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February 26, 2014

Docket Nos.: 50-348  
50-364

NL-14-0257

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

Joseph M. Farley Nuclear Plant – Units 1 and 2  
Request for Relaxation of Commission Order Modifying Licenses  
With Regard to Requirements for Mitigation Strategies for  
Beyond-Design-Basis External Events (Order Number EA-12-049)

References:

1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012. ML12056A045.
2. Letter to NRC, Joseph M. Farley Nuclear Plant - Units 1 and 2, Overall Integrated Plan in Response to Commission Order with Regard to Mitigation Strategies for Beyond-Design-Basis External Events (EA-12-049), dated February 27, 2013. ML13059A387.

Ladies and Gentlemen:

This letter transmits a request for relaxation of the requirements contained in NRC Order EA-12-049. On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Southern Nuclear Operating Company (SNC). Reference 1 was immediately effective and directs the Joseph M. Farley Nuclear Plant (FNP) to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. As described in the Overall Integrated Plan for FNP (Reference 2), one assumption of the FNP mitigation strategies is dependent upon the installed low leakage Reactor Coolant Pump (RCP) shutdown seals.

Both units at FNP already have installed low leakage seals that would have supported our FLEX strategies for the plant. However, post-operational testing at FNP and testing of similar seals elsewhere has potentially invalidated that assumption.

An extension of one additional refueling cycle for each unit is requested. This will move the implementation date for Unit 1 to completion of the Fall 2016 refueling outage and the implementation date for Unit 2 to completion of the Spring 2016 refueling outage.

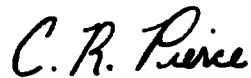
Section IV of NRC Order EA-12-049 (Reference 1) states that licensees proposing to deviate from requirements contained in NRC Order EA-12-049 may request that the Director, Office of Nuclear Reactor Regulation, relax those requirements. Therefore, in accordance with Section IV of NRC Order EA-12-049, SNC is requesting that the Director, Office of Nuclear Reactor Regulation, relax the requirement for completion of full implementation as prescribed in Section IV.A.2 of NRC Order EA-12-049 and as described in the attachment to this letter.

SNC considers that, upon approval by the NRC, the alternative full implementation dates proposed in the attachment will constitute a relaxation to the NRC Order EA-12-049 for FNP Units 1 and 2.

This letter contains no new NRC commitments. If you have any questions, please contact John Giddens at 205.992.7924.

Mr. C. R. Pierce states he is the Regulatory Affairs Director for 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  
Regulatory Affairs Director

CRP/JMG/RCW

Sworn to and subscribed before me this 26 day of February, 2014.

  
Notary Public

My commission expires: 10-8-2017

Enclosure: Joseph M. Farley Nuclear Plant - Units 1 and 2  
Request for Relaxation

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. B. L. Ivey, Vice President – Regulatory Affairs  
Mr. D. R. Madison, Vice President – Fleet Operations  
RType: CVC7000

U. S. Nuclear Regulatory Commission  
Mr. E. Leeds, Director of the Office of Nuclear Reactor Regulations  
Mr. V. M. McCree, Regional Administrator  
Mr. G. E. Miller, NRR Senior Project Manager – Farley  
Mr. P. K. Niebaum, Senior Resident Inspector – Farley  
Ms. J. A. Kratchman, NRR/JLD/PMB  
Mr. E. E. Bowman, NRR/DPR/PGCB

Alabama Department of Public Health  
Dr. D. E. Williamson, State Health Officer

**Joseph M. Farley Nuclear Plant - Units 1 and 2  
Request for Relaxation of Requirement IV.A.2 of the Commission Order with  
Regard to Mitigation Strategies for Beyond-Design-Basis External Events  
(EA-12-049)**

**Enclosure**

**Joseph M. Farley Nuclear Plant - Units 1 and 2  
Request for Relaxation**

**Joseph M. Farley Nuclear Plant - Units 1 and 2**  
**Request for Relaxation**

**1 Relaxation Request**

In accordance with the procedure specified in Section IV of Nuclear Regulatory Commission (NRC) Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (Reference 1), Southern Nuclear Operating Company(SNC) hereby submits a request for schedule relaxation from the Order requirements for completion of full implementation for Joseph M. Farley Plant Units 1 and 2 either no later than two (2) refueling cycles after submittal of the Overall Integrated Plan, as required in Condition C.I.a of the Order, or December 31, 2016, whichever comes first.

**2 Order Requirement from Which Relaxation is Requested**

NRC Order EA-12-049, Section IV.A.2 requires completion of full implementation of the Order requirements either no later than two (2) refueling cycles after submittal of the Overall Integrated Plan, as required by Condition C.I.a, or December 31, 2016, whichever comes first. In accordance with the requirements of the Order, SNC submitted the Overall Integrated Plan for Joseph M. Farley (Reference 2) on February 27, 2013. The Overall Integrated Plan milestone schedule identified the completion dates for full implementation of NRC Order EA-12-049 for Unit 1 as completion of the Spring 2015 refueling outage, and for Unit 2 as completion of the Fall 2014 refueling outage.

NRC Order EA-12-049 requires the development, implementation, and maintenance of guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond design basis external event (BDBEE). As described in the Overall Integrated Plan for FNP, these mitigation strategies are dependent upon low leakage Reactor Coolant Pump (RCP) shutdown seals. These seals will ensure the safety functions of containment integrity (during an extended loss of alternating current power or ELAP), and core cooling (RCS inventory and level) are maintained for beyond design basis external events (BDBEEs).

**3 Justification for Relaxation Request**

The RCP shutdown seals provide additional safety margin during a BDBEE by serving as a passive means of protecting the reactor. The seals reduce the risk to the plant (Core Damage Frequency) by limiting the loss of reactor coolant system (RCS) water inventory during the event.

Due to recent post-operational testing of the RCP shutdown seals at FNP and elsewhere, there is a need to enhance that design. The total implications of the shutdown seal testing results for reactor coolant pumps are currently being assessed. Resolution of these issues will require additional analytical work. Additionally, procedural development and training will also be necessary. These factors also affect SNC's ability to safely plan, and implement activities supporting FLEX.

Based on this timeline, there is uncertainty that the full implementation of the mitigation strategies in accordance with NRC Order EA-12-049 would be completed by the Order requirement dates.

The current required implementation date for Unit 1 is at the end of the Spring 2015 refueling outage and for Unit 2 is at the end of the Fall 2014 refueling outage. An extension of one additional refueling cycle is requested, which would move the implementation dates to the end of the Fall 2016 refueling outage for Unit 1 and the end of the Spring 2016 refueling outage for Unit 2. These revised completion dates are still within the maximum allowed time frame of December 2016. The extensions would provide additional time to resolve industry issues; design, test and qualify the new seals; and, for SNC to safely plan, schedule, and install the new seals at FNP. Additionally, the new seals will provide added safety margin during a BDBEE.

#### **4 Conclusion**

As described above, compliance with the current NRC Order EA-12-049 schedule requirement for full completion of implementation of mitigation strategies would result in hardship or unusual difficulty without a compensating increase in the level of safety. Therefore, in accordance with the provisions of Section IV of the Order, SNC requests relaxation of the requirement described in Section IV.A.2, as explained above.

#### **5 References**

1. NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012.
2. Joseph M. Farley Nuclear Plant – Units 1 and 2 Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," dated February 27, 2013.