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SALAS,P. Tennessee Valley Authority
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Provides rev to commitments concerning utilization of security personnel for notification of irradiated fuel damage,replacement of process computer & periodic walkdown of scram discharge vol piping sys.

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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609

November 21, 1995

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

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

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - REVISION TO COMMITMENTS CONCERNING THE UTILIZATION OF SECURITY PERSONNEL FOR NOTIFICATION OF IRRADIATED FUEL DAMAGE, REPLACEMENT OF THE PROCESS COMPUTER, AND PERIODIC WALKDOWN OF THE SCRAM DISCHARGE VOLUME PIPING SYSTEM

BFN is a participant in a pilot program for managing NRC commitments. This program uses guidelines developed by the Nuclear Energy Institute (NEI) which include a uniform process for changing commitments. The NEI guidelines provide for timely notification to the NRC when changing commitments which meet specified criteria. Where timely notification is required, the guidelines recommend this notification be accomplished by supplementing the docketed correspondence containing the original commitment.

Three commitments, originating from the referenced correspondence and described in the enclosure, have been evaluated for revision using the NEI Guidelines. Results of these evaluations indicate the revision of these commitments is justified. This letter provides the results of our evaluations and provides notification of the revision of these commitments.

270012

A001 1/1

There are no commitments contained in this correspondence. If you have any questions, please contact me at (205) 729-2636.

Sincerely,

Pedro Salas
Manager of Site Licensing

Enclosure
cc (Enclosure):

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REFERENCES:

1. TVA letter to NRC dated June 20, 1995, Browns Ferry Nuclear Plant (BFN) - Request for Additional Information (RAI) - Emergency Action Plan Conversion to NUMARC Emergency Action Levels (EALs)

2. TVA letter to NRC dated November 7, 1983, Response to Generic Letter 83-28

3. TVA letter to NRC dated October 1, 1990, Browns Ferry Nuclear Plant (BFN) - Safety Concerns Associated with Pipe Breaks in the Boiling Water Reactor (BWR) Scram System (GSI 40 and Generic Letter 86-01)

ENCLOSURE

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, 3

REVISION TO COMMITMENTS

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1. <u>Utilization of Security Personnel for Notification of Irradiated Fuel Damage</u>

Current Commitment Statement: The logic for using "confirmation by refuel floor personnel that irradiated fuel damage may have occurred" is:

- If at any time fuel handling is underway personnel will be stationed on the refuel floor.
- Any time the reactor cavity is open a security post is manned on the refuel floor.

Revised Commitment Statement: The logic for using "confirmation by refuel floor personnel that irradiated fuel damage may have occurred" is:

- If at any time fuel handling is underway personnel will be stationed on the refuel floor.

Source Document: TVA letter to NRC dated June 20, 1995, Browns Ferry Nuclear Plant (BFN) - Request for Additional Information (RAI) - Emergency Action Plan Conversion to NUMARC Emergency Action Levels (EALs)

Affected Units: 1, 2, and 3

Basis for Commitment Change: In a revision to the BFN emergency procedures, BFN provided a deviation to the NUMARC initiating condition AA2 (associated with damage to irradiated fuel) by adding a qualifying statement requiring confirmation by refueling floor personnel that irradiated fuel damage may have occurred. In response to a request for additional information from the NRC, TVA stated that the confirmation was necessary to differentiate between alarms not related to fuel damage (e.g., moving contaminated material or vessel internals) and alarms indicating actual fuel damage. As part of TVA's response, TVA provided the logic for the confirmation by refueling floor personnel. This logic included a statement that any time the reactor cavity is open, a security post would be manned on the refuel floor.

At the time this statement was made, 10 CFR 73.55(d)(8) required this security post. However, since that time, 10 CFR 73.55(d)(8) has been revised to eliminate this posting requirement. As a result, TVA is in the process of revising the BFN Site Security Plan to eliminate the requirement to man this security post when the reactor cavity is open.

The refuel floor will continue to be manned by Operations personnel during activities involving fuel movement or during activities which present the possibility of damaging fuel. These personnel are fully capable of assessing potential fuel damage and promptly reporting the potential damage to necessary personnel. Continuing to man a security post for the sole purpose of detecting potential fuel damage is unnecessary and does not make the best use of limited resources.

2. <u>Replacement of the Process Computer</u>

Current Commitment Statement: Replace the present GE 4020 process computers with Digital Equipment Corporation (DEC) VAX 11/750 process computers.

Revised Commitment Statement: Replace the present GE 4020 process computers with Digital Equipment Corporation (DEC) VAX 6000 process computers or another computer which is equivalent to or better than the VAX 6000.

Source Document: TVA letter to NRC dated November 7, 1983, Response to Generic Letter 83-28

Affected Units: 1 and 3

Basis for Commitment Change: Unit 3: At the time of purchase, the VAX series 11/750 computers had been replaced by the VAX 6000 line. The VAX 6000 line provides the same or expanded capabilities as the VAX 11/750. The VAX 11/750 was rendered obsolete by the VAX 6000.

Unit 1: A computer with capabilities equivalent to or better than the VAX 6000 will be installed.

3. <u>Periodic Walkdown of the Scram Discharge Volume Piping System</u>

Current Commitment Statement: In order to resolve this issue, TVA has revised Abnormal Operating Instruction (AOI) 2-AOI-100-1, Reactor Scram, to require the scram discharge volume be visually inspected for leaks within 30 minutes of the first reactor scram, following a refueling outage, from rated temperature and pressure. Any identified leaks will be brought to the Shift Operations Supervisor's immediate

attention. This action incorporates the BWROG suggested inspection and frequency.

Revised Commitment Statement: System leakage inspections of the scram discharge volume will be performed once per refueling outage during the system leakage test of the reactor pressure vessel and associated piping.

Source Document: TVA letter to NRC, dated October 1, 1990, Browns Ferry Nuclear Plant (BFN) - Safety Concerns Associated with Pipe Breaks in the Boiling Water Reactor (BWR) Scram System (GSI 40 and Generic Letter 86-01)

Affected Units: 1, 2, and 3

Basis for Commitment Change:

Commitment Background

In NRC's letter dated January 3, 1986, "Safety Concerns Associated with Pipe Breaks in the BWR Scram System (Generic Letter 86-01)," NRC concluded that the revised Boiling Water Reactor Owners' Group (BWROG) Emergency Procedure Guidelines for secondary containment control together with normal plant procedures and **the proposed periodic visual verification of the scram system piping integrity (BWROG-8420)** provided sufficient measures for detecting and mitigating the consequences of leakage which may occur in the scram discharge volume (SDV) piping system. Based on this review, NRC closed Generic Safety Issue (GSI) 40.

BWROG-8420 discussed the periodic inspection as follows:

> Section XI of the ASME code specifies that piping such as the SDV piping be periodically leak tested and inspected. For plants which employ the leak test criteria for Class 1 piping, this test is performed every refueling outage. For plants which employ the criteria for Class 2 piping, the test is normally performed at repeating intervals of 3, 4 and 3 years.
>
> The BWR Owners Group maintains that the testing frequency as specified by the ASME code for Class 2 piping is sufficient for the SDV piping. This is based on the low calculated leak rate and the stability of the postulated crack for a conservative number of stress cycles as noted above. However, in order to satisfy the NRC's desire for "defense-in-depth" as expressed at the

February 23, 1984 meeting, the Owners Group proposes the following program for periodic observation of the SDV piping in order to detect leaks:

> For those plants to which the leak testing and inspection criteria in the ASME code for Class 1 piping are applied, no additional actions need be taken.
>
> For other plants, it is proposed that a post-scram reset walkdown of the SDV be performed once per refueling cycle. The walkdown would occur as soon as possible but not more than 30 minutes following scram reset. The walkdown would be an observation to investigate evidence of leakage below the SDV header and instrument volume and would be sufficient to detect appreciable leakage.

In response to Generic Letter 90-04 (TVA letter to NRC dated May 30, 1990), TVA identified that the visual verification assumed by the NRC had not been implemented. Based on a verbal request from the NRC, TVA agreed to review the NRC assumption for resolution of GSI 40 and either incorporate the BWROG recommended visual inspection of the SDV or provide further justification for not implementing this recommendation. In TVA's letter of October 1, 1990, TVA committed to performing a post-scram reset leakage inspection of the SDV to incorporate the BWROG suggested inspection and frequency.

Revision Justification

At BFN, the SDV is classified as ASME Class 2 equivalent. Therefore, based upon BWROG 84-20, TVA committed to a post-scram reset walkdown of the SDV once per refueling cycle. This requirement was implemented in 2-AOI-100-1 and 3-AOI-100-1 (and was scheduled for 1-AOI-100-1 prior to restart of Unit 1). Based on further review of this issue, BFN will revise this commitment to perform a leak inspection of the SDV piping once per refueling outage during the performance of the system leakage test of the reactor pressure vessel and associated piping. This change meets the intent of BWROG 84-20 in that:

1. The SDV piping (Class 2) is designed and built with similar standards utilized for ASME Class 1 equivalent piping.

   > Although the SDV is classified as ASME Class 2 equivalent, equivalent materials were used in the Class 1 and Class 2 equivalent portions of the Control Rod Drive (CRD) system. SDV piping and supports are qualified for the combined forces of pressure, deadweight, thermal, and seismic loads

to maintain pressure boundary integrity in accordance with ANSI B31.1 and TVA design criteria. Pipe stress analysis and support design criteria are identical for Class 1 and Class 2 equivalent piping.

2. The leak inspection of the SDV will be conducted once per refueling outage.

   The BWROG 84-20 post-scram reset walkdown was proposed based on the periodicity of inspection of Class 2 systems (3 to 4 years for Class 2 as compared to every refueling outage for Class 1). BFN will perform a system leak inspection of the SDV once each refueling outage to meet the periodic inspection requirement of BWROG 84-20.

Additional advantages to this commitment revision include the following.

- Performance of the SDV piping inspection during the system leakage test will allow inspection at rated pressure (this would allow observation of active leaks). Post-scram reset walkdowns are performed following scram reset and draining of the SDV (inspection limited to looking for evidence of leaks below the SDV header and instrument volume).

- Deletion of the post-scram reset walkdown reduces the number of operator actions required during scram recovery.

Therefore, this revision meets the requirements of BWROG 84-20 by requiring a once per refueling outage leak inspection of the SDV and is consistent with the NRC assumptions utilized in the closeout of GSI 40.