

Charles R. Pierce
Regulatory Affairs Director

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35242

Tel 205.992.7872
Fax 205.992.7601



October 11, 2016

Docket Nos.: 50-348
50-364

NL-16-1763

U. S. Nuclear Regulatory Commission ATTN:
Document Control Desk Washington, D. C.
20555-0001

Joseph M. Farley Nuclear Plant – Units 1 and 2
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process

Ladies and Gentlemen:

In accordance with the provisions of 10 CFR 50.90 Southern Nuclear Operating Company (SNC) is submitting a request for an amendment to the Technical Specifications (TS) for Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2.

The proposed amendment would add TS requirements for unavailable barriers by adding Limiting Condition for Operation (LCO) 3.0.9, as described in TSTF-427, Revision 2.

Enclosure 1 provides a description of the basis for proposed change. Enclosure 2 provides the current TS pages marked up to show the proposed change. Enclosure 3 provides revised (clean) TS pages. Enclosure 4 provides the regulatory commitments made in this submittal. Enclosure 5 provides current TS Bases pages marked up to show the proposed change.

SNC requests approval of the proposed license amendments by October 30, 2017. The proposed changes would be implemented within 90 days of issuance of the amendment.

In accordance with 10 CFR 50.91(b)(1), "State Consultation," a copy of this application and its reasoned analysis about no significant hazards considerations is being provided to the designated Alabama official.

If you have any questions, please contact Ken McElroy at 205.992.7369.

U. S. Nuclear Regulatory Commission
NL-16-1763
Page 2

Mr. C. R. Pierce states he is Regulatory Affairs Director of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and, to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

C. R. Pierce

C. R. Pierce
Regulatory Affairs Director

CRP/GKM/GLS

Sworn to and subscribed before me this 11th day of October, 2016.

Laura L. Croft
Notary Public

My commission expires: 10-8-2017

- Enclosures:
1. Basis for Proposed Change
 2. FNP Technical Specification Marked Up Pages
 3. FNP Technical Specification Clean Pages
 4. FNP Regulatory Commitments
 5. FNP Technical Specification Bases Marked Up Pages (for information only)

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Ms. C. A. Gayheart, Vice President – Farley
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. B. J. Adams, Vice President – Engineering
Mr. D. R. Madison, Vice President – Fleet Operations
Ms. B. L. Taylor, Regulatory Affairs Manager – Farley
RType: CFA04.054

U. S. Nuclear Regulatory Commission

Ms. C. Hanley, Regional Administrator
Mr. S. A. Williams, NRR Project Manager – Farley
Mr. P. K. Niebaum, Senior Resident Inspector – Farley

Alabama Department of Public Health

Dr. T. M. Miller, MD, State Health Officer



**Joseph M. Farley Nuclear Plant
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process**

Enclosure 1

Basis for Proposed Change

Enclosure 1 to NL-16-1763
Basis for Proposed Change

Table of Contents

1.0	Description
2.0	Assessment
3.0	Regulatory Analysis
4.0	Environmental Evaluation

1.0 DESCRIPTION

The proposed amendment would modify Farley Nuclear Plant (FNP) Technical Specifications (TS) requirements for unavailable barriers by adding Limiting Condition for Operation (LCO) 3.0.9.

The change is consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specifications (STS) change TSTF-427, "Allowance for Non Technical Specification Barrier Degradation on Supported System OPERABILITY," Revision 2. The availability of this TS improvement was published in the Federal Register on October 3, 2006 (71 FR 58444), as part of the consolidated line item improvement process (CLIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Southern Nuclear Operating Company (SNC) has reviewed the safety evaluation (SE) published on October 3, 2006 (71 FR 58444) as part of the CLIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-427. As described in the subsequent paragraphs, SNC has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2, and justify this amendment for the incorporation of the changes to the FNP Units 1 and 2 TS.

2.2 Optional Changes and Variations

SNC is proposing the following variations from the TS changes described in the TSTF-427, Revision 2, or the applicable parts of the NRC staff's model safety evaluation published October 3, 2006 (71 FR 58444).

FNP Units 1 and 2 TS utilize different numbering than the Standard Technical Specifications on which TSTF-427 was based. Specifically, the numbers for the LCOs do not use the term "LCO" in front of each specific number as is referenced in LCO 3.0.1. This difference is administrative and does not affect the applicability of TSTF-427 to the FNP Units 1 and 2 TS.

On November 27, 2012, the NRC published a Federal Register Notice stating that RG 1.182 has been withdrawn and the subject matter has been incorporated into RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." RG 1.160 endorses Revision 4A of NUMARC 93-01, dated April 2011. TSTF-427 and the proposed Bases, the model application and commitments, the model Safety Evaluation, and the implementation guidance reference Regulatory Guide (RG) 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," which endorses the February 2000 version of NUMARC 93-01, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." References and commitments to RG 1.182 in these documents are assumed to refer to RG 1.160 and Revision 4A of NUMARC 93-01 instead of RG 1.182. References to RG 1.182 in the Technical Specifications Bases and model application have been revised to refer to RG 1.160.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

SNC has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the Federal Register as part of the CLIP. SNC has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to FNP Units 1 and 2 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the notice of availability published in the Federal Register on October 3, 2006 (71 FR 58444) for this TS improvement, plant-specific verifications were performed as follows:

1. SNC commits to the guidance of NUMARC 93-01 Section 11, Revision 4A, which provides guidance and details on the assessment and management of risk during maintenance.
2. SNC will revise procedures to ensure that the risk assessment and management process described in NEI 04-08 is used whenever a barrier is considered unavailable and the requirements of LCO 3.0.9 are to be applied, in accordance with an overall Configuration Risk Management Program (CRMP) to ensure that potentially risk-significant configurations resulting from maintenance and other operational activities are identified and avoided.

4.0 ENVIRONMENTAL EVALUATION

SNC has reviewed the environmental evaluation included in the model safety evaluation published October 3, 2006 (71 FR 58444) as part of the CLIP. SNC has concluded that the staff's findings presented in that evaluation are applicable to FNP and the evaluation is hereby incorporated by reference for this application.

**Joseph M. Farley Nuclear Plant
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process**

Enclosure 2

FNP Technical Specification Marked Up Pages

3.1 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

3.0.8, and 3.0.9.

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, 3.0.7, and ~~3.0.8~~.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 3 within 7 hours;
- b. MODE 4 within 13 hours; and
- c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

(continued)

3.1 LCO APPLICABILITY

- LCO 3.0.8 When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:
- a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or
 - b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

- LCO 3.0.9 When one or more required barriers are unable to perform their related support function(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one train or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one train or subsystem of a multiple train or subsystem supported system provided at least one train or subsystem of the supported system is OPERABLE and the barriers supporting each of these trains or subsystems provide their related support function(s) for different categories of initiating events.

If the required OPERABLE train or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the trains or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

**Joseph M. Farley Nuclear Plant
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process**

Enclosure 3

FNP Technical Specification Clean Pages

3.1 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1	LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, 3.0.7, 3.0.8, and 3.0.9.
LCO 3.0.2	<p>Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.</p> <p>If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required unless otherwise stated.</p>
LCO 3.0.3	<p>When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:</p> <ul style="list-style-type: none">a. MODE 3 within 7 hours;b. MODE 4 within 13 hours; andc. MODE 5 within 37 hours. <p>Exceptions to this Specification are stated in the individual Specifications.</p> <p>Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.</p> <p>LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.</p>
LCO 3.0.4	<p>When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:</p> <ul style="list-style-type: none">a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

(continued)

3.1 LCO APPLICABILITY

- LCO 3.0.8 When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:
- a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or
 - b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

-
- LCO 3.0.9 When one or more required barriers are unable to perform their related support functions(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one train or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one train or subsystem of a multiple train or subsystem supported system provided at least one train or subsystem of the supported system is OPERABLE and the barriers supporting each of these trains or subsystems provide their related support function(s) for different categories of initiating events.

If the required OPERABLE train or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the trains or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

**Joseph M. Farley Nuclear Plant
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process**

Enclosure 4

FNP Regulatory Commitments

REGULATORY COMMITMENTS

The following table identifies those actions committed to by Southern Nuclear Company (SNC) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

Please direct questions regarding these commitments to Ken McElroy at 205.992.7369.

COMMITMENT	DUE DATE/EVENT
SNC commits to the guidance of NUMARC 93-01 Section 11, Revision 4A which provides guidance and details on the assessment and management of risk during maintenance.	Ongoing
SNC will revise procedures to ensure that the risk assessment and management process described in NEI 04-08 is used whenever a barrier is considered unavailable and the requirements of LCO 3.0.9 are to be applied, in accordance with an overall Configuration Risk Management Program (CRMP) to ensure that potentially risk-significant configurations resulting from maintenance and other operational activities are identified and avoided.	Implement with amendment, when barrier(s) are unavailable.

**Joseph M. Farley Nuclear Plant
License Amendment Request - Application for Technical Specification
Change (TSTF-427) to Add LCO 3.0.9 Regarding the Unavailability of
Barriers Using the Consolidated Line Item Improvement Process**

Enclosure 5

FNP Technical Specification Bases Marked Up Pages (for information only)

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.89 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise stated.
------	---

LCO 3.0.1	LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).
-----------	--

LCO 3.0.2	LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:
-----------	---

- a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; and
- b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.

There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the unit that is not further

(continued)

BASES

LCO 3.0.8
(continued)

capable of performing their associated support function and due to the availability of the redundant train of the supported system.

LCO 3.0.8.b applies when one or more snubbers are not capable of providing their associated support function(s) to more than one train or subsystem of a multiple train or subsystem supported system. LCO 3.0.8.b allows 12 hours to restore the snubber(s) before declaring the supported system inoperable. The 12 hour Completion Time is reasonable based on the low probability of a seismic event concurrent with an event that would require operation of the supported system occurring while the snubber(s) are not capable of performing their associated support function.

LCO 3.0.8 requires that risk be assessed and managed. Industry and NRC guidance on the implementation of 10 CFR 50.65(a)(4) (the Maintenance Rule) does not address seismic risk. However, use of LCO 3.0.8 should be considered with respect to other plant maintenance activities, and integrated into the existing Maintenance Rule process to the extent possible so that maintenance on any unaffected train or subsystem is properly controlled, and emergent issues are properly addressed. The risk assessment need not be quantified, but may be a qualitative awareness of the vulnerability of systems and components when one or more snubbers are not able to perform their associated support function.

LCO 3.0.9

LCO 3.0.9 establishes conditions under which systems described in the Technical Specifications are considered to remain OPERABLE when required barriers are not capable of providing their related support function(s).

Barriers are doors, walls, floor plugs, curbs, hatches, installed structures or components, or other devices, not explicitly described in Technical Specifications, that support the performance of the safety function of systems described in the Technical Specifications. This LCO states that the supported system is not considered to be inoperable solely due to required barriers not capable of performing their related support function(s) under the described conditions. LCO 3.0.9 allows 30 days before declaring the supported system(s) inoperable and the LCO(s) associated with the supported system(s) not met. A maximum time is placed on each use of this allowance to ensure that as required barriers are found or are otherwise made unavailable, they are restored. However, the allowable duration may be less than the specified maximum time based on the risk assessment.

(continued)

BASES

LCO 3.0.9 (continued)

If the allowed time expires and the barriers are unable to perform their related support function(s), the supported system's LCO(s) must be declared not met and the Conditions and Required Actions entered in accordance with LCO 3.0.2.

This provision does not apply to barriers which support ventilation systems or to fire barriers. The Technical Specifications for ventilation systems provide specific Conditions for inoperable barriers. Fire barriers are addressed by other regulatory requirements and associated plant programs. This provision does not apply to barriers which are not required to support system OPERABILITY (see NRC Regulatory Issue Summary 2001-09, "Control of Hazard Barriers," dated April 2, 2001).

The provisions of LCO 3.0.9 are justified because of the low risk associated with required barriers not being capable of performing their related support function. This provision is based on consideration of the following initiating event categories:

- Loss of coolant accidents;
- High energy line breaks;
- Feedwater line breaks;
- Internal flooding;
- External flooding;
- Turbine missile ejection; and
- Tornado or high wind.

The risk impact of the barriers which cannot perform their related support function(s) must be addressed pursuant to the risk assessment and management provision of the Maintenance Rule, 10 CFR 50.65 (a)(4), and the associated implementation guidance, RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Regulatory Guide 1.160 endorses the guidance in Section 11 of NUMARC 93-01, Revision 4A, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." This guidance provides for the consideration of dynamic plant configuration issues, emergent conditions, and other aspects pertinent to plant operation with the barriers unable to perform their related support function(s). These considerations may result in risk management and other compensatory actions being required during the period that barriers are unable to perform their related support function(s).

LCO 3.0.9 may be applied to one or more trains or subsystems of a system supported by barriers that cannot provide their related support function(s), provided that risk is assessed and managed (including consideration of the effects on Large Early Release and from external events). If applied concurrently to more than one train or subsystem of a

(continued)

BASES

LCO 3.0.9 (continued)

multiple train or subsystem supported system, the barriers supporting each of these trains or subsystems must provide their related support function(s) for different categories of initiating events. For example, LCO 3.0.9 may be applied for up to 30 days for more than one train of a multiple train supported system if the affected barrier for one train protects against internal flooding and the affected barrier for the other train protects against tornado missiles. In this example, the affected barrier may be the same physical barrier but serve different protection functions for each train.

If during the time that LCO 3.0.9 is being used, the required OPERABLE train or subsystem becomes inoperable, it must be restored to OPERABLE status within 24 hours. Otherwise, the train(s) or subsystem(s) supported by barriers that cannot perform their related support function(s) must be declared inoperable and the associated LCOs declared not met. This 24-hour period provides time to respond to emergent conditions that would otherwise likely lead to entry into LCO 3.0.3 and a rapid plant shutdown, which is not justified given the low probability of an initiating event which would require the barrier(s) not capable of performing their related support function(s). During this 24-hour period, the plant risk associated with the existing conditions is assessed and managed in accordance with 10 CFR 50.65(a)(4).