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 ROBINSON, W.R. Carolina Power & Light Co.
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SUBJECT: Application for amend to License NPF-63, revising TS 3/4.2.1, 3/4.2.2, 6.9.1.6 & associated bases re transition from nuclear fuel supplied by Westinghouse to nuclear fuel supplied by Siemens Power Corp beginning w/Cycle 6.

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Carolina Power & Light Company

JUL 16 1993

SERIAL: HNP-93-826
10 CFR 50.90

Letter Number: HO-930124

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63

REQUEST FOR LICENSE AMENDMENT
CYCLE 6 FUEL TRANSITION

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company (CP&L) hereby requests a revision to the Technical Specifications (TS) for the Shearon Harris Nuclear Power Plant (SHNPP). The proposed amendment revises Technical Specifications 3/4.2.1, 3/4.2.2, 6.9.1.6 and associated Bases related to the transition from nuclear fuel supplied by Westinghouse to nuclear fuel supplied by Siemens Power Corporation (SPC) beginning with Cycle No. 6. Specifically, the proposed changes will incorporate references to the SPC methodologies that will support the transition.

Enclosure 1 provides a detailed description of the proposed changes and the basis for the changes.

Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for the Company's determination that the proposed changes do not involve a significant hazards consideration.

Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment needs to be prepared in connection with the issuance of the amendment.

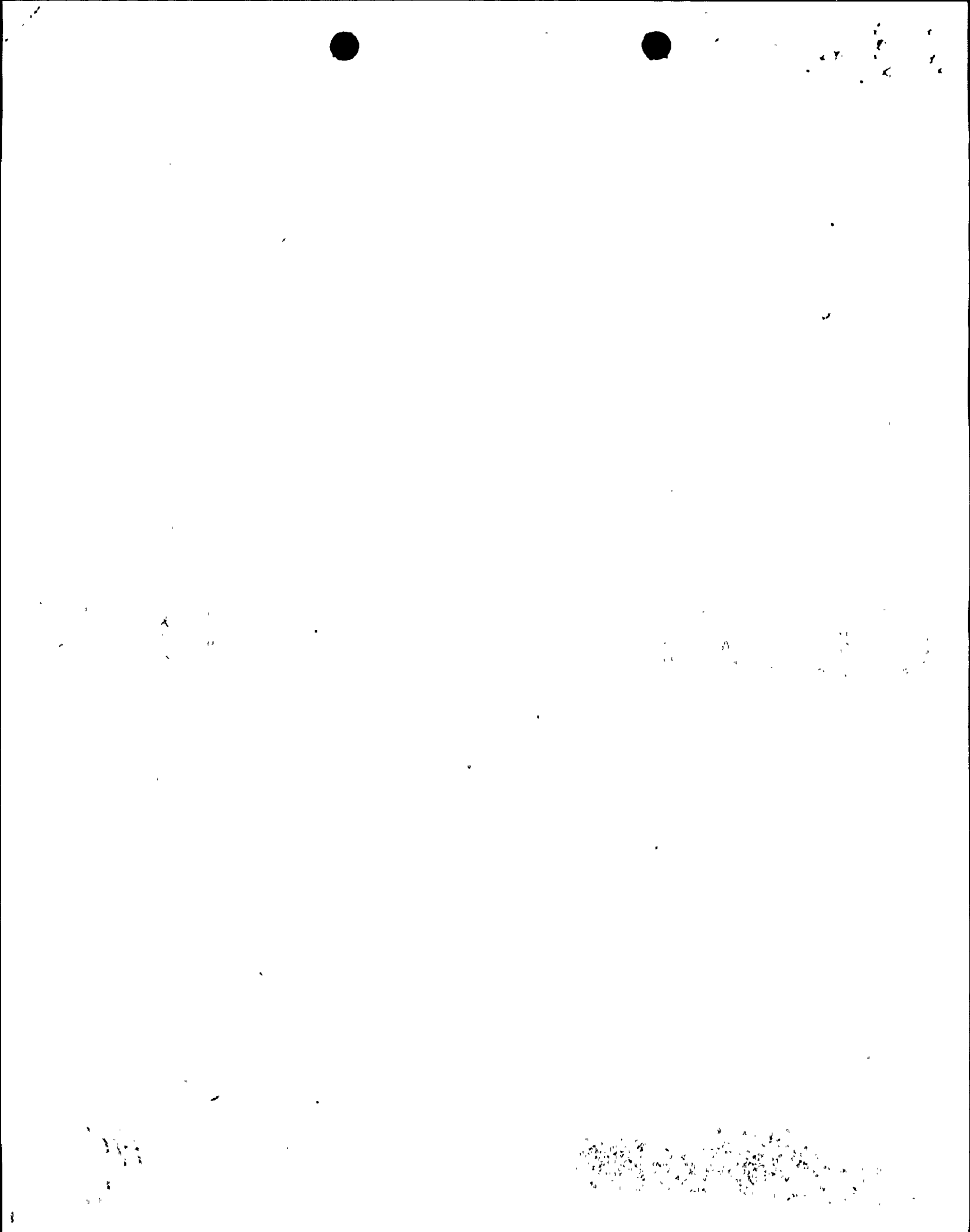
Enclosure 4 provides page change instructions for incorporating the proposed revisions.

Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

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CP&L requests approval of the proposed amendment by March 1, 1994 in order to support the next SHNPP refueling outage, currently scheduled to begin in March 1994. In order to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications, CP&L requests that the proposed amendment, once approved by the NRC, be issued such that implementation will occur within 60 days of issuance of the amendment.

Please refer any questions regarding this submittal to Mr. D. C. McCarthy at (919) 362-2100.

Yours very truly,



W. R. Robinson
General Manager - Harris Plant

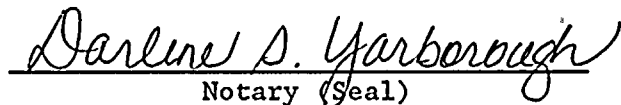
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Enclosures:

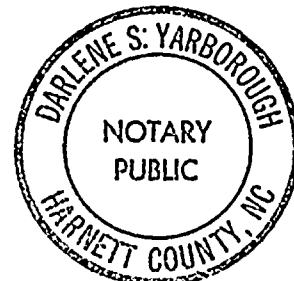
1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

cc: Mr. Dayne H. Brown
Mr. S. D. Ebnetèr
Mr. N. B. Le
Mr. J. E. Tedrow

W. R. Robinson, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: 2-5-95



SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
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BASIS FOR CHANGE REQUEST

Background

Beginning with Cycle No.6, the Shearon Harris Nuclear Power Plant (SHNPP) will begin transitioning from nuclear fuel supplied by Westinghouse Electric Corporation to nuclear fuel designed and fabricated by Siemens Power Corporation (SPC). The SPC-designed fuel will be supported by SPC design methodology, while the Westinghouse fuel (allowed peaking and burnup limits) will continue to be supported by the original Westinghouse calculations. Plant response will be supported by SPC methodology.

The transition to SPC fuel will require Technical Specification changes in the following areas: reactor core safety limits, reactor trip system instrumentation setpoints, power distribution limits, and Core Operating Limits Report (COLR) references. Since some of these changes are dependent upon plant-specific analyses that are currently underway, but not complete, CP&L will submit the Cycle No. 6 Technical Specification changes in two parts. As discussed at a meeting between CP&L and the NRC in White Flint, Maryland on April 22, 1993 and at SHNPP on June 28, 1993, the changes submitted herein are proposed references to NRC-approved methodologies or methodologies which are currently under review by the NRC for approval. Any necessary plant-specific changes will be submitted separately by September 1993.

Proposed Change

The proposed amendment revises Technical Specifications 3/4.2.1, 3/4.2.2, 6.9.1.6, and associated Bases to incorporate references to the Siemens Power Corporation (SPC) methodologies that will support the transition from Westinghouse-supplied fuel to SPC-supplied fuel. Specifically:

1. Changes are proposed to Technical Specification 3/4.2.1, Axial Flux Difference, Technical Specification 3/4.2.2, Heat Flux Hot Channel Factor (F_Q), and associated Bases to incorporate the use of the Siemens PDC-3 methodology for power distribution control. The specific Technical Specification changes reflect the manner in which Target Axial Flux Difference (AFD) will be controlled and how the associated penalties to the measured F_Q are applied.
2. Technical Specification 6.9.1.6 will be revised to update the Core Operating Limits Report (COLR) reference section to incorporate the appropriate SPC generic methodology used to establish the limits provided in the COLR. This revision incorporates references to three SPC methodologies that are currently under review by the NRC staff (EMF-92-081, EMF-92-153, and XN-NF-82-49).



Basis

1. The accidents previously evaluated in the Final Safety Analysis Report (FSAR) are unchanged by the proposed revisions to Technical Specifications 3/4.2.1 and 3/4.2.2. The plant systems, including excore and incore hardware and general methods of operation (i.e., axial power distribution control) are not affected by the proposed changes; plant procedures (except that Base Load is no longer an option) and allowed action times for limiting conditions for operation are also unchanged. Therefore, there is no increase in the probability or consequences of any accident previously evaluated in the FSAR. The proposed amendment does not involve any modifications or additions to plant equipment; therefore, there is no increase in the probability or consequences of a malfunction of equipment important to safety as evaluated previously in the FSAR. The proposed amendment replaces one approved methodology with another (PDC-3). These methodologies are designed to provide the same function, control of axial flux difference, so that existing analyses remain valid. Therefore, this change does not create the possibility of a new or different kind of accident. Additionally, the proposed amendment does not change those parameters which relate to the margin of safety as determined by safety evaluation. Therefore, there is no reduction in the margin of safety as defined in the Technical Specifications.
2. The proposed incorporation of reference changes in the Core Operating Limits Report (COLR) does not involve changes or additions to plant equipment. The referenced methodologies are used to evaluate the consequences of the changes in fuel design according to NRC-approved requirements. These consequences must satisfy the specified acceptable fuel design limits, the radiological limits, and the loss of coolant limits as defined by the NRC. These limits continue to be met. Therefore, there is no increase in the probability or consequences of an accident previously evaluated in the FSAR. Since there is no change to any postulated causes for equipment malfunction and since all applicable design limits continue to be met, there is no increase in the probability or consequences of a malfunction of equipment important to safety as previously evaluated in the FSAR. The incorporation of references in the COLR does not create precursors to a new kind of accident. Therefore, the proposed change does not create the possibility of a new or different type of accident than any previously evaluated in the FSAR. Additionally, the proposed amendment does not change those parameters which relate to the margin of safety as determined by safety evaluation. Therefore, there is no reduction in the margin of safety as defined in the Technical Specifications.



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10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if 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, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

The proposed amendment revises Technical Specifications 3/4.2.1, 3/4.2.2, 6.9.1.6, and associated Bases to incorporate references to the Siemens Power Corporation (SPC) methodologies that will support the transition from Westinghouse-supplied fuel to SPC-supplied fuel. Specifically:

- Changes are proposed to Technical Specification 3/4.2.1, Axial Flux Difference, and Technical Specification 3/4.2.2, Heat Flux Hot Channel Factor (F_Q), and associated Bases to incorporate the use of the Siemens PDC-3 methodology for power distribution control. The specific Technical Specification changes reflect the manner in which Target Axial Flux Difference (AFD) will be controlled and how the associated penalties to the measured F_Q are applied.
- Technical Specification 6.9.1.6 will be revised to update the Core Operating Limits Report (COLR) reference section to incorporate the appropriate SPC generic methodology used to establish the limits provided in the COLR. This revision incorporates references to three SPC methodologies that are currently under review by the NRC staff (EMF-92-081, EMF-92-153, and XN-NF-82-49).

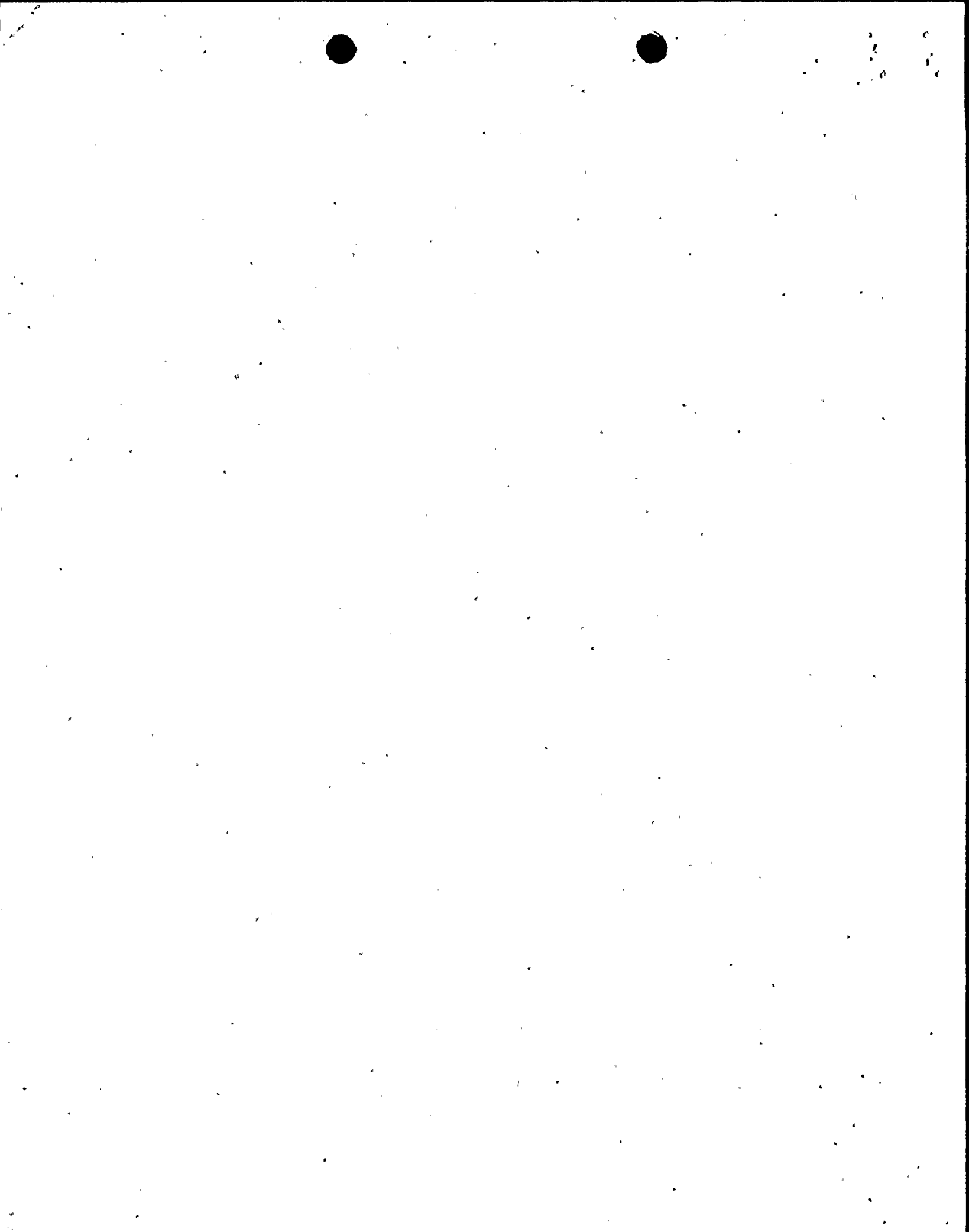
Basis

This change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.
 - (a) The accidents previously evaluated in the Final Safety Analysis Report (FSAR) are unchanged by the proposed revisions to Technical Specifications 3/4.2.1 and 3/4.2.2. The plant systems, including excore and incore hardware and general methods of operation (i.e., axial power distribution control) are not affected by the proposed

changes; plant procedures (except that Base Load is no longer an option) and allowed action times for limiting conditions for operation are unchanged.

- (b) The proposed incorporation of reference changes in the Core Operating Limits Report (COLR) does not involve changes or additions to plant equipment. The referenced methodologies are used to evaluate the consequences of the changes in fuel design according to NRC approved requirements. These consequences must satisfy the specified acceptable fuel design limits, the radiological limits, and the loss of coolant limits as defined by the NRC. These limits continue to be met.
2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.
 - (a) The proposed amendment replaces one approved methodology with another (PDC-3). These methodologies are designed to provide the same function, control of axial flux difference, so that existing analyses remain valid.
 - (b) The incorporation of references in the COLR does not create precursors to a new kind of accident.
 3. The proposed amendment does not involve a significant reduction in the margin of safety.
 - (a) The proposed changes to Technical Specifications 3/4.2.1, 3/4.2.2, and associated Bases do not affect parameters that relate to the margin of safety as defined in the Technical Specifications.
 - (b) The incorporation of references in the Core Operating Limits Report (COLR) does not impact the parameters that relate to the margin of safety as defined in the Technical Specifications.



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ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released off-site; (3) result in an increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets 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 needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

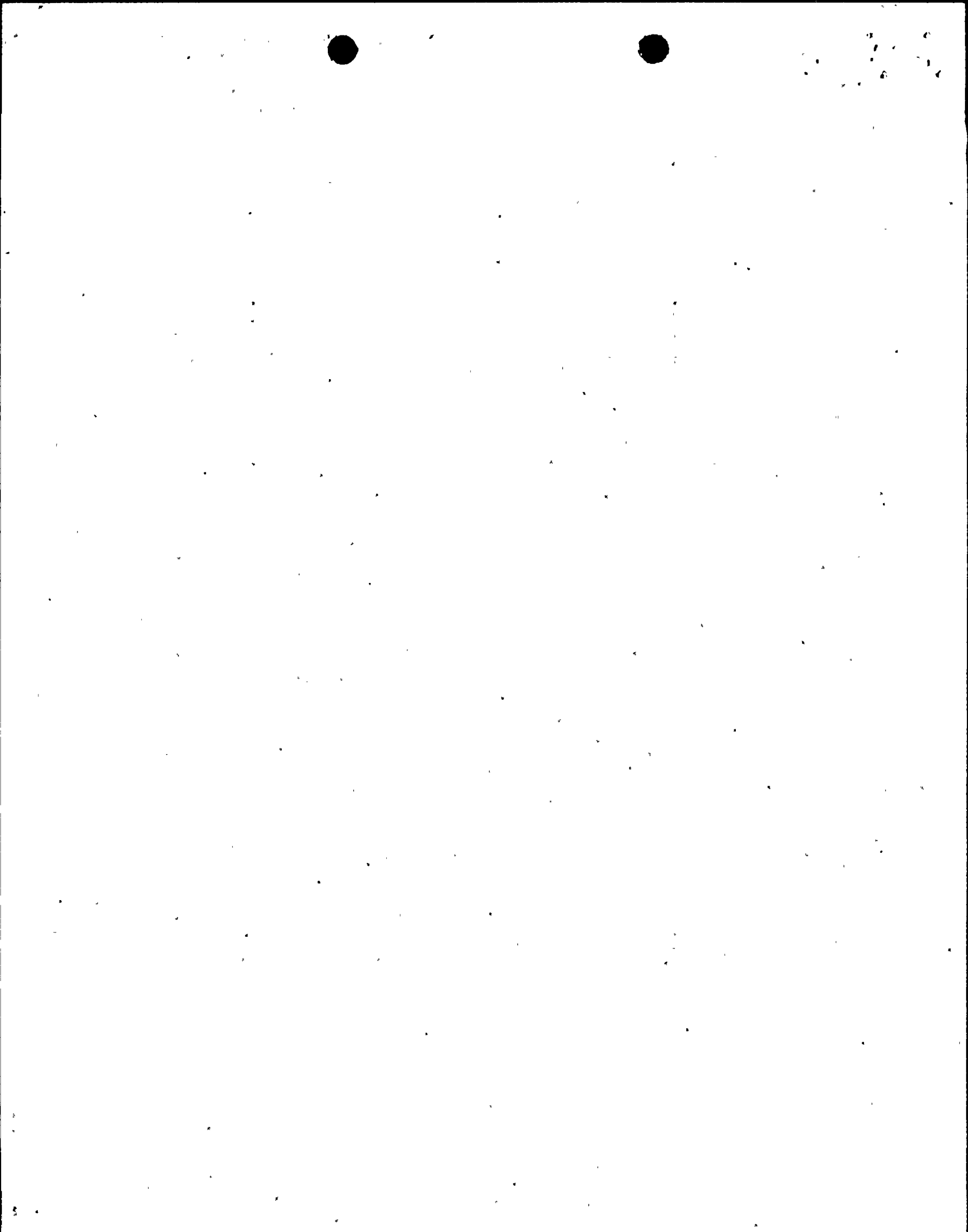
The proposed amendment revises Technical Specifications 3/4.2.1, 3/4.2.2, 6.9.1.6, and associated Bases to incorporate references to the Siemens Power Corporation (SPC) methodologies that will support the transition from Westinghouse-supplied fuel to SPC-supplied fuel. Specifically:

- Changes are proposed to Technical Specification 3/4.2.1, Axial Flux Difference, and Technical Specification 3/4.2.2, Heat Flux Hot Channel Factor (F_Q), and associated Bases to incorporate the use of the Siemens PDC-3 methodology for power distribution control. The specific Technical Specification changes reflect the manner in which Target Axial Flux Difference (AFD) will be controlled and how the associated penalties to the measured F_Q are applied.
- Technical Specification 6.9.1.6 will be revised to update the Core Operating Limits Report (COLR) reference section to incorporate the appropriate SPC generic methodology used to establish the limits provided in the COLR. This revision incorporates references to three SPC methodologies that are currently under review by the NRC staff (EMF-92-081, EMF-92-153, and XN-NF-82-49).

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.



2. The proposed amendment does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released off-site.

The proposed amendment does not introduce any new equipment, nor does it require existing systems to perform a different type of function than they are currently designed to perform. As such, the change can not affect the types or amounts of any effluents that may be released off-site.

3. The proposed amendment does not result in an increase in individual or cumulative occupational radiation exposure.

The proposed revisions do not result in changes to Technical Specification surveillance requirements and does not affect personnel radiation exposure. Therefore, the amendment has no affect on either individual or cumulative occupational radiation exposure.

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PAGE CHANGE INSTRUCTIONS

<u>Removed Page</u>	<u>Inserted Page</u>
3/4.2-1	3/4.2-1
3/4.2-2	3/4.2-2
3/4.2-4	3/4.2-4
3/4.2-6	3/4.2-6
3/4.2-7a	3/4.2-7a
3/4.2-7b	3/4.2-7b
3/4.2-7c	DELETED
3/4.2-7d	DELETED
3/4.10-2	3/4.10-2
B 3/4 2-1	B 3/4 2-1
B 3/4 2-2	B 3/4 2-2
B 3/4 2-4	B 3/4 2-4
6-24	6-24
6-24a	6-24a
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