



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

October 28, 2019

Mr. Ernest J. Kapopoulos, Jr.  
Site Vice President  
H. B. Robinson Steam Electric Plant  
Duke Energy Progress, LLC  
3581 West Entrance Road, RNPA01  
Hartsville, SC 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – RESPONSE TO  
REQUEST FOR EXTENSION OF DUE DATE FOR SEISMIC PROBABILISTIC  
RISK ASSESSMENT SUBMITTAL (EPID NO. L-2019-JLD-0014)

Dear Mr. Kapopoulos:

The purpose of this letter is to provide the U.S. Nuclear Regulatory Commission (NRC) staff's response to the letter dated October 21, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19294A028), submitted by Duke Energy Progress, LLC (Duke, the licensee), related to post-Fukushima seismic hazard reevaluations at H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson). The letter submitted by Duke requests an extension of the October 31, 2019, submittal date of the seismic probabilistic risk assessment (SPRA), associated with the seismic hazard reevaluation for Robinson, to December 12, 2019. This would be an extension from the one previously approved in our letter dated January 10, 2019 (ADAMS Accession No. ML19004A356). According to the licensee, the extension request was made to have additional time to complete the SPRA. The NRC staff has determined that extending the submittal date of the SPRA to December 12, 2019, is acceptable.

#### BACKGROUND

By letter dated March 12, 2012 (ADAMS Accession No. ML12053A340), the NRC issued a request for information under Title 10 of the *Code of Federal Regulations*, Section 50.54(f) (hereafter referred to as the 50.54(f) letter), to all nuclear power reactor licensees and construction permit holders in response to lessons learned from the March 2011 accident at Japan's Fukushima Dai-ichi nuclear power plant. Enclosure 1 of the 50.54(f) letter requested that licensees perform seismic hazard reevaluations using present-day methodologies and guidance, and then assess the impact of the reevaluated hazard on the plant (e.g., through an SPRA). The NRC staff would review the completed responses to these assessments to determine if there is a need for any additional regulatory actions, such as a plant-specific backfit.

By letter dated October 27, 2015 (ADAMS Accession No. ML15194A015), the NRC determined which licensees (1) should perform an SPRA; (2) should perform limited scope evaluations; or (3) had no further actions to perform based on a comparison of the reevaluated seismic hazard and the site's design-basis earthquake. As documented in that letter, Duke is expected to complete an SPRA for Robinson which will also assess high frequency ground motion effects.

Per the October 27, 2015, letter, the Robinson SPRA was expected to be submitted to the NRC by March 31, 2019.

In its letter dated November 29, 2018, the licensee requested that the submittal date for the SPRA be moved to October 31, 2019. In its response letter dated January 10, 2019, the NRC staff accepted the October 31, 2019, submittal date and provided the reasons for accepting this extension. On October 16, 2019, the licensee and the NRC staff held a drop-in meeting to discuss the status of the SPRA and the need for an extension to submit the SPRA report. By letter dated October 21, 2019 (ADAMS Accession No. ML19294A028), the licensee submitted an extension request explaining that additional time is needed to complete the SPRA in accordance with Enclosure 1 of the 50.54(f) letter.

### EVALUATION

In its response letter dated January 10, 2019, the NRC staff stated its evaluation of the licensee's request for extending the SPRA submittal date of March 31, 2019 to October 31, 2019, considered several factors including: (1) the schedule of the Robinson submittal, as it relates to the NRC's overall SPRA submittal schedule (December 2019); (2) the additional defense-in-depth capabilities achieved through 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. ML 12054A735) and Order EA-12-051, "Reliable Spent Fuel Pool Instrumentation" (ADAMS Accession No. ML12054A679); (3) the seismic design margin currently existing in nuclear power plants; and (4) the documented ability of Robinson to cope with earthquakes larger than the design-basis earthquake.

The NRC staff reviewed the information provided in the October 21, 2019, extension request and, based on available information, concluded that the factors in the January 10, 2019, staff response remain valid for the proposed submittal date of December 12, 2019. The additional time (from the October 31, 2019 date to December 12, 2019), will be used to gather information needed to respond to the 50.54(f) letter. The current extension request does not move the SPRA submittal outside the date range allotted to all plants who are to perform an SPRA. Compliance with NRC Orders EA-12-049 and EA-12-051 continues to provide a safety benefit and ability to mitigate beyond-design-basis events at Robinson during the period of extension. Based on available information, the combination of the seismic capacity inherent in the design of nuclear power plants and the Robinson-specific evaluations of the seismic capacity of safe-shutdown equipment and the spent fuel pool (SFP), as documented by the Expedited Seismic Evaluation Process and the SFP seismic integrity evaluations (ADAMS Accession Nos. ML15201A602 and ML16230A535, respectively), provides the ability to cope with an earthquake larger than the design-basis earthquake during the short period requested in the current extension. Because of these reasons, the staff finds that extension date to submit the Robinson SPRA on or before December 12, 2019, is acceptable.

### CONCLUSION

Based on the staff's evaluation, and after consultation with the Director of the NRC's Office of Nuclear Reactor Regulation, the NRC concludes that the licensee's proposal to extend the due date of the submittal of the SPRA related to the 50.54(f) letter request for information for seismic events is acceptable. Accordingly, the required response date for the SPRA submittal is extended until December 12, 2019.

E. Kapopoulos

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If you have any questions, please contact Milton Valentin, Project Manager, at (301) 415-2864 or via e-mail at [Milton.Valentin@nrc.gov](mailto:Milton.Valentin@nrc.gov).

Sincerely,

*/RA/*

Gregory F. Suber, Deputy Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-261

cc: via Listserv

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