9.5.3-2

SHNPP FSAR

REMOVE  
EXISTING PAGES

Fig. 9.5.4-2

Fig. 9.5.5-1

Fig. 9.5.6-1

CHAPTER 10

10-i / 10-ii

10.2.2-1 / 10.2.2-2  
through 10.2.2-5

10.2.3-5

10.2.4-1

10.3.3-1 / 10.3.3-2

10.3.6-1 / 10.3.6-2  
10.3.6-3 / 10.3.6-4

10.4.1-3 / 10.4.1-4

10.4.3-1 / 10.4.3-2

10.4.4-3 / 10.4.4-3a

10.4.8-3 / 10.4.8-4

CHAPTER 11

11-i / 11-ii  
11-iii / 11-iv  
11-vii / 11-viii

11.2.2-3 / 11.2.2-4

11.3.2-3 / 11.3.2-4  
11.3.2-5 / 11.3.2-6  
11.3.2-6a / 11.3.2-6b

11.3.3-1

11.4.1-1 / 11.4.1-2

INSERT  
REPLACEMENT PAGES

Fig. 9.5.4-2

Fig. 9.5.5-1

Fig. 9.5.6-1

CHAPTER 10

10-i / 10-ii  
10-ii-a

10.2.2-1 / 10.2.2-2  
through 10.2.2-5 / 10.2.2-6

10.2.3-5

10.2.4-1 / 10.2.4-2

10.3.3-1 / 10.3.3-2

10.3.6-1 / 10.3.6-2  
10.3.6-3 / 10.3.6-4

10.4.1-3 / 10.4.1-4

10.4.3-1 / 10.4.3-2  
10.4.3-3

10.4.4-3 / 10.4.4-3a

10.4.8-3 / 10.4.8-4

CHAPTER 11

11-i / 11-ii  
11-iii / 11-iv  
11-vii / 11-viii

11.2.2-3 / 11.2.2-4

11.3.2-3 / 11.3.2-4  
11.3.2-5 / 11.3.2-6  
11.3.2-6a / 11.3.2-6b

11.3.3-1

11.4.1-1 / 11.4.1-2

SHNPP FSAR

REMOVE  
EXISTING PAGES

11.4.2-1 / 11.4.2-2  
through 11.4.2-4a

-

11.5.1-1 / 11.5.1-2  
11.5.1-3  
11.5.1-4

11.5.2-1 / 11.5.2-2  
11.5.2-2a  
11.5.2-13 / 11.5.2-14  
through 11.5.2-16a  
11.5.2-19 / 11.5.2-19a

-

11.5.2-22  
11.5.2-23  
11.5.2-25

-

CHAPTER 12

12.3.4-11

12.5.1-1 / 12.5.1-2  
12.5.1-3 / 12.5.1-4

CHAPTER 13

13.1.2-1 / 13.1.2-2  
through 13.1.2-5 / 13.1.2-6

Fig. 13.1.2-1  
Fig. 13.1.2-2

13.2.1-3 / 13.2.1-4

CHAPTER 14

14-v / 14-vi  
14-vii / 14-viii

14.2.12-15 / 14.2.12-16  
14.2.12-61 / 14.2.12-62  
14.2.12-77 / 14.2.12-78  
14.2.12-78a

INSERT  
REPLACEMENT PAGES

11.4.2-1 / 11.4.2-2  
through 11.4.2-4a

Fig. 11.4.2-7

11.5.1-1 / 11.5.1-2  
11.5.1-3 / 11.5.1-3a  
11.5.1-4

11.5.2-1 / 11.5.2-2  
11.5.2-2a  
11.5.2-13 / 11.5.2-14  
through 11.5.2-16a  
11.5.2-19 / 11.5.2-19a  
11.5.2-19b  
11.5.2-22  
11.5.2-23  
11.5.2-25  
11.5.2-26

CHAPTER 12

12.3.4-11

12.5.1-1 / 12.5.1-2  
12.5.1-3 / 12.5.1-4

CHAPTER 13

13.1.2-1 / 13.1.2-2  
through 13.1.2-5 / 13.1.2-6

Fig. 13.1.2-1  
Fig. 13.1.2-2

13.2.1-3 / 13.2.1-4

CHAPTER 14

14-v / 14-vi  
14-vii / 14-viii

14.2.12-15 / 14.2.12-16  
14.2.12-61 / 14.2.12-62  
14.2.12-77 / 14.2.12-78  
14.2.12-78a / 14.2.12-78b

SHNPP FSAR

REMOVE  
EXISTING PAGES

CHAPTER 15

15.0.3-9

Fig. 15.0.3-1

15.1.2-3 / 15.1.2-3a  
15.1.2-4

Fig. 15.1.2-1  
through Fig. 15.1.2-4

Fig. 15.1.3-1  
through Fig. 15.1.3-8

15.2.8-6  
15.2.8-7

Fig. 15.2.8-1  
through Fig. 15.2.8-14

15.3.1-4

15.3.3-5

Fig. 15.3.1-1  
through Fig. 15.3.1-4

Fig. 15.3.2-1  
through Fig. 15.3.2-4

Fig. 15.3.3-1  
through Fig. 15.3.3-4

15.4.2-6

Fig. 15.4.2-1  
through Fig. 15.4.2-9

CHAPTER 17

17.2.1-3 / 17.2.1-4  
through 17.2.1-7 / 17.2.1-8

TMI APPENDIX

TMI-59

INSERT  
REPLACEMENT PAGES

CHAPTER 15

15.0.3-9

Fig. 15.0.3-1

15.1.2-3 / 15.1.2-3a  
15.1.2-4

Fig. 15.1.2-1  
through Fig. 15.1.2-4

Fig. 15.1.3-1  
through Fig. 15.1.3-8

15.2.8-6  
15.2.8-7

Fig. 15.2.8-1  
through Fig. 15.2.8-14

15.3.1-4

15.3.3-5

Fig. 15.3.1-1  
through Fig. 15.3.1-4

Fig. 15.3.2-1  
through Fig. 15.3.2-4

Fig. 15.3.3-1  
through Fig. 15.3.3-4

15.4.2-6

Fig. 15.4.2-1  
through Fig. 15.4.2-9

CHAPTER 17

17.2.1-3 / 17.2.1-4  
through 17.2.1-7 / 17.2.1-8

TMI APPENDIX

TMI-59

SHNPP FSAR

REMOVE  
EXISTING PAGES

TMI-60  
-

APPENDIX A

Entire Appendix A

Cover Sheet  
through Page 15

APPENDIX B

2  
5  
6  
9 through 14  
16 through 21  
24 through 36  
39 through 42

INSERT  
REPLACEMENT PAGES

TMI-60  
TMI-60a

APPENDIX A

Entire Appendix A

Cover Sheet  
through Page 21

APPENDIX B

2  
5  
6  
9 through 14  
16 through 21  
24 through 36  
39 through 42