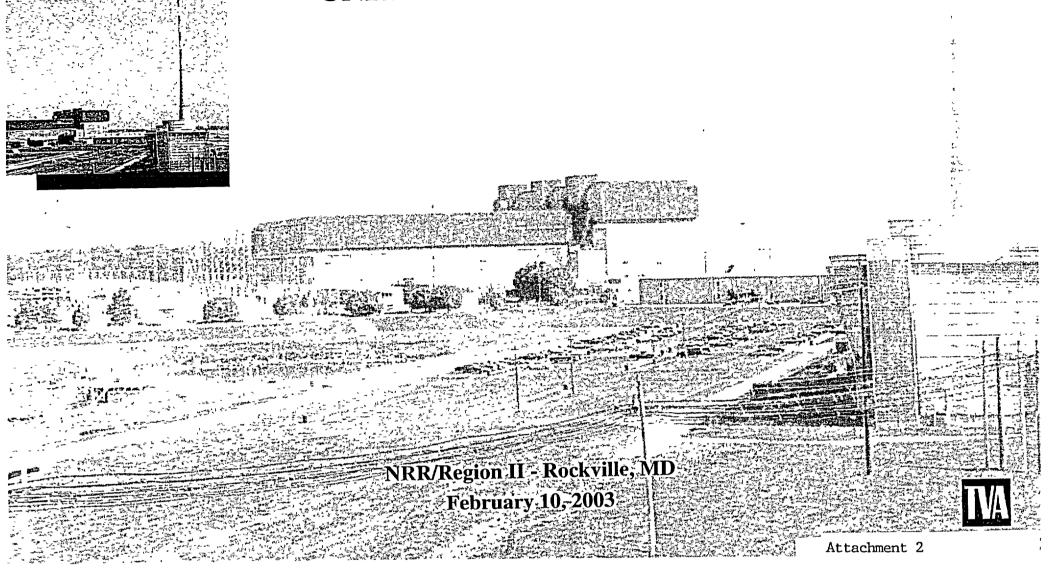
TENNESSEE VALLEY AUTHORITY BROWNS FERRY NUCLEAR PLANT UNIT 1 RESTART STATUS



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NRR/Region II - Rockville, MD February 10, 2003



Agenda

•	Introduction	- John Scalice
•	Background	- Ashok Bhatnagar
•	Unit 1 Restart Project Objectives	- Jon Rupert
•	Unit 1 Restart Organization	- Jon Rupert
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•	Unit 1 Engineering Activities Status	- Joe Valente
•	Impact on Operating Units	- Rick Drake
•	Unit 1 Maintenance & Modifications Status	- Rick Drake
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•	Corrective Action Program/Self Assessments	- Tim Abney
•	Nuclear Assurance Oversight	- Steve Tanner

Summary and Conclusion

- John Scalice



Background

- All three BFN Units are essentially identical GE BWR4, Mark I Containment reactors
- Designed and constructed by TVA
- Units 1, 2, and 3 licensed in 1973, 1974, and 1976 respectively
- All three BFN units voluntarily shutdown by TVA in March 1985, because of regulatory and management issues
 - TVA committed to obtain NRC approval prior to restart of any BFN unit
 - TVA submitted the Nuclear Performance Plan, Volume 3, in August 1986. It outlined the steps needed to recover the BFN units and was specifically directed to Unit 2



Background

- TVA executed Unit 2 restart plan, obtained NRC approval, and restarted Unit 2 on May 24, 1991
- TVA proposed regulatory framework for restart of Units 1 and 3 in July 1991, outlining improvements to the Unit 2 restart plan
- NRC approved the regulatory framework proposed by TVA in April 1992
- TVA executed the Unit 3 restart plan, obtained NRC approval, and restarted Unit 3 on November 19, 1995
- TVA Board of Directors decided on May 16, 2002, to restart Unit 1 after detailed study and favorable Supplemental Environmental Impact Statement

Ashok Bhatnagar



Unit 1 Restart Project Objectives

- Unit Fidelity
 - Return Unit 1 to service operationally the same as Units 2 and 3
 - Utilize current design criteria
 - Utilize existing TVA procedures, programs and processes
- Project Integration
 - Extensive integrated planning and scheduling which incorporated lessons learned from Units 2 and 3
 - Touch each component, system, and plant area only once
- Return Unit 1 in condition to operate safely, efficiently, and reliably

Jon Rupert



Unit 1 Restart Organization

- Dedicated resources for Unit 1 restart
- TVA management team with experience on restart of Units 2 and 3
- Bechtel is primary engineering contractor, Stone and Webster is primary maintenance and modifications contractor
- Unit 1 team closely integrated with operating units' team
- Organizational structure and strong team in place for restart effort

Jon Rupert



Unit 1 Project Overview and Schedule

- Work Scope Required for Unit 1 Restart
 - Nuclear Performance Plan Special Programs
 - Engineering analyses
 - Extensive design changes consistent with Units 2/3 restart
 - Design changes implemented since Units 2/3 restart
 - Future design changes in 5-year BFN Project Plan
 - Corrective/Preventive maintenance
 - Regulatory issues
 - Licensing actions
 - Inservice inspections
 - Restart testing

Jon Rupert 7

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Unit 1 Engineering Activities Status

Program Activities

- Design Criteria Documents complete
- Safe Shutdown Analysis complete
- Operation Mode Calculations complete
- Generic Letter 89-10 Calculations complete
- EQ Basis Calculations complete
- Analytical Limits Calculations complete
- Drywell Related Baseline Calculations complete
- Reactor Building Baseline Calculations in progress
- License Renewal Activities in progress

Joe Valente



Unit 1 Engineering Activities Status

• Design Change Packages

- Approximately 360 design change packages required for restart
- 60 design changes issued
- All design changes for the drywell are issued
- Currently, 70 design changes in progress and on schedule for Reactor Building, Control Bay and Turbine Building, and yard

Challenges

- Modifications interface
- Material supplier interactions

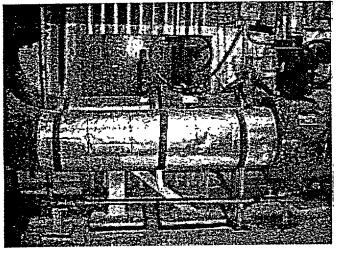
Joe Valente

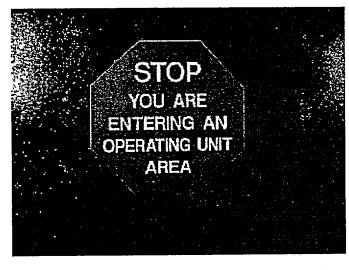


Impact on Operating Units

Access Control

- Physical access accommodations
- Personnel Identification
- Training
- Unit color codes
- Unit 1 equipment required for Unit 2/3 operation identification







Rick Drake



Impact on Operating Units

- Work Control Reviews
 - Experienced Work Control Personnel in Unit 1
 - Work schedules evaluated by operating units' personnel

Rick Drake 12



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Unit 1 Maintenance & Modifications Status

Completed Activities

- Drywell piping removal
- Drywell cable determinations
- Drywell decontamination

• Near-Term Planned Work

- Asbestos abatement
- Extraction steam piping removal
- Condenser retube preparation
- Modifications inside drywell

• Challenges

- Human performance
- Industrial safety
- Constructability of designs

Rick Drake



Regulatory Activities Status

- Proposed Regulatory Framework for Unit 1 Restart Submitted December 13, 2002
- Licensing Actions
 - Relief Requests PD-1 and PD-2 submitted October 25, 2002
 - ISI Program update submitted November 8, 2002
 - Detailed Schedules being developed for 18 license amendments

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Tim Abney



Corrective Action Program/Self Assessments

- Corrective Action Program Being Used to Monitor and Improve Quality
 - Management Review Committee Subcommittee reviews all Unit 1 Problem Evaluation Reports (PERs)
 - Extensive efforts to encourage contractors to write PERs
 - Analysis of PER data to identify trends requiring further action
- Self Assessments Completed
 - Drywell Disassembly
 - Drywell Structural Steel Design
 - Asbestos Abatement
 - Contractor Control



Corrective Action Program/Self Assessments

• Self Assessments Planned FY 03

- Mechanical Baseline Calculations
- Reactor Water Cleanup Design Change Notice
- Auxiliary Power System Analysis
- Appendix R Analysis
- Engineering Training
- Unit Barrier Separations
- Work Plan/Work Order
- Drywell Steel Modification Implementation
- Materials Process
- Drawing Improvement Program
- Corrective Action Program
- Work Control
- Rad Chem Activities
- Integrated Data base (ITEL)
- Findings from PERs and Self Assessments

Tim Abney



Nuclear Assurance Oversight

Nuclear Assurance Staffing

- Quality Control, Quality Programs, and Quality Assessments
- Inspections, Source Surveillances, Assessments, and Evaluation and Analysis
- Experienced Nuclear Assurance staff

Assessments

- Routine Observations
 - ♦ Drywell preparatory work
 - ♦ Program and support activities
- Formal Planned/Scheduled
 - ♦ Engineering Walkdown Program (Completed)
 - ♦ Vertical Slice of RHR System Design (In-progress)
 - ♦ Engineering, Maintenance & Modifications, Support, and Operations

Conclusions

- No significant issues identified to date
- Demonstrated ability to self-identify and resolve problems in Corrective Action Program

Steve Tanner



Summary and Conclusion

John Scalice