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Nov. 23, 1977

Docket Nos. 50-269
50-270
and 50-287

Duke Power Company
ATTN: Mr. William O. Parker, Jr.
Vice President - Steam Production
422 South Church Street
P. O. Box 2178
Charlotte, North Carolina 28242

Gentlemen:

The Commission has issued the enclosed Amendment Nos. 54, 54, and 51 for Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Unit Nos. 1, 2 and 3. These amendments consist of changes to the Station's common Technical Specifications and are in response to your request dated May 6, 1977.

These amendments revise the Technical Specifications to identify or conservatively account for radionuclides which may be present at low activity levels in mixtures of gamma emitters.

Copies of our Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

ISI

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 54 to License No. DPR-38
2. Amendment No. 54 to License No. DPR-47
3. Amendment No. 51 to License No. DPR-55
4. Safety Evaluation
5. Notice of Issuance

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cc w/enclosure: See next page	ORB#1	ORB#1	OELD	ORB#1
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DATE >	11/ /77	11/ /77	11/ /77	11/ /77



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 23, 1977

Docket Nos. 50-269
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ATTN: Mr. William O. Parker, Jr.
Vice President - Steam Production
422 South Church Street
P. O. Box 2178
Charlotte, North Carolina 28242

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Copies of our Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer".

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 54 to License No. DPR-38
2. Amendment No. 54 to License No. DPR-47
3. Amendment No. 51 to License No. DPR-55
4. Safety Evaluation
5. Notice of Issuance

cc w/enclosure:
See next page

November 23, 1977

cc: Mr. William L. Porter
Duke Power Company
P. O. Box 2178
422 South Church Street
Charlotte, North Carolina 28242

J. Micheal McGarry, III, Esquire
DeBevoise & Liberman
700 Shoreham Building
806-15th Street, NW.,
Washington, D.C. 20005

Oconee Public Library
201 South Spring Street
Walhalla, South Carolina 29691

Honorable James M. Phinney
County Supervisor of Oconee County
Walhalla, South Carolina 29621

Office of Intergovernmental Relations
116 West Jones Street
Raleigh, North Carolina 27603

Chief, Energy Systems
Analyses Branch (AW-459)
Office of Radiation Programs
U. S. Environmental Protection Agency
Room 645, East Tower
401 M Street, S. W.
Washington, D. C. 20460

U. S. Environmental Protection Agency
Region IV Office
ATTN: EIS COORDINATOR
345 Coutland Street, N. E.
Atlanta, Georgia 30308



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. DPR-38

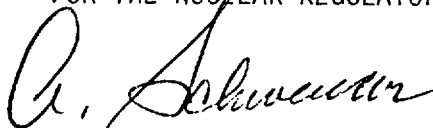
1. The U. S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated May 6, 1977, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B of Facility License No. DPR-38 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

3. This license amendment is effective within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 23, 1977



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. DPR-47

1. The U. S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated May 6, 1977, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B of Facility License No. DPR-47 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

3. This license amendment is effective within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 23, 1977



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment NO.51
License No. DPR-55

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duke Power Company (the licensee) dated May 6, 1977, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 3.B of Facility License No. DPR-55 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.51, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications."

3. This license amendment is effective within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 23, 1977

ATTACHMENT TO LICENSE AMENDMENT NOS. 54, 54 AND 51

FACILITY OPERATING LICENSE NOS. DPR-39, DPR-47 AND DPR-55

DOCKET NOS. 50-269, 50-270 AND 50-287

Revise Appendix A as follows: Remove the following pages and replace with identically numbered revised pages.

<u>Remove</u>	<u>Replace</u>
4.1-11	4.1-11
4.1-12	4.1-12
4.1-13	4.1-13

TABLE 4.1-3 Cont.

MINIMUM SAMPLING FREQUENCY

<u>Item</u>	<u>Check</u>	<u>Frequency</u>	<u>Sensitivity Limits of Lab Analysis for Waste</u>
7. Low Activity Waste Tank, Condensate Test Tank, Condensate Monitoring Tank, Laundry-Hot Shower Tank	a. Principal Gamma Emitters ⁽⁵⁾ including Dissolved Noble Gases	a. Prior to release of each batch	a. Gamma Nuclides $<5 \times 10^{-7}$ $\mu\text{Ci/ml}$ Dissolved Gases $<10^{-5}$ $\mu\text{Ci/ml}$
	b. Radiochemical Analysis Sr 89,90	b. Monthly	b. $<10^{-8}$ $\mu\text{Ci/ml}$
	c. Tritium	c. Monthly	c. $<10^{-5}$ $\mu\text{Ci/ml}$
	d. Gross Alpha Activity	d. Monthly	d. $<10^{-7}$ $\mu\text{Ci/ml}$
8. Waste Gas Decay Tank	a. Principal Gamma Emitters ⁽⁵⁾	a. Prior to release of each batch	a. $<10^{-4}$ $\mu\text{Ci/cc}$ (gases) $<10^{-10}$ $\mu\text{Ci/cc}$ (particulates and iodines)
	b. Tritium	b. Prior to release of each batch	b. $<10^{-6}$ $\mu\text{Ci/cc}$
9. Unit Vent Sampling	a. Iodine Spectrum ⁽⁴⁾	a. Weekly	a. $<10^{-10}$ $\mu\text{Ci/cc}$
	b. Particulates ⁽⁴⁾		
	1) Principal Gamma Emitters ⁽⁵⁾	1) Weekly Composite	1) $<10^{-10}$ $\mu\text{Ci/cc}$
	2) Gross Alpha Activity	2) Quarterly on a sample of one week duration	2) $<10^{-11}$ $\mu\text{Ci/cc}$
	3) Radiochemical Analysis Sr 89,90	3) Quarterly Composite	3) $<10^{-11}$ $\mu\text{Ci/cc}$

TABLE 4.1-3 Cont.

MINIMUM SAMPLING FREQUENCY

<u>Item</u>	<u>Check</u>	<u>Frequency</u>	<u>Sensitivity Limits of Lab Analysis for Waste</u>
	c. Gases by Principal Gamma Emitters (5)	c. Weekly	c. $<10^{-4}$ $\mu\text{Ci/cc}$
10. Keowee Hydro Dam Dilution Flow	Measure Leakage Flow Rate	Annually	
11. Condenser Air Ejector Partition Factor	Measure Iodine Partition Factor in Condenser	One time if and when primary to secondary leaks develop	
12. Reactor Building	a. Principal Gamma Emitters ⁽⁵⁾	a. Each Purge	a. $<10^{-4}$ $\mu\text{Ci/cc}$ (gases) $<10^{-10}$ $\mu\text{Ci/cc}$ (particulates and iodines)
	b. Tritium	b. Each Purge	b. $<10^{-6}$ $\mu\text{Ci/cc}$

(1) When radioactivity level is greater than 10 percent of the limits of Specification 3.1.4, the sampling frequency shall be increased to a minimum of once each day.

(2) \bar{E} determination will be started when gross beta-gamma activity analysis indicates greater than 10 $\mu\text{Ci/ml}$ and will be redetermined for each 10 $\mu\text{Ci/ml}$ increase in gross beta-gamma activity analysis thereafter. A radiochemical analysis for this purpose shall consist of a quantitative measurement of 95 percent of the radionuclides in the reactor coolant with half lives greater than 30 minutes. This is expected to consist of gamma isotopic analysis of the primary coolant, including dissolved gaseous activities, radiochemical analysis for Sr-89 and Sr-90, and tritium analysis.

TABLE 4.1-3 Continued

MINIMUM SAMPLING FREQUENCY

- (3) When gross activity increases by a factor of two above background, an iodine analysis will be made and performed thereafter when the gross beta-gamma activity increases by 10 percent.
- (4) When the activity level exceeds 10 percent of the limits of Specification 3.9, the sampling frequency shall be increased to a minimum of once each day. This can be done by RIA-44 (Unit Vent Iodine Monitor). When the gross activity release rate exceeds one percent of the maximum release rate and the average gross activity release rate increased by 50 percent over the previous day, an analysis shall be performed for iodines and particulates. This can be done by RIA-44 (Unit Vent Iodine Monitor) and RIA-43 (Unit Vent Particulate Monitor).
- (5) For certain mixtures of gamma emitters, it may not be possible to measure the activity level of some radionuclides in the mixture to their specified sensitivity limit when other nuclides are present in the sample at much higher activity levels. When this situation exists, the minimum detectable activities (MDA) of the nuclides not meeting the sensitivity limits will be compared with the total activity present from other nuclides. If the MDA of each of these nuclides is less than 1% of the total activity present, it will not be included in the total activity determination. If it is greater than 1% of the total activity, it will be added to the total activity at its MDA concentration.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 54, 54 AND 51

TO FACILITY LICENSE NOS. DPR-38, DPR-47 AND DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNIT NOS. 1, 2 AND 3

DOCKET NOS. 50-269, 50-270 AND 50-287

Introduction

By letter dated May 6, 1977, Duke Power Company (licensee) requested changes to the common Technical Specifications incorporated in the operating licenses of Units Nos. 1, 2 and 3 of the Oconee Nuclear Station.

Discussion

The proposed change to Technical Specification Table 3.1-3 defines provisions to identify and/or account for radionuclides which may be present at low activity levels in mixtures of gamma emitters. Due to other radionuclides, which are present in the samples at much higher activity levels, it may not be possible to measure the activity level of some radionuclides at their specified sensitivity limit. This change is considered necessary to resolve the problem of accounting for these low activity radionuclides.

The provisions of the change consist of re-identifying the gamma isotopic analysis to an analysis of principal gamma emitters in Table 4.1-3 and adding a footnote to account for low activity radionuclides.

Evaluation

The proposed change to replace the phrase "Gamma Isotopic Analysis" by the phrase "Principal Gamma Emitters" does not change (1) the requirement on the licensee to conduct a gamma analysis of the effluents from the station, (2) the minimum frequency of the analysis or (3) the sensitivity limits of the analysis. The proposed change provides that the required gamma analysis of radioactive material released in liquid and gaseous

effluent from the station determine only the "principal" gamma emitters. The word "principal" is defined by the proposed footnote 5 to Table 4.1-3. The principal gamma emitters are radionuclides which have a measured activity greater than their minimum detectable activity or which have a minimum detectable activity greater than 1% of the total measured activity. This 1% criteria is smaller than the error associated with measuring the activity itself.

These proposed changes will not allow the licensee to discharge greater concentrations or a higher total activity than the maximum allowed in the past and the amount discharged below these limits will not change as a result of this amendment. This change does not relieve the licensee from meeting the requirements of 10 CFR 20. Consequently, there will be no appreciable effect on the environment or health and safety of the public from this action. Based on our review, we conclude that this change is acceptable.

Environmental Considerations

We have determined that these amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that these amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated:

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-269, 50-270 AND 50-287DUKE POWER COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 54, 54 and 51 to Facility Operating License Nos. DPR-38, DPR-47 and DPR-55, respectively, issued to Duke Power Company which revised the Technical Specifications for operation of the Oconee Nuclear Station, Unit Nos. 1, 2 and 3, located in Oconee County, South Carolina. The amendments are effective within 30 days of date of issuance.

These amendments revise the Technical Specifications to identify or conservatively account for radionuclides which may be present at low activity levels in mixtures of gamma emitters.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and the pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative

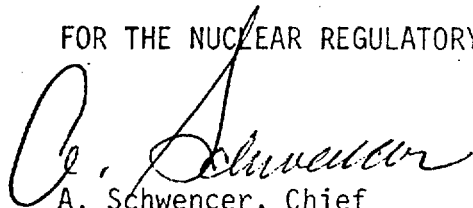
- 2 -

declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated May 6, 1977, (2) Amendment Nos. 54, 54 and 51 to License Nos. DPR-38, DPR-47 and DPR-55, respectively, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Oconee County Library, 201 South Spring Street, Walhalla, South Carolina 29691. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 23rd day of November 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors