



# **TENNESSEE VALLEY AUTHORITY BROWNS FERRY NUCLEAR PLANT**

## **UNITS 2 AND 3 STATUS**

**Atlanta, GA  
July 25, 2006**



# Introduction

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- Welcome to the status meeting for Browns Ferry Units 2 and 3
- Purpose
  - Review the site status
  - Discuss upcoming activities and strategy
  - Solicit feedback

# Agenda

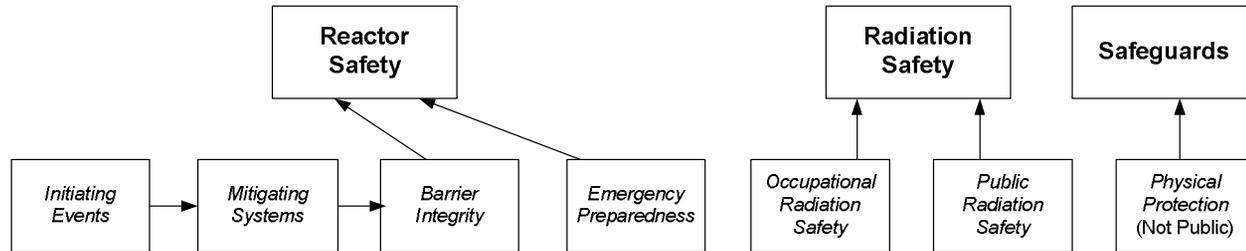
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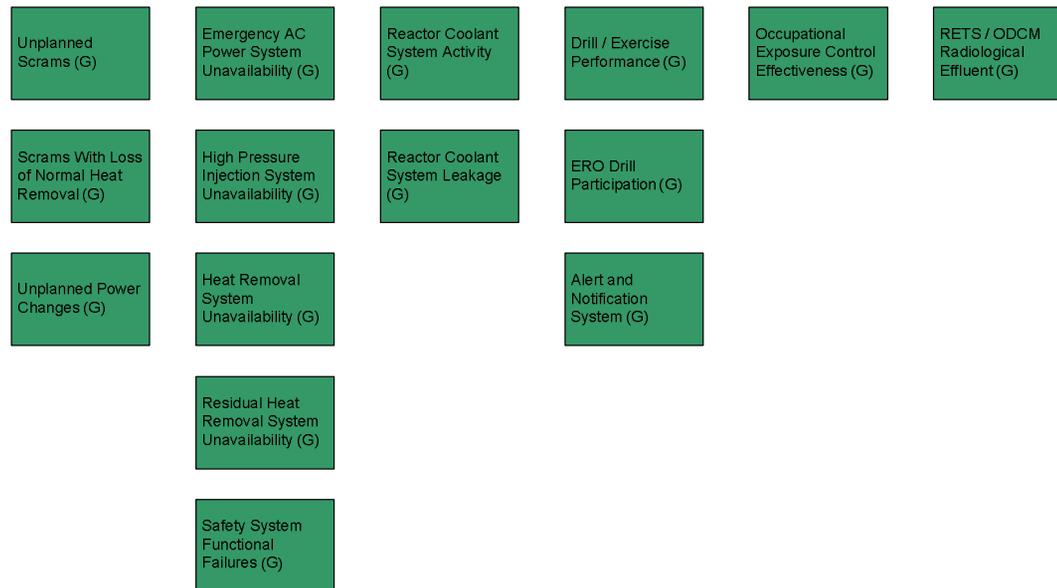
- Introduction B. Crouch
- Performance Indicators B. Aukland
- Plant Performance T. Elms
- Unit 3 Cycle 12 Outage Performance B. Aukland
- Unit 2 Cycle 14 Outage Plans B. Aukland
- Performance Improvements B. O'Grady
- Three Unit Readiness B. O'Grady
- Open Discussion

# Performance Indicators

## Browns Ferry 2 - Current Performance Summary



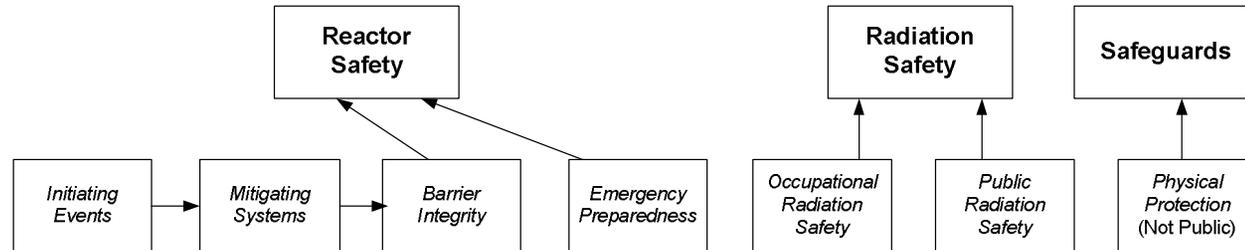
### Performance Indicators



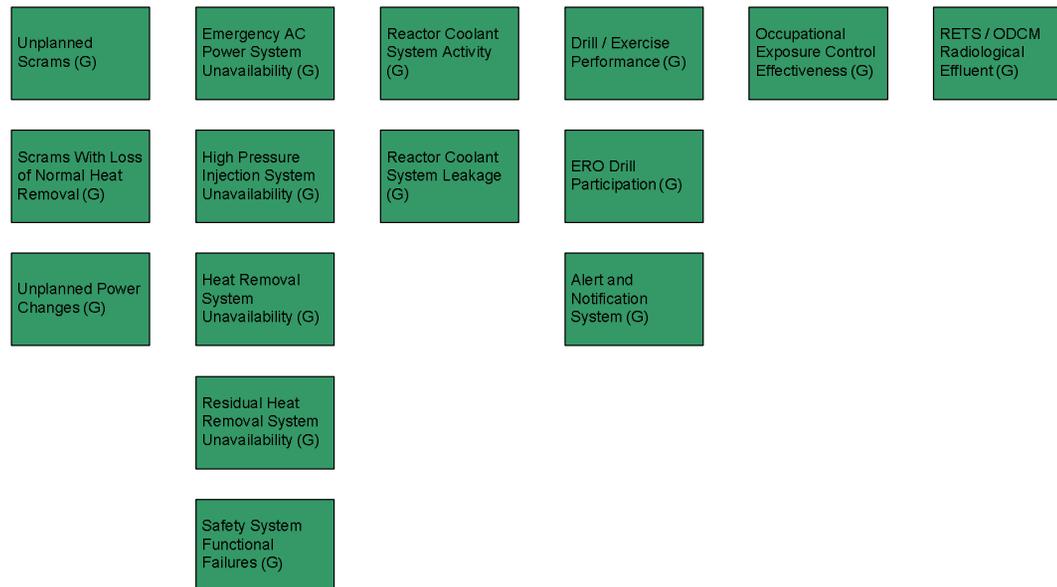
Data through June 2006

# Performance Indicators

## Browns Ferry 3 - Current Performance Summary

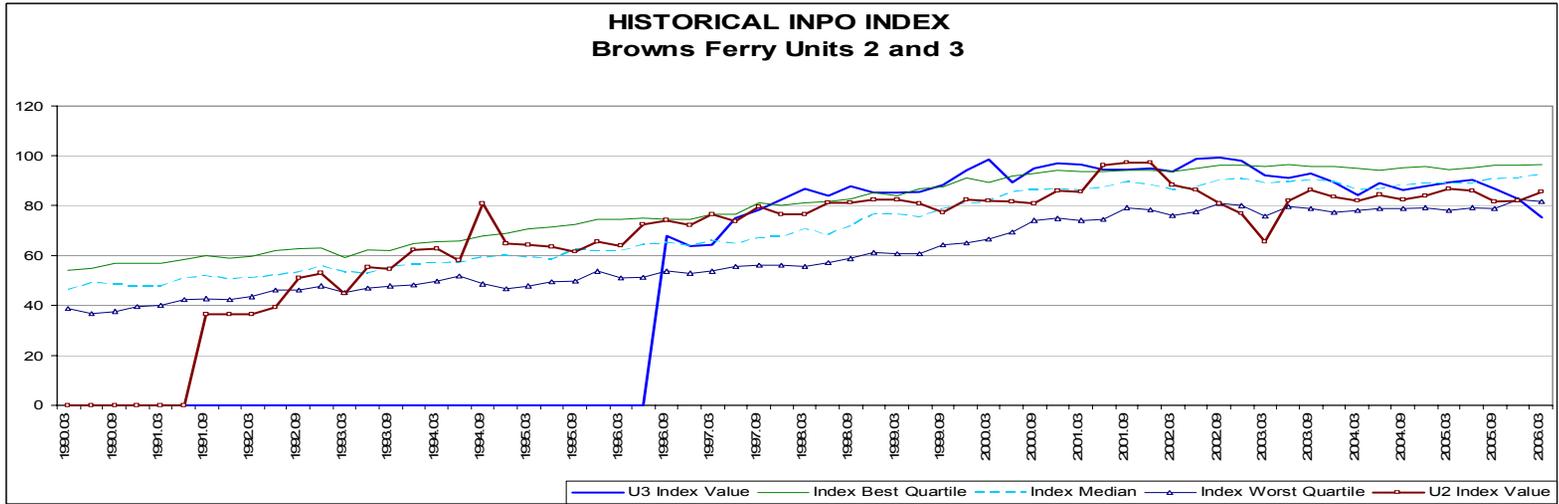
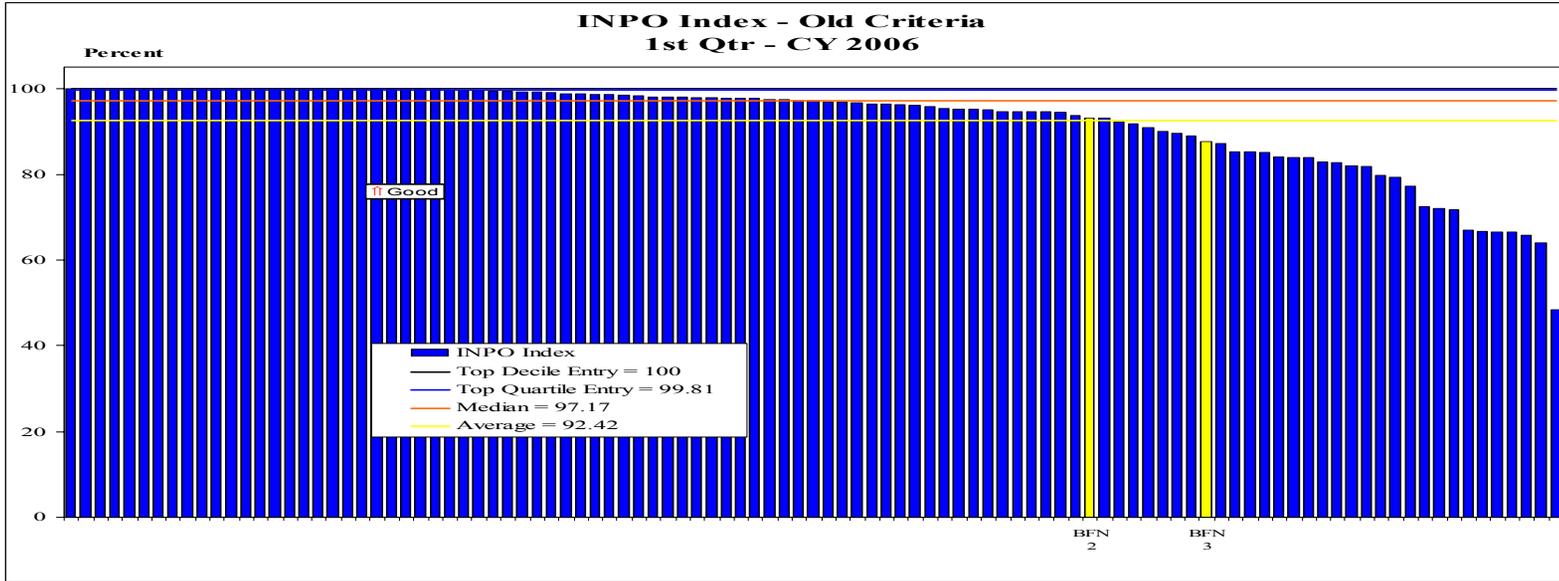


### Performance Indicators



Data through June 2006

# Performance Indicators



# Plant Performance

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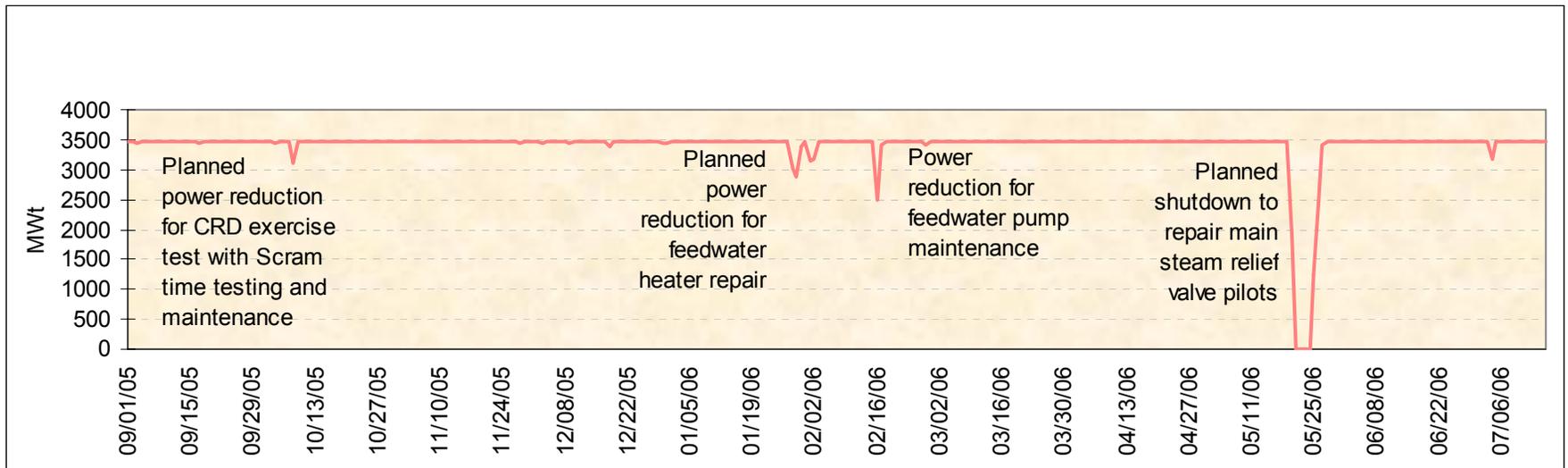


- Unit 2 Cycle 14
  - Currently operating at 100%
  - Online for 60 days
  
- Unit 3 Cycle 13
  - Currently operating at 100%
  - Online for 124 days



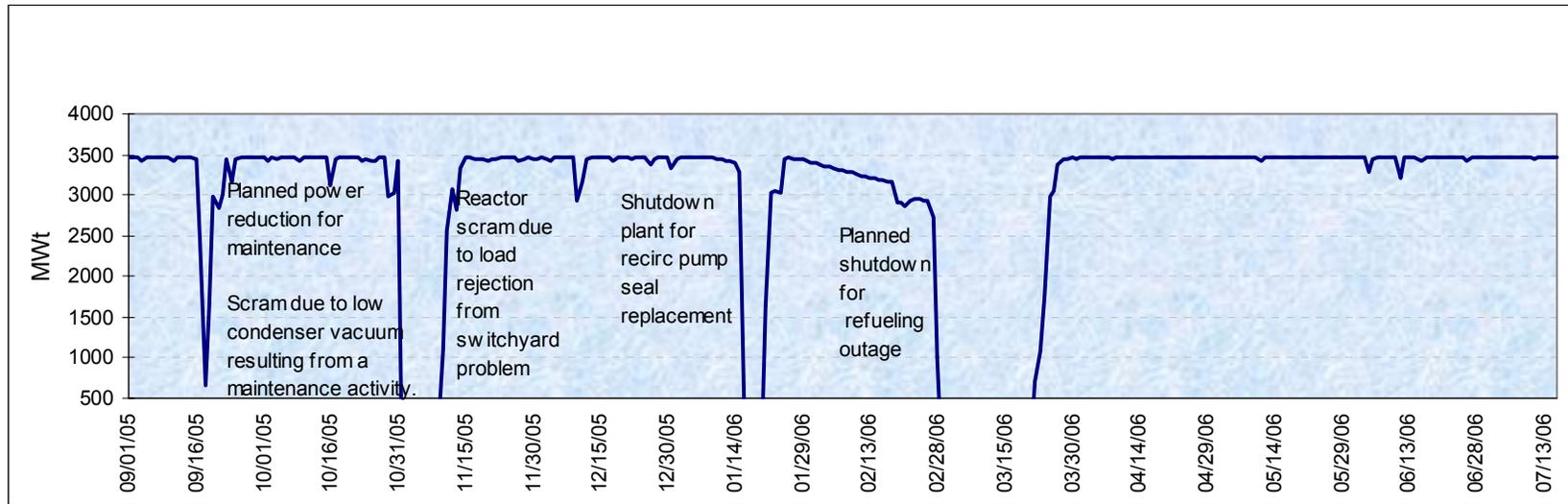
# Plant Performance

Power History Curve – Unit 2 Generation  
September 2005 through July 2006



# Plant Performance

Power History Curve – Unit 3 Generation  
September 2005 through July 2006



# Unit 3 Cycle 12 Outage Performance

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- Duration of 22 days 13 hours
- Outage Performance Milestones
  - 0 Recordable Accidents
  - 0 Lost Time Accidents
  - 0 Human Performance Events

	<u>Planned</u>	<u>Actual</u>
– Preventive Maintenance Work Orders	822	823
– Surveillance Requirements/Instructions	649	689
– Maintenance/Modifications Work Orders	909	1322
– Work Order Backlog	836	833
– Equipment Intolerance Items	All	All

# Unit 2 Cycle 14 Outage Plans

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- Extended Power Uprate Implementation Outage
  - Considerable modifications
  - Maintaining / improving operational margin
- Condensate System
  - Replace condensate pump impellers and motors
  - Condensate demineralizer 10<sup>th</sup> vessel addition
  - Replace condensate booster pump and motors
  - Condensate demineralizer control panel digital upgrade
- Feedwater System
  - Replace reactor feedwater pumps
  - Modify feedwater pump turbines
  - Modify feedwater heaters
- Main Steam System
  - Modify high pressure turbine, cross around relief valves, and steam seal piping
  - Modify main steam isolation valves internals and actuators
  - Replace moisture separator internals

# Performance Improvements

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- The Hardspot
  - Flat / declining performance in some areas
  - Significant challenges
    - Unit 1 restart activities
    - Extended power uprate on Unit 2
- The Performance Improvement Plan
  - Achieve measurable results in 90 days
  - 7 key focus areas

# Performance Improvements

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- Program Elements
  - Safety/human performance
  - Reactivity management
  - Training
  - Corrective action/self-assessment programs
  - Chemistry
  - Unit 1 restart readiness
  - Equipment reliability
- Management Sponsors
- Plans Developed and Monitored
- Communications with TVA Staff on Program

# Performance Improvements

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- Improving Results
  - Personnel error rate
  - Days between human performance events
  - Human performance index
  - Management observations of training
  - Problem evaluation report initiation rate
  - Level D problem evaluation reports – low threshold
  - Intolerance to equipment deficiencies index
  - Building inleakage
  - Reactor coolant system chemistry
  - Unit 1 readiness

# Performance Improvements

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- Phase 2
  - Teamwork
  - Work management
  - Extended Power Uprate
  - ALARA
- Continuing To Work
  - Equipment reliability
  - Reactivity management
  - Unit 1 restart / 3-unit operation

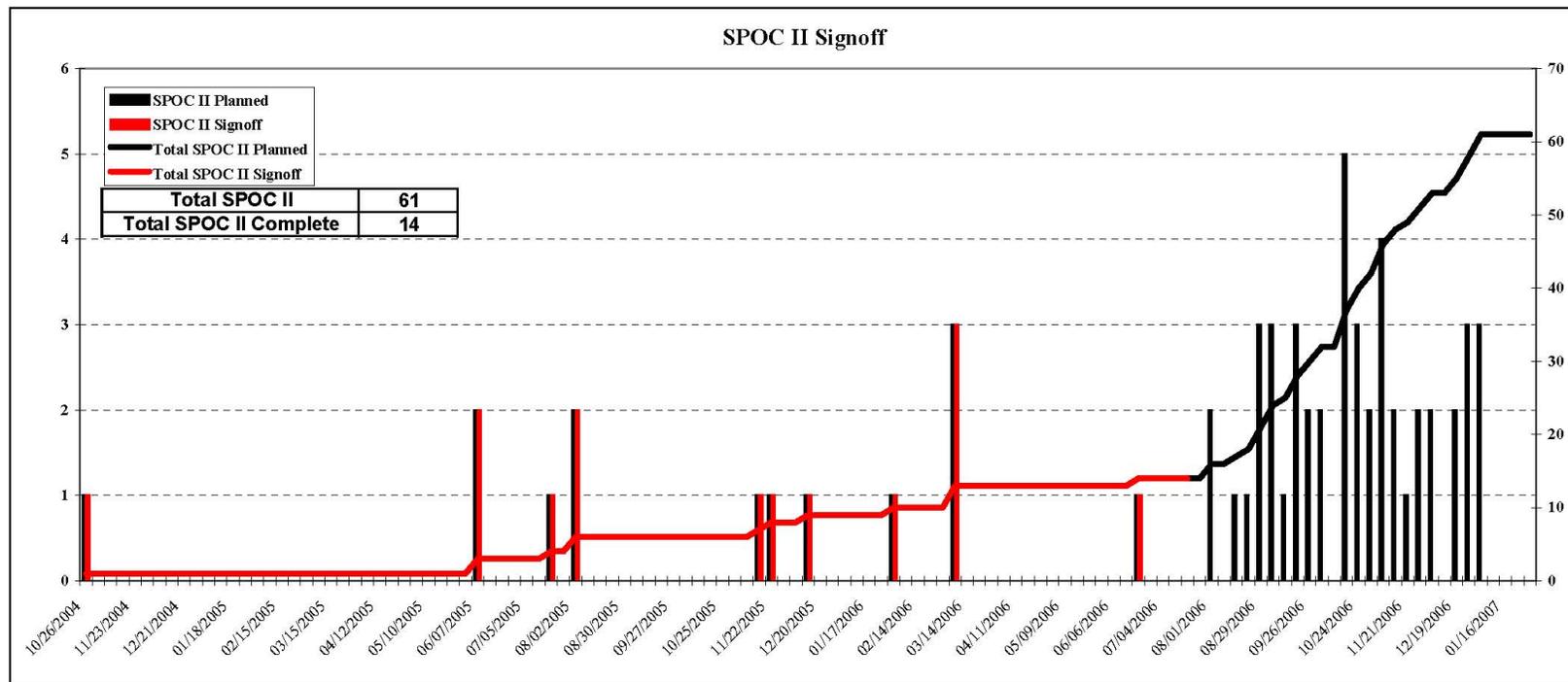


# Three Unit Readiness

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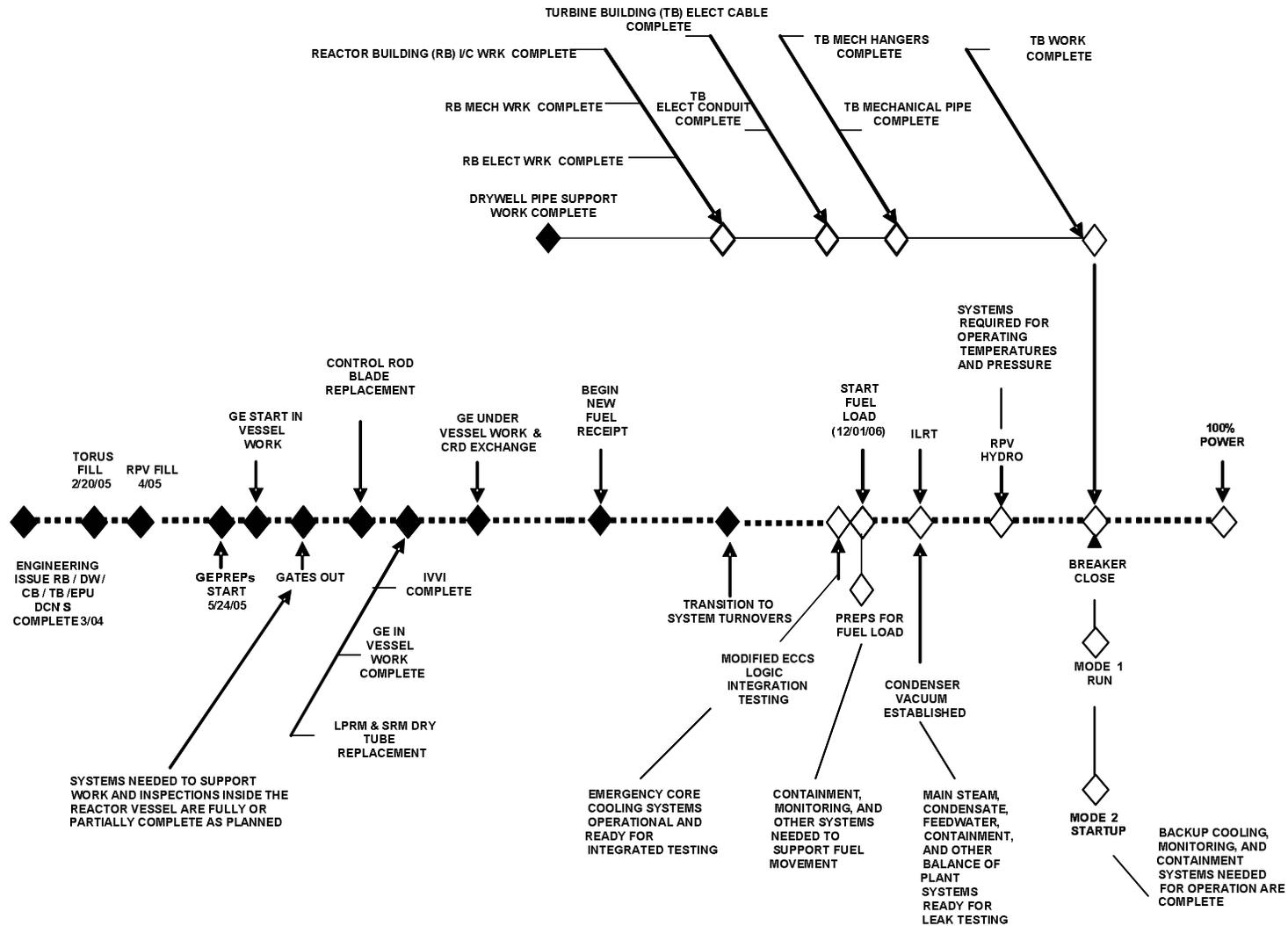
- Unit 1 Recovery Transition from Bulk Work / Construction to System Completion Milestone
- Presently 18 Systems Have Completed System Pre-Operability Checklist Phase I Process
  - Ready for restart testing
  - Manager assigned to each system
  - System pre-operability checklist board meetings
- Presently 14 Systems Have Completed System Pre-Operability Checklist Phase II Process
  - Maintenance / Surveillance Requirements maintained
  - Plant Ownership
- Nuclear Performance Program NRC Inspections Complete for Unit 1
  - 16 of 30 completed
- Integration of Plant Organizations During Recovery Activities
  - Engineering
  - Maintenance
  - Operations
- Department Readiness
  - Self Assessments
    - Initial Assessments complete
    - Eight follow-up assessments planned
  - Staffing for three unit operation

# Three Unit Readiness





# Three Unit Readiness



# Open Discussion

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