

From: Mahoney, Michael
Sent: Monday, June 21, 2021 12:59 PM
To: Dennis Earp (dennis.Earp@duke-energy.com)
Cc: Art Zaremba
Subject: Request for Additional Information - Harris RA-20-0252 - LAR to Remove Extraneous Requirements from OL and TS (L-2021-LLA-0027)
Attachments: RAIs - Harris LAR for Extraneous Requirements (L-2021-LLA-0027).docx

Dennis,

Attached are RAIs for the subject Harris license amendment request RA-20-0252 dated February 24, 2021, to remove extraneous requirements from Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1 (HNP) and the Technical Specifications. The proposed amendment would remove License Condition 2.G, "Reporting to the Commission," which requires the licensee to report any violations of Operating License Section 2.C within 24 hours to the NRC Operations Center via the Emergency Notification System with a written follow-up within 30 days. Additionally, the proposed change would delete HNP TS 3/4.4.10, "Structural Integrity" (and adds new TS Administrative Controls Section 6.8.4.s, "Reactor Coolant Pump Flywheel Inspection Program"), revise Administrative Control TS 6.1.2 to eliminate the annual management directive requirement, and revise TS Table 4.3-2, "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," to remove an overly restrictive requirement that impedes the full application of the Surveillance Frequency Control Program for a specific subset of relays. Lastly, the proposed amendment would also revise HNP TS to remove the Index and place it under licensee control.

Please provide your response to the attached RAIs within 30 days of the date of this electronic correspondence.

Thanks

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From: Mahoney, Michael

Created By: Michael.Mahoney@nrc.gov

Recipients:
"Art Zaremba" <Arthur.Zaremba@duke-energy.com>
Tracking Status: None
"Dennis Earp (dennis.Earp@duke-energy.com)" <dennis.Earp@duke-energy.com>
Tracking Status: None

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Options
Priority: Normal
Return Notification: No
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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO REMOVE EXTRANEOUS OPERATING LICENSE
AND TECHNICAL SPECIFICATION REQUIREMENTS
RENEWED FACILITY OPERATING LICENSE NO. NPF-63
DUKE ENERGY PROGRESS, LLC
SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-400

By letter dated February 24, 2021 (Reference 1), Duke Energy Progress, LLC (the licensee) requested U.S. Nuclear Regulatory Commission (NRC) approval of a license amendment request (LAR) to remove extraneous requirements from Renewed Facility Operating License No. NPF-63 for the Shearon Harris Nuclear Power Plant, Unit 1 (HNP) and the Technical Specifications. The proposed amendment would remove License Condition 2.G, "Reporting to the Commission," which requires the licensee to report any violations of Operating License Section 2.C within 24 hours to the NRC Operations Center via the Emergency Notification System with a written follow-up within 30 days. Additionally, the proposed change would delete HNP TS 3/4.4.10, "Structural Integrity" (and adds new TS Administrative Controls Section 6.8.4.s, "Reactor Coolant Pump Flywheel Inspection Program"), revise Administrative Control TS 6.1.2 to eliminate the annual management directive requirement, and revise TS Table 4.3-2, "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," to remove an overly restrictive requirement that impedes the full application of the Surveillance Frequency Control Program for a specific subset of relays. Lastly, the proposed amendment would also revise HNP TS to remove the Index and place it under licensee control.

During the Nuclear Regulatory Commission (NRC) staff's review of the license amendment request, the NRC staff determined that additional information was needed to complete the review.

Request for Additional Information (RAI) - 1

Proposed new TS Section 6.8.4.s (Refer to Enclosure of Reference 1) states:

Each reactor coolant pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at 20 year intervals.

Based on its review of relevant information in Chapters 1.8 and 5.4.1 of the HNP UFSAR (Reference 2), the NRC staff has determined that the RCP flywheel management program is designed to be a program (with noted exceptions defined in UFSAR Section 1.8 or 5.4.1) that

conforms to the guidance and regulatory positions in NRC Regulatory Guide (RG) 1.14 (Reference 3). The NRC staff has observed that the program also includes non-condition monitoring activities and evaluations beyond the RCP flywheel inspections defined in the newly proposed TS section, including but not necessarily limited to RCP flywheel design overspeed testing (refer to UFSAR Section 5.4.1.1) and either a postulated flaw fracture toughness or fatigue flaw growth analysis for the RCP flywheel discs/rotors (refer to UFSAR Section 5.4.1.3.6). The fracture toughness/fatigue flaw growth analysis is important because the licensee credits it for potential flywheel missile prevention or mitigation objectives. The periodic overspeed testing is important because it is the understanding of the NRC staff that the overspeed tests are used to confirm that the RCP flywheels will still achieve a proper coast-down condition if an overspeed event (defined as greater than 125% of the rotational design speed) were to occur in the RCP rotor.

1. Please confirm that overspeed testing and flaw evaluations are still key programmatic elements of the RCP flywheel management program that is implemented at HNP with the proposed TS change.

References

1. Duke Energy, "License Amendment Request to Remove Extraneous Content and Requirements from the Operating License and Technical Specifications," Serial RA-20-0252, dated February 24, 2021, (ADAMS Accession No. ML21055A819).
2. Shearon Harris Nuclear Plant, Unit 1, Amendment 63 to Final Safety Analysis Report. Chapter 1, "Introduction and General Description of Plant," May 15, 2020 (ADAMS Accession No. ML20147A018 for UFSAR Chapter 1 and ML20147A022 for UFSAR Chapter 5).
3. NRC Regulatory Guide 1.14, Revision 1, Reactor Coolant Pump Flywheel Integrity," August 1976 (ADAMS Accession No. ML003739936).