



September 28, 1993

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

Gentlemen:

In the Matter of)	Docket Nos. 50-259	50-327
Tennessee Valley Authority)	50-260	50-328
)	50-296	50-390
)		50-391

RESPONSE TO GENERIC LETTER (GL) 89-10, SUPPLEMENT 5, "INACCURACY OF MOTOR-OPERATED VALVE (MOV) DIAGNOSTIC EQUIPMENT"

Enclosed is TVA's response for the subject GL supplement for Browns Ferry, Sequoyah, and Watts Bar Nuclear Plants. Industry information is received and tracked through TVA's nuclear experience review group which provides timely identification of potential MOV issues, including GL 89-10 implementation, for action and resolution. Appropriate actions have been taken concerning the MOVATS diagnostic inaccuracy and are described in the enclosure.

No new commitments are identified in this letter. If you have any questions, please telephone me at (615) 751-2687 in Chattanooga.

Sincerely,


 Charles R. Davis
 Senior Project Manager
 Nuclear Licensing and Regulatory Affairs

Sworn to, and subscribed before me
this 28th day of Sept 1993


 Notary Public

My commission Expires 2/94

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission
Page 2
September 28, 1993

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ENCLOSURE

RESPONSE TO NRC'S GENERIC LETTER (GL) 89-10, SUPPLEMENT 5

- (1) All licensees are required to notify the NRC staff of the diagnostic equipment used to confirm the proper size, or to establish settings, for MOVs within the scope of GL 89-10.

RESPONSE

TVA currently uses MOVATS test equipment for confirming proper sizing and establishing thrust and torque settings for GL 89-10 MOVs. Data acquisition is accomplished using MOVATS 3000 series test equipment and a variety of sensors for measurement of thrust and torque. The sensors for a given application are selected based upon what will fit on the valve with the accuracy of the sensor given primary consideration. Sensors currently utilized for measuring thrust and/or torque include the MOVATS Torque/Thrust Cell (TTC), MOVATS Stem Strain Ring (SSR), MOVATS stem strain transducer (SST), MOVATS stem load sensor (SLS), Teledyne Quick Mount Strain Gauges, Teledyne Smart Stems, and the MOVATS Thrust Measuring Device (TMD). Due to the large inaccuracies associated with the TMD, this device is only used as a last alternative for MOV setup. If the TMD is used, the latest MOVATS accuracy information is utilized.

- (2) Licensees are required to report whether they have taken actions or plan to take actions (including schedule and summary of actions taken or planned) to address the information on the accuracy of MOV diagnostic equipment.

RESPONSE

Actions have been taken by TVA to address MOV diagnostic equipment accuracy concerns as these concerns have been identified. This has been accomplished through TVA's Nuclear Experience Review and Corrective Action Programs. These programs will also be applied to any future concerns which may arise related to diagnostic equipment accuracy.

The Supplement 5 concern related to MOVATS equipment is applicable to TVA's Browns Ferry, Sequoyah, and Watts Bar Nuclear Plants. Bellefonte Nuclear Plant was not affected since MOVs have not yet been set up using diagnostic equipment. The Supplement 5 equipment accuracy concerns related to VOTES and ABB-Impell equipment are not applicable to TVA since this equipment is not utilized.

Following is a summary and status of the actions taken/planned to address the MOVATS equipment accuracy concern reported in Supplement 5.

1. Each plant performed an initial screening to determine whether immediate nuclear safety or operability concerns existed. Where appropriate, corrective action plans and schedules were developed in accordance with TVA's Corrective Action Program.

Status: Complete for applicable TVA plants.

2. Evaluations were performed which included the following:

GL 89-10 MCVs which had been set up using the MOVATS TMD were identified.

A priority was established for evaluation of identified valves based upon considerations such as I. E. Bulletin 85-03; GL 89-10, Supplement 3, valves; valves with a safety function to close; and other appropriate considerations.

New accuracy bands, based upon the last as-left data, were determined for each affected MOV using the evaluation methodology provided in MOVATS Engineering Report 5.2. These accuracy bands were compared with valve setup requirements to determine whether the MOV was still within design allowables.

Status: Complete for applicable TVA plants.

3. Where potential nuclear safety or operability concerns were identified, appropriate actions were identified, documented, scheduled, and tracked using TVA's Corrective Action Program. Corrective actions included retesting of some MOVs using sensors capable of direct thrust measurement and better accuracy.

Status:

Browns Ferry: Thirty-eight (38) Unit 2 MOVs, within the scope of GL 89-10, were identified with a potential for over or under thrusting. A Problem Evaluation Report was initiated in accordance with TVA's Corrective Action Program to disposition this concern, and an engineering evaluation was performed which concluded there were no operability concerns. The valves were categorized, based on their design function,

into three categories which were: (1) those valves with a design basis function to close, (2) those valves with an active safety function, and (3) others with only a passive safety function. Scheduling retests was based on Probability Risk Assessment (PRA) significance and the categories previously mentioned. Twenty-seven (27) of the thirty-eight (38) GL 89-10 valves were tested during the Unit 2 Cycle 6 refueling outage using the latest available thrust and torque sensors and equipment accuracy information. This testing was completed in May 1993. The remaining eleven (11) GL 89-10 valves are planned to be retested during the Unit 2 Cycle 7 refueling outage. Units 1 and 3 are planned to have switch settings set up prior to restart utilizing the latest accuracy information.

Sequoyah: No MOVs were identified with potential over or under thrusting problems. Two valves were marginal based upon the new accuracy information; therefore, an engineering evaluation was performed for these valves to ensure continued functional capability. This evaluation determined that the two valves were capable of performing their intended function. Accordingly, resolution of the MOVATS TMD accuracy is complete for Sequoyah.

Watts Bar: Since the GL 89-10 MOVs are scheduled to be reset prior to unit startup, under thrusting was not a concern. However applicable GL 89-10 valves were evaluated for overthrusting. Two valves that were potentially overthrusting were identified and a more extensive engineering evaluation was performed and documented which determined they were acceptable for continued use since the valves are scheduled to be reset prior to unit startup.

The TVA action plan to address the MOVATS equipment accuracy issue was developed and partially implemented prior to guidance being provided by NUMARC. However, the actions taken by TVA are consistent with the NUMARC guidelines which were subsequently provided.