



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555

ENCLOSURE

AUDIT REPORT ON TENNESSEE VALLEY AUTHORITY CONFORMANCE WITH  
TITLE 10 OF THE CODE OF FEDERAL REGULATIONS PART 50.4, 50.59, 50.71(e)  
IN AMENDMENT 8 OF THE BROWNS FERRY UPDATED FINAL SAFETY ANALYSIS REPORT

The updated Final Safety Analysis Report is an annual requirement in the Code of Federal Regulations, Part 50.71(e) for all licensees. Amendment 8 is the update required for calendar year 1990. It includes changes made to the Browns Ferry Nuclear Plant (BFN) facility and procedures as described in the FSAR prior to the BFN annual cutoff date of January 22, 1991.

The criteria established for the audit included:

1. Comparing the UFSAR Amendment 8 with the list of 50.59 changes in the Tennessee Valley Authority (TVA) BFN Units 1, 2, and 3 Annual Operating Report for January 1 to December 31, 1990.
2. Comparing the UFSAR Amendment 8 with site licensing control records to determine if all 50.59 changes including changes greater than six months old from the date of filing were included in the updated FSAR.
3. Confirming that a duly authorized officer of TVA certified the accuracy and completeness of UFSAR Amendment 8.
4. Ensuring that TVA's records for the UFSAR include all changes made to the BFN facility or procedures.
5. Ensuring that safety evaluations written by TVA and maintained in the site licensing files supporting Amendment 8, support the changes made and conclude that the changes do not involve an unreviewed safety question.
6. Ensuring that TVA records supporting the UFSAR include all safety analyses of new safety issues performed by or on behalf of the licensee at the Commission's request and the updated information is appropriately located within the UFSAR.

Amendment 8 of the FSAR was compared by the staff to the itemized list of 50.59 changes enumerated in the BFN Annual Operating Report for Units 1, 2 and 3 covering calendar year 1990, transmitted March 1, 1991. BFN site licensing performs the necessary work involved with physically preparing UFSAR amendments between January and July of each year. During this period, 50.59 changes to the FSAR to be included in the Annual Operating Report and published the following year, are received. There were 34 items reported as 50.59 changes. Twenty-one of these changes were incorporated in Amendment 7 and the remaining 13 were incorporated in Amendment 8.

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As a part of the audit at the BFN site, the staff compared Amendment 8 of the FSAR with BFN site licensing internal records for control of all FSAR changes. Site licensing utilizes BFN's "Records Information Management System" (RIMS) to collect information and data pertinent to licensing documentation. Amendment 8 records include an annotated copy of Amendment 7. The change package annotations are marginal notes on related pages of the FSAR Amendment 7 identifying the change package by RIMS number, the pertinent safety evaluations (also identified by a unique number) and copies of source documentation used to modify the text, tables or drawings for Amendment 8.

The file for Amendment 8 includes 406 change packages, each identified by individual RIMS numbers. The staff observed changes documented in the "living FSAR" change file identified for Amendment 8. Each section of the Amendment 8 published version of the FSAR was checked out against Amendment 7 and the marked-up changes to ensure that procedures were being followed to effect the changes.

There were 785 page changes in the text, tables and diagrams. In addition to drawing and figure changes due to physical changes to the plant and calculation changes and corrections to tables, BFN took the opportunity in Amendment 8 to reprint their drawings, flow charts and piping and instrumentation diagrams. The advances in computer aided design and graphic reproduction technology enable BFN to provide sharper focus on these figures and make a document more readable than the original issue. TVA replaced 252 figures with improved reproductions.

The staff examined pertinent procedures and audited the control of revisions to the procedures which must be followed by site personnel specifically involved in the transmission of information and data as well as effecting the physical changes to the updated FSAR. The BFN Operations Vice President is in the process of changing the identifying title for procedures from "Site Director Standard Practice" (SDSP) to "Site Standard Practice" (SSP). Several of the standards which control the changes to the plant and documentation of changes to the plant were revised.

Physical changes to the plant, including attendant drawing changes and calculations are accomplished by means of Design Change Notices (DCN). The DCN is controlled by SSP 12.13, Revision 0, entitled "10 CFR 50.59 Evaluation of Changes, Tests and Experiments." This procedure was approved July 5, 1991 and made effective July 18, 1991. SSP 12.13 replaces and supercedes SDSP 27.1. The BFN procedure governing approval of the DCN is SDSP 27.4, "Plant Operations Review Committee" (PORC). The current issue of SDSP 27.4 is Revision 11, effective May 16, 1991. SDSP 8.1, "Plant Modifications/Design Change Approval", Revision 9, provides instructions for ECN/DCN initiation and release for schedule.

BFN site licensing maintains two copies of the FSAR; the current amendment and a second copy of the current revision annotated with in-process changes. BFN SSP 4.2, "Management of the Final Safety Analysis Report" (FSAR), controls the items to be listed in the annual operating report and provides for the second FSAR copy called the "living FSAR" as a control for in-process changes. The current issue of SSP 4.2 is Revision 0 approved August 13, 1991 and effective August 21, 1991. SSP 4.2 replaces and supersedes SDSP 15.7.

The remainder of substantive changes (i.e., changes to the plant involving the DCN process) were made according to Nuclear Engineering NEP 2.3, "Control of Changes to Licensing Documents." The current issue of NEP 2.3 is Revision 0 - PCN 1, approved by the Chief Engineer and issued March 26, 1991.

The process used by the Nuclear Engineering Department is line-in, line-out annotation of the FSAR text being amended. In this case, Amendment 7 was annotated by nuclear engineering and transmitted to BFN Site Licensing. Site Licensing verified the annotations by using the "living FSAR" which was marginally annotated by Site Licensing according to SSP 4.2, identifying changes in process.

The staff verified that controls maintained by BFN are in place and are followed effectively by the three entities principally involved - site licensing, nuclear engineering and plant operations. The procedures used were reviewed by the staff to verify that the approval and revision processes are viable. The staff finds that the BFN site meets Criteria 1 and 2 described on Page 1 of this report by comparing the UFSAR Amendment 8 with 50.59 changes enumerated in the BFN Annual Operating Report and determining that all changes, including 50.59 changes, greater than six months old were incorporated in Amendment 8 of the FSAR.

The staff finds that the BFN site meets Criterion 3 that a duly authorized officer of TVA certified in the July 17, 1991 transmittal letter that Amendment 8 of the UFSAR accurately presents changes made to the plant since the previous submittal. The staff finds that the BFN site meets Criteria 4, 5 and 6 as follows: TVA records for the UFSAR Amendment 8 include all changes made to the facility or procedures; all safety evaluations performed by the licensee support the changes made and these changes do not involve an unreviewed safety question; and all analyses of new safety issues performed by or on behalf of the licensee at the Commission's request are part of the updated information and located within the FSAR as appropriate. The staff finds that TVA meets the tests acceptably.

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