

## PUBLIC NOTICE

### NRC STAFF PROPOSES TO AMEND FACILITY OPERATING LICENSE FOR SEQUOYAH NUCLEAR PLANT, UNIT 1

The U.S. Nuclear Regulatory Commission (NRC or the Commission) staff has received an application dated November 16, 2019 (available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML19320C333), from the Tennessee Valley Authority (TVA or the licensee), for an exigent amendment to the facility operating license for Sequoyah Nuclear Plant (Sequoyah), Unit 1, located in Hamilton County, Tennessee.

The proposed one-time amendment would amend the Sequoyah, Unit 1, Technical Specifications to allow the Sequoyah, Unit 1, core to contain 52 full length control rods (CRs) with no CR in core location H-08 during Operating Cycle 24. This would be in lieu of the current technical specification requirement of 53 full length CRs. This change would only be applicable for Sequoyah, Unit 1 Operating Cycle 24.

The licensee requested that the proposed amendment be processed on an exigent basis in accordance with the provisions in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.91(a)(6). Under 10 CFR 50.91(a)(6)(i), where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a *Federal Register* notice allowing 30 days for prior public comment, and it also determines that the amendment involves no significant hazards consideration, the Commission will either (A) issue a *Federal Register* notice providing notice of an opportunity for hearing and allowing at least 2 weeks from the date of the notice for prior public comment; or (B) use local media to provide reasonable notice to the public in the area surrounding a licensee's facility of the licensee's amendment and of its proposed determination that no significant hazards consideration is involved, consulting with the licensee on the proposed media release and on the geographical area of its coverage. Due to the timing of the

amendment request, the NRC staff is providing this notice in local media pursuant to 10 CFR 50.91(a)(6)(i)(B) and has consulted with the licensee and the NRC regional office on the proposed media release.

TVA's claim of exigent circumstances is based on the following considerations.

On March 11, 2015, the Sequoyah, Unit 1, reactor tripped from 99 percent rated thermal power due to a dropped control rod in core location H-08. The root cause was determined to be the lack of suitable inspection guidance and acceptance criteria for control rod drive mechanism (CRDM) vertical electrical panel connections. This was addressed by a maintenance procedure revision and periodic preventive maintenance checks on CRDM vertical electrical panel connections. There were no additional issues observed with the H-08 control rod for the next two cycles of operation.

On August 27, 2019, Sequoyah, Unit 1 tripped from 100 percent rated thermal power due to CR H-08 dropping into the core. The licensee identified the probable cause to be a deficiency in the control rod drive shaft or CRDM housing that was affecting the CR at the withdrawn or near fully withdrawn travel height.

During the Unit 1, Refueling Outage 23, which began on October 12, 2019, inspections and activities of the material condition of the H-08 control rod drive shaft, CRDM housing, stationary gripper latch mechanism, and thermal sleeve showed the direct cause of the event to be worn stationary gripper latch mechanisms that are unable to hold the control rod reliably in the fully withdrawn or near fully withdrawn position. This was an unexpected condition that had not been identified previously by the original equipment manufacturer or in the industry and was not consistent with what was previously seen in the 2015 event. The license amendment request addresses removal of CR H-08 from Sequoyah, Unit 1, for Operating Cycle 24.

Based on this information, the NRC staff finds that exigent circumstances exist in that the licensee and the NRC must act quickly and that time does not permit the NRC staff to publish a *Federal Register* notice allowing 30 days for prior public comment.

As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration using the standards in 10 CFR 50.92. The NRC staff has (preliminarily) evaluated this proposed change with regard to the determination of whether or not a significant hazards consideration is involved.

Operation of Sequoyah, Unit 1, Cycle 24 with the H-08 control rod removed will not involve a significant increase in the probability or consequences of an accident previously evaluated. Shutdown margin is reduced by the absence of the H-08 control rod but remains bounded by the limits specified by the Core Operating Limits Report. Because the impacts on the cycle-specific nuclear design parameters are bounded by the conservative input values used in the Updated Final Safety Analysis Report (UFSAR) accident analyses, the current accident analyses remain bounding. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Operation of Sequoyah, Unit 1, Cycle 24 with the H-08 control rod removed will not create the possibility of a new or different kind of accident from any accident previously evaluated. The safety evaluations performed for U1C24 with the H-08 control rod removed validate that the impacts to the nuclear design parameters are within the bounds of those already assumed in the UFSAR Chapter 15 accident analyses. The current accident analyses remain bounding. Additionally, by installing a flow restrictor in the H-08 upper internals control rod guide tube, the hydraulic characteristics of the reactor vessel upper internals are unchanged, and all plant equipment will continue to meet applicable design and safety requirements. Therefore, the proposed change does not create the possibility of a new or different kind of accident.

Operation of Sequoyah, Unit 1, Cycle 24 with the H-08 control rod removed will not involve a significant reduction in a margin of safety. The margin of safety is established by setting safety limits and operating within those limits. The proposed change does not alter any UFSAR design basis or safety limit and does not change any setpoint at which automatic actuations are initiated. The proposed change has been evaluated for effects on available shutdown margin, boron worth, trip reactivity as a function of time, and moderator temperature coefficient. The results of these evaluations show that the proposed change does not exceed or alter a design basis or safety limit. Therefore, the proposed change does not significantly reduce a margin of safety.

Following an initial review of this application, the requested amendment has been evaluated against the standards in 10 CFR 50.92 and the NRC staff has made a proposed (preliminary) determination that the requested amendment involves no significant hazards consideration. The changes do not significantly increase the probability or consequences of any accident previously considered, nor create the possibility of an accident of a different kind, nor significantly decrease any margin of safety.

If the proposed determination that the requested license amendment involves no significant hazards consideration becomes final, the NRC staff will issue the amendment without first offering an opportunity for a public hearing. An opportunity for a hearing will be published in the *Federal Register* at a later date and any hearing request will not delay the effective date of the amendment.

If the NRC staff decides in its final determination that the amendment does involve a significant hazards consideration, a notice of opportunity for a prior hearing will be published in the *Federal Register* and, if a hearing is granted, it will be held before the amendment is issued.

Comments on the proposed determination of no significant hazards consideration may be (1) telephoned to Undine Shoop, Chief, Licensing Projects Branch II-2, by toll-free telephone

number 1-800-368-5642 or by facsimile to 301-415-2102, (2) e-mailed to [Undine.Shoop@nrc.gov](mailto:Undine.Shoop@nrc.gov), or (3) submitted in writing to the Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555 0001, ATTN: Program Management, Announcements and Editing Staff. All comments received by 4:00 p.m. Eastern Standard Time on November 21, 2019, will be considered in reaching a final determination. A copy of the application may be examined electronically through ADAMS in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html> by using Accession No. ML19320C333 and at the Commission's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209, or 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).