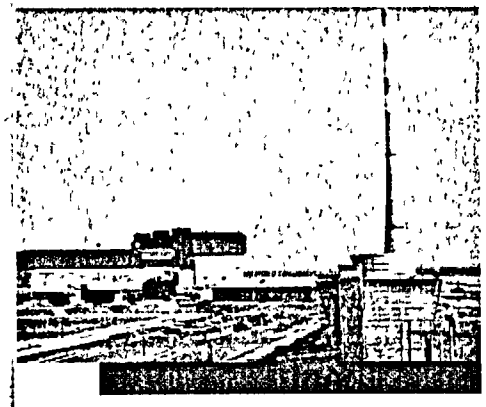
Tennessee Valley Authority
Browns Ferry Nuclear Plant
Units 1, 2, and 3



License Renewal Application

TVA / NRC Meeting

Nuclear Reactor Regulation - Rockville, MD

October 31, 2002

Agenda

❖ Introduction	Tim Abney
❖ Application Approach – Unit 1	Ray Alexander
❖ Application Examples	Gary Adkins
❖ Application Review Schedule	Tim Abney
❖ Closing Remarks	Tim Abney

Introduction

- Meeting Objectives
  - Present TVA's approach for the preparation of a three-unit license renewal application for Browns Ferry Nuclear Plant using the latest standard application format
  - Provide the Staff with examples that demonstrate the impact of Unit 1 restart activities on the application
  - Obtain Staff feedback on TVA's approach
- Background
  - License renewal letter of intent submitted on June 1, 2000
  - TVA Board decision to restart Unit 1 on May 16, 2002
  - TVA/NRC meeting on July 24, 2002 to discuss plans for a three-unit license renewal application
- License Renewal Project Status
- Unit 1 Restart Program Status

Application Approach – Unit 1

- TVA plans to submit using the standard application format guidance for the class of 2003
  - Unit 1 differences will be annotated in combined application format similar to previous multi-site applications from other utilities
- TVA will reflect the Unit 1 CLB in the application
  - Implement process for reviewing Unit 1 modifications for impact on the LRA
- Operating experience
  - Three identical units - Units 2/3 OE applicable to Unit 1
- AMRs - same aging management programs are credited for all three units
  - Common aging management programs will be evaluated against the GALL and credited for all three units

Application Approach – Unit 1, continued

- The Unit 1 current licensing basis is well-known, documented
  - Unit 1 elements of the SAR have been maintained
  - Unit differences identified
  - SAR update planned just prior to LRA submittal
  - Unit 1 Technical Specifications converted to Improved Standard & Unit 1 TRM issued in 1998
- In addition to the SAR, the following licensing and design basis documents are currently being used for Unit 1 scoping, screening and material identification
  - Safe Shutdown Analysis
  - Engineering Specifications, Design Standards
  - Design Criteria Documents
  - System Mechanical Control and Flow Drawings (verified by walkdown)
  - Bills of Material
  - Station Blackout Calculation
  - Vendor Manuals/Drawings
  - Electronic Docket
- Based on Units 2/3, TVA knows the ultimate Unit 1 licensing basis
  - The scope of the Unit 1 modification program is clearly defined
  - TVA's plan for Unit 1 will result in three identical units at restart

Application Examples

- Main Steam Modification - FAC resistant piping installation
  - Results in a material change (sub-material) in the Browns Ferry license renewal database
  - No new application commodity type
  - No impact on scoping and screening results
- RHR & Recirculation Systems Modification – IGSCC resistant piping installation
  - Sub-material change in the database
  - Scoping results – no application impact
  - AMR results – no application impact
- Main Steam Unit 1 Modification – Increased MSIV allowable leakage
  - Intended function difference has minor impact on scoping results
  - AMR results annotated based on current Unit 1 licensing basis
  - No new aging management programs
  - Staff review of the aging management programs credited in the application directly applicable to the ultimate Unit 1 licensing basis
- Other Examples
  - Connection of Unit 1 piping to existing Auxiliary Decay Heat Removal System
    - New system for Unit 1
    - In scope for containment isolation function
  - Hardened Wet-Well Vent
    - New installation for Unit 1
    - In scope for primary containment function

Application Examples, continued

- TLAA Example – Reactor Pressure Vessel Integrity
  - Unit 1 licensing basis differences annotated
  - 52 EFPY analysis for all three units being performed by the extended power uprate project
- Appendix B Program Example – Flow Accelerated Corrosion Program
  - Common program applied to all three units
  - TVA responses to Staff RAIs applicable to all three units
  - Unit 1 implementation commitment

Application Review Schedule

- Staff review of the three-unit BFN license renewal application can be completed more efficiently than two separate applications
  - No unique aging management programs required for Unit 1
  - License renewal inspections can be coordinated with Unit 1 restart inspection activities
- TVA recognizes that the review may take longer than the standard review schedule
- TVA is willing to make more frequent 10 CFR 54.21(b) updates to the application
- A Unit 1 license condition is acceptable to allow all three licenses to be issued concurrently
  - TVA will not restart Unit 1 without NRC approval
  - Final closeout inspection if necessary

Closing Remarks

- Browns Ferry three-unit application is consistent with Commission goals for license renewal
  - Maintain safety
    - No safety impacts associated with a three-unit application
  - Increase effectiveness and efficiency
    - Three-unit application is the most cost-effective use of NRC resources
    - Shutdown/defueled condition of Unit 1 provides unique inspection opportunities
  - Reduce regulatory burden
    - Three-unit economies of scale for TVA resources
    - Environmental data/conclusions review and re-work may be required if the Unit 1 application is delayed
  - Increase public confidence