



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 7, 2016

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Co., Inc.
P.O. Box 1295, Bin 038
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 – STAFF REVIEW OF
MITIGATION STRATEGIES ASSESSMENT REPORT OF THE IMPACT OF THE
REEVALUATED SEISMIC HAZARD DEVELOPED IN RESPONSE TO THE
MARCH 12, 2012, 50.54(f) LETTER (CAC NOS. MF7743 AND MF7744)

Dear Mr. Pierce:

The purpose of this letter is to provide the U.S. Nuclear Regulatory Commission's (NRC) assessment of the seismic hazard mitigation strategies assessment (MSA), as described in the April 27, 2016, letter (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16118A488), submitted by Southern Nuclear Operating Company, Inc. (the licensee) for Joseph M. Farley Nuclear Plant, Units 1 and 2 (Farley). The mitigation strategies assessment confirms that the licensee has adequately addressed the reevaluated seismic hazard within its mitigating strategies for beyond-design-basis external events.

BACKGROUND

By letter dated March 12, 2012 (ADAMS) Accession No. ML12053A340), the NRC issued a request for information pursuant to Title 10 of the *Code of Federal Regulations (10 CFR)*, Section 50.54(f) (hereafter referred to as the 50.54(f) letter). The 50.54(f) letter was issued as part of implementing lessons-learned from the accident at the Fukushima Dai-ichi nuclear power plant. Enclosure 1 to the 50.54(f) letter requested licensees reevaluate the seismic hazard using present-day methodologies and guidance. Concurrent with the reevaluation of seismic hazards, the NRC issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12054A736). The order requires holders of operating power reactor licenses and construction permits issued under 10 CFR Part 50 to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment and spent fuel pool (SFP) cooling following a beyond-design-basis external event.

By letter dated March 31, 2014 (ADAMS Accession No. ML14092A020), the licensee provided its reevaluated seismic hazard for Farley in response to the 50.54(f) letter.

On December 10, 2015 (ADAMS Accession No. ML16005A621), NEI submitted Revision 2 to NEI 12-06 including guidance for mitigating strategies assessments regarding reevaluated hazard information. The NRC subsequently endorsed NEI 12-06, Revision 2, with exceptions,

clarifications, and additions in Japan Lessons-Learned Division (JLD) interim staff guidance (ISG) JLD-ISG-2012-01, Revision 1, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML15357A163).

MITIGATION STRATEGIES ASSESSMENT

By letter dated October 16, 2015 (ADAMS Accession No. ML15287A092), the NRC staff documented its review of the licensee's reevaluated seismic hazard, also referred to as the mitigating strategies seismic hazard information. The staff confirmed the licensee's conclusion that its reevaluated seismic hazard is bounded by the current design-basis at most frequencies above 1 Hertz (Hz). Minor exceedances were noted below the 2.5 Hz and above the 10 Hz frequency range. However, as stated in an NRC letter dated October 27, 2015, (ADAMS Accession No. ML 15194A015), these exceedances are considered "de minimis" (too minor to merit consideration). In addition, the staff concluded that the Ground Motion Response Spectrum determined by the licensee adequately characterizes the reevaluated seismic hazard for the Farley site.

The licensee stated that the Farley MSA was performed consistent with NEI 12-06, Revision 2. Appendix H of NEI 12-06, Revision 2 describes acceptable methods for demonstrating that the reevaluated seismic hazards is addressed within the Farley mitigating strategies for beyond-design-basis external events. The NRC staff confirmed that the licensee's seismic hazard MSA is consistent with the guidance in Appendix H.4.1 of NEI 12-06, Revision 2, as endorsed, by JLD-ISG-2012-01, Revision 1. Therefore, the methodology used by the licensee is appropriate to perform an assessment of the mitigation strategies that addresses the reevaluated seismic hazard.


The NRC staff has reviewed the seismic hazard MSA for Farley. The NRC staff concludes that sufficient information has been provided to demonstrate that the licensee's plans for the development and implementation of guidance and strategies under Order EA-12-049 appropriately address the reevaluated seismic hazard information stemming from the 50.54(f) letter.

C. Pierce

- 3 -

If you have any questions, please contact me at (301) 415-1617 or via e-mail at Frankie.Vega@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frankie Vega', written in a cursive style.

Frankie Vega, Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

cc: Distribution via Listserv

C. Pierce

- 3 -

If you have any questions, please contact me at (301) 415-1617 or via e-mail at Frankie.Vega@nrc.gov.

Sincerely,

/RA/

Frankie Vega, Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

cc: Distribution via Listserv

DISTRIBUTION:

PUBLIC

JHMB R/F

RidsNrrDorILPL2-1 Resource

RidsNrrPMFarleyResource

RidsNrrLASLent Resource

FVega, NRR

BTitus, NRR

EBowman, NRR

MShams, NRR

RidsAcrcAcnw_MailCTR Resource

ADAMS Accession No. ML16132A482

OFFICE	NRR/JLD/JHMB/PM	NRR/JLD/LA	NRR/JLD/JHMB/BC
NAME	FVega	SLent	MShams
DATE	05/12/2016	05/12/2016	06/04/2016
OFFICE	OGC	NRR/JLD/JHMB/PM	
NAME	BHarris	FVega	
DATE	05/27/2016	06/07/2016	

OFFICIAL RECORD COPY