

DUKE POWER COMPANY
POWER BUILDING, BOX 2178, CHARLOTTE, N. C. 28201

WILLIAM S. LEE
VICE PRESIDENT ENGINEERING

April 1, 1967



Director
Division of Reactor Licensing
U S Atomic Energy Commission
Washington, D C 20545

Re: Docket Nos 50-269 and -270

Dear Sir: Regulatory Formal File Cy.

Duke Power Company is filing herewith Amendment No 1 to its Application for Licenses for its proposed Oconee Nuclear Station. This filing includes three signed original copies and 19 conformed copies applicable to the general information section of the Application and 100 copies of material applicable to the Preliminary Safety Analysis Report.

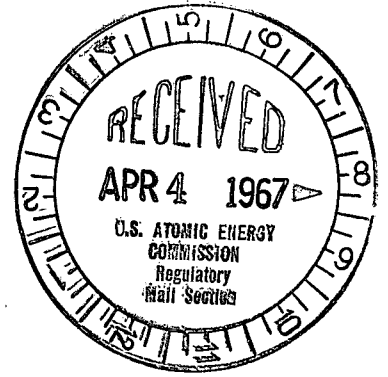
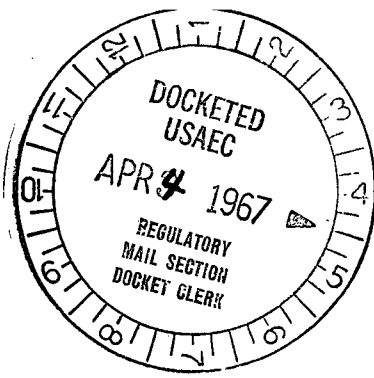
This amendment is in a format designed to keep current the Application and the Preliminary Safety Analysis Report. For convenient reference, it is suggested that the amendment material be inserted in those documents previously filed as follows:

1. Please make corrections to the Preliminary Safety Analysis Report in accordance with the attached errata sheets. This applies to 100 copies (Serial Nos 79-178). *all corrections made 4-6-67*
MTB
2. Please insert the attached revised pages as replacements for existing pages in the 100 copies of the Preliminary Safety Analysis Report (Serial Nos 79-178). *inserted 4-6-67*
MTB
3. Answers to 37 of the questions contained in the Director's letter of March 23, 1967 are included as Supplement 1 which should be inserted at the rear of Volume II of the 100 copies of the Preliminary Safety Analysis Report (Serial Nos 79-178). *inserted 4-6-67*
MTB
4. Copies of Duke Power Company's 1966 Annual Report to stockholders are provided for filing with Exhibit II in the 22 copies of the Application (Serial Nos 79-100). *inserted 4-6-67*
MTB

Very truly yours,

W S Lee

WSL/s



BEFORE THE
UNITED STATES ATOMIC ENERGY COMMISSION

IN THE MATTER OF)
)
DUKE POWER COMPANY)

DOCKET NOS 50-269
50-270

Regulatory Formal File Cy.

AMENDMENT NO. 1
TO
APPLICATION FOR LICENSES

Duke Power Company, Applicant in the above-captioned proceeding,
hereby files Amendment No. 1 to its Application for Licenses.

This Amendment No. 1 consists of the following documents which are
appended hereto and made a part hereof:

- a. Errata Sheets indicating various changes and corrections to portions of the Preliminary Safety Analysis Report and the Application, together with substitution and supplementary pages as indicated for the Preliminary Safety Analysis Report.
- b. Additional information submitted in response to selected questions contained in letter of Dr. Peter A. Morris, Director, Division of Reactor Licensing, to Applicant dated March 23, 1967. For convenience, this information is submitted in the form of a supplement to the Preliminary Safety Analysis Report and is labeled "Supplement 1" thereto.

c. Copy of Duke Power Company Annual Report to Shareholders
for the year 1966.

WHEREFORE, Applicant renews its request for the licenses specified
in its original Application.

IN WITNESS WHEREOF, Duke Power Company has caused its name
to be hereunto signed by W. S. Lee, its Vice President, and its corporate
seal to be hereto affixed by James S. Sease, its Assistant Secretary, this
1st day of April, 1967.

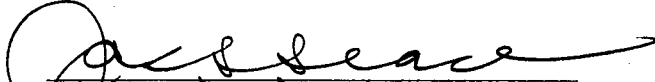
DUKE POWER COMPANY

By



Vice President

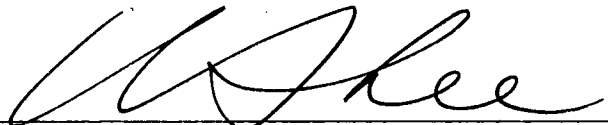
ATTEST:


Assistant Secretary

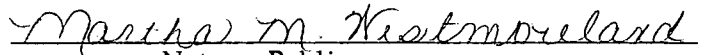
NORTH CAROLINA

MECKLENBURG COUNTY

W. S. LEE, being duly sworn, states that he is Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Atomic Energy Commission this Amendment No. 1 to its Application and documents appended thereto; that he has read all of the statements contained in such Application and the documents appended thereto and made a part thereof; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.


W. S. LEE

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 1st day of April, 1967.


Notary Public



My Commission Expires: 12-8-67

DUKE POWER COMPANY
 AMENDMENT NO. 1 TO
 APPLICATION FOR LICENSES
 DOCKET NOS. 50-269

270

Errata sheets indicating various changes and corrections to portions of the Preliminary Safety Analysis Report and the Application, together with substitution and supplementary pages as indicated for the Preliminary Safety Analysis Report.

Errata sheets, pages 1-7, for PSAR.

Errata sheet for Exhibit III in the Application.

Substitution and supplementary pages as listed below:

Front	Back	Front	Back	Front	Back
1-3	1-4	6-5	6-6	8-ii	-
1-14	-	6-7	6-8	8-1	8-2
1-17	1-18	6-9	6-10	8-3	8-4
1-29	1-30	6-11	6-12	8-4a	-
Fig 2-2	-	6-13	6-14	8-4b	-
3-74	3-75	6-15	6-16	8-4c	-
Fig 3-45	Fig 3-46	6-17	6-18	8-4d	-
Fig 3-47	Fig 3-48	6-19	6-20	Fig 8-1	-
Fig 3-57	Fig 3-58	6-21	6-22	Fig 8-3	-
Fig 3-59	Fig 3-60	6-23	6-24	9-3	9-4
4-23	4-24	6-25	6-26	9-5	9-6
Fig 4-1	-	6-27	6-28	9-17	9-18
Fig 4-5	-	6-29	6-30	9-19	9-20
5-5	5-6	Fig 6-1	-	Fig 9-1	-
5-17	5-18	Fig 6-2	-	Fig 9-2	-
5-19	-	Fig 6-6	-	Fig 9-4	-
5-26	-	Fig 6-9	-	Fig 9-5	-
Fig 5-1	-	Fig 6-10	-	Fig 9-6	-
Fig 5-2	-	Fig 6-11	-	Fig 9-9	-
Fig 5-3	-	Fig 6-15	-	11-17	-
Fig 5-4	-	7-1	7-2	Fig 11-1	-
Fig 5-5	-	7-5	7-6	Fig 12-1	-
Fig 5-7	-	7-6a	-	Fig 12-2	-
6-i	-	7-7	7-8	5A-1	5A-2
6-ii	-	7-9	7-10	5A-3	5A-4
6-iii	-	7-11	7-12	5B-7	5B-8
6-iv	-	Fig 7-2	-	5D-7	5D-8
6-v	-	Fig 7-3	-	5D-11	5D-12
6-1	6-2	Fig 7-11	-	5D-13	5D-14
6-3	6-4	8-i	-	5E-5	5E-6

Fourth page for Table of Contents in front of Volumes I and II.

DOCKETS 50-269 AND 50-270
DUKE POWER COMPANY
OCONEE NUCLEAR STATION
UNITS 1 AND 2

Errata
Filed With Amendment 1

Please make the following notations in the Preliminary Safety Analysis Report to effect correction of errors and minor changes:

<u>Page</u>	<u>Section</u>	
	Table of Contents in front of Volumes I and II	Change page numbers for Sections 6.2.3, 6.2.4, 6.3 and 6.3.1 from "6-20, 6-21, 6-21 and 6-21," respectively, to "6-19, 6-20, 6-20 and 6-20," respectively. Change the title of Section 6.3 to read, "Reactor Building Emergency Cooling Units." Section 9-3, delete "Reactor Building and" from the title.
1-iii	List of Tables	Change the title of Table 1-1 to "Engineered Safeguards Equipment."
1-7	1.3	Item 9, end sentence with a period (.) after "stainless steel" and delete "for the straight sections."
1-8	Table 1-2	Item 1 under Oconee 1 or 2, sixth line, System Pressure (minimum steady state), psia should read, "2150" instead of "2120."
1-9	Table 1-2	Item 2 under Oconee 1 or 2, last line on page, Thermal Shield ID/OD, in. should read, "155/159" instead of "157/161."
1-10	Table 1-2	Item 3, change "Atomic H ₂ O/U (unit cell-cold)" to read, "Fuel Rods per Assembly."
1-11	Table 1-2	Item 4 under Oconee 1 or 2: System Heat Output, BTU/hr should read "8,423 x 10 ⁶ " instead of "8,369 x 10 ⁶ "; and Coolant Volume, including pressurizer, ft ³ should read "11,800" instead of "11,600."
1-12	Table 1-2	Item 7 under Oconee 1 or 2, Shell Side Design Temperature, F should read "600" instead of "570."
1-12	Table 1-2	Item 8 under Oconee 1 or 2, Motor Rating, hp should read "9,000" instead of "8,000."

Errata
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Dockets 50-269 & 50-270

<u>Page</u>	<u>Section</u>	
1-13	Table 1-2	Item 10 under Oconee 1 or 2: Reference Incident Energy (E_1), Btu should read "306,700,000" instead of "302,000,000"; Ratio: E_1/E_2 should read "0.915" instead of "0.900"; Ratio: $(E_2-E_1)/E_1$ should read "0.093" instead of "0.110."
1-13	Table 1-2	Item 11 under Oconee 1 or 2: No. of High Head Pumps should read "3" instead of "2 per unit and 2 shared"; No. of Low Head Pumps should read "3" instead of "2 per unit and 2 shared."
1-16	1.4.1	Fourth paragraph from bottom of page, add "core flooding tanks" to the first sentence so that it reads, "Engineered safeguards, ie, core flooding tanks, the emergency injection systems, . . . insure proper operability."
1-21	1.4.9	First paragraph of Answer, third sentence, change "four" to "three."
1-22	1.4.10	Fourth paragraph of Answer, second sentence, add "core flooding tanks and the" so that sentence reads, "The source of injection water will be the core flooding tanks and the borated water storage tank."
1-24	1.4.13	Last line on page, change "containments" to "contaminants."
1-28	1.4.17	Third complete paragraph on page, last sentence, end sentence with a period (.) after "each shutdown" and delete "and one Reactor Building component cooling pump is in continuous use."
3-51	3.2.4.1.1	First paragraph, second sentence, delete "openings for passage of water for core flooding,."
3-52	3.2.4.1.2	First paragraph under Core Support Shield, delete the fifth sentence which reads, "Two core flooding chambers . . . the core support shield."
3-52	3.2.4.1.2	Second paragraph under Core Support Shield, first line, delete "and the core flooding nozzles."
4-29	Table 4-2	Core Flooding Water Nozzle, in. should read "14" instead of "8."
4-31	Table 4-5	Hydraulic Efficiency, % should read "88" instead of "86." Seal Water Injection, gpm should read "45 to 50" instead of "58 to 65." Seal Water Return, gpm should read "43 to 48" instead of "55 to 62."

Errata
Filed With Amendment 1
Dockets 50-269 & 50-270

<u>Page</u>	<u>Section</u>	
4-31	Table 4-5 (Cont'd)	Water Volume, ft ³ should read "95" instead of "76." Voltage should read "6,600" instead of "4,000." Input (hot reactor coolant), kw should read "5,400" instead of "5,600." Input (cold reactor coolant), kw should read "7,420" instead of "7,350."
4-32	Table 4-6	Pressurizer Surge Piping, in. should be "10 Sch 160" instead of "10 Sch 120."
4-33	Table 4-9	Under Reactor Coolant Pump, change "Volute and Casing" to "Casing."
5-2	5.1.1.3	Third paragraph, add to the listing of engineered safe- guards systems "Core flooding tanks."
5-8	5.1.2.7.1	Subparagraph (a), third line, change "associates" to "associated."
5-12	5.1.2.7.3	First paragraph, second line, change "mps" to "mph."
5-14	5.1.2.8	Fourth paragraph on page, second line, change "bar liner" to "bar and liner."
5-16	5.2.2	Last paragraph (system abbreviations), the definition of RB should read, "Component Cooling System (Reactor Building)."
5-20	5.3.1.1	Second paragraph, first line, insert "Reactor Building" before "emergency cooling"; same line, following "cooling units," delete "in the Reactor Building and component cooling system."
5-22	5.4	Next to last paragraph, following sentence which reads, "Provisions will . . . normal operation.," add "There are double seals at each of these access openings, and the space between these double seals is connected to the penetration room."
7-1	Table of Contents	Page number listed for Section 7.1.2.3 should read "7-6a" instead of "7-7."
7-1	7.1.1.1	Last subparagraph "a" on the page, end the first sen- tence with a period (.) after "coolant pressure" and delete "or low pressurizer level."

Errata
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Dockets 50-269 & 50-270

<u>Page</u>	<u>Section</u>	
7-4	7.1.1.3	Subparagraph "b," end the sentence with a period (.) after "system pressure" and delete "or a low pressurizer level."
7-4	7.1.1.4	First paragraph, second line, change "120 F" to read "110 F"; fourth paragraph, last line, change "120 F" to read "110 F."
7-10	7.1.2.4	In the listing of actions initiated by the engineered safeguards protective system, for Low Pressure Injection, delete "Low Pressurizer Level or" under Trip Condition; also, for Low Pressure Injection, delete "4 in. Above Heaters or" under the Trip Point.
7-27	7.3.2.1	Subparagraph "e," delete the second sentence which reads, "This level information . . . protective system."
7-28	7.3.3.2.2	Delete the second paragraph which begins, "Calibration of temperature detectors . . . isothermal."
8-5	8.2.2.9	Subparagraph (b), first line, add "6900 volt switchgear," so that the sentence reads, "The 6900 volt switchgear, 4160 volt switchgear and 600 volt load centers will be . . ."
8-5	8.2.2.9	Subparagraph (d), first line, delete "4160 volt."
9-ii	Table of Contents	Title of Section 9.3 should read, "Component Cooling System" instead of "Reactor Building and Component Cooling System."
9-1	9	Change item c following first paragraph to read, "Component cooling system."
9-2	9	Subparagraph i, delete "American."
9-2	9.1.1.2	Last line of paragraph, delete "reactor building and."
9-7	Table 9-1	Total Seal Flow to Each Reactor Coolant Pump, gpm should read "45-50" instead of "58-65." Seal Inleakage to Reactor Coolant System per Reactor Coolant Pump, gpm should read "2" instead of "3." Temperature to Seals, normal/maximum, F should read "120/150" instead of "125/150." Purification Letdown Fluid Temperature, normal/maximum, F should read "120/140" instead of "125/140."

Errata
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Dockets 50-269 & 50-270

<u>Page</u>	<u>Section</u>	
9-8	Table 9-2	Letdown Cooler, Heat Transferred, Btu/hr should read "16.1 x 10 ⁶ " instead of "16.4 x 10 ⁶ ." Letdown Cooler, Letdown Temperature Change, F should read "555 to 120" instead of "555 to 125." Purification Demineralizer, Resin Volume, ft ³ should read "50" instead of "40."
9-21	Table 9-7	Component Cooling Water Flow Rate, gpm should read "650" instead of "1,130." Design Temperature, F should read "225" instead of "300." Design Pressure, psig should read "100" instead of "200." LPSW Outlet Temperature, F should read "102" instead of "82." LPSW Flow Rate, gpm should read "1,300" instead of "5,000." External Design Pressure, psig should read "100" instead of "200." External Design Temperature, F should read "225" instead of "300."
9-25	9.5.1.2	In the first line, delete ", in normal operation," and replace with "during a routine shutdown."
9-25	9.5.1.3	In the first line, delete ", in normal operation," and replace with "during a routine shutdown."
9-25	9.5.2.3	In the second sentence, delete "isolating the pumps and coolers from the shared pumps, and."
9-26	9.5.2.4	In the first line, "two half capacity pumps and two coolers" should read, "three half capacity pumps and two full capacity coolers."
9-26	9.5.2.6	At end of second sentence, change "a check valve in series" to read, "two check valves in series"; at beginning of third sentence, delete "three."
9-28	Table 9-10	Borated Water Storage Tanks, capacity (each), gal should read "350,000" instead of "260,000."
9-30	9.6.2.3	Second paragraph, second line, change "the spray coolers and the Reactor Building component coolers" to read, "the Reactor Building emergency cooling units."

Errata
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Dockets 50-269 & 50-270

<u>Page</u>	<u>Section</u>	
9-30	9.6.2.3	Third paragraph, second line, delete ", the spray coolers."
10-2	10.2.1	Third paragraph, second sentence, change "50,000" to "71,500" and change "3.6" to "5.0."
Figure 10-1	10	Upper Surge Tank, change "50,000 GAL" to "71,500 GAL." Hotwell, change Total Hotwell Storage from "136,000 gal" to "142,000 gal."
11-2	Table 11-1	Deborating Demin. Regen. and Rinse should read "5,000" instead of "500."
12-1	12.1.1	First paragraph, fourth line, delete "an Assistant Vice President" and substitute therefor "the Manager."
13-3	Table 13-1	Following item 27, add "28. Core Flooding System" and indicate by "x" each of the following tests: Hydro, Operational, Functional.
1A-2	Appendix 1A, 1.3	Third paragraph, first line, delete "Production and Transmission" and substitute therefor "Transmission-Electric Installations."
1A-4	Appendix 1A, 1.6	First paragraph, before first sentence, insert "Under the general supervision of Mr. A. C. Thies, Vice President, Production-Operation,"; and delete reference to Mr. Thies at end of sentence, substituting therefor "Mr. E. D. Powell, Manager, Steam Production."
Figure 2A-2	Appendix 2A	Change bar scale from "feet" to "hundreds of feet."
Figure 2A-3	Appendix 2A	Change bar scale from "feet" to "hundreds of feet."
5B-9	Appendix 5B, 5.1.3	Fifth line, delete "strand or" following "A length of"
5C-4	Appendix 5G, 3.5	First paragraph, last line, change "(f')" to "(f' _c)."
5D-7	Appendix 5D, 2.5.1	First paragraph, first line, delete ", high strength strands or large diameter strands" following "steel wires."
5D-12	Appendix 5D, 2.10	Third line on page, delete "or strands" following "steel wires."

Errata
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Dockets 50-269 and -270

<u>Page</u>	<u>Section</u>	
5D-15	Appendix 5D, 4.2	Third line on page, change "mode" to "made."
5E-1	Appendix 5E, 3.	Second paragraph, first line, change "UW-38" to "UW-35."

DOCKETS 50-269 AND 50-270
DUKE POWER COMPANY
OCONEE NUCLEAR STATION
UNITS 1 AND 2

Errata
Filed With Amendment 1

Please make the following changes in Exhibit III to the License Application:

<u>Page</u>	<u>Section</u>	
1A-2	License Application, Technical Qualifica- tions, Section 1.3	Third paragraph, first line, delete "Produc- tion and Transmission" and substitute there- for "Transmission-Electric Installations."
1A-4	License Application, Technical Qualifica- tions, Section 1.6	First paragraph, before first sentence, insert "Under the general supervision of Mr. A. C. Thies, Vice President, Production- Operation,"; and delete reference to Mr. Thies at end of sentence, substituting therefor "Mr. E. D. Powell, Manager, Steam Production."

DUKE POWER COMPANY
AMENDMENT NO. 1 TO
APPLICATION FOR LICENSES
DOCKET NOS. 50-269
50-270

Additional information submitted in response to selected questions contained in letter of Dr. Peter A. Morris, Director, Division of Reactor Licensing, to Applicant dated March 23, 1967.

The answers to the following questions are submitted as Supplement 1, dated April 1, 1967:

1. 1	3. 4	8. 1
1. 2	3. 6	8. 3
1. 3	4. 2	8. 4
1. 5	4. 4	8. 5
1. 6	4. 5	8. 6
1. 7	4. 6	9. 1
2. 1	4. 8	9. 2
2. 2	7. 1	9. 3
2. 3	7. 2	9. 4
2. 4	7. 3	9. 5
2. 6	7. 4	9. 6
2. 7	7. 6	9. 7
		10. 1