UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

June 23, 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 05000260/2016012; INVESTIGATION REPORT NO. 2-2015-008; AND APPARENT VIOLATIONS

Dear Mr. Shea:

This refers to the 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 plant procedures when he manipulated an electrical switch, and deliberately failed to provide complete and accurate information to BFN during its investigation into the incident. A Factual Summary of the OI investigation is provided as Enclosure 1.

Based on the results of the investigation, the NRC identified apparent violations of procedures required by BFN Technical Specification 5.4.1 and 10 CFR § 50.9, which are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html.

The OI investigation shows that on December 21, 2014, 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 Fuel Pool Cooling Pump, 2A SJAE, and Hydrogen Water Control.

The actions of the SM caused TVA to be in apparent 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.

Second, the NRC identified an apparent violation 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. The apparent deliberate violations are provided in Enclosure 2.

The circumstances surrounding these apparent violations, your corrective actions, the significance of the issues, and the need for lasting and effective corrective action were previously discussed between members of your staff and the NRC. The NRC understands the following actions have been taken: 1) the operator responsible has turned in his resignation and TVA has terminated his license with the NRC; 2) you have documented briefings with SROs to reinforce the requirements set forth in OPDP-1 section 4.2.O; 3) Operations management discussed with Shift Managers the importance of adhering to standards; and 4) the Plant Manager communicated with all SROs to reaffirm the commitment to the expectations in OPDP-1, Conduct of Operations. As a result, it may not be necessary to conduct a pre-decisional enforcement conference in order to enable the NRC to make an enforcement decision. In addition, because you identified the apparent violations, and based on our understanding of your corrective actions, a civil penalty may not be warranted in accordance with Section 2.3.4 of the Enforcement Policy. The final decision will be based on you confirming on the license docket that the corrective actions previously described to the NRC staff have been or are being taken.

Before the NRC makes its enforcement decision, we are providing you an opportunity to (1) respond in writing to the AVs, summarized in this letter as Enclosure 2, within 45 days of the date of this letter, or (2) request a Pre-decisional Enforcement Conference (PEC), or (3) request Alternative Dispute Resolution as discussed below. If a PEC is held, the NRC will issue a press release to announce the time and date of the conference; however, the PEC will be closed to public observation since it is associated with an OI report, the results of which have not been publicly released. If you decide to participate in a PEC, or pursue ADR, please contact Alan Blamey at 404-997-4415 within 10 days of the date of this letter. A PEC should be held within 30 days and an ADR session within 45 days of the date of this letter.

If you choose to provide a written response, it should be clearly marked as a "Response to Apparent Violations in NRC Inspection Report 05000260/2016012 and Investigation Report No. 2-2015-008, EA-16-009" and should include (1) the reason for the AVs or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. Additionally, your response should be sent to the NRC's Document Control Center, with a copy mailed to Mark Franke, Director of Reactor Projects, Region II, 245 Peachtree Center Avenue NE, Atlanta, GA 30303, within 30 days of the date of this letter. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a PEC.
If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a PEC does

not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned.

In lieu of a PEC, you may request Alternative Dispute Resolution (ADR) with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts using a third party neutral. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral (the "mediator") works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC's program can be obtained at http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," after completion of enforcement related activities, a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from 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. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

For administrative purposes this letter is issued as Inspection Report 05000260/2016012 and the apparent violations are designated as AV 05000260/2016012-01, Failure to Follow Conduct of Operation Procedure and AV 05000260/2016012-02, Failure to Maintain Complete and Accurate Shift Logs.

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

Sincerely,

/RA/

Mark E. Franke, Acting Director
Division of Reactor Projects

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

Enclosures:
1. Factual Summary
2. Apparent Violation

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

Sincerely,

/RA/

Mark E. Franke, Acting Director
Division of Reactor Projects

Docket No.: 50-260
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1. Factual Summary
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☐ PUBLICLY AVAILABLE ☒ NON-PUBLICLY AVAILABLE ☒ SENSITIVE ☐ NON-SENSITIVE

ADAMS: ☒ Yes ACCESSION NUMBER:___ML16175A514____ ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:OFC	RII:DRP	
SIGNATURE	Via Email/RA/CRK1	AJB3	DLG2	SAP1	MEF1	
NAME	C. Kontz	A. Blamey	D. Gamberoni	S. Price	M. Franke	
DATE	6/15/2016	6/13/2016	6/13/2016	6/15/2016	6/22/2016	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRPII\RPB6\BROWNS FERRY\REPORTS\2016\EA-16-009 TVA CHOICE LETTER_REV3.DOCX

Letter to J. Shea from Mark E. Franke dated June 23, 2016

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FACTUAL SUMMARY
OFFICE OF INVESTIGATIONS REPORT NO. 2-2015-008

On January 8, 2016, the Nuclear Regulatory Commission's (NRC) Office of Investigations (OI) completed an investigation 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 when he manipulated an electrical switch, and subsequently deliberately failed to provide complete and accurate information to BFN during its investigation into the incident.

On or about December 21, 2014, BFN operators were performing a routine electrical switch verification, and identified that the local operating switch for the B 4Kilovolt (KV) shutdown board normal feeder (43 switch) was incorrectly flagged. The Unit 1 Unit Supervisor (US) was tasked with independently verifying the switch position. However, the SM, who held a Senior Reactor Operator (SRO) license and was acting in an oversight position, decided to personally verify and correct the switch position, and manipulated the 2A 480V Shutdown Board feeder breaker switch by mistake. This resulted in a loss of power to the 2A 480V Shutdown Board electrical bus. The SM immediately reclosed the switch to the electrical breaker. This caused a plant transient including the de-energization of an electric board, loss of the 2A Reactor Water Cleanup Pump, 2A Fuel Pool Cooling Pump, 2A SJAE and Hydrogen Water Control.

After exiting the electrical board room, the SM met the U1 US who was on his way to verify the breaker position as previously directed by the SM. As identified during TVA's investigation into the transient, the SM provided information that was included in the log entry made at 14:45:00 on December 21, 2014, to describe the transient. Later that day, the SM realized that he had operated the wrong switch but did not inform anyone of this discovery. On the morning of December 22, 2014, the SM called the Operation Superintendent and fully disclosed the details of the previous day's event.

Based on documentary and testimonial evidence acquired during the OI investigation, the SM had training, experience, and knowledge of the requirements of TVA BFN procedure OPDP-1, Conduct of Operations and the prohibition that SROs in an oversight position shall not manipulate plant equipment. The SM was also aware of the requirements for providing information to the licensee that is complete and accurate in all material respects, as required by 10 CFR 50.9.

APPARENT VIOLATIONS

1. 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.

2. 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.