



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 28, 2016

EA-16-009

Mr. Joseph W. Shea
Vice President, Nuclear Licensing
Tennessee Valley Authority
1101 Market Street, LP 3D-C
Chattanooga, TN 37402-2801

**SUBJECT: BROWNS FERRY NUCLEAR PLANT - INSPECTION REPORT
05000260/2016014; INVESTIGATION REPORT NO. 2-2015-008; AND NOTICE
OF VIOLATION**

Dear Mr. Shea:

This letter refers to the apparent violations that were identified as a result of an investigation completed on January 8, 2016, by the Nuclear Regulatory Commission's (NRC) Office of Investigations (OI) concerning activities at the Tennessee Valley Authority's (TVA) Browns Ferry Nuclear Plant (BFN). The purpose of the investigation was to determine whether a former Operations Shift Manager (SM) deliberately failed to follow a procedure during the manipulation of an electrical switch, and subsequently deliberately failed to provide complete and accurate information to BFN during its investigation of the incident. The details of the investigation are documented in NRC Inspection Report 05000260/2016012, issued on June 23, 2016.

In our inspection report, we provided you with the opportunity to address the apparent violations identified in the report by attending a predecisional enforcement conference, or by providing a written response before we made our final enforcement decision. In a letter dated August 8, 2016, you provided a written response to the two apparent violations. Your response acknowledged the two apparent violations, provided the causes of the violations, and described corrective actions taken to preclude recurrence.

Based on the information developed during the investigation, and the information that you provided in your response dated August 8, 2016, the NRC has determined that two violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice) (Enclosure 1) and the circumstances surrounding them are described in detail in NRC Inspection Report 05000260/2016012. These violations are being cited in the Notice because they were willful and therefore do not meet the Noncited Violation requirements of Enforcement Policy Section 2.3.2.

The first violation involves an incident that occurred on December 21, 2014, when BFN operators were performing a routine electrical switch verification, and determined that the local operating switch for the 2B 4Kilovolt (KV) shutdown board normal feeder (43 switch) was incorrectly flagged.

An Operations Shift Manager (SM), in an attempt to rectify the condition, personally manipulated the 2A 480V shutdown board feeder breaker switch. This resulted in a loss of power to the 2A 480V shutdown board electrical bus, and caused a plant transient including the de-energization of an electric board, loss of the 2A reactor water cleanup pump, 2A spent fuel pool cooling pump, 2A steam jet air ejector, and hydrogen water control. The deliberate actions of the SM caused TVA to be in violation of procedure OPDP-1, Conduct of Operations, section 4.2.O, which states that the SROs in an oversight position shall not manipulate plant equipment. This procedure is required by BFN Technical Specification 5.4.1.

The second violation involves the requirements of 10 CFR § 50.9. Based on the evidence developed during the investigation, the NRC has determined that subsequent to the transient and during TVA's review of the incident, the SM deliberately provided information to TVA that was incomplete and inaccurate. TVA maintained incomplete and/or inaccurate information on the cause of the transient in the operating logs and corrective action program. Shift logs are material to the NRC, as the logs are used to provide information in the determination of chronologies, root and contributing causes, and corrective actions for post-transient safety reviews and investigation by TVA and by the NRC.

In determining the significance of the two violations, the NRC recognizes that no actual consequence occurred to the facility or the public. The potential consequences were low, based on the defense-in-depth provided by available redundant safety-related equipment, and the operations' staff prompt recognition and response to the de-energized shutdown board. Additionally, based on the available information, the NRC has concluded that the poor judgement of the SM is not reflective of a larger concern with procedural non-compliance involving Operations staff. The NRC also notes that upon returning to his duties the following day, the SM promptly came forward to TVA management to fully acknowledge his involvement in the incident, accept responsibility for the seriousness of his actions, and clarified the incomplete and inaccurate information. TVA's post transient review and investigation of the incident also appeared to be very prompt and thorough. In light of the above, the NRC has concluded that the two violations are appropriately characterized at Severity Level IV.

The NRC has concluded that information regarding (1) the reason for the violations, (2) the corrective actions that have been taken and the results achieved, and (3) the date when full compliance will be achieved is already addressed on the docket in your letter dated August 8, 2016. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

For administrative purposes this letter is issued as Inspection Report 05000260/2016014. Apparent Violation (AV) 05000260/2016012-01, and AV 05000260/2016012-02 have been re-designated as Violation (VIO) 05000260/2016012-01, Failure to Follow Conduct of Operation Procedure and VIO 05000260/2016012-02, Failure to Maintain Complete and Accurate Shift Logs.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, and its enclosure will be made available electronically for public inspection in the NRC Public Document Room and in the NRC's ADAMS, accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions regarding this matter, please contact Alan Blamey of my staff at 404-997-4415.

Sincerely,

/RA/

Joel T. Munday, Director
Division of Reactor Projects

Docket No.: 50-260
License No.: DPR-52

Enclosure: Notice of Violation

cc: Distribution via ListServ

If you have any questions regarding this matter, please contact Alan Blamey of my staff at 404-997-4415.

Sincerely,

/RA/

Joel T. Munday, Director
Division of Reactor Projects

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License No.: DPR-52

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*See previous Concurrence

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NOTICE OF VIOLATION

Tennessee Valley Authority
Browns Ferry Nuclear Plant

Docket No. 50-260
License No. DPR-52
EA-16-009

During an NRC investigation completed on January 8, 2016, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are described below:

- A. Technical Specification 5.4.1 requires written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. RG 1.33 App A.1.b, Authorities and Responsibilities for Safe Operation and A.1.c, Equipment Control, are implemented as part of licensee procedure OPDP-1, Conduct of Operations. OPDP-1, section 4.2.O states, "The SROs in an oversight position (SM and US) shall not manipulate plant equipment."

Contrary to the above, on December 21, 2014, while performing the licensed duties of Shift Manager, a Senior Reactor Operator (SRO) manipulated the 2A 480V shutdown board feeder breaker switch inducing a loss of power to the bus and plant transient.

This is a Severity Level IV violation (NRC Enforcement Policy - Supplement 6.1.d).

- B. 10 CFR 50.9, "Completeness and Accuracy of Information," states, in part, information required by the Commission's regulations, orders, or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

Contrary to the above, on December 21, 2014, TVA failed to maintain information required by the Commission's regulations that was complete and accurate in all material respects. Specifically, following an equipment manipulation, plant transient and subsequent realization of an operator error, TVA maintained incomplete and/or inaccurate information on the cause of the transient in the operating logs and corrective action program. Shift logs are material to the NRC, as the logs are used to provide information in the determination of chronologies, root and contributing causes, and corrective actions for post-transient safety reviews and investigation by TVA and by the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy - Supplement 6.1.d).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance will be achieved, is already adequately addressed on the docket in your letter dated August 8, 2016. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA 16-009", and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

Enclosure

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). The NRC also includes significant enforcement actions on its Web site at [\(http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/\)](http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/).

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 28th day of October 2016.