

October 12, 1984

Docket No. 50-296

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

Dear Mr. Parris:

SUBJECT: IGSCC INSPECTION PER AUGUST 26, 1983 ORDER

Re: Browns Ferry Nuclear Plant, Unit 3

On August 26, 1983 the Commission issued "IGSCC Inspection Order Confirming Shutdown" (Order) for the Browns Ferry Nuclear Plant, Unit 3. Section III.C. required that "the facility shall remain in cold shutdown until the Director, Office of Nuclear Reactor Regulation, finds that the licensee has satisfactorily completed the following actions, or has provided adequate justification for not completing a given action."

Item 1 of the Order required that, to the extent practical, you conduct an ultrasonic examination of 100% of the welds on 304 stainless steel piping greater than or equal to 4" in the recirculation system and the Class 1 portions of the Residual Heat Removal (RHR), Core Spray and Reactor Water Cleanup systems. We have determined that this was accomplished. A total of 192 welds were examined. You also elected to examine a number of other welds that were not specifically covered. No indications of any cracks were found in the welds you were required to examine by the subject Order.

Item 2 of the subject Order required that you provide a list of welds that you would not be able to examine with a technical justification for not conducting such inspections. The list was provided by your letter of September 22, 1983. Adequate justification was provided for not being able to examine some welds in all directions due to design access restrictions. Where you could not fully examine a weld, the inspection was augmented by surface examination. We find that you fully complied with Item 2 of the Order.

Item 3 of the Order required that all ultrasonic test (UT) personnel demonstrate the capability for detecting intergranular stress corrosion cracking (IGSCC). We have determined that you complied with Item 3.

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Item 4 required that, based on the results of the inspections, you take appropriate corrective action. Since no indications of cracks were found in the welds you were required to inspect, no evaluations or repairs were indicated. To reduce the potential for IGSCC, Induction Heating Stress Improvement (IHSI) was performed on 148 welds as discussed in Attachment 5 of your August 9, 1984 report.

Item 5 of the Order required that you submit a report of the inspections. Your submittal of August 9, 1984 satisfies this requirement.

We have reviewed your report and other information provided and find that TVA has satisfactorily completed the actions required by the Order and therefore, Unit 3 may be returned to full power operation. My decision is based on the staff review as described in the enclosed Safety Evaluation.

During the year-long outage of Unit 3, you examined various welds that were not specifically required to be inspected by the subject Order. An unacceptable indication was found in the head spray piping; this piping was removed from service. A possible linear indication not indicative of IGSCC was found in the reactor water cleanup system between the isolation valves; we concurred that the extent of the indication did not require repair or other corrective action. During the outage, you also inspected both jet pump instrument nozzles, which you repaired with weld overlays. The results of these inspections and repairs were also described in your August 9, 1984 report. As discussed in the enclosed Safety Evaluation, we have determined that the inspection and repairs were performed satisfactorily.

Items A.1 and A.2 of the Order required that "notwithstanding the current Technical Specifications for the facility and during the interim period prior to the conduct of the inspections" discussed above, that you implement certain compensatory measures - namely, monitoring the drywell unidentified leakage every 8 hours and reducing to three days the sump pump monitoring system out of service time. These were the same time limits specified in four other Confirmatory Orders issued on the same date to other operating BWRs. You not only implemented the more stringent constraints on unidentified leakage for Browns Ferry Unit 3 but proposed changes to the Technical Specifications that would permanently include these restrictions on all three Browns Ferry units. These more stringent limits were incorporated in Amendment Nos. 94, 87 and 60 issued December 27, 1983.

On April 19, 1984, we issued Generic Letter No. 84-11 on "Inspection of BWR Stainless Steel Piping." This letter reflects the recommendations of NRC's Piping Review Committee as endorsed by the Committee for Review of Generic

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Requirements. Attachment 1 of the Generic Letter contains the NRC's proposed current requirements on leak detection and leakage limits. There are two variations from previous requirements - namely, that sump level monitoring systems be monitored at 4 hour intervals rather than 8 hour intervals and that the outage time for inoperable instruments which are accessible during operation be limited to 24 hours. In view of these new requirements, we request that in the near-term that you submit appropriate revisions to the Technical Specifications for the Browns Ferry units.

Sincerely,

Original Signed by
H. R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
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Handwritten signature and date:
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Mr. Hugh G. Parris
Tennessee Valley Authority
Browns Ferry Nuclear Plant, Units 1, 2 and 3

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