

August 23, 2005

Mr. Ronald A. Jones
Vice President, Oconee Site
Duke Energy Corporation
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3 RE: ISSUANCE OF
AMENDMENTS (TAC NOS. MC8130, MC8131, AND MC8132)

Dear Mr. Jones:

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 347, 349, and 348 to Renewed Facility Operating Licenses DPR-38, DPR-47, and DPR-55, respectively, for the Oconee Nuclear Station, Units 1, 2, and 3. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated August 21, 2005, as supplemented by two letters dated August 22, 2005.

The amendments revise TS Limiting Condition for Operation 3.8.1, Condition C.2.1, to permit a one-time extension of 96 hours of the Completion Times for Keowee Hydro Unit 2. These amendments are being issued as emergency license amendments to allow additional time to continue troubleshooting efforts, perform repairs, and return the unit to service.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Leonard N. Olshan, Sr. Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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

Enclosures:

1. Amendment No. 347 to DPR-38
2. Amendment No. 349 to DPR-47
3. Amendment No. 348 to DPR-55
4. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION: See next page

Package Number: ML052500006
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License Amendment Number: ML052410066
NRR-058

OFFICE	PDII-1/PM	PDII-1/LA	OGC	SPSB/SC	EEIB/SC	PDII-1/SC
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DATE	8/23/05	8/23/05	8/23/05	8/23/05	8/23/05	8/23/05

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SUBJECT: OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3 - ISSUANCE OF
AMENDMENTS RE: (TAC NOS. MC8130, MC8131, AND MC8132)

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DUKE ENERGY CORPORATION

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 347
Renewed License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility) Renewed Facility Operating License No. DPR-38 filed by the Duke Energy Corporation (the licensee) dated August 21, 2005, as supplemented by two letters dated August 22, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-38 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 347, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Evangelos C. Marinos, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 23, 2005

DUKE ENERGY CORPORATION

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 349
Renewed License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility) Renewed Facility Operating License No. DPR-47 filed by the Duke Energy Corporation (the licensee) dated August 21, 2005, as supplemented by two letters dated August 22, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-47 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 349, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Evangelos C. Marinos, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 23, 2005

DUKE ENERGY CORPORATION

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 348
Renewed License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility) Renewed Facility Operating License No. DPR-55 filed by the Duke Energy Corporation (the licensee) dated August 21, 2005, as supplemented by two letters dated August 22, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Renewed Facility Operating License No. DPR-55 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 348, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Evangelos C. Marinos, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 23, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 347
RENEWED FACILITY OPERATING LICENSE NO. DPR-38
DOCKET NO. 50-269
AND
TO LICENSE AMENDMENT NO. 349
RENEWED FACILITY OPERATING LICENSE NO. DPR-47
DOCKET NO. 50-270
AND
TO LICENSE AMENDMENT NO. 348
RENEWED FACILITY OPERATING LICENSE NO. DPR-55
DOCKET NO. 50-287

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3.8.1.-3	3.8.1-3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO
AMENDMENT NO. 347 TO RENEWED FACILITY OPERATING LICENSE DPR-38
AMENDMENT NO. 349 TO RENEWED FACILITY OPERATING LICENSE DPR-47
AND AMENDMENT NO. 348 TO RENEWED FACILITY OPERATING LICENSE DPR-55
DUKE ENERGY CORPORATION
OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3
DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

By letter dated August 21, 2005, as supplemented by two letters dated August 22, 2005, Duke Energy Corporation (the licensee) submitted a request for changes to the Oconee Nuclear Station, Units 1, 2, and 3, Technical Specifications (TS). The amendments revise TS Limiting Condition for Operation 3.8.1, Condition C.2.1, to permit a one-time extension of 96 hours of the Completion Times for Keowee Hydro Unit 2 (KHU #2). The licensee requested these emergency amendments to allow additional time to continue troubleshooting efforts, perform repairs, and return the unit to service.

Technical Specification Limiting Condition for Operation (LCO) 3.8.1, Condition C.2.1, was entered for all three Oconee Units beginning on Saturday, August 20, 2005, at 10:58 am. The condition was initially entered for KHU # testing. Shortly thereafter, KHU #2 experienced an emergency lockout condition. While logged into LCO 3.8.1, required action (RA) C.1 commenced that verified, within the required completion time (CT), the operability of the remaining KHU Unit 1 and underground power path.

Pursuant to LCO 3.8.1, RA C.2.1, if the inoperable KHU Unit is not restored by 10:58 am on Tuesday, August 23, 2005, Condition M applies and all three Oconee Units must be in MODE 3 within 12 hours and MODE 5 within 84 hours. This proposed change seeks additional time to extend the CT for RA C.2.1 in order to continue troubleshooting efforts, perform repairs, and to return the unit to service. At the time of this submittal, the root cause of the condition has not been determined; however, a unit threat team has been formed and is working around the clock to determine the cause and subsequent repairs to prevent recurrence.

A similar event occurred to KHU # 2 on August 10, 2005. During a normal start on that day, an emergency lockout signal was received. LCO 3.8.1 RA C.2.1 was entered at time of lockout. Exhaustive troubleshooting singled out a Bus Differential Relay as the most probable cause of

the event. This relay was replaced with a refurbished and tested (at the manufacturer's facility in Coral Gables, Florida) spare, and post-maintenance testing was determined to be acceptable. At that time, there was reasonable assurance that this relay had caused the lockout condition. Approximately 10 start cycles of KHU # 2 have taken place since that time with no further lockout indications until the August 20, 2005, event.

2.0 REGULATORY EVALUATION

The regulatory requirements which the staff applied in its review of the application includes:

General Design Criterion (GDC) 17, "Electric power systems," of Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10, Part 50, of the Code of Federal Regulations (CFR) requires, in part, that nuclear power plants have onsite and offsite electric power systems to permit the functioning of structures, systems, and components that are important to safety. The onsite system is required to have sufficient independence, redundancy, and testability to perform its safety function, assuming a single failure. The offsite power system is required to be supplied by two physically independent circuits that are designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. In addition, this criterion requires provisions to minimize the probability of losing electric power from the remaining electric power supplies as a result of loss of power from the unit, the offsite transmission network, or the onsite power supplies.

GDC-18, "Inspection and testing of electric power systems," requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing.

10 CFR 50.36, "Technical Specifications," requires a licensee's TS to establish LCOs and surveillance requirement for equipment that is required for safe operation of the facility. Specifically, Section 50.36(c)(1) stipulates the items to be included in the TS and Section 50.36(c)(3) stipulates the surveillance requirements.

3.0 TECHNICAL EVALUATION

3.1 Deterministic Evaluation

The current TS requires that the CT for the Required Action (RA) C.2.1, to restore the KHU and its required overhead emergency power path to OPERABLE status within 72 hours. The proposed amendment requests that the CT for TS LCO 3.8.1, "AC Sources ! Operating," RA C.2.1 be extended 96 hours to provide additional time to effect repairs on KHU2. This CT will be revised to restore the KHU, along with its required overhead emergency power path, to OPERABLE status within 168 hours from the time of initial TS LCO 3.8.1 entry. A "Note" will also be added to document that this is a one-time change expiring on August 27, 2005, at 10:58 am.

ONS OPERABILITY requirements for the onsite and offsite AC sources during plant operation (MODES 1, 2, 3, and 4) are specified in TS 3.8.1, "AC sources - Operating." TS 3.8.1 includes CT that permit the ONS to continue to operate for 3 days with one Keowee Hydro Unit inoperable. KHUs provide onsite ac power system for all three ONS Units.

The proposed change only applies to the one time inoperability of the KHU2 due to emergency lockout condition in order to continue troubleshooting efforts, perform repairs, and to return the unit to service. On August 22, 2005, the licensee submitted a supplement which documented a phone call on August 22, 2005, in which the licensee discussed with the staff ONS's contingency plans, weather conditions, communication protocol with the local transmission and distribution services provider and the independent system operator, and common cause issue.

In response to the staff's concern regarding common cause issue (RAI # 8), the licensee stated that while the cause for the KHU2 failure is unknown, it is not considered, at this time, to be common to a KHU1 condition. This conclusion is based upon the following facts:

- C KHU1 and KHU2 have similar operating histories. KHU2 has experienced two emergency lockouts within the last 15 unit starts with no associated indication of a valid fault condition. KHU1 has not experienced any emergency lockouts during its recent operating history.
- C Ongoing testing, troubleshooting efforts, and engineering judgment have not identified any deficiencies that are common to KHU1.

A component of the root cause evaluation will be to address the cause's extent of condition. If at any time during the investigation a common cause is identified affecting HKU1 operability the appropriate TS condition will be entered.

The staff asked the licensee to describe what actions will be taken if severe weather or grid stability concern arise during the exigent allowed outage time extension (RAI #2). In its reply, the licensee stated that for severe weather conditions, Oconee Abnormal Procedure AP/0/A/1700/006 will be entered for each Oconee Unit. This procedure is entered for a variety of weather conditions, including severe thunderstorms, high wind, and tornado watches or warnings. Potential flood conditions also require use of this procedure. Guidance is provided to restore critical equipment to service that is undergoing maintenance or testing (SSF, Keowee power paths, 4160V power system, Emergency Feedwater, etc.). Also, the SSF is manned with Operators. Since KHU2 and the overhead power path are already out of service, these steps have been taken as a preliminary conservative measure:

- SSF has been manned by operators full time
- A second Lee Combustion Turbine will be running
- No Engineered Safeguard (ES) testing is allowed
- No work on SSF (including support systems) or EFDW allowed
- No work on KHU1
- Except for testing, KHU1 is not allowed to generate to the grid
- No "T" Code work (no high risk trip/transient work will be allowed)

Additionally, Keowee Natural Disaster AP/0/A/2000/001 is entered for similar conditions which direct detailed damage assessments of critical structures and components.

For grid stability issues, Oconee Procedure AP/1,2,3/A/1700/034 will be utilized. These unit-specific procedures are entered for actual/suspected voltage or frequency disturbances based on alarms or notification from the Transmissions Control Center (TCC). Appropriate indications are monitored and steps taken to either restore grid conditions, or shutdown units to separate Oconee from the grid.

The staff asked the licensee to provide a description of planned maintenance on required systems, subsystems, trains, components and devices that depend on the other trains of equipment during CT extension (RAI #4). In its reply, the licensee stated that during the period of the extended CT, planned maintenance activities on critical electrical, mechanical, and support systems/subsystems/trains/components/devices are being carefully controlled. In most cases, all maintenance activities are being deferred. Specifically, maintenance work on systems/equipment will be suspended as addressed in the answer to RAI #7. However the following are examples of TS work is planned to be performed between August 23 and August 27, 2005, due to low risk potential:

- C Siphon Seal Water header - Required Preventative Maintenance (PM)
- C Control room booster fans - Required PM
- C Reactor building spray system - Required PM
- C Hydrogen analyzer - Required PM
- C Spent fuel pool ventilation - Required PM
- C Waste gas system - Required PM
- C Reactor building isolation - Required PM
- C Modification on control room booster fan - TS Related Work

In RAI# 3, the staff asked the licensee to describe the formal communication protocols and agreement that are presently in place between the Oconee and the local transmission and distribution system operator to (a) reduce the probability of loss of offsite power to the Oconee and (b) maintain adequate offsite power system voltage at Oconee assuming a trip of one unit. In its reply, the licensee provided the following:

a) The TCC will utilize the "Real Time Contingency Analyses" computer program to determine and predict grid conditions so that any problems can be anticipated prior to expected occurrence. Oconee Operations personnel will be notified if this program becomes unavailable (normal practice).

b) The Duke system reserve conditions will be maintained at an "adequate" level or better (greater than 1200MW's, significantly higher than the output of a single Oconee unit) by the System Operating Center (SOC). System grid status will also be maintained at a "Green" or "Yellow" status by the SOC during this period.

The NRC staff asked the licensee to provide verification that no adverse weather conditions exist in the areas of offsite power supplies that challenge the stability of the grid (RAI # 5). In its response, the licensee stated that the Duke Energy Weather Office forecast for Oconee County indicates a potential for showers and thunderstorms (none deemed severe or threatening) between August 22 and August 23, 2005. Chance of rain ranges between 40 - 60% during this period, with temperatures ranging between the lower 70s to the lower 90s. From August 24 through August 27, 2005, the forecast calls for cloudy conditions with a 30 - 50% chance of rain. Temperatures are expected to range between the lower 70s to the upper 80s, with conditions improving toward the weekend. This forecast has been confirmed with the Duke Meteorologist as of the morning of August 22, 2005, at 11:55 am. The Duke service area forecast predicts similar weather conditions, with no adverse weather that would challenge the stability of the grid.

The NRC staff asked the licensee to provide verification that station is not under hurricane, tornado

or flood watches or warnings (RAI #6). In its response, the licensee stated that there are no tornado watches or warnings in the Oconee/Pickens county and none are forecast for the next four days. Additionally, there are no tropical storms or hurricanes forecast to effect the Oconee/Pickens county area for the next four days until expiration of the extended CT period.

In RAI #7, the staff asked the licensee to describe other compensatory measures to be taken during extended CT extension (i.e., Turbine driven auxiliary feedwater pump, auxiliary feedwater pump, etc.). In its response, the licensee stated that the Operations Shift Manager Turnover Sheet notes the following additional compensatory measures for the period KHU2 and associated overhead power path are out of service:

- C SSF has been manned by Operators full time
- C A second Lee Combustion Turbine (LCT) will be running
- C No ES testing is allowed
- C No work on SSF (including support systems) or EFDW allowed
- C No work on KHU1
- C KHU1 is not allowed to generate power to the grid (commercial generation prohibited)
- C No "T" Code work (no high risk trip/transient work will be allowed)

Additionally, the staff wanted to know if one LCT has sufficient capacity to handle all ONS Units safe shutdown load (RAI 9). In its response, the licensee stated that a single LCT is rated at 44.1 MVA and is testing per TS annually to produce greater than 25 MW (e). Associated transformer CT5 is rated at 22.4 MVA, and the safe shutdown loads of three unit loss-of-coolant accident (LOCA)/LOOP event are equal to or less than 16 MVA.

On the basis of its review, the staff finds that the licensee has adequately addressed the staff's concerns and that the amendment request is acceptable based on the deterministic evaluation.

3.2 Probabilistic Evaluation

3.2.1 Risk Assessment Evaluation

In evaluating the risk information submitted by the licensee, the NRC staff followed the three-tiered approach documented in Regulatory Guide (RG) 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications."

Under the first tier, the staff determines if the proposed change is consistent with the NRC's Safety Goal Policy Statement, as documented in RG 1.174. Specifically, the first tier objective is to ensure that the plant risk does not increase unacceptably during the period the equipment is taken out of service.

The second tier addresses the need to preclude potentially high-risk plant configurations that could result if additional equipment, not associated with the proposed change, is taken out of service during the proposed 4-day additional CT extension.

The third tier addresses the establishment of a configuration risk management program for identifying risk-significant configurations resulting from maintenance or other operational activities,

and taking appropriate compensatory measures to avoid such configurations.

3.2.2 Basis and Quality of Risk Assessment

The licensee used its probabilistic risk assessment (PRA) model and appropriate conservative assumptions to assess the risk increase associated with operation at-power for a period of 4 additional days without the Keowee Hydro Unit 2 (KHU #2). The risk consideration included maintaining defense-in-depth and quantifying risk to determine the change in core damage frequency (CDF) and large early release frequency (LERF) as a result of the proposed 4-day CT extension. Also, the licensee is maintaining the continuous on-line risk management program to control the performance of other risk-significant tasks during the extended CT period with consideration of specific compensatory risk reduction measures listed in the submittal to minimize risk. The dominant accident sequences contributing to the assessed risk increase include the sequences initiated by Loss of Offsite Power (LOOP) and occurrence of conditions due to the unavailability of and demand for the use of the KHU #2. The external event-centered (bad weather consideration) LOOP was not included in the evaluation processes since the bad severe weather season is statistically over at this time. The NRC staff could not evaluate the quality of the licensee PRA models directly. However, licensee employed the latest revision 3 of the Oconee PRA fault tree and databases (CAFTA), and major assumptions and data used in the risk assessment were reviewed.

The licensee employed zero maintenance (configuration model) model and re-evaluated human error combinations that have not previously been evaluated. To consider the potential common cause failure of the other Keowee unit (KHU #1), the CCF impact on KHU #1 was included by setting the basic event failure rate to $1.13\text{E}-2$, five (5) times its nominal value. From the licensee's inspection the licensee reports there is no evidence of common cause failure.

Staff found that the licensee quantification method was acceptable for this application. This evaluation compared the applicable findings from the NRC staff's review of the licensee's PRA results with the NRC's Standardized Plant Analysis Risk Model (SPAR), Version 3-SRA, employing the NRC PRA quantification tool, SAPHIRE Version 7, and NRC Manual Chapter 0609, Appendix H for LERF, as well as findings from similar evaluations of similar plants.

3.2.3 Risk Impact of the Proposed Change (Tier 1)

An acceptable approach to risk-informed decisionmaking is to show that the proposed change to the design basis meets several key principles. One of these principles is to show that the proposed change results in no more than a small but acceptable increase in risk in terms of CDF and LERF, and is consistent with the NRC's Safety Goal Policy Statement. Acceptance guidelines for meeting this principle are presented in RG 1.174 and RG 1.177. The licensee used its PRA model to calculate risk increases due to the CT extension of 4 days. Both the incremental conditional core damage probability (ICCDP) and the incremental conditional large early release probability (ICLERP) were assessed. These quantities are a measure of the increase in probability of core damage and large early release, respectively, during a single outage that would last for the entire duration allowed by the proposed change. Based on the one-time extension of 4 days, the incremental changes are summarized in the following table.

	Baseline CDF	Incremental Conditional Change CCDP	Baseline LERF	Incremental Conditional Change ICLERP
Prior to CT Extension	3.5E-05/yr		2.0E-06/yr	
Increase because of 4-day CT extension (Licensee Results)		3.6E-08		Approximately 0.0
New Baseline CDF/LERF	3.5E-05/yr		2.0E-06/yr	
Increase because of 4-day CT Extension (using NRC SPAR 3-SRA Model)		4.0E-07 (using CCF for KHU 1 as 1.13E-02)		4.0E-8
New Baseline CDF/LERF after 4-day CT extension based on annualized ICCDP/ICLERF (using NRC SPAR Model)	3.54E-05/yr		2.04E-06/yr	
Acceptance Guidelines*) CDF 1E-5/yr	5E-7) LERF 1E-6/yr	5E-8

* Criteria for permanent change, flexibility considered for one-time changes.

The ICCDP quantification for Oconee SPAR model employed a truncation level of 1.0E-12, and used common cause failure probability of KHU #1 based on the licensee assumptions. The LERF is calculated employing NRC Inspection Manual Chapter 0609, SDP Appendix H with the CDF_LERF conversion factor of 0.10. Oconee has a robust concrete containment with large and dry design, and the conversion factor of 0.1 is conservative in determining the risk acceptability of the proposed one-time CT extension.

During the proposed extension period, the baseline total CDF and LERF have been increased by small numbers due to the incremental changes in ICCDP and ICLERP respectively, resulting from the one time 4-day extension of the CT. The new baseline values for this proposed change under TS LCO 3.8.1 would be minimal for both CDF and LERF, and the risk increases under the proposed CT extension are well within the acceptable range.

The transitional and shutdown risk is qualitatively evaluated with respect to at-power configuration risk. The evaluation basis includes potential relative risk contributors as well as relative functional attributes by the KHU #2 for various plant configurations. The staff views the risk associated with plant transitional operation leading to shutdown as being relatively higher than the risk during at-power operation without the KHU #2. The staff views the integral ICCDP due to the unavailable KHU #2 to be smaller during at-power operation as compared with the integral ICCDP of transitional and shutdown configuration risk without the KHU #2. In conclusion, a one-time 4-day extension of TS LCO 3.8.1 - "AC Sources" at power to perform appropriate maintenance work would be more desirable than to perform maintenance at shutdown.

3.2.4 Avoidance of High Risk Plant Configurations (Tier 2)

The licensee's PRA will identify and estimate major risk contributors of plant configurations, contributing event sequences, and associated cutsets. Potential major risk contributors include plant equipment failures, human errors and common cause failures. Insights from the risk assessment would be used in identifying and monitoring the plant configurations or conditions that may lead to significant risk increases during the CT extension. The NRC staff finds that the proposed precautions, as well as the proposed compensatory measures, identified in the licensee's submittal are adequate for preventing plant configurations or conditions that may increase risk significantly. In conclusion, there is reasonable assurance that high risk plant configuration will not occur during the proposed 4-day extension period.

3.2.5 Risk-Informed Configuration Risk Management (Tier 3)

The intent of risk-informed configuration risk management is to ensure that plant safety is maintained and monitored. A formal commitment to maintain a configuration risk management program is necessary on the part of a utility prior to implementation of a risk-informed TS. This program can support the licensee's decision-making regarding the appropriate actions to control risk whenever a risk-informed TS LCO is entered. The staff finds that the licensee has an adequate configuration management program.

3.3 Conclusion

The NRC staff has reviewed the licensee's submittal and the supplement information dated August 22, 2005, and finds the proposed changes related to TS LCO 3.8.1, "AC Sources - Operating," required action C.2.1 to extend the CT for additional 96 hours to provide additional time to effect repairs on KHU2 to be acceptable. The NRC staff's conclusion is based on the following:

1. During the 96 hours extension period, a Lee Combustion Turbine (LCT) will be energizing the standby bus via an isolated power path. A second LCT will be running. The third remaining LCT is also available and can be started and used to supply both standby buses should the running LCT fail. To enhance unit availability, no major preventive maintenance work will be performed on the third LCT. LCT has sufficient capacity to handle all ONS Units safe shutdown equipment loads.
2. Standby shutdown facility (Appendix R diesel generator) will be manned during the 96 hour extension in order to improve the operator response time. No work on SSF (including support system) or emergency feed water (EFDW) will be allowed.
3. No work on KHU1 will be allowed and KHU1 will not be allowed to generate power to the grid (commercial generation prohibited).
4. No "T" Code work (no high risk trip/transient work will be allowed) will be allowed.
5. On going testing and troubleshooting efforts have not identified any potential cause that is common to KHU1.
6. No adverse weather that would challenge the stability of the grid is expected during the extension period at the Duke service area. There are no tornado watches or warnings in the

Oconee/Pickens county and none are forecast for the next four days. Additionally, there are no tropical storms or hurricanes forecast to effect the Oconee/Pickens county for the next four days until expiration of the extension period.

The NRC staff has developed risk insights, associated with conducting the repair to the KHU #2 during at-power operation, and qualitatively compared the risk with the total risk of performing the maintenance activities following transitional operation and shutdown without KHU #2. The staff concludes that the shutdown and transitional risk with only one available KHU 2# is greater than at-power risk, and thus, the proposed one-time 4-day extension of the CT with an inoperable KHU #2 is acceptable.

4.0 STATEMENT OF EMERGENCY CIRCUMSTANCES

Section 50.91 of 10 CFR 50 provides special circumstances for the issuance of amendments when the usual 30-day public notice cannot be met. One type of special exception is an emergency. Specifically, 10 CFR 50.91(a)(5) provides that where the NRC finds that an emergency situation exists, in that failure to act in a timely way would result in a shutdown of a nuclear power plant, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or public comment. In this situation, the NRC will publish a notice of issuance under 10 CFR 2.106, providing for opportunity of a hearing and for public comment after issuance.

The licensee requested these emergency amendments to allow additional time to continue troubleshooting efforts, perform repairs, and return the unit to service. Technical Specification Limiting Condition for Operation (LCO) 3.8.1, Condition C.2.1, was entered for all three Oconee Units beginning on Saturday, August 20, 2005, at 10:58 am. The condition was initially entered for KHU # testing. Shortly thereafter, KHU #2 experienced an emergency lockout condition. While logged into LCO 3.8.1, required action (RA) C.1 commenced that verified, within the required completion time (CT), the operability of the remaining KHU Unit 1 and underground power path.

Because the equipment failure was unexpected, the licensee could not have anticipated the need for a license amendment that would allow for a 30-day comment period. Additionally, the proposed amendments involve no significant hazards as specified in 10 CFR 50.92.

On the basis of the above discussion, the NRC staff has determined that emergency circumstances exist and that the licensee used its best efforts to make a timely application and could not avoid the emergency situation.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92(c) state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or,
- (2) Create the possibility of a new or different kind of accident from any previously evaluated; or,

- (3) Involve a significant reduction in a margin of safety.

The following analysis was provided by the licensee in its August 21, 2005, letter.

Pursuant to 10 CFR 50.91, Duke Power Company (Duke) has made the determination that this amendment request involves a No Significant Hazards Consideration by applying the standards established by the NRC regulations in 10 CFR 50.92. This ensures that operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated:

Response: No

The request for enforcement discretion involves a one-time extension of the Completion Time for Required Action C.2.1 associated with restoring compliance with TS LCO 3.8.1.

The probability of an event occurring during the extended Completion Time of 168 hours are the same as those that would occur during the existing 72-hour Completion Time; therefore, the probability of an accident previously evaluated is not significantly increased.

The consequences associated with extending the Completion Time to 168 hours have been evaluated and results show only a minimal increase for a previously evaluated accident. In addition, the additional time to effect repairs to the KHU will permit Duke to avoid an unplanned forced shutdown of all three Oconee Units and the potential safety consequences and operational risks associated with that action.

There are no adverse impacts on containment integrity, radiological release pathways, fuel design, filtration systems, main steam relief valve set points, or radwaste systems. No new radiological release pathways are created.

As additional conservative measures, a Lee Combustion Turbine (LCT) will be energizing the standby bus via an isolated power path. A second LCT is operating in standby. The third remaining LCT is also available and can be started and used to supply both standby buses should the running LCT fail. Also, several risk reduction actions will be implemented to further reduce the risk impact during the extension period.

- (2) Create the possibility of a new or different kind of accident from any kind of accident previously evaluated:

Response: No

The request for this one-time TS change enforcement discretion involves an extension of the Completion Time for TS LCO 3.8.1, RA C.2.1, associated with restoring compliance with the TS LCO 3.8.1. The proposed change will not physically alter the present plant configuration nor adversely effect how the plant is currently operated. Also, measures previously specified in this submittal are will be in-place as additional risk to minimizing actions; consequently, this request does not create the possibility of a new or different kind of accident from any kind of accident previously evaluated.

(3) Involve a significant reduction in a margin of safety.

Response: No

Since the proposed change will not physically alter the present plant configuration nor adversely effect how the plant is currently operated, the proposed change does not adversely affect any plant safety limits, setpoints, or design parameters. The change also does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity. Also, measures previously specified in this submittal are in-place as additional risk to minimizing actions. Therefore, the proposed change does not involve a reduction in a margin of safety.

Duke has concluded that, based on the above responses, that there are no significant hazards considerations involved in this amendment request.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff determines that the proposed amendments involve no significant hazards consideration.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendments on August 23, 2005. The State official had no comments.

7.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final no significant hazards finding with respect to this amendment.

Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

8.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: August 23, 2005