



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

August 15, 2022

Mr. Fadi Diya
Senior Vice President and
Chief Nuclear Officer
Ameren Missouri
Callaway Energy Center
8315 County Road 459
Steedman, MO 65077

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 - WITHDRAWAL OF REQUESTED
LICENSING ACTION RE: LICENSE AMENDMENT REQUEST FOR
TECHNICAL SPECIFICATION CHANGE AND EXEMPTION REQUEST
REGARDING TRANSITION TO ALLOW USE OF FRAMATOME GAIA FUEL,
SUBMITTED TO NRC FOR ACCEPTANCE REVIEW (EPID L-2022-LLA-0083
AND EPID L-2022-LLE-0019)

Dear Mr. Diya:

By letter dated June 2, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22153A174), Union Electric Company, dba Ameren Missouri (the licensee) submitted a license amendment request and a regulatory exemption to Renewed Facility Operating License No. NPF-30 for Callaway Plant, Unit No. 1 (Callaway). The proposed amendment would revise the Technical Specifications (TSs) to allow the use of Framatome GAIA fuel at Callaway. Additionally, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.12, "Specific exemptions," the licensee requested an exemption from the provisions of 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," and Appendix K to 10 CFR Part 50, "ECCS Evaluation Models," to allow the use of M5® fuel rod cladding in future core reload applications.

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this LAR and exemption request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with 10 CFR 50.90, an application for an amendment to a license (including the TSs), and an exemption must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

In a letter dated July 19, 2022 (ML22199A177), the NRC requested supplemental information related to this application, to be provided prior to August 5, 2022. Subsequently, by letter dated August 4, 2022 (ML22216A202), the licensee requested to withdraw the application from NRC review. The NRC acknowledges the licensee's request to withdraw the application. NRC staff activities on the review have ceased and the associated EPID numbers (L-2022-LLA-0083 and L-2022-LLE-0019) have been closed.

The NRC staff notes that its review to date has identified that your application did not provide the following technical information in sufficient detail to enable the staff to complete its detailed review. Therefore, should you decide to re-submit the request, it must include the following information:

- Enclosure 1 of the licensee's letter identifies that the results of the control rod ejection event analysis will be available for review by the NRC staff but does not identify a timeline for availability. More detailed information concerning the schedule for providing this analysis appears necessary to support a determination of the NRC staff's review timeline.
- In general, the limitations and conditions, established by NRC staff, for each technical report associated with GAIA fuel, and requested by the licensee to be added to its licensing basis, are not dispositioned or addressed.
- The licensee proposes a unique TS structure, which includes parallel sets of TS requirements for TSs 3.2.1, "Heat Flux Hot Channel Factor ($F_Q(Z)$) (F_Q Methodology)"; 3.2.2, "Nuclear Enthalpy Rise Hot Channel Factor"; and 3.2.3, "Axial Flux Difference (AFD) (Relaxed Axial Offset Control (RAOC) Methodology," with one set of requirements based on Westinghouse fuel and methods, and the other based on those of Framatome. While the licensee would allow both fuel types to be present in limiting locations for several cycles, only one set of these TS requirements would apply for each cycle. Framatome has performed confirmatory analysis for its fuel, and the two sets of parallel TS operating limits would be similar. However, differences remain, such as with respect to TS required actions and surveillances. The basis for selecting one or the other of the parallel sets of TS requirements as governing for a given cycle is not clear and does not necessarily appear to be associated with which type of fuel has the limiting operating margin. The application does not appear to include sufficient information justifying why the TS requirements for the fuel type considered to "govern Core Operating Limits Report development" adequately protect the other fuel type, which could be more limiting with respect to operating margin.
- Enclosure 1, attachment 12 (ANP-3969P) identifies that evaluation of the inadvertent loading and operation of a fuel assembly in an improper position event will be provided by the licensee. However, the NRC staff could not locate the analysis or disposition of this event in the licensee's submittal. This information should be provided, and the licensee should clarify the expected schedule to support a determination of the NRC staff's review timeline.

The purpose of this letter is to advise that the above-cited application is being treated as withdrawn. Notice of Consideration of Issuance of the proposed amendment had not been published in the *Federal Register*.

If you have any questions, please contact me at (301) 415-8371 or via e-mail at Mahesh.Chawla@nrc.gov .

Sincerely,

/RA/

Mahesh Chawla, Project Manager
Plant Licensing Branch 4,
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-483

cc: Listserv

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