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August 18, 2005

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 associated with New
Reactor Building Emergency Sump (RBES) Strainers,
TSC Number 2004-08

Duke Energy Corporation (Duke) proposes to amend Appendix A, Technical Specifications (TS), for Renewed Facility Operating Licenses DPR-38, DPR-47 and DPR-55 for Oconee Nuclear Station (ONS), Units 1, 2, and 3. The proposed change to Technical Specification (TS) Surveillance Requirement (SR) 3.5.2.6 and SR 3.5.3.6 is needed to reflect the replacement of RBES suction inlet trash racks and screens with strainers in response to Generic Letter 2004-02.

Attachments 1 and 2 provide revised Technical Specification retyped pages and markup pages that reflect the changes, respectively. Attachment 3 provides the justification for the change. Attachments 4 and 5 contain the No Significant Hazards Consideration Evaluation and the Environmental Impact Analysis, respectively.

The proposed change 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.

UFSAR changes necessary to reflect approval of this submittal will be made in accordance 10 CFR 50.71(e).

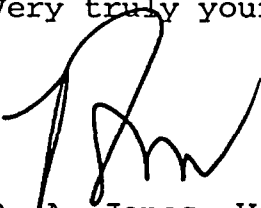
Pursuant to 10 CFR 50.91, a copy of this proposed amendment is being sent to the South Carolina Department of Health and Environmental Control for review, and as deemed necessary and appropriate, subsequent consultation with the NRC staff.

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Duke plans to implement this modification on Unit 2 during the 2EOC-21 refueling outage scheduled to start in October of 2005 and on Units 1 and 3 on their next scheduled refueling outage. Therefore, approval of this proposed LAR is requested by October 15, 2005. If there are any additional questions, please contact Russell Oakley at (864) 885-3829.

Very truly yours,

A handwritten signature in black ink, appearing to be 'R. A. Jones', written over the closing text.

R. A. Jones, Vice President
Oconee Nuclear Site

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cc: Mr. L. N. Olshan, Project Manager
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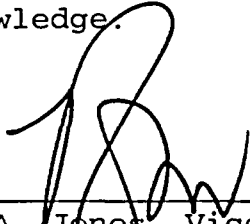
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Mr. Henry Porter, Director
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R. A. Jones, being duly sworn, states that he is Vice President, Oconee Nuclear Site, Duke Energy Corporation, that he is authorized on the part of said Company to sign 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

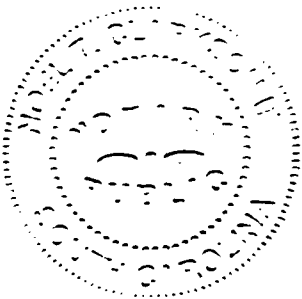
Subscribed and sworn to before me this 18th day of August, 2005



Notary Public

My Commission Expires:

9-20-2009



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bcc: w/attachments

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BWOOG Tech Spec Committee (5)
ONS Document Management
Reene' V. Gambrell

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.3	Verify each HPI pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.5.2.4	Verify each HPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.5.2.5	Verify each HPI pump starts automatically on an actual or simulated actuation signal.	18 months
SR 3.5.2.6	Verify, by visual inspection, each HPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion.	18 months
SR 3.5.2.7	Cycle each HPI discharge crossover valve and LPI-HPI flow path discharge valve.	18 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.3.2</p> <p>-----NOTE----- Not applicable to operating LPI pump(s). -----</p> <p>Vent each LPI pump casing.</p>	<p>31 days</p>
<p>SR 3.5.3.3</p> <p>Verify each LPI pump's developed head at the test flow point is greater than or equal to the required developed head.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.5.3.4</p> <p>Verify each LPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>18 months</p>
<p>SR 3.5.3.5</p> <p>Verify each LPI pump starts automatically on an actual or simulated actuation signal.</p>	<p>18 months</p>
<p>SR 3.5.3.6</p> <p>Verify, by visual inspection, each LPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion.</p>	<p>18 months</p>

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ATTACHMENT 2

MARKUP OF TECHNICAL SPECIFICATION

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.3	Verify each HPI pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.5.2.4	Verify each HPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.5.2.5	Verify each HPI pump starts automatically on an actual or simulated actuation signal.	18 months
SR 3.5.2.6	Verify, by visual inspection, each HPI train reactor building sump suction inlet is not restricted by debris and suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion.	18 months strainers
SR 3.5.2.7	Cycle each HPI discharge crossover valve and LPI-HPI flow path discharge valve.	18 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.3.2</p> <p>-----NOTE----- Not applicable to operating LPI pump(s). -----</p> <p>Vent each LPI pump casing.</p>	<p>31 days</p>
<p>SR 3.5.3.3</p> <p>Verify each LPI pump's developed head at the test flow point is greater than or equal to the required developed head.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.5.3.4</p> <p>Verify each LPI automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>18 months</p>
<p>SR 3.5.3.5</p> <p>Verify each LPI pump starts automatically on an actual or simulated actuation signal.</p>	<p>18 months</p>
<p>SR 3.5.3.6</p> <p>Verify, by visual inspection, each LPI train reactor building sump suction inlet is not restricted by debris and suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion.</p>	<p>18 months</p> <div style="border: 1px solid black; width: 100px; height: 20px; margin-left: 100px; display: inline-block;">strainers</div>



Attachment 3
Technical Justification

Overview

A change to Technical Specification (TS) Surveillance Requirement (SR) 3.5.2.6 and SR 3.5.3.6 is needed to reflect the replacement of Reactor Building Emergency Sump (RBES) suction inlet trash racks and screens with strainers in response to Generic Letter 2004-02. Duke's evaluation concluded that the Reactor Building Emergency Sump (RBES) screen effective surface area must be increased for each Oconee unit. Analyses of structural loading, including dead weight, differential pressure, seismic, thermal and potential for jet impingement and missile generation concluded that a trash rack was not needed for the new design. This modification will be performed on Unit 2 in 2EOC21 refueling outage scheduled to start in October of 2005 and then will be performed on Units 1 and 3 during their next scheduled refueling outage. The new term "strainers" is also appropriate for the existing design that uses trash racks and screens to strain debris from the suction inlet. Therefore, the change is proposed for all three Oconee Units.

During review of the suction inlet modification, which is being "fast tracked" to support prompt installation, Duke recognized that two TS SRs needed to be revised to reflect the replacement of the trash racks and screens with strainers. The description of the modification, including design details, is provided only to assist the NRC in understanding the reason for the TS change and thus facilitate the NRC's review of the TS change. Since the design is on-going, some design details may change from those included. Details related to the modification are being provided in response to Generic Letter 2004-02.

Description of the Technical Specification Change

The proposed change revises TS SR 3.5.2.6 and SR 3.5.3.6.

TS SR 3.5.2.6

TS SR 3.5.2.6 states: "Verify, by visual inspection, each HPI train reactor building sump suction inlet is not restricted by debris and suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion."

The proposed change revises the SR to state: "Verify, by visual inspection, each HPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion."

Use of the more generic terminology (i.e., strainers) addresses the installation of the new strainers and can also be applied to the existing design that uses trash racks and screens to strain debris from the suction inlet.

TS SR 3.5.3.6

TS SR 3.5.3.6 states: "Verify, by visual inspection, each LPI train reactor building sump suction inlet is not restricted by debris and suction inlet trash racks and screens show no evidence of structural distress or abnormal corrosion."

The proposed change revises the SR to state: "Verify, by visual inspection, each LPI train reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion."

Use of the more generic terminology (i.e., strainers) addresses the installation of the new strainers and can also be applied to the existing design that uses trash racks and screens to strain debris from the suction inlet.

Description of Modification

Current RBES sump screen design

The existing RBES screens are designed to preclude passage of debris large enough to damage the Low Pressure Injection (LPI), Reactor Building Spray (RBS), or High Pressure Injection (HPI) pumps or obstruct the RBS nozzles.

The existing RBES is covered with 1/4" steel deck plate in four sections. This cover plate serves as a debris barrier by directing flow around the sides of the sump where it passes through the trash rack and then through the sump screens.

The existing trash racks installed around the perimeter of the RBES are made from several sections of standard floor grating, approximately one foot wide with opening dimensions of approximately 1" by 4." This grating serves to catch large debris. The existing trash rack has a surface area of approximately 50 ft². The existing screen has a surface area of approximately 93 ft² with opening dimensions of approximately 1/8" square.

RBES Screen Modification

The modification removes the hardware described above and replaces it with a fabricated strainer assembly utilizing perforated stainless steel plate as the primary straining element. The perforations are approximately 1/12 of an inch in diameter. The assembly is an array of strainer "pockets" which extends from the bottom of the emergency sump to approximately 3-feet above the reactor building floor. The array of "pockets" is arranged in 2 sets of stacks separated by a center walkway above the sump suction inlet located in the bottom of the sump.

The pocket openings are each approximately 4-inches by 3-inches and are arranged to form a grid array which prevent large objects from entering the individual pockets where the water passes through the perforated plate. The total area of straining surface will be approximately 5000 ft². The total face area of the pocket array is approximately 350 ft². The

pocket array serves a similar function as the existing trash racks.

Justification for Change

The RBES trash racks and screens are being replaced with strainers as part of Duke's actions associated with Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents At Pressurized Water Reactors," dated September 13, 2004. The strainers provide a larger surface area to ensure that adequate ECCS and RBS pump net positive suction head (NPSH) is maintained under debris loaded conditions.

The proposed change to the Technical Specification Surveillance Requirements is necessary to reflect the new strainer design which does not include trash racks. While the change is required for Unit 2 to support the upcoming fall 2005 outage, the change is also needed for Units 1 and 3 to support the installation of the modification in their next outages. The function of the trash racks and screens is to strain debris. Therefore, the use of the generic term "strainers" can be used in place of "trash racks and screens" for both the existing and new designs. This negates the need for a note to distinguish between Units with and without the modification complete, which would require an administrative change to remove at a later date.

The purpose of the RBES screens is to preclude passage of debris large enough to damage any of the downstream components (such as the LPI, RBS, or HPI pumps, or block flow passages such as flow channels in the fuel and the RBS nozzles). This function is required to support operation of the supported systems (i.e., LPI, Building Spray and HPI) during large or small break LOCAs which credit recirculation flow from the RBES. The proposed re-wording of the SR continues to ensure the RBES suction inlet straining elements for LPI and HPI are not restricted by debris and are in proper operating condition for both the existing and modified configurations.

Although the configurations of the existing trash rack and sump screen and the replacement strainer assemblies are

different, they serve the same fundamental purpose of passively removing debris from the sump's suction supply of the supported system pumps.

Removal of trash racks does not impact the adequacy of the pump NPSH assumed in the safety analyses. Likewise, the change does not reduce the reliability of any supported systems or introduce any new system interactions.

The location of the RBES is not changed. Due to extension of new strainer above the floor level, evaluations of potential missile and jet impingement/pipe whip effects were performed and concluded that no additional protection was necessary. The jet impingement evaluation of the new strainer design, crediting Leak-Before-Break (LBB) and utilizing other pipe break rules to which ONS is licensed, concluded that there are no credible HELB jets that could damage the strainer when needed during a LOCA. The missile evaluation of the new strainer design concluded that there is no credible missile that could damage the strainer when needed during a Loss of Coolant Accident (LOCA). Also, the approach velocity at the strainer face is reduced by a factor of about 3.5 greatly reducing the potential for adverse effects of impact from objects entrained in the flow stream.

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Attachment 4

Attachment 4
No Significant Hazards Consideration

Pursuant to 10 CFR 50.91, Duke Energy Corporation (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:

Duke is replacing the RBES trash racks and screens with strainers in support of the response to Generic Letter 2004-02 on all three Oconee Units in the next refueling outage for each Unit. A change to Technical Specification (TS) Surveillance Requirements (SRs) 3.5.2.6 and 3.5.3.6 is needed to reflect this change. Although the configurations of the existing sump screen and the replacement strainer assemblies are different, they serve the same fundamental purpose of passively removing debris from the sump's suction supply of the supported system pumps. Removal of trash racks does not impact the adequacy of the pump NPSH assumed in the safety analyses. Likewise, the change does not reduce the reliability of any supported systems or introduce any new system interactions. A missile evaluation of the new strainer design concluded that there is no credible missile that could damage the strainer when needed during a LOCA. A jet impingement evaluation of the new strainer design concluded that there are no credible HELB jets that could damage the strainer when needed during a LOCA. The greatly increased surface area of the new strainer will reduce the approach velocity at the strainer face significantly, further decreasing the risk of impact from large debris entrained in the sump flow stream. The proposed rewording of the SRs will continue to ensure that the reactor building sump suction inlet is not restricted by debris and suction inlet strainers show no evidence of structural distress or abnormal corrosion for Unit(s) with or without the strainer modification complete. As such, the proposed change does 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:

Duke is replacing the RBES trash racks and screens with strainers in support of the response to Generic Letter 2004-02 on all three Oconee Units in the next refueling outage for each Unit. The RBES strainers are passive components in standby safety systems used for accident mitigation. As such, they cannot be accident initiators. Therefore, there is no possibility that this change could create any accident of any kind. A change to TS SRs 3.5.2.6 and 3.5.3.6 is needed to reflect this change. These changes do not alter the nature of events postulated in the Safety Analysis Report nor do they introduce any unique precursor mechanisms. Therefore, the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed changes do not adversely affect any plant safety limits, set points, or design parameters. The changes also do not adversely affect the fuel, fuel cladding, Reactor Coolant System (RCS), or containment integrity. Therefore, the proposed TS change, which revises the terminology associated with TS SRs, does not involve a significant reduction in the margin of safety.

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

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Attachment 5

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 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 significantly 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.