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JUN 12 1992

U.S. Nuclear Regulatory Commission
ATTK: Document Control Desk
Washington, D.C. 20555

Gentlemen:

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

BROWNS FERRY NUCLEAR PLANT (BFN) - REQUEST FOR REVISION TO SAFETY
EVALUATION ISSUED BY NRC ON JANUARY 10, 1990, RELATED TO COMPONENT AND
PIECE PART QUALIFICATION PLAN

On January 10, 1990, in a letter from S. C. Black to O. D. Kingsley, Jr., NRC issued a Safety Evaluation related to BFN's component and piece part qualification program for BFN Unit 2. In this letter, NRC concluded, the program should acceptably correct previous deficiencies in the component and piece part qualification area. Subsequently, TVA's letters to NRC dated January 9, 1991, and July 10, 1991, informed NRC that the Components and Piece Parts Qualification Program for Units 3 and 1 would be implemented in accordance with the Unit 2 criteria and implementation precedents. The enclosure to this letter provides justification for a change in methodology from the Unit 2 program. Specifically, the Unit 3 action plan is a change in methodology from the Unit 2 program which utilizes work smart methods that will maintain the effectiveness and level of assurance in satisfying program requirements. Therefore, TVA requests a revision to the NRC Safety Evaluation to address the change in methodology for Units 3 and 1.

Sincerely,

R. R. Baron
Manager of Site Licensing

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

JUN 12 1992

Enclosure

cc (Enclosure):

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ENCLOSURE

UNIT 3 AND UNIT 1 COMPONENT AND PIECE PART QUALIFICATION PLAN

INTRODUCTION

On January 10, 1990, in a letter from S. C. Black to O. D. Kingsley, Jr., NRC issued a Safety Evaluation related to BFN's component and piece part qualification program for BFN Unit 2. In this letter, NRC concluded, the program should acceptably correct previous deficiencies in the component and piece part qualification area. Subsequently, TVA's letters to the NRC dated January 9, 1991 and July 10, 1991, provided TVA's plan for achieving the restart of BFN Units 3 and 1 (3/1). Specifically, these letters informed the NRC that the Components and Piece Part Qualification Program for Units 3/1 would be implemented in accordance with the Unit 2 criteria and implementation precedents. The purpose of this enclosure is to clarify the methodology utilized for completion of the Unit 3/1 activities. Specifically, the Unit 3 action plan is a change in methodology from the Unit 2 program, and utilizes work smart methods that will maintain the effectiveness and level of assurance in satisfying program requirements. The following discussion provides justification for revision of the methodology.

BACKGROUND

TVA's self evaluation conducted between 1983 and 1985, and an NRC inspection in November 1986, identified deficiencies in TVA's site-wide practices for the procurement and control of safety-related replacement parts. To correct these deficiencies, TVA established the Items Evaluation Group (IEG). The primary purpose of IEG was to involve Nuclear Engineering in the procurement process as an integral part and to: 1) verify that previously environmentally qualified equipment had not been degraded through the use of spare and replacement parts, and 2) establish programs and practices that will ensure that previously qualified equipment (seismically and environmentally) would not be degraded in the future through the use of spare and replacement parts.

For Unit 2, these actions were scheduled to be completed in two phases. The first phase, which was required for restart of Unit 2, consisted of 1) reviewing maintenance history in order to identify activities that replaced safety-related components, 2) performing evaluations of replacement items installed in 10 CFR 50.49 systems, and 3) performing evaluations of the 10 CFR 50.49 inventoried commercial grade spare parts to assure that their subsequent use would not degrade previously qualified equipment. These tasks were completed in June 1990, and analysis of the results yielded a nonconformance percentage of less than one percent. Specifically, sixteen nonconforming items were identified from the review of approximately 226,000 replacement items potentially affecting 10 CFR 50.49 equipment. TVA's letter to the NRC dated April 16, 1991, documents completion of the Phase 1 actions and commitments for Unit 2. NRC conducted a broad based performance oriented procurement inspection on Unit 2 (NRC IR-90-36) and concluded that BFN has a continually improving, viable, and workable procurement program currently in place that has been adequately implemented for Unit 2.

The second phase was a Unit 2 postrestart item consisting of: 1) performing evaluations of both installed and inventoried items used in non-10 CFR 50.49 safety-related applications, 2) developing pre-engineered specifications that would detail the technical and quality requirements, and 3) establishing a conditional release program. Items 2 and 3 have been completed and Item 1 will be completed by September 30, 1993. It should be noted that completion of the postrestart activities for Unit 2 also applies to Units 3 and 1. TVA committed in a letter to the NRC dated January 9, 1991, to complete both phases of the Unit 2 Component and Piece Part Program for Units 3/1 prior to their respective restart dates.

UNIT 3 AND UNIT 1 PROGRAM

The Units 3/1 program addresses the qualification of two categories of components: 1) safety-related components in non-10 CFR 50.49 applications and 2) components in 10 CFR 50.49 applications. These categories correspond with the two categories identified for the Unit 2 prerestart and postrestart commitments.

With respect to safety-related components in non-10 CFR 50.49 applications, TVA evaluations are being completed as initially planned and will encompass all three units at BFN. These evaluations are the second phase (Unit 2 postrestart) of the Unit 2 component and piece part qualification program. TVA considers that since the scope has not changed for these evaluations, additional staff review is not required. However, with respect to components in 10 CFR 50.49 applications, TVA's methodology for Units 3/1 will differ from the methodology used for the Unit 2 components. Specifically, the Unit 3/1 evaluations will rely on statistical sampling techniques to achieve a 95/95 confidence level of qualification adequacy as opposed to the 100 percent sampling performed for Unit 2. This change in methodology is justified since only 16 nonconformances were identified during the review of approximately 226,000 specific items for Unit 2.

The statistical sampling method will be applied to the population of Unit 3 components in 10 CFR 50.49 applications that are not subject to replacement or rework. Classes of components which have been identified for replacement or rework include:

- Cables,
- Cable splices on safety related equipment located in harsh environments,
- Components having no replaceable parts, such as Fenwall temperature switches,
- Limitorque valve motor operators, and
- Any additional components identified for replacement with qualified components.

TVA estimates that approximately 500 specific components will remain to be evaluated for Unit 3. A sampling of these approximately 500 components will be performed to achieve reasonable assurance commensurate with the results of the Unit 2 effort. The sample size of 59 items randomly selected from a cross section of 10 CFR 50.49 components is based on statistical analysis to achieve a 95/95 confidence level. The maintenance history of these components and the 16 nonconforming items identified during the Unit 2 prerestart activities will be reviewed. The maintenance history review of the sampled components will provide assurance of similarity of procurement activities between the units at BFN.

The maintenance history review (which includes TVA 575N forms and work plans associated with the components) will identify replacement parts currently installed in each application. Each part will then be evaluated for: 1) traceability to the procurement contract, 2) adequate procurement contract technical and quality assurance requirements, and 3) documentation for acceptability. Action will be taken to address any identified nonconforming items and the sampling will be expanded if necessary.

The results of the Unit 3 evaluations will then be compared to the results of the Unit 2 activities to provide assurance that items installed in Unit 3 applications were procured to the same requirements as for those items installed in Unit 2. Additionally, this activity will demonstrate that items issued for Unit 3 installations were controlled to the same warehouse procedures as for those items issued for Unit 2. A similar program will be followed for the Unit 1 components prior to the restart of Unit 1.

SUMMARY

The Unit 2 program at BFN reviewed 100 percent of the components and replacement items used in 10 CFR 50.49 applications. The Unit 3/1 program will take credit for the Unit 2 evaluations and will provide reasonable assurance that Unit 3/1 items are acceptable. This approach consists of the evaluation of 59 items randomly selected from a cross section of 10 CFR 50.49 components and the 16 nonconforming items identified by the Unit 2 effort. TVA concludes that sufficient justification for this approach exists since the Unit 2 results yielded such a small percentage (less than one percent) of nonconformance. In addition, the sample size for Unit 3 is based on statistical analysis to achieve a 95/95 confidence level, thereby providing reasonable assurance of acceptability for the entire population.