

UNITED STATES NUCLEAR REGULATORY COMMISSIONTENNESSEE VALLEY AUTHORITYDOCKET NOS. 50-259, 50-260, AND 50-296NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO  
FACILITY OPERATING LICENSE AND PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION AND OPPORTUNITY FOR HEARING

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68 issued to Tennessee Valley Authority (TVA or the licensee), for the operation of the Browns Ferry Nuclear Plant (BFN), Units 1, 2 and 3, located in Limestone County, Alabama.

The proposed amendment would change the Browns Ferry (BFN) Technical Specification (TS) for Units 1, 2 and 3 to allow the Core Spray System (CSS) (Section 3.5.A.5) to be inoperable provided specific Limiting Conditions for Operation (LCO) are met. In addition, Unit 2 TS Tables 3.2.A and 3.2.B would be temporarily changed to note that Reactor Low Water Level Instruments LIS-3-203 A-D and LIS-3-58 A-D will be out-of-service during the time that the reactor vessel level monitoring upgrade system (RVLMS) is being performed. These changes are TS 260 and 261-T, respectively, in the licensee's application dated October 14, 1988.

Using the General Electric (GE) Standard Technical Specifications, the licensee's proposed amendment would state that the Core Spray is not required to be operable during refueling provided that the following steps are executed

1) reactor head is removed, 2) cavity is flooded, 3) spent fuel gates are removed, and 4) water level is maintained within specific limits. Changing the BFN TS as proposed, will allow various work (e.g., the reactor level monitoring modification) be performed in a safe and more efficient manner.

In addition, an asterisk (\*) notation for TS 3.5.A.5 would require that there would be manual initiation capability to start either 1 loop of CSS or 1 Residual Heat Removal (RHR) pump, and its associated diesel generator. This requirement would ensure that there is additional water makeup capability and emergency power source available when there is work in progress that has the potential to drain the vessel. The spent fuel pool has a low level indication which alarms in the control room. By maintaining the requirement of TS 3.5.A.5 of having one Residual Heat Removal Service Water (RHRSW) pump operable, an additional source of water supply to the spent fuel pool is assured.

In performing the reactor vessel water level monitoring system upgrade modification, two specific water level monitoring instruments will be out-of-service. These instruments either automatically initiate the actuation of the diesel generator(s) on a reactor low water level signal or the Standby Gas Treatment System and the Reactor Building Isolation upon receipt of a reactor low level signal. Since the subject modifications render the automatic function of these instruments to be out-of-service, the licensee cannot meet the current TS. The proposed amendment request would grant temporary relief to permit fuel to be moved from the spent fuel pool to the reactor without the automatic initiation functions of these two instruments. During the time the automatic initiation logic is out-of-service, manual initiation of these systems would be available.

Before issuance of the proposed amendment, the Commission will have made findings required by the Atomic Energy Act of 1954 (the Act), as amended, and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The basis for this proposed determination is provided by the licensee in its submittal and is given below.

NRC has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards considerations if operation of the facility in accordance with the proposed amendment would not 1) involve a significant increase in the probability or consequences of an accident previously evaluated, or 2) create the possibility of a new or different kind of accident from an accident previously evaluated, or 3) involve a significant reduction in a margin of safety.

1. The proposed change does not involve a significant increase in the probability or consequences of any accident previously evaluated.
  - a. Changing TS LCO 3.5.A.5 does not change any of the design criteria or bases for which BFN was licensed. The BFN Final Safety Analysis Report (FSAR) and the assumptions made in the accident analysis are not invalidated as a result of this change. The proposed change requires specific conditions to be met when the CSS is not needed to be operable. In addition to those conditions identified in the GE Standard TS, we are adding the requirements to have manual initiation capability available for either 1 CSS loop or 1 RHR pump, and their associated diesel generator(s), when work is being performed with the capability of draining the reactor vessel. This along with the requirement of having 1 RHRSW pump operable ensures that adequate water is available for makeup to the reactor vessel. The proposed change is still bounded by the FSAR analysis since the change only applies to operability requirements in the cold shutdown or refuel conditions.

- b. This temporary change would allow the Reactor Low Water Level Instrument (LIS-3-203 A-D) to be out-of-service during that time in which the reactor vessel level monitoring system modification is being installed. When the reactor water level falls below the low level setpoint, this instrument automatically initiates the Standby Gas Treatment System and Reactor Building Isolation. The intended safety function of these systems is still maintained through the manual initiation capability. In addition to having manual initiation capability available, these systems would still automatically initiate upon receipt of a high radiation signal. Again, this temporary relaxation does not invalidate any safety-related function or analysis in which BFN was licensed.
  - c. This temporary change would allow the Reactor Water Level Instrument (LIS-3-58 A-D) to be out-of-service during that time in which the reactor vessel level monitoring system modification is being installed. One of the functions of this instrument is to automatically actuate the diesel generator(s) when the reactor water level falls below the low level setpoint. Maintaining the manual initiation capability of the diesel generator(s) ensures that emergency power is available to either the CSS or RHR system. This ensures that adequate makeup water is available to either the CSS or RHR system. This ensures that adequate makeup water is available to the reactor vessel. This proposed change does not invalidate the BFN FSAR and the design basis to which BFN was designed.
2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.
- a. The proposed changes, as stated above, are enveloped by the current BFN FSAR. Even though the automatic initiation logic for the CSS and RHR system will be out-of-service during the specific LCO conditions-stated in LCO 3.5.A.5, the addition of the asterick notation (\*) requiring that manual initiation capability for 1 CSS loop or 1 RHR pump ensures that adequate water supply is available to keep the reactor core covered.
  - b. The temporary relaxation of allowing instrument LIS-3-203 A-D to be out-of-service, will not introduce a new accident. Again, there is manual capability available to initiate the Standby Gas Treatment System and Reactor Building Isolation in the event they are needed to perform their intended safety function. In addition, these systems will still have automatic initiation capability available if a high radiation signal were received. The high radiation monitor is located on the refueling floor.

- c. The temporary relaxation of allowing instrument LIS-3-58 A-D to be out-of-service, will not introduce a new accident different than that previously evaluated. Requiring the manual actuation capability of the diesel generator(s) provides additional assurance that either the CSS or RHR system would be able to provide makeup water to the reactor vessel if needed. By providing this assurance, BFN would be in a condition bounded by the current FSAR.
3. The proposed changes does not involve a significant reduction in a margin of safety.
- a. By identifying the specific LCO conditions when the CSS and RHR automatic initiation logic could be out-of-service, added assurance is provided that an adequate margin of safety is maintained. In addition to the subject conditions, the proposed TS requires that a RHRSW pump is operable and the capability of manual initiation of 1 CSS loop or 1 RHR pump and an associated diesel generator are available. This would ensure that adequate equipment is available to perform their intended safety function.

The bases section of the BFN TS (3.5) states that by requiring the spent fuel pool gates to be open with the vessel head removed, the combined water inventory in the fuel pool, the reactor cavity, and the separator/dryer, between the fuel pool low level alarm and the reactor vessel flange, is approximately 65,800 cubic feet (492,000 gallons). This will provide adequate low pressure cooling in lieu of CSS and RHR (LPCI and containment cooling mode) as required in TS 3.5.A.4 and 3.5.B.9. With the additional requirements placed on TS 3.5.A.5, of having manual operation capability of 1 loop of CSS, 1 RHR pump, and automatic operation of 1 RHRSW pump a redundant supply of water is provided.

The BFN FSAR LOCA analysis assumes a pipe break under operating conditions in which the reactor is pressurized. This would allow the reactor vessel to drain at a faster rate than if the head were removed. As discussed above, requiring the cavity to be flooded, the spent fuel pool gate be opened, and that at least one RHRSW pump be operable, when irradiated fuel is in the vessel, ensures that an adequate supply of water is available to maintain the reactor core covered. In addition, the spent fuel pool has a low level alarm that alarms in the control room. When this alarm is received, makeup water can be supplied either through the RHRSW pump and/or the available CSS loop or RHR pump. Ensuring that the associated diesel generator has manual initiation capability during this LCO provides added assurance that emergency power is available therefore, adequate makeup capability will be maintained. By ensuring these conditions are met, the margin of safety is not significantly reduced.

- b. The temporary relaxation to allow instrument LIS-3-203 A-D to be out-of-service during that time in which the reactor vessel level monitoring system modification is being performed does not significantly reduce the margin of safety since the manual initiation of the Standby Gas Treatment System and Reactor Building isolation would be available.

Along with the manual initiation capability of these systems, their automatic initiation capability will still be available upon receipt of a high radiation signal. These systems will be able to perform their intended safety function.

- c. The temporary relaxation to allow instrument LIS-3-58 A-D to be out-of-service during that time in which the RVLMS is being performed does not significantly reduce the margin of safety since the manual initiation of the diesel generator(s) would be available. Manual initiation would supply power to the CSS and RHR system if required to perform their intended safety function.

The staff has reviewed the licensee's no significant hazards consideration determination and agrees with the licensee's analysis. Therefore, the staff proposes to determine that the application for amendments involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Comments should be addressed to the Regulatory Publications Branch, Division of Freedom of Information and Publication Services, Office of Administration and Resources Management, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice.

By November 28, 1988, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license,

and any person whose interest may be affected by the proceeding and who wishes to participate as a party in the proceeding must file a written petition for leave to intervene. Request for a hearing and petitions for leave to intervene must be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board Panel will rule on the request and/or petition, and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene must set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made a party to the proceedings; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which the petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, the petitioner shall file a supplement to the

petition to intervene which must include a list of the contentions which are sought to be litigated in the matter, and the bases for each contention set forth with reasonable specificity. Contentions should be limited to matters within the scope of the amendment under consideration. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the request for amendment involves no significant hazards consideration, the Commission may issue the amendment and make it effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the request for amendment involves a significant hazards consideration, any hearing held would take place before the issuance of the amendment.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards

consideration. The final determination will consider all public and state comments received. Should the Commission take this action, it will publish a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Docketing and Service Branch, or may be delivered to the Commission's Public Document Room, Gelman Building, 2120 L Street, N.W., Washington, D.C., by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by toll-free telephone call to Western Union at 1-800-325-6000 (in Missouri 1-800-342-6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to Suzanne C. Black: petitioner's name and telephone number; date petition was mailed; plant name; and publication date and page number of this FEDERAL REGISTER notice. A copy of the petition should also be sent to the Office of the General Counsel, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, and to the General Counsel, Tennessee Valley Authority, 400 West Summit Hill Drive, E11 B33, Knoxville, Tennessee 37902.

Nontimely filings of the petition for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board designated to rule on the

For further details with respect to this action, see the application for amendment which is available for public inspection at the Commission's Public Document Room, Gelman Building, 2120 L Street, Washington, D.C., 20555, and at the Local Public Document Room located at the Athens Public Library, South Street, Athens, Alabama 35611.

Dated at Rockville, Maryland, this 20th day of October 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by

Suzanne C. Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Special Projects

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