cp 1

March 25, 1983

Docket Nos. 50-259
50-260
50-296

Mr. Hugh G. Parris
Manager of Power
Tennessee Valley Authority
500 A Chestnut Street, Tower II
Chattanooga, Tennessee 37401

Dear Mr. Parris:

The Commission has issued the enclosed Orders confirming your commitments to implement those post-TMI related items set forth in NUREG-0737 for which the staff requested completion on or after July 1, 1981. The Orders are based on commitments contained in your letters responding to the NRC's Generic Letters 82-05 and 82-10 dated March 17, 1982 and May 5, 1982, respectively.

The Orders reference your letters and, in their Attachments, contain lists of the applicable NUREG-0737 items with your schedular commitments. As discussed in the Orders, several of the items listed in Generic Letter 82-10 will be handled outside of the Orders.

The Commission's intention when it issued NUREG-0737 was that items would be completed in accordance with the staff's recommended schedule. However, our evaluation of your proposed schedule exceptions concludes that the proposed delays are acceptable. Among other things, the Orders require implementation of these items in accordance with your proposed schedule.

Some of the items set forth in the Attachments to the Orders are subject to post implementation review and inspection. Our post implementation review and/or the development of Technical Specifications may identify alterations to your method of implementing and maintaining the requirements. Any identified alterations will be the subject of future correspondence.

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....

A copy of the Orders is being filed with the Office of the Federal Register for publication.

Sincerely,

Original signed by
D. B. Vassallo

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosure:
Orders

cc w/enclosure:
See next page

Dist:	Docket File	SECY	ELJordan
NRC PDR	NSIC	JHeltemes	JMTaylor
LPDR	ORB#2 Reading	ORAB	DEisenhut
SNorris	RClark	OELD	TBarnhart(4)
RDiggs	ASLAB	Extra-5	Gray
ACRS-10	OPA, C. Miles		

OFFICE	DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:OR	DL	ORAB	OELD
SURNAME	SNorris	RClark	DVassallo	GLainas	DEisenhut		
DATE	12/3/82	12/03/82	12/3/82	12/1/82	12/9/82	3/25/83	3/18/83

3/7/83

NRC FORM 318 (10-80) NRCM 0240 **OFFICIAL RECORD COPY** USGPO: 1981—335-960

Mr. Hugh G. Parris

cc:

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U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 50-259
TENNESSEE VALLEY AUTHORITY	)	
(Browns Ferry Nuclear Plant, Unit 1)	)	

ORDER CONFIRMING LICENSEE COMMITMENTS
ON POST-TMI RELATED ISSUES

I.

The Tennessee Valley Authority (the licensee) is the holder of Facility Operating License No. DPR-33 which authorizes the operation of the Browns Ferry Nuclear Plant, Unit 1 (the facility) at steady-state power levels not in excess of 3293 megawatts thermal. The facility is a boiling water reactor (BWR) located at the licensee's site in Limestone County, Alabama.

II.

Following the accident at Three Mile Island Unit No. 2 (TMI-2) on March 28, 1979, the Nuclear Regulatory Commission (NRC) staff developed a number of proposed requirements to be implemented on operating reactors and on plants under construction. These requirements include Operational Safety, Siting and Design, and Emergency Preparedness and are intended to provide substantial

additional protection in the operation of nuclear facilities based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. The staff's proposed requirements and schedule for implementation are set forth in NUREG-0737, "Clarification of TMI Action Plan Requirements." Among these requirements are a number of items, consisting of hardware modifications, administrative procedure implementation and specific information to be submitted by the licensee, scheduled to be completed on or after July 1, 1981. On March 17, 1982, a letter (Generic Letter 82-05) was sent to all licensees of operating power reactors for those items that were scheduled to be implemented from July 1, 1981 through March 1, 1982. Subsequently, on May 5, 1982, a letter (Generic Letter 82-10) was also sent to all licensees of operating power reactors for those items that were scheduled for implementation after March 1, 1982. These letters are hereby incorporated by reference. In these letters each licensee was requested to furnish within 30 days pursuant to 10 CFR 50.54(f) the following information for items which the staff had proposed for completion on or after July 1, 1981:

> (1) For applicable items that have been completed, confirmation of completion and the date of completion, (2) For items that have not been completed, a specific schedule for implementation, which the licensee committed to meet, and (3) Justification for delay, demonstration of need for the proposed schedule, and a description of the interim compensatory measures being taken.

III.

The licensee responded to Generic Letter 82-05 by letter dated April 14, 1982. By letters dated May 13, 1982 and February 1, 1983, we requested additional information on TVA's responses. TVA submitted revised responses to Generic Letter 82-05 by letters dated June 17, June 28 and July 15, 1982 and January 14 and February 28, 1983. The licensee responded to Generic Letter 82-10 by letter dated June 24, 1982. In these submittals, the licensee confirmed that some of the items identified in the Generic Letters had been completed, took technical exception to one item, and made firm commitments to complete the remainder. The attached Tables summarizing the licensee's schedular commitments or status were developed by the staff from the Generic Letters and the licensee-provided information.

Generic Letters 82-05 and 82-10 applied to 16 and 10 items, respectively, for BWRs with jet pumps. Of the 10 items listed in Generic Letter 82-10, six items are not included in this Order. Item I.A.1.3.2 is part of a separate rulemaking; Items I.C.1, III.A.1.2 (2 items), and III.A.2.2 will be handled separately following Commission actions that would proceed as a result of its consideration of SECY 82-111, as amended; and Item II.K.3.30 and II.K.3.31 (one item) is not required until one year after staff approval of the generic model and staff review of these models has not been completed.

Thirteen of the 20 items addressed in this Order are considered by the licensee to be completed or to require no modifications. The licensee is taking technical exception to one item, II.K.3.22, that will be addressed in

a separate action. On item II.B.3, TVA has completed the post-accident sampling facility. However, the tie-in of the sample lines inside the reactor vessel and the waste/flush lines to the torus are scheduled for future refueling outages. Since the staff is still evaluating TVA's design and program, this item will also be addressed in a separate action. These two items - II.B.3 and II.K.3.22 - are therefore not included in this Order.

The staff's evaluation of the licensee's delays for the remaining five items is provided herein:

II.F.1 Post-Accident Monitoring (5 items)

Three items, II.F.1.3, II.F.1.4 and II.F.1.5 are scheduled to be installed during the next refueling outage on each unit. For Unit 1, the next refueling is scheduled to start March 18, 1983 and be completed by July 18, 1983. The delay in installation has been the result of late delivery schedules in materials and vendor-supplied equipment. Two items, II.F.1.1 and II.F.1.2, will be completed (including readout in the control room) prior to startup in Cycle 7 (about February 1985). The delay is primarily the result of the long time spent by TVA in designing a customized monitoring system. This approach was abandoned in June 1982 and purchase of commercially available equipment initiated. Based on scheduled delivery of materials and components, installation will begin in June 1984 and be completed by December 31, 1984. The effluent monitors currently installed at Browns Ferry perform the functions required by II.F.1.1 and II.F.1.2, but with a smaller range than required by NUREG-0737. Also, TVA has the capability for monitoring through use of grab samples.

We find, based on the above evaluation, that: 1) the licensee has taken corrective actions regarding the delays and has made a responsible effort to implement the NUREG-0737 requirements noted; 2) there is good cause for the delays; and 3) as noted above, interim compensatory measures have been provided.

In view of the foregoing, I have determined that these modifications and actions are required in the interest of public health and safety and, therefore, the licensee's commitment should be confirmed by Order.

IV.

Accordingly, pursuant to Sections 103, 161i, and 161o of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, IT IS HEREBY ORDERED EFFECTIVE IMMEDIATELY THAT THE LICENSEE SHALL:

> Implement and maintain the specific items described in the Attachments to this Order in the manner described in the licensee's submittals noted in Section III herein no later than the dates in the Attachments.

V.

The licensee may request a hearing on this Order within 20 days of the date of publication of this Order in the Federal Register. A request for a hearing shall be addressed to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

A copy shall also be sent to the Executive Legal Director at the same address. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

If a hearing is requested by the licensee, the Commission will issue an Order designating the time and place of any such hearing.

If a hearing is held concerning this Order, the issue to be considered at the hearing shall be whether the licensee should comply with the requirements set forth in Section IV of this Order. This Order is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Purple, Deputy Director
Division of Licensing
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland,
this 25th day of March 1983.

Attachments:
1. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-05
2. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-10

Attachment 1

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737 Schedule	Requirement	Licensee's Completion Schedule (or status)
I.A.3.1	Simulator Exams	10/1/81	Include simulator exams in licensing examinations	Complete
II.B.2	Plant Shielding	1/1/82	Modify facility to provide access to vital areas under accident conditions	Complete
II.B.3	Post-Accident** Sampling	1/1/82	Install upgraded post-accident sampling capability	To be addressed in separate action
II.B.4	Training for Mitigating Core Damage	10/1/81	Complete training program	Complete
II.E.4.2	Containment Isolation Dependability	7/1/81	Part 5-lower containment pressure setpoint to level compatible w/normal operation	Complete
		7/1/81	Part 7-isolate purge & vent valves on radiation signal	Complete
II.F.1	Accident Monitoring	1/1/82	(1) Install noble gas effluent monitors with control room instrumentation	Prior to start-up in Cycle 7 (2/85)
		1/1/82	(2) Provide capability for effluent monitoring of iodine with control room instrumentation	Prior to start-up in Cycle 7 (2/85)
		1/1/82	(3) Install incontainment radiation-levels monitors	Prior to start-up in Cycle 6 (7/83)

**Not part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
II.F.1		1/1/82	(4) Provide continuous indication of containment pressure	Prior to start-up in Cycle 6 (7/83)
		1/1/82	(5) Provide continuous indication of containment water level	Prior to start-up in Cycle 6 (7/83)
		1/1/82	(6) Provide continuous indication of hydrogen concentration in containment	Complete
II.K.3.15	Isolation of HPCI & RCIC Modification	7/1/81	Modify pipe break detection logic to prevent inadvertent isolation	Complete
II.K.3.22	RCIC Suction**	1/1/82	Modify design of RCIC suction to provide automatic transfer to torus	Technical Exception
II.K.3.24	Space Cooling for HPCI/RCIC	1/1/82	Confirm the adequacy of space cooling for HPCI/RCIC	Complete
II.K.3.27	Common reference level	7/1/81	Provide common reference level for vessel level instrumentation	Complete

**Not Part of Confirmatory Order.

Attachment 2

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
I.A.1.3.1	Limit Overtime	10/1/82 per Gen. Ltr. 82-12 dtd 6/15/82	Revise administrative procedures to limit overtime in accordance w/NRC Policy Statement issued by Generic Ltr. No. 82-12, dtd 6/15/82	Complete
I.A.1.3.2	Minimum Shift* Crew	To be superseded by Proposed Rule	To be addressed in the Final Rule on Licensed Operator Staffing at Nuclear Power Units	To be addressed when Final Rule is issued
I.C.1	Revise Emergency* Procedures	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
II.D.1.2	RV and SV Test Programs	7/1/82	Submit plant specific reports on relief and safety valve program	Complete
II.K.3.18	ADS Actuation	9/30/82	Submit revised position on need for modifications	Complete
II.K.3.30 & 31	SBLOCA Analysis*	1 yr. after staff approval of model	Submit plant specific analyses	To be determined following staff approval of model
III.A.1.2	Staffing Levels* for Emergency Situations	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined

*Not Part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
III.A.1.2	Upgrade Emer* gency Support Facilities	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.A.2.2	Meteorological* Data	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.D.3.4	Control Room Habitability	To be Determined by licensee	Modify facility as identified by licensee study	Complete

*Not Part of Confirmatory Order

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 50-260
	)	
TENNESSEE VALLEY AUTHORITY	)	
	)	
	)	
(Browns Ferry Nuclear Plant, Unit 2)	)	

ORDER CONFIRMING LICENSEE COMMITMENTS
ON POST-TMI RELATED ISSUES

I.

The Tennessee Valley Authority (the licensee) is the holder of Facility Operating License No. DPR-52 which authorizes the operation of the Browns Ferry Nuclear Plant, Unit 2 (the facility) at steady-state power levels not in excess of 3293 megawatts thermal. The facility is a boiling water reactor (BWR) located at the licensee's site in Limestone County, Alabama.

II.

Following the accident at Three Mile Island Unit No. 2 (TMI-2) on March 28, 1979, the Nuclear Regulatory Commission (NRC) staff developed a number of proposed requirements to be implemented on operating reactors and on plants under construction. These requirements include Operational Safety, Siting and Design, and Emergency Preparedness and are intended to provide substantial

additional protection in the operation of nuclear facilities based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. The staff's proposed requirements and schedule for implementation are set forth in NUREG-0737, "Clarification of TMI Action Plan Requirements." Among these requirements are a number of items, consisting of hardware modifications, administrative procedure implementation and specific information to be submitted by the licensee, scheduled to be completed on or after July 1, 1981. On March 17, 1982, a letter (Generic Letter 82-05) was sent to all licensees of operating power reactors for those items that were scheduled to be implemented from July 1, 1981 through March 1, 1982. Subsequently, on May 5, 1982, a letter (Generic Letter 82-10) was also sent to all licensees of operating power reactors for those items that were scheduled for implementation after March 1, 1982. These letters are hereby incorporated by reference. In these letters each licensee was requested to furnish within 30 days pursuant to 10 CFR 50.54(f) the following information for items which the staff had proposed for completion on or after July 1, 1981:

> (1) For applicable items that have been completed, confirmation of completion and the date of completion, (2) For items that have not been completed, a specific schedule for implementation, which the licensee committed to meet, and (3) Justification for delay, demonstration of need for the proposed schedule, and a description of the interim compensatory measures being taken.

III.

The licensee responded to Generic Letter 82-05 by letter dated April 14, 1982. By letters dated May 13, 1982 and February 1, 1983 we requested additional information on TVA's responses. TVA submitted revised responses to Generic Letter 82-05 by letters dated June 17, June 28 and July 15, 1982 and January 14 and February 28, 1983. The licensee responded to Generic Letter 82-10 by letter dated June 24, 1982. In these submittals, the licensee confirmed that some of the items identified in the Generic Letters had been completed, took technical exception to one item, and made firm commitments to complete the remainder. The attached Tables summarizing the licensee's schedular commitments or status were developed by the staff from the Generic Letters and the licensee-provided information.

Generic Letters 82-05 and 82-10 applied to 16 and 10 items, respectively, for BWRs with jet pumps. Of the 10 items listed in Generic Letter 82-10, six items are not included in this Order. Item I.A.1.3.2 is part of a separate rulemaking; Items I.C.1, III.A.1.2 (2 items), and III.A.2.2 will be handled separately following Commission actions that would proceed as a result of its consideration of SECY 82-111, as amended; and Item II.K.3.30 and II.K.3.31 (one item) is not required until one year after staff approval of the generic model and staff review of these models has not been completed.

Thirteen of the 20 items addressed in this Order are considered by the licensee to be completed or to require no modifications. The licensee is taking technical exception to one item, II.K.3.22, that will be addressed in a separate action.

On item II.B.3, TVA has completed the post-accident sampling facility. However, the tie-in of the sample lines inside the reactor vessel and the waste/flush lines to the torus are scheduled for future refueling outages. Since the staff is still evaluating TVA's design and program, this item will also be addressed in a separate action. These two items - II.B.3 and II.K.3.22 - are therefore not included in this Order.

The staff's evaluation of the licensee's delays for the remaining five items is provided herein:

II.F.1 Post-Accident Monitoring (5 items)

Three items, II.F.1.3, II.F.1.4 and II.F.1.5 are scheduled to be installed during the next refueling outage on each unit. For Unit 2, the next refueling is scheduled to start in April 1984 and be completed by September 1984. The delay in installation has been the result of late delivery schedules in materials and vendor-supplied equipment. For two items, II.F.1.1 and II.F.1.2, installation of the monitoring instrumentation and associated equipment will be completed by December 1984. This instrumentation will have local readout capability. Providing readout in the control room can only be accomplished during an outage. TVA will be providing control room readout for these two monitors during the Unit 2 outage scheduled to start in February 1986; the control room instrumentation will be installed prior to startup in Cycle 7 (about July 1986). The delay is primarily the result of the long time spent by TVA in designing a customized monitoring system. This approach was abandoned in June 1982 and purchase of commercially

available equipment initiated. Based on scheduled delivery of materials and components, installation will begin in June 1984 and be completed by December 31, 1984. The effluent monitors currently installed at Browns Ferry perform the functions required by II.F.1.1 and II.F.1.2, but with a smaller range than required by NUREG-0737. Also, TVA has the capability for monitoring through use of grab samples.

We find, based on the above evaluation, that: 1) the licensee has taken corrective actions regarding the delays and has made a responsible effort to implement the NUREG-0737 requirements noted; 2) there is good cause for the delays; and 3) as noted above, interim compensatory measures have been provided.

In view of the foregoing, I have determined that these modifications and actions are required in the interest of public health and safety and, therefore, the licensee's commitment should be confirmed by Order.

IV.

Accordingly, pursuant to Sections 103, 161i, and 161o of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, IT IS HEREBY ORDERED EFFECTIVE IMMEDIATELY THAT THE LICENSEE SHALL:

> Implement and maintain the specific items described in the Attachments to this Order in the manner described in the licensee's submittals noted in Section III herein no later than the dates in the Attachments.

V.

The licensee may request a hearing on this Order within 20 days of the date of publication of this Order in the Federal Register. A request

for a hearing shall be addressed to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

A copy shall also be sent to the Executive Legal Director at the same address. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

If a hearing is requested by the licensee, the Commission will issue an Order designating the time and place of any such hearing.

If a hearing is held concerning this Order, the issue to be considered at the hearing shall be whether the licensee should comply with the requirements set forth in Section IV of this Order. This Order is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert A. Purple, Deputy Director
Division of Licensing
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland,
this 25th day of March 1983.

Attachments:
1. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-05
2. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-10

Attachment 1

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737 Schedule	Requirement	Licensee's Completion Schedule (or status)
I.A.3.1	Simulator Exams	10/1/81	Include simulator exams in licensing examinations	Complete
II.B.2	Plant Shielding	1/1/82	Modify facility to provide access to vital areas under accident conditions	Complete
II.B.3	Post-Accident** Sampling	1/1/82	Install upgraded post-accident sampling capability	To be addressed in separate action
II.B.4	Training for Mitigating Core Damage	10/1/81	Complete training program	Complete
II.E.4.2	Containment Isolation Dependability	7/1/81	Part 5-lower containment pressure setpoint to level compatible w/normal operation	Complete
		7/1/81	Part 7-isolate purge & vent valves on radiation signal	Complete
II.F.1	Accident Monitoring	1/1/82	(1) Install noble gas effluent monitors with local readout capability	12/31/84
			Install control room instrumentation	Prior to start-up in Cycle 7 (7/86)
		1/1/82	(2) Provide capability for effluent monitoring of iodine with local readout capability	12/31/84
			Install control room instrumentation	Prior to start-up in Cycle 7 (7/86)
		1/1/82	(3) Install incontainment radiation-level monitors	Prior to start-up in Cycle 6 (9/84)

**Not part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
II.F.1		1/1/82	(4) Provide continuous indication of containment pressure	Prior to start-up in Cycle 6 (9/84)
		1/1/82	(5) Provide continuous indication of containment water level	Prior to start-up in Cycle 6 (9/84)
		1/1/82	(6) Provide continuous indication of hydrogen concentration in containment	Complete
II.K.3.15	Isolation of HPCI & RCIC Modification	7/1/81	Modify pipe break detection logic to prevent inadvertent isolation	Complete
II.K.3.22	RCIC Suction**	1/1/82	Modify design of RCIC suction to provide automatic transfer to torus	Technical Exception
II.K.3.24	Space Cooling for HPCI/RCIC	1/1/82	Confirm the adequacy of space cooling for HPCI/RCIC	Complete
II.K.3.27	Common reference level	7/1/81	Provide common reference level for vessel level instrumentation	Complete

**Not Part of Confirmatory Order.

Attachment 2

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
I.A.1.3.1	Limit Overtime	10/1/82 per Gen. Ltr. 82-12 dtd 6/15/82	Revise administrative procedures to limit overtime in accordance w/NRC Policy Statement issued by Generic Ltr. No. 82-12, dtd 6/15/82	Complete
I.A.1.3.2	Minimum Shift* Crew	To be superseded by Proposed Rule	To be addressed in the Final Rule on Licensed Operator Staffing at Nuclear Power Units	To be addressed when Final Rule is issued
I.C.1	Revise Emergency* Procedures	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
II.D.1.2	RV and SV Test Programs	7/1/82	Submit plant specific reports on relief and safety valve program	Complete
II.K.3.18	ADS Actuation	9/30/82	Submit revised position on need for modifications	Complete
II.K.3.30 & 31	SBLOCA Analysis*	1 yr. after staff approval of model	Submit plant specific analyses	To be determined following staff approval of model
III.A.1.2	Staffing Levels* for Emergency Situations	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined

*Not Part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
III.A.1.2	Upgrade Emer* gency Support Facilities	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.A.2.2	Meteorological* Data	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.D.3.4	Control Room Habitability	To be Determined by licensee	Modify facility as identified by licensee study	Complete

*Not Part of Confirmatory Order

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 50-296
TENNESSEE VALLEY AUTHORITY	)	
(Browns Ferry Nuclear Plant, Unit 3)	)	

ORDER CONFIRMING LICENSEE COMMITMENTS
ON POST-TMI RELATED ISSUES

I.

The Tennessee Valley Authority (the licensee) is the holder of Facility Operating License No. DPR-68 which authorizes the operation of the Browns Ferry Nuclear Plant, Unit 3 (the facility) at steady-state power levels not in excess of 3293 megawatts thermal. The facility is a boiling water reactor (BWR) located at the licensee's site in Limestone County, Alabama.

II.

Following the accident at Three Mile Island Unit No. 2 (TMI-2) on March 28, 1979, the Nuclear Regulatory Commission (NRC) staff developed a number of proposed requirements to be implemented on operating reactors and on plants under construction. These requirements include Operational Safety, Siting and Design, and Emergency Preparedness and are intended to provide substantial

additional protection in the operation of nuclear facilities based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. The staff's proposed requirements and schedule for implementation are set forth in NUREG-0737, "Clarification of TMI Action Plan Requirements." Among these requirements are a number of items, consisting of hardware modifications, administrative procedure implementation and specific information to be submitted by the licensee, scheduled to be completed on or after July 1, 1981. On March 17, 1982, a letter (Generic Letter 82-05) was sent to all licensees of operating power reactors for those items that were scheduled to be implemented from July 1, 1981 through March 1, 1982. Subsequently, on May 5, 1982, a letter (Generic Letter 82-10) was also sent to all licensees of operating power reactors for those items that were scheduled for implementation after March 1, 1982. These letters are hereby incorporated by reference. In these letters each licensee was requested to furnish within 30 days pursuant to 10 CFR 50.54(f) the following information for items which the staff had proposed for completion on or after July 1, 1981:

> (1) For applicable items that have been completed, confirmation of completion and the date of completion, (2) For items that have not been completed, a specific schedule for implementation, which the licensee committed to meet, and (3) Justification for delay, demonstration of need for the proposed schedule, and a description of the interim compensatory measures being taken.

III.

The licensee responded to Generic Letter 82-05 by letter dated April 14, 1982. By letters dated May 13, 1982 and February 1, 1983, we requested additional information on TVA's responses. TVA submitted revised responses to Generic Letter 82-05 by letters dated June 17, June 28 and July 15, 1982 and January 14 and February 28, 1983. The licensee responded to Generic Letter 82-10 by letter dated June 24, 1982. In these submittals, the licensee confirmed that some of the items identified in the Generic Letters had been completed, took technical exception to one item, and made firm commitments to complete the remainder. The attached Tables summarizing the licensee's schedular commitments or status were developed by the staff from the Generic Letters and the licensee-provided information.

Generic Letters 82-05 and 82-10 applied to 16 and 10 items, respectively, for BWRs with jet pumps. Of the 10 items listed in Generic Letter 82-10, six items are not included in this Order. Item I.A.1.3.2 is part of a separate rulemaking; Items I.C.1, III.A.1.2 (2 items), and III.A.2.2 will be handled separately following Commission actions that would proceed as a result of its consideration of SECY 82-111, as amended; and Item II.K.3.30 and II.K.3.31 (one item) is not required until one year after staff approval of the generic model and staff review of these models has not been completed.

Thirteen of the 20 items addressed in this Order are considered by the licensee to be completed or to require no modifications. The licensee is taking technical exception to one item, II.K.3.22, that will be addressed in a separate action.

On item II.B.3, TVA has completed the post-accident sampling facility. However, the tie-in of the sample lines inside the reactor vessel and the waste/flush lines to the torus are scheduled for future refueling outages. Since the staff is still evaluating TVA's design and program, this item will also be addressed in a separate action. These two items - II.B.3 and II.K.3.22 - are therefore not included in this Order.

The staff's evaluation of the licensee's delays for the remaining five items is provided herein:

II.F.1 Post-Accident Monitoring (5 items)

Three items, II.F.1.3, II.F.1.4 and II.F.1.5 are scheduled to be installed during the next refueling outage on each unit. For Unit 3, the next refueling is scheduled to start August 1, 1983 and be completed by November 28, 1983. The delay in installation has been the result of late delivery schedules in materials and vendor-supplied equipment. For two items, II.F.1.1 and II.F.1.2, installation of the monitoring instrumentation and associated equipment will be complete by December 1984. This instrumentation will have local readout capability. Providing readout in the control room can only be accomplished during an outage. TVA will be providing control room readout for these two monitors during the Unit 3 outage scheduled to Start in March 1985; the control room instrumentation will be installed prior to startup in Cycle 7 (about August 1985). The delay is primarily the result of the long time spent by TVA in designing a customized monitoring system. This approach was abandoned in June 1982 and purchase of commercially available

equipment initiated. Based on scheduled delivery of materials and components, installation will begin in June 1984 and be completed by December 31, 1984. The effluent monitors currently installed at Browns Ferry perform the functions required by II.F.1.1 and II.F.1.2, but with a smaller range than required by NUREG-0737. Also, TVA has the capability for monitoring through use of grab samples.

We find, based on the above evaluation, that: 1) the licensee has taken corrective actions regarding the delays and has made a responsible effort to implement the NUREG-0737 requirements noted; 2) there is good cause for the delays; and 3) as noted above, interim compensatory measures have been provided.

In view of the foregoing, I have determined that these modifications and actions are required in the interest of public health and safety and, therefore, the licensee's commitment should be confirmed by Order.

IV.

Accordingly, pursuant to Sections 103, 161i, and 161o of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR Parts 2 and 50, IT IS HEREBY ORDERED EFFECTIVE IMMEDIATELY THAT THE LICENSEE SHALL:

> Implement and maintain the specific items described in the Attachments to this Order in the manner described in the licensee's submittals noted in Section III herein no later than the dates in the Attachments.

V.

The licensee may request a hearing on this Order within 20 days of

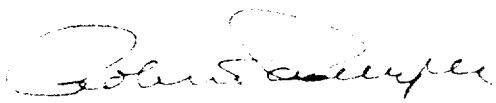
the date of publication of this Order in the Federal Register. A request for a hearing shall be addressed to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

A copy shall also be sent to the Executive Legal Director at the same address. A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

If a hearing is requested by the licensee, the Commission will issue an Order designating the time and place of any such hearing.

If a hearing is held concerning this Order, the issue to be considered at the hearing shall be whether the licensee should comply with the requirements set forth in Section IV of this Order. This Order is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Purple, Deputy, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland,
this 25th day of March 1983.

Attachments:
1. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-05
2. Licensee's Commitments on Applicable NUREG-0737 Requirements from Generic Letter 82-10

Attachment 1

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737 Schedule	Requirement	Licensee's Completion Schedule (or status)
I.A.3.1	Simulator Exams	10/1/81	Include simulator exams in licensing examinations	Complete
II.B.2	Plant Shielding	1/1/82	Modify facility to provide access to vital areas under accident conditions	Complete
II.B.3	Post-Accident** Sampling	1/1/82	Install upgraded post-accident sampling capability	To be addressed in separate action
II.B.4	Training for Mitigating Core Damage	10/1/81	Complete training program	Complete
II.E.4.2	Containment Isolation Dependability	7/1/81	Part 5-lower containment pressure setpoint to level compatible w/normal operation	Complete
		7/1/81	Part 7-isolate purge & vent valves on radiation signal	Complete
II.F.1	Accident Monitoring	1/1/82	(1) Install noble gas effluent monitors with local readout capability	12/31/84
			Install control room instrumentation	Prior to start-up in Cycle 7 (8/85)
		1/1/82	(2) Provide capability for effluent monitoring of iodine with local readout capability	12/31/84
			Install control room instrumentation	Prior to start-up in Cycle 7 (8/85)
		1/1/82	(3) Install incontainment radiation-level monitors	Prior to start-up in Cycle 6 (12/83)

**Not Part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-05

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
II.F.1		1/1/82	(4) Provide continuous indication of containment pressure	Prior to start-up in Cycle 6 (12/83)
		1/1/82	(5) Provide continuous indication of containment water level	Prior to start-up in Cycle 6 (12/83)
		1/1/82	(6) Provide continuous indication of hydrogen concentration in containment	Complete
II.K.3.15	Isolation of HPCI & RCIC Modification	7/1/81	Modify pipe break detection logic to prevent inadvertent isolation	Complete
II.K.3.22	RCIC Suction**	1/1/82	Modify design of RCIC suction to provide automatic transfer to torus	Technical Exception
II.K.3.24	Space Cooling for HPCI/RCIC	1/1/82	Confirm the adequacy of space cooling for HPCI/RCIC	Complete
II.K.3.27	Common reference level	7/1/81	Provide common reference level for vessel level instrumentation	Complete

**Not Part of Confirmatory Order.

Attachment 2

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
I.A.1.3.1	Limit Overtime	10/1/82 per Gen. Ltr. 82-12 dtd 6/15/82	Revise administrative procedures to limit overtime in accordance w/NRC Policy Statement issued by Generic Ltr. No. 82-12, dtd 6/15/82	Complete
I.A.1.3.2	Minimum Shift* Crew	To be superseded by Proposed Rule	To be addressed in the Final Rule on Licensed Operator Staffing at Nuclear Power Units	To be addressed when Final Rule is issued
I.C.1	Revise Emergency* Procedures	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
II.D.1.2	RV and SV Test Programs	7/1/82	Submit plant specific reports on relief and safety valve program	Complete
II.K.3.18	ADS Actuation	9/30/82	Submit revised position on need for modifications	Complete
II.K.3.30 & 31	SBLOCA Analysis*	1 yr. after staff approval of model	Submit plant specific analyses	To be determined following staff approval of model
III.A.1.2	Staffing Levels* for Emergency Situations	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined

*Not Part of Confirmatory Order

LICENSEE'S COMMITMENTS ON APPLICABLE NUREG-0737 ITEMS FROM GENERIC LETTER 82-10

Item	Title	NUREG-0737	Requirement	Licensee's Completion Schedule (or status)
III.A.1.2	Upgrade Emer* gency Support Facilities	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.A.2.2	Meteorological* Data	Superseded by SECY 82-111	Reference SECY 82-111, Requirements for Emergency Response Capability	To be determined
III.D.3.4	Control Room Habitability	To be Determined by licensee	Modify facility as identified by licensee study	Complete

*Not Part of Confirmatory Order