

October 17, 1990

Docket No. 50-368

Mr. Neil S. Carns
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 109 TO FACILITY OPERATING LICENSE
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 77166)

The Commission has issued the enclosed Amendment No. 109 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 6, 1990.

The amendment revises the ANO-2 Technical Specification 3.4.2 to include a note which would allow both pressurizer code safety valves to be removed during Mode 5. The amendment allows the licensee to conduct testing and/or maintenance with both valves simultaneously removed from the pressurizer provided that the required overpressure protection is maintained at an equivalent level to that of the existing specification.

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

Sincerely,
Original signed by:

Chester Poslusny, Jr., Project Manager
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 109 to NPF-6
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION:

Docket File

M. Virgilio MS13E4
OGC MS15B18
Wanda Jones MNBB7103
GPA/PA MS2G5

NRC PDR
T. Quay
D. Hagan MNBB3206
J. Calvo MS11F22
ARM/LFMB MNBB4503

Local PDR
L. Berry
G. Hill (4) MSP137
PD4-1 Plant File
T. Westerman, RIV

PD4-1 Reading
C. Poslusny (2)
ACRS (10) MS P-315
L. Tran
R. Jones MS8E23

*See Previous Concurrence

DF01
11

OFC	:PD4-1/LA*	:PD4-1/PM*	:SRXB*	:OGC*	:PD4-1/D (A)	:	:
NAME	:LBerry	:CPoslusny	:lh:RJones	:EHoller	:TQuay	:	:
DATE	:09/18/90	:10/01/90	:10/01/90	:10/09/90	:10/17/90	:	:

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

October 17, 1990

Docket No. 50-368

Mr. Neil S. Carns
Vice President, Operations ANO
Entergy Operations, Inc.
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SUBJECT: ISSUANCE OF AMENDMENT NO.109 TO FACILITY OPERATING LICENSE
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 77166)

The Commission has issued the enclosed Amendment No.109 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 6, 1990.

The amendment revises the ANO-2 Technical Specification 3.4.2 to include a note which would allow both pressurizer code safety valves to be removed during Mode 5. The amendment allows the licensee to conduct testing and/or maintenance with both valves simultaneously removed from the pressurizer provided that the required overpressure protection is maintained at an equivalent level to that of the existing specification.

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

Sincerely,

A handwritten signature in cursive script, reading "Chester Poslusny Jr.", is positioned above the typed name.

Chester Poslusny, Jr., Project Manager
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.109 to NPF-6
2. Safety Evaluation

cc w/enclosures:
See next page

Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

Mr. Early Ewing, General Manager
Technical Support and Assessment
Arkansas Nuclear One
Route 3 Box 137G
Russellville, Arkansas 72801

Mr. Donald C. Hintz
Executive Vice President
and Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, Mississippi 39286

Mr. Jerry Yelverton
Director Nuclear Operations
Arkansas Nuclear One
Route 3 Box 137G
Russellville, Arkansas 72801

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Vice President Operations Support
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Senior Resident Inspector
U.S. Nuclear Regulatory Commission
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Russellville, Arkansas 72801

Admiral Kinnaid R. McKee, USN (Ret)
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Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
Office of Executive Director
for Operations
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Mr. Tom W. Nickels
Arkansas Nuclear One
Route 3, Box 137G
Russellville, Arkansas 72801

Honorable Joe W. Phillips
County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Environmental Health
Protection
Arkansas Department of Health
4815 West Markam Street
Little Rock, Arkansas 72201



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

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 109
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated July 6, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;
 - D. The issuance of this license 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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 109, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay

Theodore R. Quay, Acting Director
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 17, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 109

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

Revise the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES

3/4 4-3
3/4 4-4*

INSERT PAGES

3/4 4-3
3/4 4-4*

* overleaf page

REACTOR COOLANT SYSTEM

SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 PSIA \pm 1%*#.

APPLICABILITY: MODES 4 AND 5.

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

#Equivalent relief capacity during MODE 5 satisfies the requirements of this Specification. This allows both pressurizer code safety valves to be removed for testing and/or maintenance.

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of $2500 \pm 1\%$ *

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.
- b. The provisions of Specification 3.0.4 may be suspended for one valve at a time for up to 18 hours for entry into and during operation in MODE 3 for the purpose of setting the pressurizer code safety valves under ambient (hot) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional Surveillance Requirements other than those required by Specification 4.0.5.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.109 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

INTRODUCTION

By letter dated July 6, 1990, Entergy Operations, Inc. (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit 2 (ANO-2). The proposed amendment would add a note to TS 3.4.2 which would allow both pressurizer code safety valves (PSVs) to be simultaneously removed during Mode 5. This would allow the licensee to conduct testing and/or maintenance provided that overpressure protection is at least equivalent to that of the existing specification.

DISCUSSION

The pressurizer code safety valves provide overpressure protection for the Reactor Coolant System (RCS). Each of the valves has a capacity to prevent RCS pressure from exceeding 110% of design pressure during anticipated operational occurrences. According to the ANO-2 Safety Analysis Report (SAR), during low temperature operation of the RCS, overpressure protection is provided by two Low Temperature Overpressure Protection (LTOP) relief valves, primarily to address inadvertent Safety Injection Actuation System (SIAS) operation.

ANO-2 Technical Specification 3.4.2 requires that one of the two pressurizer code safety valves be operable during Operational Modes 4 and 5 to provide reactor coolant system overpressure protection. To perform maintenance on the PSVs, the existing requirement permits the licensee to conduct maintenance and/or testing on only one PSV at a time. The licensee proposed to modify the specification to allow simultaneous removal of both PSVs during Mode 5, provided that overpressure protection equivalent to one PSV is available. The licensee stated that during Mode 5, the necessary overpressure protection can be maintained since with the PSV removed, the PSV connection nozzle flange opening exceeds the PSV internal orifice area providing greater pressure relief capacity than the PSV itself when it is installed. In addition, overpressure protection of the RCS during Mode 5 is also provided by LTOP system equipment.

EVALUATION

The licensee is requesting a change to an existing specification to allow simultaneously removal of both PSVs for maintenance and/or testing provided that overpressure protection of the RCS is maintained.

During Mode 5 operation, with the removal of both PSVs, the staff agrees that an equivalent overpressure protection of the RCS is provided by the opening of the PSVs connection nozzle and the pressurizer. Furthermore, as indicated in the ANO-2 Safety Analysis Report (SAR), overpressure protection of the RCS during low temperature operation is also provided by the LTOP system. Hence, the staff concludes that removal of both PSVs during Mode 5, as described by this requested TS change, is acceptable because no new or unanalyzed accident is created by this change and it does not effect the margin of safety at the plant.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendment involves 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 exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 amendment.

CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: October 17, 1990

Principal Contributors:

Linh Tran
Chester Poslusny

October 17, 1990

Docket No. 50-368

Mr. Neil S. Carns
Vice President, Operations ANO
Entergy Operations, Inc.
Route 3 Box 137G
Russellville, Arkansas 72801

Dear Mr. Carns:

SUBJECT: ISSUANCE OF AMENDMENT NO. 109 TO FACILITY OPERATING LICENSE
NO. NPF-6 - ARKANSAS NUCLEAR ONE, UNIT NO. 2 (TAC NO. 77166)

The Commission has issued the enclosed Amendment No. 109 to Facility Operating License No. NPF-6 for the Arkansas Nuclear One, Unit No. 2 (ANO-2). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 6, 1990.

The amendment revises the ANO-2 Technical Specification 3.4.2 to include a note which would allow both pressurizer code safety valves to be removed during Mode 5. The amendment allows the licensee to conduct testing and/or maintenance with both valves simultaneously removed from the pressurizer provided that the required overpressure protection is maintained at an equivalent level to that of the existing specification.

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

Sincerely,
Original signed by:

Chester Poslusny, Jr., Project Manager
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 109 to NPF-6
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION:

Docket File	NRC PDR	Local PDR	PD4-1 Reading
M. Virgilio MS13E4	T. Quay	L. Berry	C. Poslusny (2)
OGC MS15B18	D. Hagan MNBB3206	G. Hill (4) MSP137	ACRS (10) MS P-315
Wanda Jones MNBB7103	J. Calvo MS11F22	PD4-1 Plant File	L. Tran
GPA/PA MS2G5	ARM/LFMB MNBB4503	T. Westerman, RIV	R. Jones MS8E23

*See Previous Concurrence

8pp

FC	:PD4-1/LA*	:PD4-1/PM*	:SRXB*	:OGC*	:PD4-1/D (A)	:	:
AME	:LBerry	:CPoslusny	:lh:RJones	:EHoller	:TQuay	:	:
ATE	:09/18/90	:10/01/90	:10/01/90	:10/09/90	:10/17/90	:	:



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NUCLEAR REGULATORY COMMISSION
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Chester Poslusny Jr.

Chester Poslusny, Jr., Project Manager
Project Directorate IV-1
Division of Reactor Projects - III,
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Office of Nuclear Reactor Regulation

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1. Amendment No.109 to NPF-6
2. Safety Evaluation

cc w/enclosures:
See next page

Entergy Operations, Inc.

Arkansas Nuclear One, Unit 2

cc:

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Technical Support and Assessment
Arkansas Nuclear One
Route 3 Box 137G
Russellville, Arkansas 72801

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Route 3, Box 137G
Russellville, Arkansas 72801

Honorable Joe W. Phillips
County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801

Ms. Greta Dicus, Director
Division of Environmental Health
Protection
Arkansas Department of Health
4815 West Markam Street
Little Rock, Arkansas 72201



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

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

ARKANSAS NUCLEAR ONE, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 109
License No. NPF-6

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated July 6, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;
 - D. The issuance of this license 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.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-6 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 109, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay

Theodore R. Quay, Acting Director
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 17, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 109

FACILITY OPERATING LICENSE NO. NPF-6

DOCKET NO. 50-368

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REMOVE PAGES

3/4 4-3
3/4 4-4*

INSERT PAGES

3/4 4-3
3/4 4-4*

* overleaf page

REACTOR COOLANT SYSTEM

SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 PSIA $\pm 1\%^\#$.

APPLICABILITY: MODES 4 AND 5.

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

#Equivalent relief capacity during MODE 5 satisfies the requirements of this Specification. This allows both pressurizer code safety valves to be removed for testing and/or maintenance.

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of $2500 \pm 1\%$ *

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.
- b. The provisions of Specification 3.0.4 may be suspended for one valve at a time for up to 18 hours for entry into and during operation in MODE 3 for the purpose of setting the pressurizer code safety valves under ambient (hot) conditions provided a preliminary cold setting was made prior to heatup.

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WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.109 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

INTRODUCTION

By letter dated July 6, 1990, Entergy Operations, Inc. (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit 2 (ANO-2). The proposed amendment would add a note to TS 3.4.2 which would allow both pressurizer code safety valves (PSVs) to be simultaneously removed during Mode 5. This would allow the licensee to conduct testing and/or maintenance provided that overpressure protection is at least equivalent to that of the existing specification.

DISCUSSION

The pressurizer code safety valves provide overpressure protection for the Reactor Coolant System (RCS). Each of the valves has a capacity to prevent RCS pressure from exceeding 110% of design pressure during anticipated operational occurrences. According to the ANO-2 Safety Analysis Report (SAR), during low temperature operation of the RCS, overpressure protection is provided by two Low Temperature Overpressure Protection (LTOP) relief valves, primarily to address inadvertent Safety Injection Actuation System (SIAS) operation.

ANO-2 Technical Specification 3.4.2 requires that one of the two pressurizer code safety valves be operable during Operational Modes 4 and 5 to provide reactor coolant system overpressure protection. To perform maintenance on the PSVs, the existing requirement permits the licensee to conduct maintenance and/or testing on only one PSV at a time. The licensee proposed to modify the specification to allow simultaneous removal of both PSVs during Mode 5, provided that overpressure protection equivalent to one PSV is available. The licensee stated that during Mode 5, the necessary overpressure protection can be maintained since with the PSV removed, the PSV connection nozzle flange opening exceeds the PSV internal orifice area providing greater pressure relief capacity than the PSV itself when it is installed. In addition, overpressure protection of the RCS during Mode 5 is also provided by LTOP system equipment.

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EVALUATION

The licensee is requesting a change to an existing specification to allow simultaneously removal of both PSVs for maintenance and/or testing provided that overpressure protection of the RCS is maintained.

During Mode 5 operation, with the removal of both PSVs, the staff agrees that an equivalent overpressure protection of the RCS is provided by the opening of the PSVs connection nozzle and the pressurizer. Furthermore, as indicated in the ANO-2 Safety Analysis Report (SAR), overpressure protection of the RCS during low temperature operation is also provided by the LTOP system. Hence, the staff concludes that removal of both PSVs during Mode 5, as described by this requested TS change, is acceptable because no new or unanalyzed accident is created by this change and it does not effect the margin of safety at the plant.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendment involves 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 exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 amendment.

CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: October 17, 1990

Principal Contributors:

Linh Tran
Chester Poslusny