



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

May 1, 2020

Mr. James Barstow
Vice President, Nuclear Regulatory
Affairs and Support Services
Tennessee Valley Authority
1101 Market Street, LP 4A-C
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3; SEQUOYAH
NUCLEAR PLANT, UNITS 1 AND 2; AND WATTS BAR NUCLEAR PLANT,
UNITS 1 AND 2 – CLOSEOUT OF BULLETIN 2012-01, "DESIGN
VULNERABILITY IN ELECTRIC POWER SYSTEM"

Dear Mr. Barstow:

The purpose of this letter is to inform you that the U.S. Nuclear Regulatory Commission (NRC) staff has verified that Browns Ferry Nuclear Plant (Browns Ferry), Units 1, 2, and 3; Sequoyah Nuclear Plant (Sequoyah), Units 1 and 2; and Watts Bar Nuclear Plant (Watts Bar), Units 1 and 2, have provided the necessary information requested in Bulletin 2012-01, "Design Vulnerability in Electric Power System," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12074A115) to close out the open phase condition (OPC) issue.

On July 27, 2012, the NRC issued Bulletin 2012-01 and requested information about each facility's electric power system designs. Specifically, the NRC requested licensees to provide information to address:

- the protection scheme for Engineered Safety Features buses (Class 1E for current operating plants or non-Class 1E for passive plants) is designed to detect and automatically respond to a single-phase open circuit condition or high impedance ground fault condition on offsite power circuits or another power source; and
- the operating configuration of Engineered Safety Features buses (Class 1E for current operating plants or non-Class 1E for passive plants) at power (i.e., normal operating condition).

By letter dated October 25, 2012 (ADAMS Accession No. ML12312A167), Tennessee Valley Authority (TVA) responded to Bulletin 12-01 for Browns Ferry, Units 1, 2, and 3; Sequoyah, Units 1, and 2; and Watts Bar, Units 1, and 2.

To address the OPC issue at Browns Ferry, Sequoyah, and Watts Bar, the licensee submitted one set of combined license amendment requests for changes to the electric power systems at the three nuclear plants.

Based on the licensee's actions documented in the references below, the NRC staff concludes that TVA has adequately addressed the OPC issue discussed in Bulletin 2012-01 for Browns Ferry, Units 1, 2, and 3; Sequoyah, Units 1 and 2; and Watts Bar, Units 1 and 2.

Specifically, the NRC staff determined that the proposed detection and protection schemes for the 4160-volt emergency buses at Browns Ferry, Units 1, 2, and 3; Sequoyah, Units 1 and 2; and Watts Bar, Units 1 and 2 provide reasonable assurance that the safety-related equipment will be adequately protected from the consequences of OPCs; therefore, no further information or actions under the NRC Bulletin 2012-01 are needed.

The following references pertain to the OPC issue for these three nuclear plants:

- Application dated November 17, 2017 (ADAMS Accession No. ML17324A349), as supplemented by letters dated June 18 and November 19, 2018; and January 25, 2019 (ADAMS Accession Nos. ML18169A404, ML18324A609, and ML19025A210, respectively) for changes to the Technical Specifications for Browns Ferry, Units 1, 2, and 3; Sequoyah, Units 1 and 2; and Watts Bar, Units 1 and 2.
- NRC letter dated August 27, 2019 (ADAMS Accession No. ML18277A110), regarding:
 - Amendment Nos. 309, 332, and 292 to Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for the Browns Ferry, Units 1, 2, and 3, respectively;
 - Amendment Nos. 345 and 339 to Renewed Facility Operating License Nos. DPR-77 and DPR-79 for Sequoyah, Units 1 and 2, respectively; and
 - Amendment Nos. 128 and 31 to Facility Operating License Nos. NPF-90 and NPF-96 for the Watts Bar, Units 1 and 2, respectively.

If you have any questions, please contact me by phone at (301) 415-6459 or by email at michael.wentzel@nrc.gov.

Sincerely,

Michael J. Wentzel, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, 50-296,
50-327, 50-328, 50-390, and 50-391

cc: Listserv

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3; SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2; AND WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2 – CLOSEOUT OF BULLETIN 2012-01, “DESIGN VULNERABILITY IN ELECTRIC POWER SYSTEM DATED MAY 1, 2020

DISTRIBUTION:

PUBLIC
 PM File Copy
 RidsNrrDorlLpl2-2
 RidsNrrPMBrownsFerry
 RidsNrrPMSequoyah
 RidsNrrPMWattsBar
 RidsNrrLABAbeywickrama
 RidsACRS_MailCTR
 RidsRgn2MailCenter
 AFoli, NRR
 OLopez-Santiago, OEDO
 MMcCoppin, OEDO

ADAMS Accession No.: ML20104A192

***by e-mail**

OFFICE	NRR/DORL/LPLII-2/PM	NRR/DORL/LPLII-2/LA*	NRR/DEX/EEOB/BC*
NAME	MWentzel	BAbeywickrama	BTitus
DATE	04/28/2020	04/24/2020	04/09/2020
OFFICE	NRR/DRO/IOEB/BC*	NRR/DORL/LPLII-2/BC*	NRR/DORL/LPLII-2/PM*
NAME	LRegner	UShoop	MWentzel
DATE	04/13/2020	04/30/2020	05/01/2020

OFFICIAL RECORD COPY