



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

January 27, 2025

Mr. Brian McDermott, Director  
Licensing and Planning  
New Nuclear Program  
Tennessee Valley Authority  
1101 Market Street  
LP 1G-C  
Chattanooga, TN 37402

SUBJECT: PREAPPLICATION READINESS ASSESSMENT SUMMARY REPORT ON THE  
TENNESSEE VALLEY AUTHORITY DRAFT PRELIMINARY SAFETY  
ANALYSIS REPORT, CONSTRUCTION PERMIT APPLICATION, CLINCH  
RIVER NUCLEAR SITE

Dear Mr. McDermott:

On October 8, 2024, members of the staff of the U.S. Nuclear Regulatory Commission (NRC) completed a preapplication readiness assessment (hereinafter "readiness assessment") of the draft preliminary safety analysis report (PSAR)<sup>1</sup> and supporting documents that Tennessee Valley Authority (TVA) intends to submit as part of the Clinch River Nuclear (CRN) Site construction permit (CP) application. The staff conducted the readiness assessment by virtual means using an electronic portal (electronic reading room - eRR) shared by TVA in accordance with the Office of Nuclear Reactor Regulation's office instruction LIC-116, "Preapplication Readiness Assessment," (ML20104B698). The readiness assessment plan used for the CRN Site CP application can be found in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML23285A224. The Office of Nuclear Material Safety and Safeguards (NMSS) conducted a parallel readiness assessment effort on TVA's draft environmental report and issued a separate readiness assessment report (ML24218A168).

The readiness assessment is not part of the NRC's official acceptance review process. The staff performed the readiness assessment to understand the level of detail of the draft CRN Site PSAR and to identify any major issues or information gaps between the draft application and the technical content required to be included in the final application submitted to the NRC. Therefore, the observations from the readiness assessment do not predetermine whether the application will be docketed.

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<sup>1</sup>Chapters 1 and 2 and the appendices to Chapter 3 were not included by TVA for this readiness review.

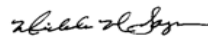
During the readiness assessment, the NRC staff provided their initial assessments of each chapter. At the completion of the assessment, these observations were updated, as appropriate, to reflect any new information made available in the eRR and have been tabulated by PSAR section in Enclosure 1. Most of the staff observations identify information that should be included, augmented and/or information that could be clarified in the PSAR that could improve the efficiency of the staff's safety review. The staff, however, has issues that could be focus areas for the CP application acceptance and/or safety review. The staff would encourage continued engagement on these topics until the CP application submittal. These topics include:<sup>2</sup>:

- Missing evaluation of a substantial core melt accident for both GDC 19 and the Chapter 15 radiological accident analysis
- Insufficient demonstration of diverse means of reactivity control

Please consider the observations from the readiness assessment while finalizing your application.

If you have any questions regarding this matter, please contact Mr. Allen Fetter, Senior Project Manager, at (301) 415-8556 or by email at [allen.fetter@nrc.gov](mailto:allen.fetter@nrc.gov).

Sincerely,



Signed by Sampson, Michele  
on 01/27/25

Michele Sampson, Director  
Division of New and Renewed Licenses  
Office of Nuclear Reactor Regulation

Docket No.: 99902056

Enclosure:  
Tabulated Final Readiness  
Assessment Observations

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<sup>2</sup> The full text associated with these observations are included in Enclosure 1.

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