

January 29, 1987

Dockets Nos. 50-269, 50-270
and 50-287

Mr. Hal B. Tucker
Vice President - Nuclear Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

We have enclosed a copy of the Environmental Assessment associated with your January 14, 1986 amendment application as supplemented April 10, June 18, 1986 and January 15, 1987. The proposed amendments would extend the license expiration dates from November 6, 2007 to February 6, 2013 for Oconee Unit 1; to October 6, 2013 for Oconee Unit 2; and to July 19, 2014 for Oconee Unit 3.

A copy of the Notice of Issuance of Environmental Assessment and Finding of No Significant Impact published in the Federal Register on January 29, 1987. (51 FR 2964), is also enclosed.

Sincerely,

/s/

Helen N. Pastis, Project Manager
PWR Project Directorate #6
Division of PWR Licensing-B

Enclosures:
As stated

cc w/enclosures:
See next page

Distribution:
Docket File
NRC & L PDRs
PBD#6 Files
FMiraglia
DCrutchfield
HPastis
OGC
EJordan
JPartlow
BGrimes

JWermeil
GEdison
OPA
ACRS

8702090291 870129
PDR ADOCK 05000269
PDR

*See previous white for concurrences

PWR#6*	PWR#6*	PWR#6*	PWR#6*	<i>ADPMB</i>	OGC*
RIngram	HPastis;eh	GEdison	JStolz	DCrutchfield	CWoodhead
1/7/87	1/8/87	1/8/87	1/9/87	1/21/87	1/12/87

Dockets Nos. 50-269, 50-270
and 50-287

Mr. Hal B. Tucker
Vice President - Nuclear Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

We have enclosed a copy of the Environmental Assessment associated with your January 14, 1986 amendment application as supplemented April 10 and June 18, 1986. The proposed amendments would extend the license expiration dates from November 6, 2007 to February 6, 2013 for Oconee Unit 1; to October 6, 2013 for Oconee Unit 2; and to July 19, 2014 for Oconee Unit 3.

A copy of the Notice of Issuance of Environmental Assessment and Finding of No Significant Impact published in the Federal Register on (FR), is also enclosed.

Sincerely,

Helen N. Pastis, Project Manager
PWR Project Directorate #6
Division of PWR Licensing-B

Enclosures:
As stated

cc w/enclosures:
See next page

Distribution:
Docket File
NRC & L PDRs
PBD#6 Files
FMiraglia
DCrutchfield
HPastis
OGC
EJordan
JPartlow
BGrimes

GEEdison
OPA
ACRS

PWR#6 RIngram 1/1/87	PWR#6 HPastis;eh 1/1/87	PWR#6 GEEdison 1/18/87	PWR#6 JStoiz 1/19/87	AD:PWR-B DCrutchfield 1/1/87
----------------------------	-------------------------------	------------------------------	----------------------------	------------------------------------

OGC
Woodhead
1/2/87
in condition
FRN of EA
published prior
to issuance
of amendment

Mr. H. B. Tucker
Duke Power Company

Oconee Nuclear Station
Units Nos. 1, 2 and 3

cc:

Mr. A. V. Carr, Esq.
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Duke Power Company
Post Office Box 33189
422 South Church Street
Charlotte, North Carolina 28242

J. Michael McGarry, III, Esq.
Bishop, Liberman, Cook, Purcell & Reynolds
1200 Seventeenth Street, N.W.
Washington, D.C. 20036

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 220, 7910 Woodmont Avenue
Bethesda, Maryland 20814

Manager, LIS
NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Route 2, Box 610
Seneca, South Carolina 29678

Regional Administrator
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Suite 3100
Atlanta, Georgia 30303

Mr. Heyward G. Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

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

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



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

ENVIRONMENTAL ASSESSMENT

BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO THE CHANGE IN EXPIRATION DATES OF
FACILITY OPERATING LICENSES NOS. DPR-38, DPR-47 AND DPR-55

DUKE POWER COMPANY

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

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

8702090296 870129
PDR ADOCK 05000269
P PDR

January 22, 1987

TABLE OF CONTENTS

- 1.0 INTRODUCTION
- 2.0 IDENTIFICATION OF THE PROPOSED ACTION
- 3.0 THE NEED FOR THE PROPOSED ACTION
- 4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION
 - 4.1 Radiological Impacts - General Public
 - 4.1.1 Environmental Impacts - General Public
 - 4.1.2 Environmental Impacts - Uranium Fuel Cycle
 - 4.1.3 Environmental Impacts - Occupational Exposures
 - 4.1.4 Environmental Impacts - Transportation of Fuel and Waste
 - 4.2 Non-Radiological Impacts
- 5.0 ALTERNATIVES TO THE PROPOSED ACTION
- 6.0 ALTERNATIVE USE OF RESOURCES
- 7.0 AGENCIES AND PERSONS CONSULTED
- 8.0 BASIS AND CONCLUSIONS FOR NOT PREPARING AN ENVIRONMENTAL IMPACT STATEMENT

1.0 INTRODUCTION

The United States Nuclear Regulatory Commission (the Commission or staff) is considering the issuance of proposed amendments which would extend the expiration dates of the operating licenses for Oconee Nuclear Station, Units 1, 2 and 3, from November 6, 2007 to February 6, 2013 for Oconee Unit 1; to October 6, 2013 for Oconee Unit 2; and to July 19, 2014 for Oconee Unit 3. The Oconee Nuclear Station is operated by Duke Power Company (the licensee) and is located in Oconee County, South Carolina.

2.0 IDENTIFICATION OF THE PROPOSED ACTION

The currently licensed term for Oconee Nuclear Station, Units 1, 2 and 3, is 40 years commencing with issuance of the construction permits (November 6, 1967). Accounting for the time that was required for plant construction, this represents an effective operating license term of 34 years for Units 1 and 2, and 33 years for Unit 3. The licensee's application dated January 14, 1986, as supplemented on April 10, June 18, 1986 and January 15, 1987, requests an extension of the expiration dates of the operating licenses to February 6, 2013 (Unit 1), October 6, 2013 (Unit 2) and July 19, 2014 (Unit 3). Therefore, the 40-year operating term would start with the issuance of the operating licenses and not the construction permits.

3.0 THE NEED FOR THE PROPOSED ACTION

The granting of the proposed license amendments would allow the licensee to operate Oconee Nuclear Station, Units 1, 2 and 3, for an additional six to seven years, beyond the currently approved dates.

4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

In March 1972, the Atomic Energy Commission issued the "Final Environmental Statement Related to Operation of the Oconee Nuclear Station, Units 1, 2 and 3" (FES). This document evaluates the environmental impact associated with the operation of Oconee Units 1, 2 and 3. The Commission's staff has reviewed this document to determine if any significant environmental impacts, other than those previously considered, would be associated with the proposed license extensions.

4.1 Radiological Impacts - General Public

The staff has considered the radiological impacts expected as a result of a hypothetical, design basis accident at the Oconee Nuclear Station and from normal plant operation including the impact of revised population estimates.

In previous documents (Safety Evaluation Report, Oconee Unit 1, December 29, 1970, Safety Evaluation Report, Oconee Units 2 and 3, July 23, 1973, and Final Environmental Statement, March 1972), the staff evaluated the regional demography for Oconee Units 1, 2 and 3. The site is in eastern Oconee County, South Carolina. The exclusion area has a one mile radius (from the center of Oconee Unit 2). The low population distance is at least six miles, and the nearest population center, Anderson, South Carolina, which has a population of 41,000, is located 21 miles southeast of the site.

Duke has updated population estimates for the area surrounding the Oconee Nuclear Station. These estimates were compared to those referenced in the FES. The population estimates were recalculated based on the 1980 census and projected to the years 2010 and 2020. The population within 20 miles of the plant is estimated to be 231,794 in 2010 and 246,536 in 2020. This corresponds to a 90% increase over what was forecast in the FES. This increase in population can be expected as a result of residential developments surrounding the area lakes (Lake Keowee in particular). The actual permanent population within the low population boundary (six miles from the site) was 3620 in 1970 and is estimated to be 8900 for 2010. The staff concludes that, based upon the above population estimates, the Low Population Zone and nearest population center distances will likely be unchanged from those used for licensing the units. Therefore, the conclusion reached in the staff's Safety Evaluation in 1970 that Oconee Nuclear Station meets the requirements of 10 CFR Part 100 remains unchanged.

In addition, the staff concludes that the higher projected population for 2020 would not change the overall conclusions of the FES concerning radiological consequences following accidents.

Finally, the staff has assessed the public risks from reactor accidents per year of operation at other reactors of comparable design and power level (and larger). In all cases, the estimated reactor accident risks of early and latent cancer fatality per year of operation have been small compared to the background cancer fatality risks to which the public is exposed and did not increase with longer periods of operation. If similar risks were estimated for Oconee Nuclear Station, Units 1, 2 and 3, we would expect a similar comparison. Therefore, we conclude that the proposed additional years of operation would not increase the annual public risk from reactor accidents.

The principal factors associated with an additional period of operation which could potentially change the probability or consequence of an accident would be due to aging of electric equipment important to safety, and changes in the fracture toughness properties of reactor vessel beltline materials due to neutron irradiation. The Commission has reviewed fracture toughness requirements for protection against pressurized thermal shock events and has determined that Oconee Units 1 and 3 can be operated for 40 calendar years without reaching pressurized thermal shock screening criterion specified in 10 CFR 50.61. However, Oconee Unit 2 will exceed the applicable 10 CFR Part 50.61 screening criterion of 300°F for 40 calendar years of operation at an assumed plant utilization factor of 80%. The licensee's reanalysis based on a plant utilization factor of 74% indicates that the screening criterion of 300°F for 40 calendar years can be met. Based on actual experience at the Oconee Nuclear Station, the utilization factor is about 65%. Accordingly, there is reasonable assurance that operation of Oconee Unit 2 for 40 calendar years will not exceed the PTS screening criterion.

The Commission also finds that the licensee has established an environmental qualification program for electric equipment important to safety in accordance with 10 CFR 50.49, and that this program has given appropriate consideration to all significant types of degradation, including aging, which can have an effect on the functional capability of equipment. Under the licensee's environmental qualification program, equipment important to safety has either been determined to be qualified for at least 40 years of operation, or is designated for periodic replacement or refurbishment before the end of its predetermined life.

In addition to the environmental qualification program, numerous other programs exist at nuclear power plants to assure that the probability and consequence of any accident remains consistently small. Examples of such programs include those of Technical Specifications which limit conditions for operation and require periodic surveillances; operating and emergency procedures; administrative procedures; inservice inspection requirements; periodic maintenance; quality control and quality assurance programs; personnel qualification and training programs; and other programs associated with continued conformance to national codes and standards. Such programs remain in effect throughout the duration of the operating license, including any extended operation authorized by the Commission. Accordingly, the Commission concludes that the proposed extension does not increase the probability or the severity of any accident. Although there does exist an integral exposure to risk by virtue of the additional years of plant operation and increased population within 6 miles of the site, the additional exposure to risk is not significant because the probability and consequences of accidents remain small. Accordingly, the proposed extension would not cause a significant increase in the public risks from reactor accidents and would not change any conclusions reached by the Commission in the FES.

The staff has also evaluated the radiological environmental effects associated with normal operation of the facility. This evaluation was conducted to assure that the licensee's "as low as is reasonably achievable" (ALARA) measures and dose projections are applicable for the additional years of plant service and are in accordance with 10 CFR Part 20 and the guidance of Regulatory Guide 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low as is Reasonably Achievable" (Revision 3).

4.1.1 Environmental Impacts - General Public

In the FES, the staff calculated dose commitments to the human population residing around the Oconee nuclear power reactors to assess the impact on people from radioactive material released from the reactors. The annual dose commitment was calculated to be the dose that would be received over a 50-year period following the intake of radioactivity for one year under the conditions that would exist 15 years after the plants began operation.

The 15-year operation was chosen as representing the midpoint of plant operation and was incorporated into the dose models by allowing for buildup of long life radionuclides in the soil. The buildup factor mainly affects the estimated doses for long life radionuclides (i.e., half-lives greater than a few years) ingested by humans. For a plant licensed for 40 years, increasing the buildup period from 15 to 20 years would increase the dose from long life radionuclides via the ingestion pathways by less than one-third. It would have much less effect on dose from shorter lived radionuclides. Table V-5 of the FES indicates that the estimated doses via the ingestion pathways are well below the annual dose design objectives in 10 CFR Part 50, Appendix I, "Numerical Guides For Design Objectives and Limiting Conditions For Operation To Meet the Criterion 'As Low As Is Reasonably Achievable' For Radioactive Material In Light-Water-Cooled Nuclear Power Reactor Effluents". For example, the ingestion dose to the thyroid from Oconee Units 1, 2 and 3 is 1.6 millirems per year (mrem/yr) compared to an Appendix I design objective of 15 mrem/yr. Thus, an increase of even as much as one-third in these pathways would remain well below the Appendix I guidelines and would not be significant.

4.1.2 Environmental Impacts - Uranium Fuel Cycle

The impacts of the uranium fuel cycle are based on 30 years of operation of a model light water reactor (LWR). The fuel requirements for the model LWR were assumed to be one initial core load and 29 annual refuelings (approximately 1/3 core). The annual fuel requirement for the model LWR averaged out over a 40-year operating life (1 initial core and 39 refuelings of approximately 1/3 core) would be reduced slightly as compared to the annual fuel requirement averaged for a 30-year operating life. The net result would be approximately a 1.5% reduction in the annual fuel requirement for the model LWR. This small reduction in fuel requirements would not lead to significant changes in the impacts of the uranium fuel cycle when a 40-year period of operation is considered.

4.1.3 Environmental Impacts - Occupational Exposures

The staff has evaluated the licensee's dose assessment for the years 2007 to 2014 (the additional years during which Oconee Units 1, 2 and 3 would operate), and compared it with current Oconee and overall industry occupational dose experience.

The average dose for Oconee Nuclear Station over the recent five-year period covering 1980 to 1985 has been 530 person-rems per unit per year, which is comparable to the current five-year average of 569 person-rems dose per unit per year for operating pressurized water reactors in the United States. Duke does not expect any increase in station doses for the years 2007 to 2014. It is expected that state-of-the-art technologies will be in use including some robotics, enhanced chemistry control and modern decontamination. The staff expects that increased doses from maintenance and corrosion product buildup will be offset by a continually improving ALARA program, dose-saving plant modifications, and fewer major modifications, but that overall, average annual doses could increase by about 10%. Oconee has been average in the number of workers receiving measurable doses, but well below average in dose per worker during this same period, compared to other U.S. pressurized water reactors. Overall, occupational radiation exposures can be expected to remain about as estimated in the FES and as experienced during the initial operation period.

Oconee has averaged less than half the volume of solid radwaste shipped by the average pressurized water reactor over the period 1980-1985 and ranks mid-range in overall volume of radwaste shipped during this same period. Occupational doses and population doses from radwaste processing and shipping are well within the estimates made in the FES. Radioactive waste shipments are expected to remain at about the present level for the remaining life of the plant.

Spent fuel will be stored in the reracked spent fuel pool (previously evaluated by the staff for radiological environment consequences) in lieu of shipment offsite as stated in the FES, and in accordance with current national policy. Any further expansion of onsite spent fuel storage capacity (such as through rod consolidation) will be further evaluated for radiological environmental effects by the staff at the time it is proposed.

The staff concludes that the licensee's occupational dose assessment is acceptable, and their radiation protection program is adequate to ensure that occupational radiation exposures will be maintained ALARA and in continued compliance with the requirements of 10 CFR Part 20.

Therefore, the staff concludes that the environmental impacts associated with a 40-year operating license duration are not significantly different from those associated with a 30-year operating license duration and those previously assessed in the Oconee FES.

4.1.4 Environmental Impacts - Transportation of Fuel and Waste

The staff reviewed the environmental impacts attributable to the transportation of fuel and waste to and from the Oconee site. With respect to the normal conditions of transport and possible accidents in transport, the staff concludes that the environmental impacts are bounded by those identified in Table S-4, "Environmental Impact of Transportation of Fuel and Waste To and From One Light Water-Cooled Nuclear Power Reactor" of 10 CFR Part 51.52. The bases for this conclusion are that: 1) Table S-4 is based on an annual refueling and an assumption of 60 spent-fuel shipments per reactor year. Presently, Oconee Nuclear Station is on an 18-month refueling cycle which would require less than 30 spent fuel shipments per reactor year. Reducing the number of fuel shipments will reduce the overall impacts related to population exposure and accidents discussed in Table S-4. 2) Table S-4 represents the contribution of such transportation to annual radiation dose per reactor year to exposed transportation workers and to the general public. Presently, Oconee Nuclear Station is authorized to slightly exceed the fuel enrichment and average fuel irradiation levels that are specified in 10 CFR 51.52(a)(2) and (3) as the bases for Table S-4. The radiation levels of the transport fuel casks are limited by the Department of Transportation and are not dependent on fuel enrichment and/or irradiation levels. Therefore, the estimated doses to exposed individuals per reactor year will not increase over that specified in Table S-4.

The annual radiation dose to individuals would not be changed by the extended period of operation. Although some integral risk with respect to normal conditions of transportation and possible accidents in transport would be attributed to the additional years of operation, the integral risk would not be significant because the annual risk for such transportation is small.

The environmental impacts associated with the transshipment of Oconee spent fuel to the McGuire and Catawba Nuclear Stations were previously evaluated by the staff (Final Environmental Statement related to the Operation of Catawba Nuclear Station, January 1983) and the Atomic Safety and Licensing Appeal Board (ASLAB-651, 14 NRC 307 (1981)) and found to be insignificant; these impacts would not be changed by the proposed license amendment. The current authorization to ship such spent fuel is limited to 300 fuel assemblies.

4.2 Non-Radiological Impacts

Reexamination of the staff's FES of March 1972 reveals that the assessments of non-radiological impacts were based on several considerations depending on the type of impact being addressed. For some types of impact, the assessments were based on a fixed life-of-plant; for other types, the assessments were based on plant design features, on relative loss of renewable resources, or on relative loss or degradation of available habitat.

A time scale reaching far into the future was considered in the relationship between short-term uses of the environment and maintenance of the site for the 30 to 40-year life of the plant (FES P.152). The biota of the region was studied for probable impact by the plant for significant short- or long-term effects including the use of the environment (i.e., air, water, and land). In essence, no significant short- or long-term damage or loss of biota of the region has occurred or is anticipated. The licenses for the operation of Oconee were issued provided that comprehensive monitoring, as described in the FES, be undertaken to monitor the effects of plant operation on the aquatic environment of Lakes Keowee, Hartwell and Jocasee. A five-year monitoring program was initiated in 1971 and completed in 1976.

Amendment Nos. 112, 112, and 109 issued by letter dated May 27, 1982, deleted the water quality monitoring requirements (Appendix R) from the Technical Specifications since these requirements would be administered by the South Carolina Department of Health and Environmental Control, the permitting agency designated by the U.S. Environmental Protection Agency (EPA). The South Carolina Department of Health and Environmental Control issued the final National Pollutant Discharge Elimination System (NPDES) Permit No. SC0000515, covering the Oconee Nuclear Station, Units 1, 2 and 3. Water quality requirements covered in the NPDES would be extended to cover the requested extensions. All other issues addressed in our safety evaluation associated with these amendments were reviewed, and it was determined that the conclusions would not be impacted by the requested extension.

The position and design of the intake structure and the thermal discharge effects on aquatic organisms were considered by the staff. The position and design of the Station in relation to Lake Keowee indicate that the major effects on aquatic life in Lake Keowee will result from (1) discharge of waste heat from the power plant condensers, (2) entrainment of smaller organisms in cooling water through the plant, (3) impingement of fish on the intake screens, and (4) discharge of water with low levels of dissolved oxygen. Organisms in the headwaters of Hartwell Reservoir will be subjected to increases in temperature and decreases in dissolved oxygen as the hydroelectric plant operates and receives input from the heated discharge from the nuclear plant. The intake of the hydroelectric plant is designed to withdraw Lake Keowee water from the surface to the top of the intake structure (approximately 35 feet below the lake surface). This additive thermal discharge probably will favor organisms that can tolerate periodic surges of warmed water, at least at the Keowee headwaters of Hartwell Reservoir.

A number of plant modifications have been made since the FES was issued. These modifications tend to improve plant reliability, and it has been shown that the environmental impact has been minimal. The plant modifications are described in the Updated Safety Analysis Report, which is revised annually. In addition, the 40-year plant operating life is considered part of the design and construction of the modifications. Components associated with the modifications that are expected to wear out during plant life are subjected to a surveillance and maintenance program so that component degradation will be identified and corrected. Extending the operating life as proposed by the licensee will have no detectable environmental impact resulting from the plant modifications.

All potential impacts have been identified, described, and evaluated in previously issued environmental impact statements and/or appraisals by the NRC and reviews by the NPDES permitting authority under the Clean Water Act. All operational non-radiological impacts on biological resources have been assessed by the staff on bases other than a life-of-plant bases. The staff concludes that the proposed extension would not cause a significant increase in the impacts to the environment and would not change any conclusions reached by the Commission in the FES.

5.0 ALTERNATIVES TO THE PROPOSED ACTION

The principal alternative to issuance of the proposed license extensions would be to deny the applications. In this case, Oconee Nuclear Station, Units 1, 2 and 3, would shut down upon expiration of the present operating licenses.

In Chapter XI of the FES, a cost-benefit analysis is presented for Oconee. Included in the analysis is comparison among various options for producing an equivalent electrical power capacity. Even considering significant changes in the economics of the alternatives, operation of Oconee Units 1, 2 and 3 for an additional six to seven years would only require incremental yearly costs. These costs would be substantially less than the purchase of replacement power or the installation of new electrical generating capacity. Moreover, the overall cost per year of the facility would decrease since the large initial capital outlay would be averaged over a greater number of years. In summary, the cost-benefit advantage of Oconee compared to alternative electrical power generating capacity improves with the extended plant lifetime.

6.0 ALTERNATIVE USE OF RESOURCES

This action does not involve the use of resources not previously considered in connection with the "Final Environmental Statement Related to Operation of Oconee Nuclear Station, Units 1, 2 and 3" dated March 1972.

7.0 AGENCIES AND PERSONS CONSULTED

The Commission's staff reviewed the licensee's request and did not consult other agencies or persons.

8.0 BASIS AND CONCLUSIONS FOR NOT PREPARING AN ENVIRONMENTAL IMPACT STATEMENT

The Commission has determined not to prepare an environmental impact statement for the proposed action. The staff has reviewed the proposed license amendments relative to the requirements set forth in 10 CFR Part 51. Based on this assessment, the staff concludes that there are no significant radiological or non-radiological impacts associated with the proposed action and will not change any conclusions reached by the Commission in the FES. Therefore, pursuant to 10 CFR 51.31, an environmental impact statement need not be prepared for this action. Based upon this environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDUKE POWER COMPANYOCONEE NUCLEAR STATION, UNITS 1, 2 AND 3DOCKETS NOS. 50-269, 50-270 AND 50-287NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENTAND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55, issued to Duke Power Company (the licensee), for operation of the Oconee Nuclear Station, Units 1, 2 and 3, located in Oconee County, South Carolina.

Identification of Proposed Action:

The amendments would consist of changes to the operating licenses to extend the expiration dates of the operating licenses for Oconee Nuclear Station, Units 1, 2 and 3, from November 6, 2007 to February 6, 2013 for Oconee Unit 1 (DPR-38); to October 6, 2013 for Oconee Unit 2 (DPR-47); and to July 19, 2014 for Oconee Unit 3 (DPR-55). The license amendments are responsive to the licensee's application dated January 14, 1986, as supplemented on April 10, June 18, 1986 and January 15, 1987. The Commission's staff has prepared an Environmental Assessment of the proposed action, "Environmental Assessment by the Office of Nuclear Reactor Regulation Relating to the Change in Expiration Dates of Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55, Duke Power Company, Oconee Nuclear Station, Units Nos. 1, 2 and 3, Dockets Nos. 50-269, 50-270 and 50-287," dated January 22, 1987

Summary of Environmental Assessment:

The Commission's staff has reviewed the potential environmental impact of the proposed change in the expiration dates of the Operating Licenses for Oconee Nuclear Station, Units 1, 2 and 3. This evaluation considered the previous environmental studies, including the "Final Environmental Statement Related to Operation of Oconee Nuclear Station, Units 1, 2 and 3", March 1972, and more recent NRC policy.

Radiological Impacts

Based on the 1980 census, the population within 20 miles of the plant is estimated to increase about 90% over what was forecast in the FES based on the 1970 census. The actual permanent population within the low population boundary (six miles from the site) was 3620 in 1970 and is estimated to be 8900 in 2010. The staff concludes that the Low Population Zone and the nearest population center distances will likely be unchanged from those used for licensing the units. Therefore, the conclusion reached in the staff's Safety Evaluation in 1970 that Oconee Nuclear Station meets the requirements of 10 CFR Part 100 remains unchanged.

Station radiological effluents to unrestricted areas during normal operation have been well within Commission regulations regarding as-low-as-is-reasonably-achievable (ALARA) limits, and are indicative of future releases. In addition, the proposed additional years of reactor operation do not increase the annual public risk from reactor operation. Thus, the higher-than-projected population growth rate within 20 miles of the site does not change the environmental impact findings in the FES because its effects are offset by favorable radiological exposure from plant releases during normal operation and by low public risk from accidents.

With regard to normal plant operation, the licensee complies with Commission guidance and requirements for keeping radiation exposures "as low as is reasonably achievable" (ALARA) for occupational exposures and for radioactivity in effluents. The licensee would continue to comply with these requirements during any additional years of facility operation and also apply advanced technology when available and appropriate. Accordingly, radiological impacts on man, both onsite and offsite, are not significantly more severe than previously estimated in the FES and our previous cost-benefit conclusions remain valid.

The environmental impacts attributable to transportation of fuel and waste to and from the Oconee Nuclear Station, with respect to normal conditions of transport and possible accidents in transport, would be bounded as set forth in Summary Table S-4 of 10 CFR Part 51.52, and the values in Table S-4 would continue to represent the contribution of transportation to the environmental costs associated with the reactor.

Non-Radiological Impacts

The Commission has concluded that the proposed extension will not cause a significant increase in the impacts to the environment and will not change any conclusions reached by the Commission in the FES.

FINDING OF NO SIGNIFICANT IMPACT:

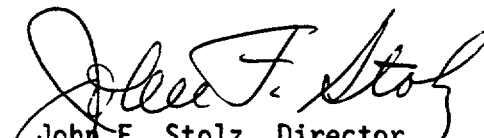
The Commission's staff has reviewed the proposed change to the expiration dates of the Oconee Nuclear Station, Units 1, 2 and 3, Facility Operating Licenses relative to the requirements set forth in 10 CFR Part 51. Based upon the environmental assessment, the staff concluded that there are no significant radiological or non-radiological impacts associated with the

proposed action and that the proposed license amendments will not have a significant effect on the quality of the human environment. Therefore, the Commission has determined, pursuant to 10 CFR 51.31, not to prepare an environmental impact statement for the proposed amendments.

For further details with respect to this action, see (1) the application for amendments dated January 14, 1986, as supplemented on April 10, June 18, 1986 and January 15, 1987, (2) the Final Environmental Statement Related to Operation of Oconee Nuclear Station, Units 1, 2 and 3, issued March 1972, and (3) the Environmental Assessment dated January 22, 1987 . These documents are available for public inspection at the Commission's Public Document Room, 1717 H Street, Washington D.C., 20555 and at the Oconee County Library, 501 West Southbroad Street, Walhalla, South Carolina 29691.

Dated at Bethesda, Maryland, this 22nd day of January, 1987.

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B