TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

November 16, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Denton:

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

This is in response to your letter dated October 30, 1979, to all operating nuclear power plants concerning further discussion of lessons learned short-term requirements. TVA believes that the majority of the commitments as addressed in my letter dated October 17, 1979, to D. G. Eisenhut are in complete agreement with the NRC staff's requirements. However, since that time, we have made extraordinary efforts to finalize short-term design modifications, expedite materials deliveries, and consolidat our procedural efforts. Areas that need clarification or more detail to defend our schedular commitments are discussed in the enclosure to this letter. We have also addressed the areas of concern which were expressed by R. Clark and D. Verelli of your staff in a November 8, 1979, conference call.

The original schedule as stated in my October 17, 1979, letter for completion of modifications, material deliveries, and procedural efforts has been improved somewhat (as addressed in the enclosure). The present Browns Ferry unit 3 refueling outage will extend into December 1979 and will have the short-term hardware requirements fully implemented before restart. The Browns Ferry unit 1 refueling outage will follow in late December 1979 or early 1980. Equipment for full NUREG-0578 implementation will be available for the scheduled outage. Browns Ferry unit 2 will be shut down in March 1980 to install the short-term hardware if equipment vendors meet their delivery schedules as discussed in the enclosure. A three-week outage is required to install this equipment. This schedule will complete the short-term hardware requirements for all units.

If our October 17, 1979, submittal, as expanded by the enclosed clarifications, is not satisfactory, and NRC intends to order additional shutdowns of any Browns Ferry units, please notify us promptly.

1388 126

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

A040
S
1/1

Enclosure

P

7911230 245

CLARIFICATIONS TO BROWNS FERRY NUREG-0578 RESPONSES

2.1.1 Emergency Power Supplies

We are aware that NRC has new concerns regarding long-term operability of the Automatic Depressurization System valves. This item is generic in nature and will be addressed by the BWR Owners group. However, as previously stated, the Browns Ferry design incorporates safety grade diverse power with manual control of normal to emergency offsite power in the control room. The control air supplies control air to the valves is fed by redundant air compressors which are supplied with safety grade diverse power systems. Long-term operation can be maintained.

2.1.2 Performance Testing for Relief and Safety Valves

We are aware that NRC has requested additional clarification regarding S/RV testing requirements. This item is generic in nature and will be addressed by the BWR Owners group.

2.1.3a Direct Indication of Valve Position

TVA is planning to install acoustic monitors on all of the relief and safety valves. Material requirements are estimated as follows per unit.

Accelerometers (detectors)	13 (new installation)
Junction Boxes	13 (new installation)
Amplifiers inside junction boxes	13 (new installation)
Cable	8,000 feet, routed through drywell, penetrations, reactor building, (fire stops) control bay spreading room, to control room (new installation
Conduit	400 feet (new installation)
Control Room Modules - valve indication and alarm	13 (new installation)

The equipment was placed on expedited order on October 23, 1979, and we have partial receipt. Design changes (drawings, etc.) have been finalized for unit 3 and are proceeding toward completion for units 1 and 2. The schedule for installation will be concurrent with item 2.1.4 below, since each item requires a unit outage of comparable length. We have been assured of equipment delivery and final design efforts to meet an installation schedule comparable to item 2.1.4 as follows:

Unit 3	November 1979
Unit 1	January 1980
Unit 2	March 1980

The acoustic monitoring system has been qualified to be seismic Class I, and its power supply will be Class IE. We are proceeding with preliminary work as is possible for the operating units.

2.1.3b Inadequate Core Cooling

We are willing to commit to the negotiated B&OTF schedule for procedures.

2.1.4 Containment Isolation

Our design review on part 4 of this item indicates considerably more work is involved than originally scoped. Material requirements are estimated as follows per unit.

Cable	4,000 feet, routed through the auxiliary instrument room, control room, and reactor building
Control Switches	10 new, 2 to change out
Relays	16 (new installation)
Conduit	100 feet of 2-inch
Terminal strips for	140 points

We have been able to purchase and shift enough equipment to do one unit. Additional equipment to do the remaining units has been placed on expedited orders. Although firm delivery commitments have not been obtained on all the equipment, we have been assured that receipt will be in time to meet the installation schedule as follows:

Unit 3	November - December, 1979
Unit 1	January 1980
Unit 2	March 1980

In the meanwhile, we will finalize design changes, and do whatever preliminary work is possible on the operating units.

As indicated in our original response, procedural controls will be incorporated in the interim. These procedural controls are particularly effective, since most of the subject valves are normally closed.

2.1.5a Dedicated Hydrogen Control Penetrations

The last sentence in the first paragraph of the TVA response is in error and should be deleted. The paragraph should be finished as follows:

During CAD system operation, containment atmosphere is vented in a controlled manner to the standby gas treatment system through a two-inch line. Failure of one vent path will not disable the CAD system, since a redundant vent line is available.

2.1.9 Transient and Accident Analyses

TVA will commit to the negotiated B&OTF schedule for procedures and training.