Duke Power®
A Duke Energy Company

R. A. JONES
Vice President

Duke Power
29672 / Oconee Nuclear Site
7800 Rochester Highway
Seneca, SC 29672

864 885 3158
864 885 3564 fax

October 16, 2003

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Oconee Nuclear Station
Docket Numbers 50-269, 270, and 287
License Amendment Request for Technical Specification (TS) 3.4.9, "Pressurizer"
Technical Specification Change (TSC) Number 2003-07

Pursuant to Title 10, Code of Federal Regulations, Part 50, Section 90 (10 CFR 50.90), Duke Energy Corporation (Duke) proposes to amend Appendix A, Technical Specifications (TS), for Facility Operating Licenses DPR-38, DPR-47 and DPR-55 for Oconee Nuclear Station (ONS), Units 1, 2, and 3. Technical Specification 3.4.9, "Pressurizer" currently specifies a minimum Pressurizer (PZR) heater capacity capable of being powered from an emergency power supply. Duke proposes to change this minimum capacity from 126 to 400 kW to correct a non-conservative TS associated with a PZR design basis deficiency.

The revised TS pages are included in Attachment 1. Attachment 2 contains the markup of the current TS pages. The Technical Justification for the amendment request is included in Attachment 3. Attachments 4 and 5 contain the No Significant Hazards Consideration Evaluation and the Environmental Impact Analysis, respectively.

This proposed change to the TS has been reviewed and approved by the Plant Operations Review Committee and Nuclear Safety Review Board. Implementation of these changes will not result in an undue risk to the health and safety of the public.

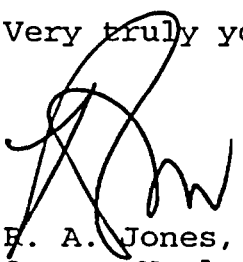
The Oconee Updated Final Safety Analysis Report has been reviewed and no changes are necessary to support this LAR.

A001

Pursuant to 10 CFR 50.91, a copy of this proposed amendment is being sent to the South Carolina Department of Health and Environmental Control for review, and as deemed necessary and appropriate, subsequent consultation with the NRC staff.

Approval of this LAR is requested by December 31, 2003. A 90-day implementation window is also requested. Upon implementation, Selected Licensee Commitment (SLC) 16.5.8a, implemented as an interim corrective action for this condition, will be deleted. If there are any additional questions, please contact Stephen C. Newman at (864) 885-4388.

Very truly yours,



R. A. Jones, Vice President
Oconee Nuclear Site

Attachments

cc: Mr. L. N. Olshan, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop O-14 H25
Washington, D. C. 20555

Mr. L. A. Reyes, Regional Administrator
U. S. Nuclear Regulatory Commission - Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

Mr. M. C. Shannon
Senior Resident Inspector
Oconee Nuclear Station

Mr. Henry Porter, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201-1708

R. A. Jones, being duly sworn, states that he is Vice President, Oconee Nuclear Site, Duke Energy Corporation, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this revision to the Renewed Facility Operating License Nos. DPR-38, DPR-47, DPR-55; and that all the statements and matters set forth herein are true and correct to the best of his knowledge.

R. A. Jones, Vice President
Oconee Nuclear Site

Subscribed and sworn to before me this 16 day of October 2003

Notary Public

My Commission Expires:

6/12/2013

SEAL

ATTACHMENT 1

TECHNICAL SPECIFICATION

Remove Page	Insert Page
3.4.9-1	3.4.9-1
3.4.9-2	3.4.9-2
B 3.4.9-2	B 3.4.9-2
B 3.4.9-3	B 3.4.9-3
B 3.4.9-4	B 3.4.9-4
B 3.4.9-5	B 3.4.9-5
B 3.4.9-6	B 3.4.9-6

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Pressurizer

LCO 3.4.9 The pressurizer shall be OPERABLE with:

a. Pressurizer water level ≤ 285 inches; and

b. A minimum of 400 kW of pressurizer heaters OPERABLE and capable of being powered from an emergency power supply.

APPLICABILITY: MODES 1 and 2,
MODE 3 with RCS temperature > 325°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Pressurizer water level not within limit.	A.1	Restore level to within limit.	1 hour
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 3 with RCS temperature ≤ 325°F.	18 hours
C. Capacity of pressurizer heaters capable of being powered by emergency power supply less than limit.	C.1	Restore pressurizer heater capability.	72 hours

(continued)

ACTIONS *(continued)*

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. AND D.2 Reduce RCS temperature to ≤ 325°F.	12 hours 18 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	Verify pressurizer water level ≤ 285 inches.	12 hours
SR 3.4.9.2	Verify capacity of required pressurizer heaters and associated power supplies are ≥ 400 kW.	18 months

BASES

BACKGROUND (continued)

maintained with a loss of offsite power. Consequently, the emphasis of this LCO is to ensure that the essential power supplies and the associated heaters are adequate to maintain pressure for RCS loop subcooling with an extended loss of offsite power.

A minimum required available capacity of 400 kW ensures that the RCS pressure can be maintained. Unless adequate heater capacity is available, reactor coolant subcooling cannot be maintained indefinitely. Inability to control the system pressure and maintain subcooling under conditions of natural circulation flow in the primary system could lead to loss of single phase natural circulation and decreased capability to remove core decay heat.

The 400 kW of heater capacity exceeds the capacity required to be powered by the Standby Shutdown Facility (SSF) per the Technical Specification 3.10.1 BASES. The 400 kW limit is not unit specific and was conservatively established to bound future increases in pressurizer ambient heat loss.

APPLICABLE SAFETY ANALYSES

In MODES 1 and 2, the LCO requirement for a steam bubble is reflected implicitly in the accident analyses. No associated safety analyses are performed in lower MODES. All analyses performed from a critical reactor condition assume the existence of a steam bubble and saturated conditions in the pressurizer. In making this assumption, the analyses neglect the small fraction of noncondensible gases normally present.

Safety analyses presented in the UFSAR do not take credit for pressurizer heater operation; however, an implicit initial condition assumption of the safety analyses is that the RCS is operating at normal pressure.

The maximum level limit is of prime interest for the startup accident and Loss of Main Feedwater (LOMFW) event. Conservative safety analyses assumptions for the startup accident indicate that it produces the largest increase of pressurizer level caused by an analyzed event. Thus this event has been selected to establish the pressurizer water level limit. For pressurizer levels > than 285 inches, the LOMFW event may be more limiting.

Evaluations performed for the design basis large break loss of coolant accident (LOCA), which assumed a higher maximum level than assumed for the startup accident, have been made. The higher pressurizer level

BASES

APPLICABLE SAFETY ANALYSES (continued)

assumed for the LOCA is the basis for the volume of reactor coolant released to the containment. The containment analysis performed using the mass and energy release demonstrated that the maximum resulting containment pressure was within design limits.

The requirement for emergency power supplies is based on NUREG-0737 (Ref. 2). The intent is to allow maintaining the reactor coolant in a subcooled condition with natural circulation at hot, high pressure conditions for an undefined, but extended, time period after a loss of offsite power. While loss of offsite power is an initial condition or coincident event assumed in many accident analyses, maintaining hot, high pressure conditions over an extended time period is not evaluated as part of UFSAR accident analyses.

The maximum pressurizer water level limit satisfies Criterion 2 of 10 CFR 50.36 (Ref. 1). Although the heaters are not specifically used in accident analysis, the need to maintain subcooling in the long term during loss of offsite power, as indicated in NUREG-0737 (Ref. 2), is the reason for providing an LCO.

LCO

The LCO requirement for the pressurizer to be OPERABLE with a water level $\leq$ 285 inches ensures that a steam bubble exists. Limiting the maximum operating water level preserves the steam space for pressure control. The LCO has been established to ensure the capability to establish and maintain pressure control for steady state operation and to minimize the consequences of potential overpressure transients. Requiring the presence of a steam bubble is also consistent with analytical assumptions.

The LCO requires a minimum of 400 kW of pressurizer heaters OPERABLE and capable of being powered from an emergency power supply. As such, the LCO addresses both the heaters and the power supplies. The minimum heater capacity required is sufficient to maintain the system near normal operating pressure when accounting for heat losses through the pressurizer insulation. By maintaining the pressure near the operating conditions, a wide margin to subcooling can be obtained in the loops. The design value of 400 kW will require the use of twenty-nine heaters rated at 14 kW (nominal) each. The amount needed to maintain pressure is dependent on the insulation losses, which can vary due to tightness of fit and condition.

BASES

APPLICABILITY

The need for pressure control is most pertinent when core heat can cause the greatest effect on RCS temperature, resulting in the greatest effect on pressurizer level and RCS pressure control. Thus Applicability has been designated for MODES 1 and 2. The Applicability is also provided for MODE 3 with RCS temperature > 325°F. The purpose is to prevent solid water RCS operation during heatup and cooldown to avoid rapid pressure rises caused by normal operational perturbations, such as reactor coolant pump startup. The temperature of 325°F has been designated as the cutoff for applicability because LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," provides a requirement for pressurizer level ≤ 325°F. The LCO does not apply in MODE 4, 5 or 6 since either pressurizer level is under the control of LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," or the RCS is open to the containment atmosphere.

In MODES 1, 2, and 3, there is the need to maintain the availability of pressurizer heaters capable of being powered from an emergency power supply. In the event of a loss of offsite power, the initial conditions of these MODES give the greatest demand for maintaining the RCS in a hot pressurized condition with loop subcooling for an extended period. For MODE 4, 5, or 6, it is not necessary to control pressure (by heaters) to ensure loop subcooling for heat transfer when the Decay Heat Removal loops are in service, and therefore the LCO is not applicable.

ACTIONS

A.1

With pressurizer water level in excess of the maximum limit, action must be taken to restore pressurizer operation to within the bounds assumed in the analysis. This is done by restoring the pressurizer water level to within the limit.

The 1 hour Completion Time is considered to be a reasonable time for draining excess liquid.

B.1 and B.2

If the water level cannot be restored, reducing core power constrains heat input effects that drive pressurizer insurge that could result from an anticipated transient. By shutting down the reactor and reducing reactor coolant temperature to at least MODE 3 with RCS temperature ≤ 325°F, the potential thermal energy of the reactor coolant mass for LOCA mass and energy releases is reduced.

BASES

ACTIONS (continued)

Twelve hours is a reasonable time based upon operating experience to reach MODE 3 from full power without challenging unit systems and operators. Further pressure and temperature reduction to MODE 3 with RCS temperature ≤ 325°F places the unit into a MODE where the LCO is not applicable. The 18 hour Completion Time to reach the nonapplicable MODE is reasonable based upon operating experience.

C.1

If the power supplies to the heaters are not capable of providing 400 kW, or the pressurizer heaters are inoperable, restoration is required in 72 hours. The Completion Time of 72 hours is reasonable considering the anticipation that a demand will not occur in this period.

D.1 and D.2

If pressurizer heater capability cannot be restored within the allowed Completion Time of Required Action C.1, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to MODE 3 within 12 hours and to MODE 3 with RCS temperature ≤ 325°F within the following 6 hours. The Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging unit systems. Similarly, the Completion Time of 18 hours to be in MODE 3 with RCS temperature ≤ 325°F is reasonable based on operating experience to achieve power reduction from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.4.9.1

This SR requires that during steady state operation, pressurizer water level is maintained below the nominal upper limit to provide a minimum space for a steam bubble. The Surveillance is performed by observing the indicated level. The 12 hour interval has been shown by operating practice to be sufficient to regularly assess the level for any deviation and verify that operation is within safety analyses assumptions. Alarms are also available for early detection of abnormal level indications.

SR 3.4.9.2

The SR verifies the power supplies are capable of producing the minimum power and the associated pressurizer heaters are at their design rating. (This may be done by testing the power supply output and heater current,

BASES (continued)

SURVEILLANCE REQUIREMENTS (continued)

or by performing an electrical check on heater element continuity and resistance.) The Frequency of 18 months is considered adequate to detect heater degradation and has been shown by operating experience to be acceptable.

REFERENCES

1. 10 CFR 50.36.

2. NUREG-0737, November 1980.

ATTACHMENT 2

MARKUP OF TECHNICAL SPECIFICATION

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Pressurizer

LCO 3.4.9 The pressurizer shall be OPERABLE with:

a. Pressurizer water level ≤ 285 inches; and

400

b. A minimum of ~~126~~ kW of pressurizer heaters OPERABLE and capable of being powered from an emergency power supply.

APPLICABILITY: MODES 1 and 2,
MODE 3 with RCS temperature > 325°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Pressurizer water level not within limit.	A.1	Restore level to within limit.	1 hour
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 3 with RCS temperature ≤ 325°F.	18 hours
C. Capacity of pressurizer heaters capable of being powered by emergency power supply less than limit.	C.1	Restore pressurizer heater capability.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. AND D.2 Reduce RCS temperature to ≤ 325°F.	12 hours 18 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	Verify pressurizer water level ≤ 285 inches.	12 hours
SR 3.4.9.2	Verify capacity of required pressurizer heaters and associated power supplies are ≥ ~~126~~ 400 kW.	18 months

BASES

BACKGROUND (continued)

maintained with a loss of offsite power. Consequently, the emphasis of this LCO is to ensure that the essential power supplies and the associated heaters are adequate to maintain pressure for RCS loop subcooling with an extended loss of offsite power.

A minimum required available capacity of ~~126~~ 400 kW ensures that the RCS pressure can be maintained. Unless adequate heater capacity is available, reactor coolant subcooling cannot be maintained indefinitely. Inability to control the system pressure and maintain subcooling under conditions of natural circulation flow in the primary system could lead to loss of single phase natural circulation and decreased capability to remove core decay heat.

APPLICABLE SAFETY ANALYSES

In MODES 1 and 2, the LCO requirement for a steam bubble is reflected implicitly in the accident analyses. No associated safety analyses are performed in lower MODES. All analyses performed from a critical reactor condition assume the existence of a steam bubble and saturated conditions in the pressurizer. In making this assumption, the analyses neglect the small fraction of noncondensible gases normally present.

Safety analyses presented in the UFSAR do not take credit for pressurizer heater operation; however, an implicit initial condition assumption of the safety analyses is that the RCS is operating at normal pressure.

The maximum level limit is of prime interest for the startup accident and Loss of Main Feedwater (LOMFW) event. Conservative safety analyses assumptions for the startup accident indicate that it produces the largest increase of pressurizer level caused by an analyzed event. Thus this event has been selected to establish the pressurizer water level limit. For pressurizer levels > than 285 inches, the LOMFW event may be more limiting.

Evaluations performed for the design basis large break loss of coolant accident (LOCA), which assumed a higher maximum level than assumed for the startup accident, have been made. The higher pressurizer level assumed for the LOCA is the basis for the volume of reactor coolant released to the containment. The containment analysis performed using the mass and energy release demonstrated that the maximum resulting containment pressure was within design limits.

The requirement for emergency power supplies is based on NUREG-0737 (Ref. 2). The intent is to allow maintaining the reactor coolant in a subcooled condition with natural circulation at hot, high pressure conditions

The 400 kW of heater capacity exceeds the capacity required to be powered by the Standby Shutdown Facility (SSF) per the Technical Specification 3.10.1 BASES. The 400 kW limit is not unit specific and was conservatively established to bound future increases in pressurizer ambient heat loss.

BASES

APPLICABLE SAFETY ANALYSES (continued)

for an undefined, but extended, time period after a loss of offsite power. While loss of offsite power is an initial condition or coincident event assumed in many accident analyses, maintaining hot, high pressure conditions over an extended time period is not evaluated as part of UFSAR accident analyses.

The maximum pressurizer water level limit satisfies Criterion 2 of 10 CFR 50.36 (Ref. 1). Although the heaters are not specifically used in accident analysis, the need to maintain subcooling in the long term during loss of offsite power, as indicated in NUREG-0737 (Ref. 2), is the reason for providing an LCO.

LCO

The LCO requirement for the pressurizer to be OPERABLE with a water level ≤ 285 inches ensures that a steam bubble exists. Limiting the maximum operating water level preserves the steam space for pressure control. The LCO has been established to ensure the capability to establish and maintain pressure control for steady state operation and to minimize the consequences of potential overpressure transients. Requiring the presence of a steam bubble is also consistent with analytical assumptions.

The LCO requires a minimum of ~~126~~ 400 kW of pressurizer heaters OPERABLE and capable of being powered from an emergency power supply. As such, the LCO addresses both the heaters and the power supplies. The minimum heater capacity required is sufficient to maintain the system near normal operating pressure when accounting for heat losses through the pressurizer insulation. By maintaining the pressure near the operating conditions, a wide margin to subcooling can be obtained in the loops. The design value of ~~126~~ 400 kW ~~is derived from~~ will require the use of twenty heaters rated at 14 kW each (Nominal). The amount needed to maintain pressure is dependent on the insulation losses, which can vary due to tightness of fit and condition.

APPLICABILITY

The need for pressure control is most pertinent when core heat can cause the greatest effect on RCS temperature, resulting in the greatest effect on pressurizer level and RCS pressure control. Thus Applicability has been designated for MODES 1 and 2. The Applicability is also provided for MODE 3 with RCS temperature > 325°F. The purpose is to prevent solid water RCS operation during heatup and cooldown to avoid rapid pressure rises caused by normal operational perturbations, such as reactor coolant

BASES

APPLICABILITY (continued)

pump startup. The temperature of 325°F has been designated as the cutoff for applicability because LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," provides a requirement for pressurizer level ≤ 325°F. The LCO does not apply in MODE 4, 5 or 6 since either pressurizer level is under the control of LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," or the RCS is open to the containment atmosphere.

In MODES 1, 2, and 3, there is the need to maintain the availability of pressurizer heaters capable of being powered from an emergency power supply. In the event of a loss of offsite power, the initial conditions of these MODES give the greatest demand for maintaining the RCS in a hot pressurized condition with loop subcooling for an extended period. For MODE 4, 5, or 6, it is not necessary to control pressure (by heaters) to ensure loop subcooling for heat transfer when the Decay Heat Removal loops are in service, and therefore the LCO is not applicable.

ACTIONS

A.1

With pressurizer water level in excess of the maximum limit, action must be taken to restore pressurizer operation to within the bounds assumed in the analysis. This is done by restoring the pressurizer water level to within the limit.

The 1 hour Completion Time is considered to be a reasonable time for draining excess liquid.

B.1 and B.2

If the water level cannot be restored, reducing core power constrains heat input effects that drive pressurizer insurge that could result from an anticipated transient. By shutting down the reactor and reducing reactor coolant temperature to at least MODE 3 with RCS temperature ≤ 325°F, the potential thermal energy of the reactor coolant mass for LOCA mass and energy releases is reduced.

Twelve hours is a reasonable time based upon operating experience to reach MODE 3 from full power without challenging unit systems and operators. Further pressure and temperature reduction to MODE 3 with RCS temperature ≤ 325°F places the unit into a MODE where the LCO is not applicable. The 18 hour Completion Time to reach the nonapplicable MODE is reasonable based upon operating experience.

BASES

ACTIONS (continued)

C.1

If the power supplies to the heaters are not capable of providing ~~126~~ 400 kW, or the pressurizer heaters are inoperable, restoration is required in 72 hours. The Completion Time of 72 hours is reasonable considering the anticipation that a demand will not occur in this period.

D.1 and D.2

If pressurizer heater capability cannot be restored within the allowed Completion Time of Required Action C.1, the unit must be brought to a MODE in which the LCO does not apply. To achieve this status, the unit must be brought to MODE 3 within 12 hours and to MODE 3 with RCS temperature ≤ 325°F within the following 6 hours. The Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging unit systems. Similarly, the Completion Time of 18 hours to be in MODE 3 with RCS temperature ≤ 325°F is reasonable based on operating experience to achieve power reduction from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.4.9.1

This SR requires that during steady state operation, pressurizer water level is maintained below the nominal upper limit to provide a minimum space for a steam bubble. The Surveillance is performed by observing the indicated level. The 12 hour interval has been shown by operating practice to be sufficient to regularly assess the level for any deviation and verify that operation is within safety analyses assumptions. Alarms are also available for early detection of abnormal level indications.

SR 3.4.9.2

The SR verifies the power supplies are capable of producing the minimum power and the associated pressurizer heaters are at their design rating. (This may be done by testing the power supply output and heater current, or by performing an electrical check on heater element continuity and resistance.) The Frequency of 18 months is considered adequate to detect heater degradation and has been shown by operating experience to be acceptable.

BASES (continued)

REFERENCES

1. 10 CFR 50.36.

2. NUREG-0737, November 1980.

ATTACHMENT 3

TECHNICAL JUSTIFICATION

Attachment 3

Technical Justification

Background

For event or transient scenarios involving decay heat removal via the steam generators, an adequate number of pressurizer (PZR) heaters must be functional to compensate for ambient losses. This is necessary in order to maintain a PZR steam bubble for reactor coolant system (RCS) pressure control and to ensure adequate natural circulation cooling. Presently, Technical Specification (TS) LCO 3.4.9(b) and Selected Licensee Commitment (SLC) 16.5.8a each contain a minimum PZR heater kilowatt (kW) capacity value for this function.

In March 2002, Duke identified a condition associated with higher than calculated ambient heat losses from the Unit 1, 2, and 3 PZRs. Specifically, it was revealed that due to both (1) greater than anticipated ambient heat losses and, (2) non-conservative capacity estimates from a 1972 heat-load calculation, the 126 kW minimum PZR heater capacity given in TS LCO 3.4.9(b) is not sufficient to overcome the higher ambient heat losses and as such is non-conservative. This condition affects all three units.

As an interim corrective action for this condition, in late March 2002, Selected Licensee Commitment (SLC) 16.5.8a was implemented at the station. The SLC specifies a higher minimum PZR heater capacity (378 versus 126 kW) as added assurance that RCS pressure would be maintained when considering the higher PZR ambient heat losses. This SLC will remain in-place until the non-conservative value given in TS Limiting Condition for Operation (LCO) 3.4.9(b) can be corrected and implemented.

Description of the Technical Specification Change and Technical Justification

The proposed revision to TS LCO 3.4.9 (b) changes the minimum required PZR heater capacity from 126 kW to 400 kW. It is also proposed to change the acceptance value in surveillance requirement (SR) 3.4.9.2 from 126 kW to 400 kW. The additional kW capacity is necessary based on tests conducted by Duke which have shown that the amount of ambient heat being lost by the Unit 1, 2, and 3 PZRs to be approximately 140, 179, and 190 kW respectively. For additional conservatism, a minimum of 400 kW is being proposed that is

slightly higher than the 378 kW value given in SLC 16.5.8.

Applicable sections of the TS 3.4.9 BASES will be revised to reflect the increase in the minimum heater capacity and a clarifying statement added to the TS BASES Background section in regards to those PZR heaters powered from the Standby Shutdown Facility (per TS 3.10.1 BASES). The specific areas where changes are necessary are shown in the marked-up pages given in Attachment 2.

The total available heater capacity being powered from an emergency power supply is approximately 1000 kW for the most restrictive unit. This available capacity exceeds the proposed 400 kW minimum capacity required by the TS and ensures that the requirement will be satisfied.

The changes proposed in the license amendment request are necessary in order to correct a non-conservative TS associated with a PZR design basis deficiency. The proposed changes are considered safe and their implementation will not adversely affect the public health; consequently, these changes are justified.

ATTACHMENT 4

NO SIGNIFICANT HAZARDS CONSIDERATION

Attachment 4

No Significant Hazards Consideration

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:

No. The proposed changes revise the minimum PZR heater capacity required and capable of being powered from an emergency power supply source. UFSAR safety analyses do not take credit for PZR heater operation; however, an implicit initial condition assumption of the safety analyses is that RCS is operating at normal pressure. Assurance of this assumption is enhanced due to these proposed changes. Consequently, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

No. These changes correct a non-conservative value from the TS and are necessary to assure RCS pressure control and adequate natural circulation cooling. The available heater capacity being powered from an emergency power supply is approximately 1000 kW for the most restrictive unit which exceeds the proposed 400 kW minimum capacity required by TS. The proposed changes help ensure that the RCS is operating at normal pressure which is an implicit initial assumption used in several UFSAR described safety analyses. Consequently, these changes do 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.

No. The proposed change does not adversely affect any

plant safety limits, set points, or design parameters. The change also does not adversely affect the fuel, fuel cladding, Reactor Coolant System, or containment integrity. Therefore, the proposed changes do not involve a reduction in a margin of safety.

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

ATTACHMENT 5

ENVIRONMENTAL ASSESSMENT

ATTACHMENT 5

Environmental Assessment

Pursuant to 10 CFR 51.22(b), an evaluation of the license amendment request (LAR) has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10 CFR 51.22(c)9 of the regulations. The LAR does not involve:

1) A significant hazards consideration.

   This conclusion is supported by the determination of no significant hazards contained in Attachment 4.

2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

   This LAR will not significantly change the types or amounts of any effluents that may be released offsite.

3) A significant increase in the individual or cumulative occupational radiation exposure.

   This LAR will not increase the individual or cumulative occupational radiation exposure.

In summary, this LAR meets the criteria set forth in 10 CFR 51.22 (c)9 of the regulations for categorical exclusion from an environmental impact statement.