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AUTH.NAME AUTHOR AFFILIATION
WALLACE,E.G. Tennessee Valley Authority
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SUBJECT: Responds to NRC 901217 ltr re violations noted in Insp Rept 50-259/90-33,50-260/90-33 & 50=296/90-33.Corrective actions: TVA has revised its reportability determination.

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JAN 16 1991

U.S. Nuclear Regulatory Commission
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Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - NRC INSPECTION REPORT 50-259, 260, 296/90-33 - RESPONSE TO NOTICE OF VIOLATION

This letter provides TVA's response to the notice of violation transmitted by letter from B. A. Wilson to O. D. Kingsley, Jr. dated December 17, 1990. NRC cited TVA with a violation consisting of three examples. The first two examples are related to TVA's failure to provide four-hour notifications to the NRC Operations Center. The last example relates to TVA's failure to submit a Licensee Event Report to NRC.

TVA fully recognizes the importance of its obligation to comply with both the 10 CFR 50.72 immediate reporting requirements and the 10 CFR 50.73 licensee event reporting system. TVA admits Example A and Example C of the violation, but denies Example B. TVA has reviewed its interpretation of the 10 CFR 50.72 immediate notification rule and believes that its reporting philosophy is consistent with both industry practice and NRC guidance on the reporting requirements.

Enclosure 1 provides TVA's response to this violation. Each example of the violation is addressed separately along with corrective actions taken. Enclosure 2 provides a listing of commitments made in this response.

If you have any questions, please get in touch with Patrick P. Carier, Manager of Site Licensing, at (205) 729-3570.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. G. Wallace, Manager
Nuclear Licensing and
Regulatory Affairs

Enclosures
cc: See page 2

IE01

JAN 16 1991

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ENCLOSURE 1

RESPONSE - BROWNS FERRY NUCLEAR PLANT (BFN)
NRC INSPECTION REPORT 50-259, 260, 296/90-33
LETTER FROM B. A. WILSON TO O. D. KINGSLEY, JR.
DATED DECEMBER 17, 1990

During the Nuclear Regulatory Commission (NRC) inspection conducted on October 16 - November 16, 1990, violations of NRC requirements were identified. The first violation involved failures to notify the NRC of reportable events in accordance with 10 CFR 50.72 and 50.73. The second violation was for failure to take corrective action for a previous nonconformance. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), the violations are listed below:

VIOLATION

10 CFR 50 requires notification and reporting to NRC of various reactor events. 10 CFR 50.72 requires that licensee's notify the NRC within four hours of any event or condition that results in manual or automatic actuation of any Engineered Safety Feature (ESF). 10 CFR 50.73 requires that a Licensee Event Report (LER) be submitted within 30 days after the discovery of any operation or condition prohibited by the plant's Technical Specifications (TS).

Final Safety Analysis Report (FSAR) section 1.6.2, Nuclear Safety Systems and Engineered Safeguards, includes both the Primary Containment Isolation Control System (PCIS) and Secondary Containment. The PCIS automatically initiates closure of isolation valves to seal off all potential leakage paths for radioactive material to the environs.

TS section 3.11.A.1 requires that the fire detection instrumentation listed in TS Table 3.11.A be operable whenever equipment protected by the fire detection instrument is required to be operable. TS section 3.11.A.1.a requires that the fire detection system's heat and smoke detectors for all protected zones be operable and TS section 3.11.A.1.b requires that a patrolling fire watch be established whenever TS section 3.11.1.a cannot be met.

Contrary to the above, the licensee failed to notify the NRC within 4 hours of the ESF actuations in a and b, below, and failed to submit an LER within 30 days for item c below.

Example a.

On October 20, 1990, Unit 3 Reactor Water Cleanup system valve 3-FCV-69-01, a PCIS valve, unexpectedly isolated during a momentary power loss from an electrical board transfer. This valve is designed to isolate on a PCIS group 3 actuation signal. The licensee did not notify the NRC Operations Center of this unplanned ESF actuation via the Emergency Notification System until October 30, 1990.

Example b.

On November 4, 1990, the Refuel Zone ventilation system isolated due to a failed relay in the circuit for the refueling floor static pressure relays. This ventilation system is designed to isolate upon receipt of a PCIS group 6 actuation signal. The licensee did not notify the NRC Operations Center of this unplanned ESF actuation.

Example c.

On September 27, 1990, a patrolling fire watch missed the hourly check of the A 4160V shutdown board room due to the vital door being locked during a loss of the security card reading system. The fire watch was required because the duct detector in the room would not actuate the associated dampers as required by TS Table 3.11.A. The licensee did not submit an LER to the NRC on this event.

These examples are a Severity Level IV violation (Supplement I) which is applicable to all three Units.

TVA's Response to Example A

1. Admission or Denial of the Violation

TVA admits the violation.

2. Reason for the Violation

This violation was caused by TVA's interpretation of the guidance contained in NUREG 1022, Licensee Event Report System.

TVA's determination that the event was not reportable was based on the fact that closure of 3-FCV-69-1 did not constitute an ESF actuation since the system was isolated due to a planned evolution and the closure was not in response to an accident signal.

More specifically, the determination was influenced by the NRC response to question 6.9 in NUREG 1022, Supplement No. 1, which states that:

> If the system is not required to be operable and it has been properly removed from service such that it can not perform its intended function (e.g., manual discharge valves are shut, breakers are open), then a spurious actuation of part of the system (e.g., the pump starts but the discharge valve remains shut) is not reportable.

In this event, the reactor water cleanup (RWCU) system had been properly removed from service and was not required to be operable. 3-FCV-69-1 is a primary containment inboard isolation valve for the RWCU system. TVA determined the closure of 3-FCV-69-1 was due to a failed fuse. Since the RWCU system had been properly removed from service and the valve closure was a result of fuse failure, TVA concluded this event showed sufficient similarity to the example provided in NUREG 1022 and therefore was not considered reportable.

However, upon further evaluation, the closure of 3-FCV-69-1 has been determined to be a result of the loss of initiation logic power and included a part of the ESF logic. Therefore, TVA has revised its reportability position for this example and has subsequently reported this event.

3. Corrective Steps Which Have Been Taken and Results Achieved

As noted above, TVA has revised its reportability determination for this example and has concluded that this event is reportable. A Licensee Event Report (LER) 296/90004 was submitted on November 19, 1990.

4. Corrective Steps Which Have Been or Will Be Taken to Avoid Further Violations

This violation and its response will be included as required reading for the shift operations supervisors by June 1, 1991.

5. Date When Full Compliance Will Be Achieved

Full compliance has been achieved for the specifics of this example.

TVA's Response to Example B

1. Admission or Denial of the Violation

TVA denies the violation.

2. Reasons for the Denial

The event described in this example was not reported as an unplanned ESF actuation because no ESF logic was actuated during the event. The Refuel Zone Ventilation System fans and isolation dampers are dual function components. First, the refuel zone ventilation fans are shutdown and the dampers closed to isolate secondary containment upon receipt of a PCIS Group 6 isolation signal. Second, they are utilized for pressure control of the ventilation zones.

A PCIS Group 6 isolation signal is developed when any of the following conditions exist: low reactor vessel water level, high drywell pressure, or high radiation in the reactor zone. At the time of the event, none of the ESF logic (either spurious or valid) associated with any of these three conditions was actuated.

At the time the PCIS Group 6 signal was received, TVA investigated the event and determined that the refuel zone isolation was initiated by the spurious action of the refuel zone static pressure switch 1-PDS-64-611B/D. This switch is not associated with the ESF, but is designed to protect the Reactor Building zones from excessive positive or negative pressures. Further, this switch is nonsafety-related and is not required to perform a safe shutdown function. The relationship of the zonal pressure switch logic to the PCIS logic is shown on Enclosure 3. As depicted on the diagram, the static pressure switch logic is independent of the PCIS logic. The refuel zone isolation characterized by this event was an expected non-ESF response to a spurious actuation of a refuel zone zonal pressure switch.

Since the refuel zone isolation resulting from the static pressure switch failure was not a valid ESF signal, TVA determined this event to be not reportable per 10 CFR 50.72 or 10 CFR 50.73, and made this determination within four hours of receiving the isolation signal.

TVA considers that this interpretation of what constitutes an ESF actuation is consistent with guidance provided by the NRC. During the NRC Region Event Reporting Workshop (Regions IV and V) held on November 8, 1990, this type of example was the subject of discussion (involving dual function components) when the following question was asked:

> [Is] the actuation of an ESF component from a non-ESF source, closure reactor water cleanup isolation valves in response to an ion change or high temperature? Is that viewed as a valid ESF actuation under 50.72?

Mr. Weiss, Chief, Operations Officer Section, AEOD, NRC, responded the following:

> . . . where you had reactor water cleanup isolation and its closing due to a process parameter saying that the ionization beds needed to be protected from high temperatures, that's not an engineered safety feature actuation signal.
>
> It would be my judgment that that would not be a reportable ESF item. . . .
>
> . . . If you have a dual safety function in a reactor water cleanup isolation valve going closed, and it's for a nonsafety purpose, we're not all that interested in it.

TVA's Response to Example C

1. Admission or Denial of the Violation

TVA admits the violation.

2. Reason for the Violation

This violation has been attributed to a failure to maintain compliance with the TSs. BFN TSs show the function of the shutdown board room "A" fire detection system is to alarm in the main control room and to actuate the ventilation duct dampers. These dampers were out of service and a maintenance work order had been issued.

However, the alarm function of the fire detection system was operable. In addition, 10 CFR 50 Appendix R modifications previously installed fire-rated dampers in these ducts. Therefore, based on the operability of both the alarm function of the fire detection system and the Appendix R related dampers, TVA determined the intent of the TSs were met and the failure of the fire watch to physically enter the room was not reportable per 10 CFR 50.73. Based on additional review by TVA, it was determined that compliance with the TSs had not been maintained and that this item is reportable per 10 CFR 50.73.

3. Corrective Steps Which Have Been Taken or Will Be Taken and Results Achieved

The LER associated with this event will be submitted to NRC by February 14, 1991.

4. Corrective Steps Which Will Be Taken or Have Been Taken to Avoid Further Violations

This event has been reviewed with the appropriate operations, technical support, and fire protection personnel to ensure awareness of the importance of maintaining strict compliance with technical specifications.

5. Date When Full Compliance Will Be Achieved

Full compliance will be achieved with the submittal of an LER. The LER will be submitted by February 14, 1991.

ENCLOSURE 2

COMMITMENT

The Licensee Event Report which TVA committed to prepare in response to Example C of Notice of Violation 90-33-01 will be submitted to NRC by February 14, 1991.

This violation and its response will be included as required reading for the shift operations supervisors by June 1, 1991.

ENCLOSURE 3

EXAMPLE B - RELAY LOGIC DIAGRAM