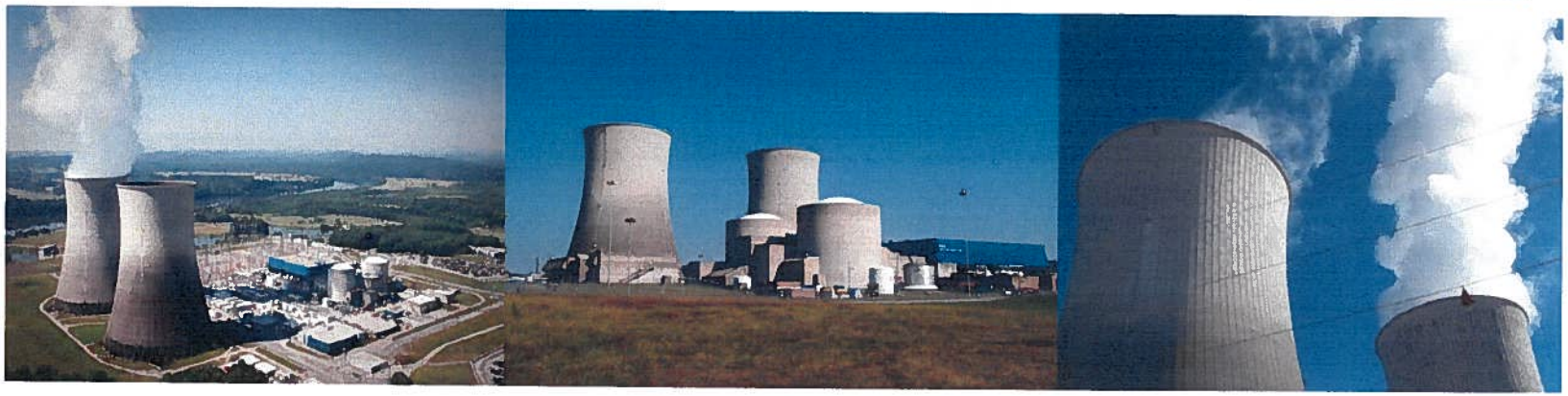
Watts Bar Nuclear Plant

WRAG

October 1, 2014



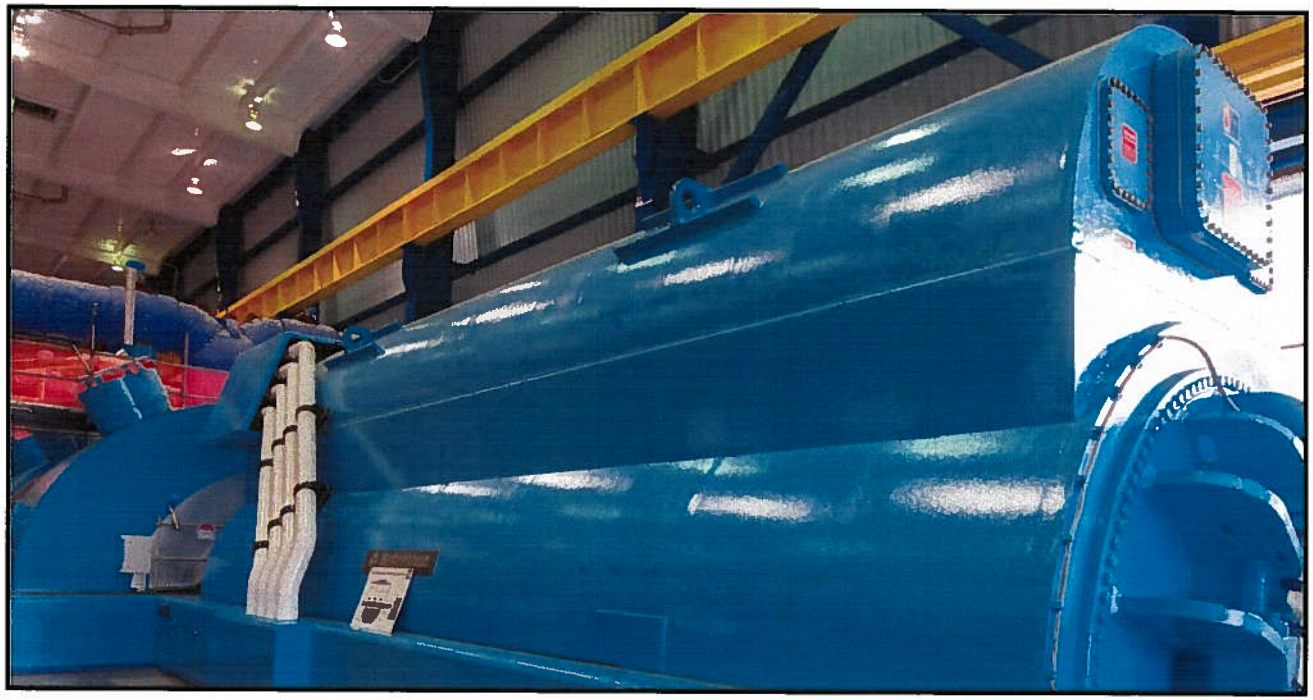
Enclosure 3

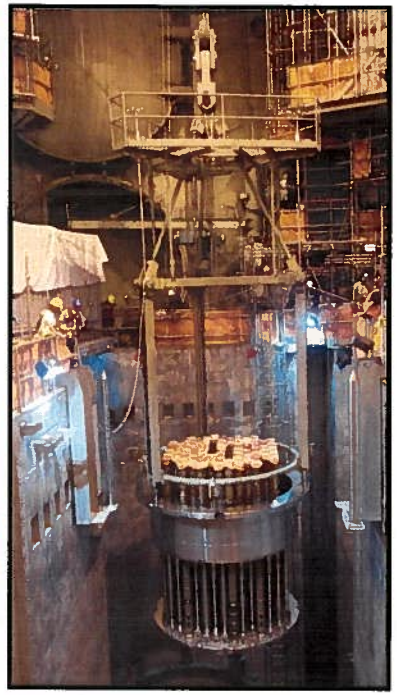
Agenda

- **Introductions**
- **Watts Bar 2 Completion Status**
- **Project Timeline**
- **Project Risks**
- **Licensing**
- **Dual-Unit Readiness**
- **Special Topics**
  - Hydrology
  - Fukushima
  - Safety Culture
  - Outreach
- **Closing Remarks**

Watts Bar 2 Guiding Principles

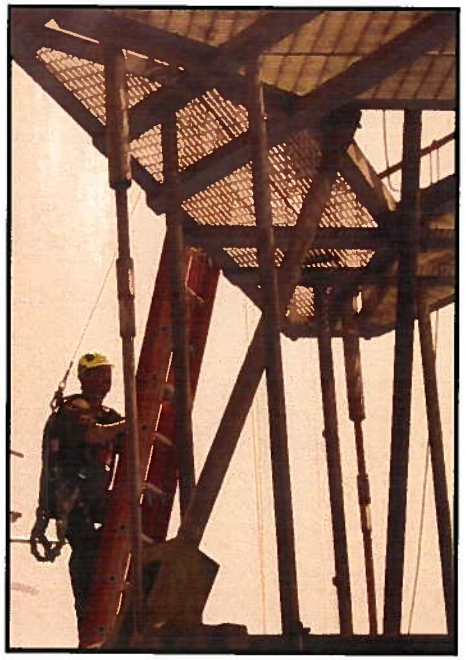
- Safe and High Quality
- Design Basis Fidelity with Watts Bar 1
- Systems, Structures, and Components – Made Like New



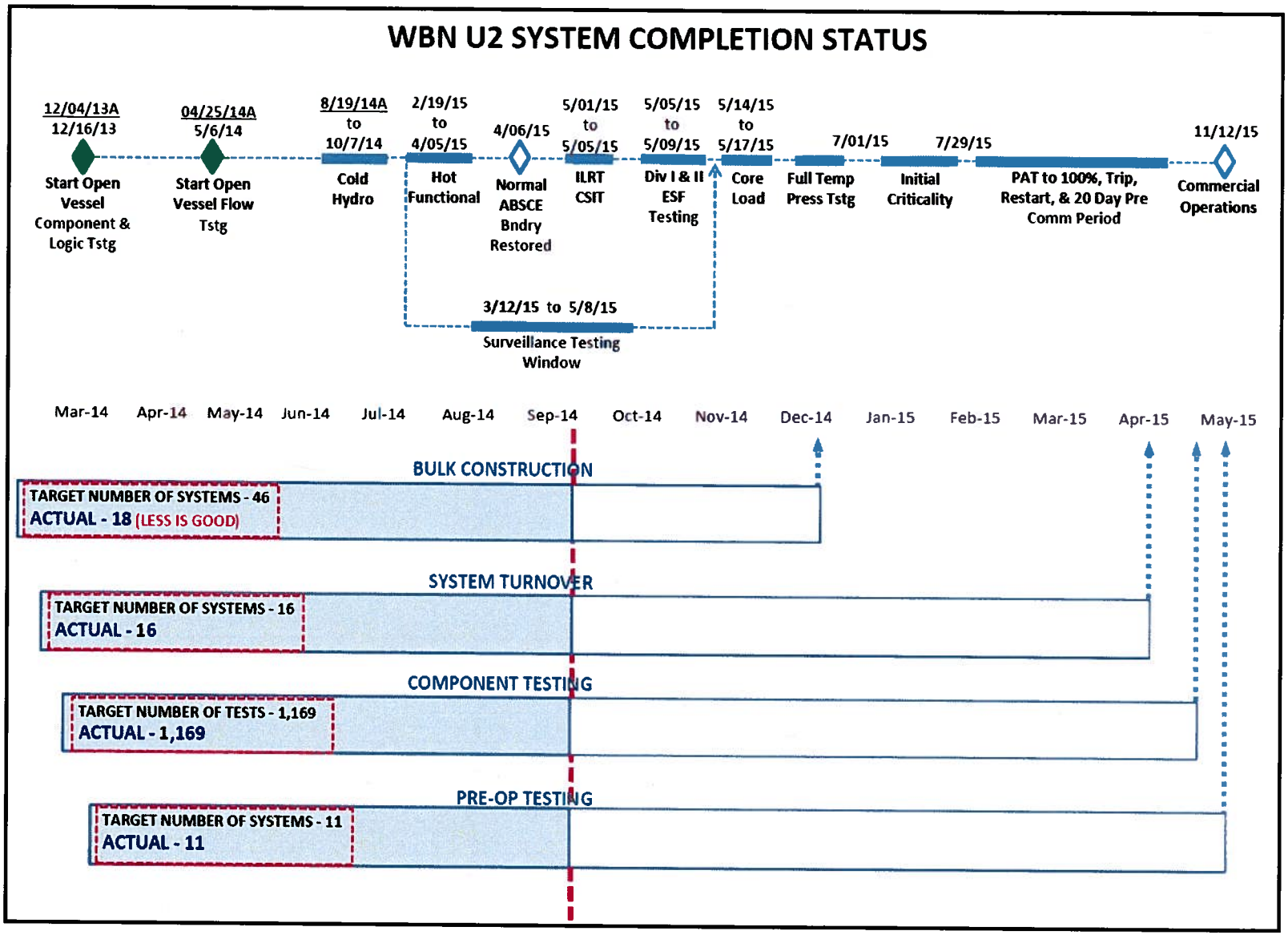


Watts Bar 2 Construction Summary

- **Safety**
  - Over 28 million hours without lost-time incident
  - Fiscal year-to-date Recordable Injury Rate at 0.33
- **Quality**
  - Project Quality Control Acceptance Rate >98%
- **Cost & Schedule**
  - Cost and schedule adherence meeting expectations



Project Timeline



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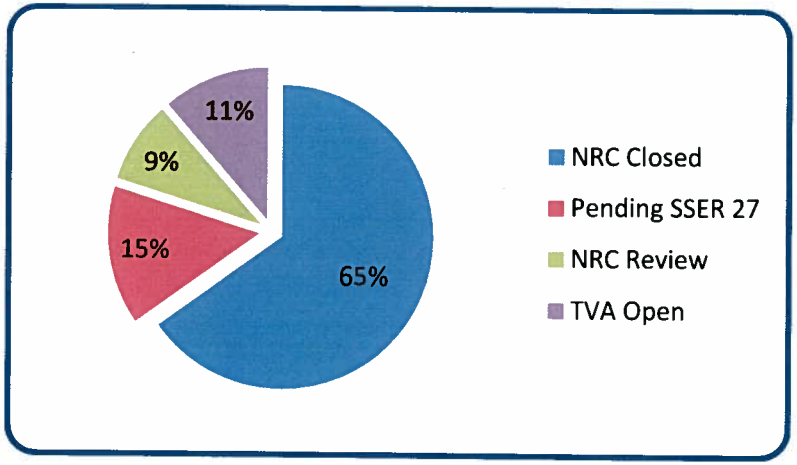
Project Risks

- Hydrology
- Productivity
- Start-up Performance
  - Component Testing
- Critical Equipment Failure During Startup

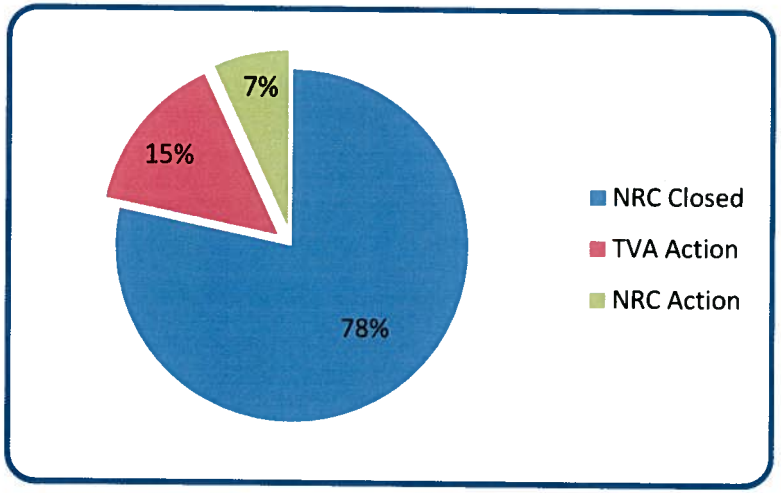
Licensing Status

- Final Environmental Statement – Complete
- Safety Evaluation – Nearing Completion
- Closure of Regulatory Commitments Accelerating
- No Watts Bar 2 Specific Contentions Remain Open

Supplemental Safety Evaluation Report Open Item Status



Inspection Planning and Scheduling Item Status



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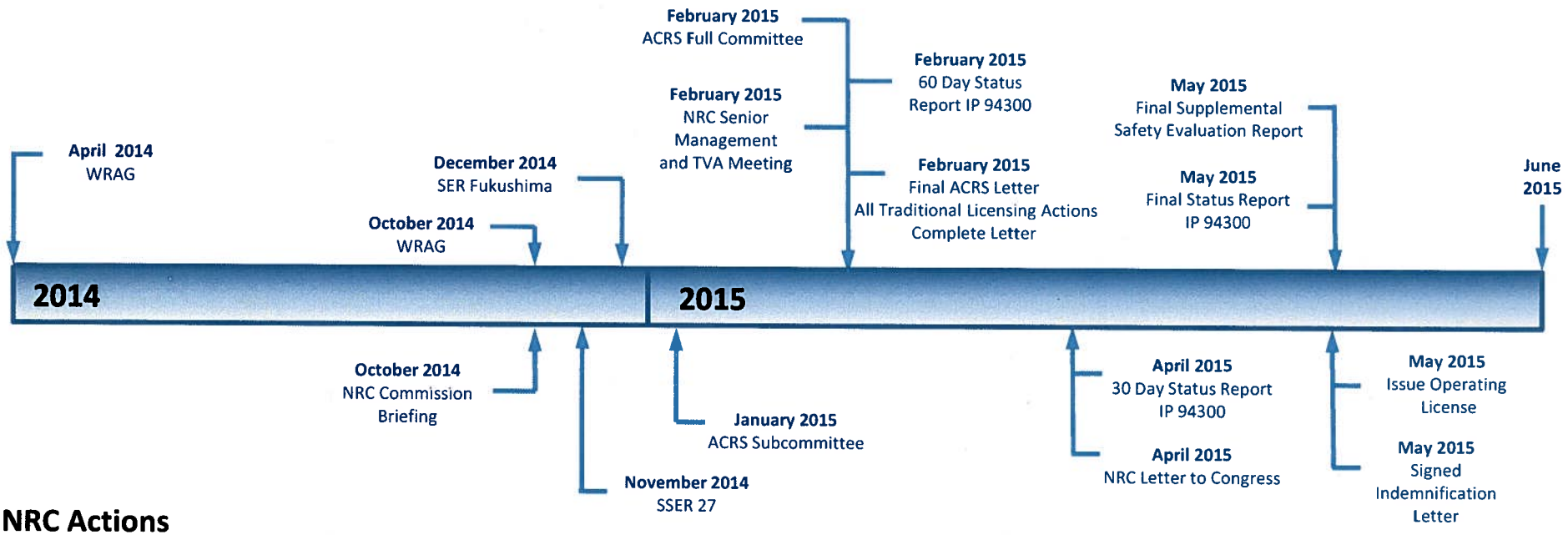
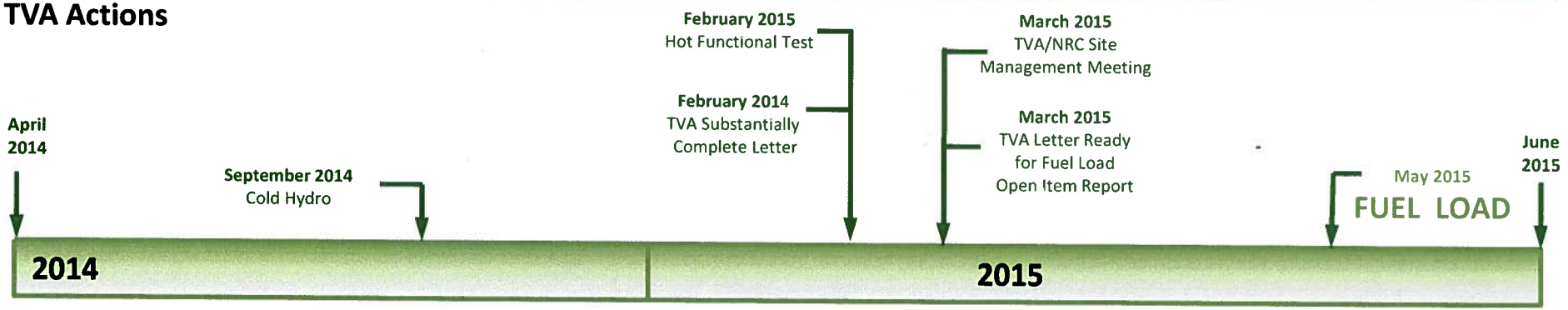
Watts Bar 2 Licensing Fuel Load Schedule



NRC Actions

TVA Actions



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Dual-Unit Operation Readiness Overview

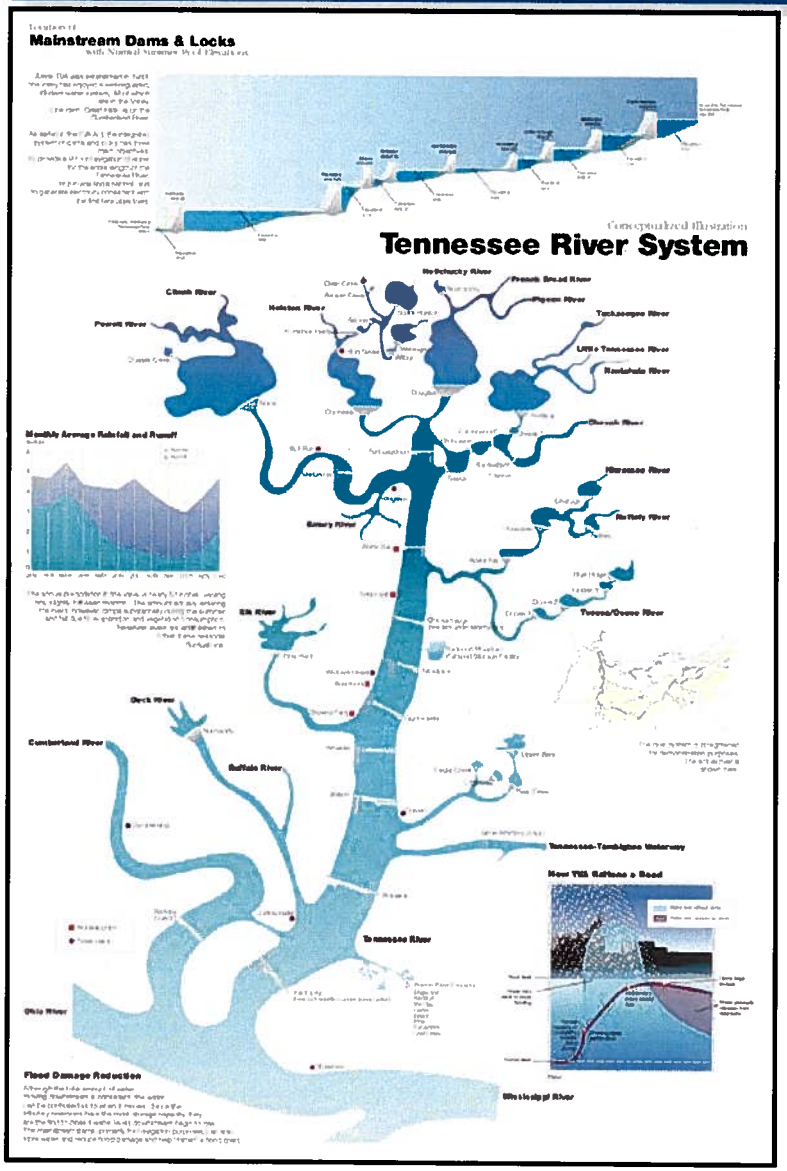
- **Operational Readiness Team**
  - Prepared organizational transition plans
  - Conducted Organizational Capacity Study, considering workload challenges for operations of Unit 1 while supporting the completion and commissioning of Unit 2
  - Developed strategies and plans for system, area, and program turnovers and for power ascension testing

Dual-Unit Readiness Overview

- **Operating Organization Driving Transition**
  - Development, management and oversight of actions necessary to integrate the site and assure readiness of important functions including but not limited to:
    - Department transition
    - Procedure development
    - Preventive maintenance development
    - Program readiness
    - Staffing
    - Training
- **Unit 1 Managers Taking Shared Ownership of Critical Unit 2 Milestones**
  - Designed to assure proper coordination and communication as we proceed through dual-unit integration toward operation
- **Staffing at Dual-Unit Target, Training for Dual-Unit Licenses Complete**

Special Topics

Tennessee River System Overview



- **Existing Watts Bar Licensing Basis Regarding Dams and Hydrology Based on Criteria in Place at Time Plants Originally Licensed**
  - Those techniques, while meeting the requirements of the licensing basis, do not meet the documentation expectations of today.
- **TVA Determined Most Robust Way to Demonstrate Stability of Its Dams and Associated Hydraulic Analysis Is to Convert to Modern Industry Methodology**

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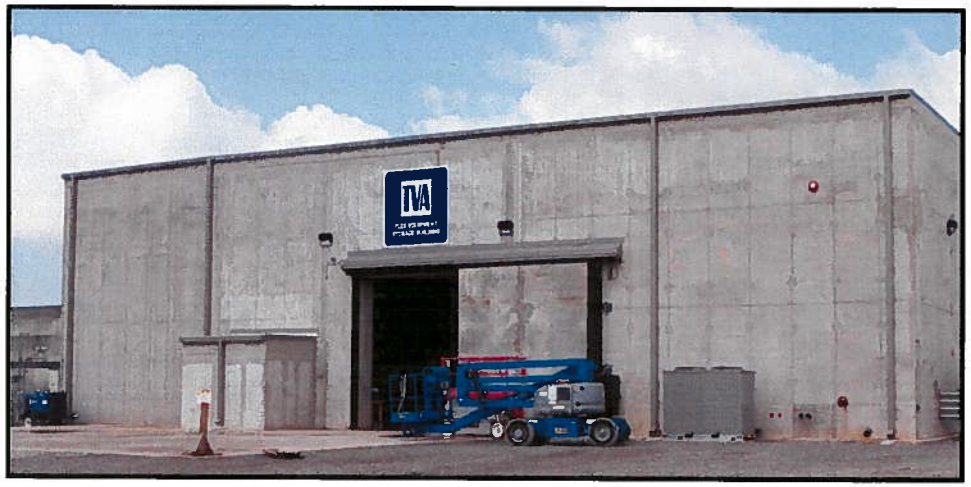
TVA's Approach

- **Basis - Why Approach Works**
  - Removes any question about the stability of dams credited in the Probable Maximum Flood (PMF) analysis
  - Move to a full HEC-RAS model provides more consistent and reliable results, which will not result in modifications to the plant
  - HEC-RAS tool provides a robust analysis using current industry acknowledged methodologies
  - Facilitates timely Nuclear Regulatory Commission (NRC) review using analysis methodology familiar to staff
  - Tool is consistent with TVA analysis for its Fukushima submittals
- **Result**
  - PMF level is bounded by July 2012 License Amendment Request

Fukushima Response

- Spent Fuel Pool Level Instrumentation Complete
- Construction of Flexible Equipment Storage Building Complete
- Construction of New Auxiliary Feedwater Storage Tank Complete
- Dominator, Triton &Transfer Pumps, 480 Volt Diesel Generators, and 6900 Volt Diesel Generators Delivered
- Construction of FLEX Modifications 95% Complete



Fukushima Response

- **Interim Staff Evaluation for Mitigating Strategies – Received**
  - Two open items
    - Alternate strategy for 3 megawatt diesel generators – submitted and accepted by NRC
    - Boron injection to ensure shutdown margin (WCAP 17601) – resolved with NRC staff May 15, 2014 – revised calculation June 30, 2014
  - 23 confirmatory items
- **Mitigating Strategies Audit – Complete**
- **Spent Fuel Pool Instrumentation Audit – Complete**
- **FLEX Procedures – Complete Except Uninstalled Unit 2 Validation**
- **Programming Changes to Simulator – Complete**
- **Drafting of Training Modules for Updated Procedures – Complete**
- **Full Compliance Expected Early Fall 2014**

Nuclear Safety Culture

- **Process**
  - Multi-tool approach
  - Internal and external assessments
  - Conducted on a routine basis
- **Assessed Safety Culture Areas**
  - Human performance
  - Problem identification and resolution
  - Safety conscious work environment
  - Other
- **More Appropriate Due to Nature of Construction Staffing**
- **Effective in Assessing Safety Culture at Watts Bar 2**

Nuclear Safety Culture

- **Dual-Unit Operation**
  - Focus on key accountability behaviors
    - Do What We Say We Will Do
    - Openly Listen and Communicate the Why
    - Set and Reinforce High Standards
    - Actively Find Ways to Help the Team
  - Re-enforce expectations
    - Mentoring
    - Coach the Coach
    - Observation Program
  - Measure results
    - Pulse Surveys
    - Operational Readiness Survey

Outreach Initiatives

- Community Action Panel Established and Meeting on Regular Basis
- Visits and Tours
- Speeches
- Public Meetings
- Proactive Media Strategy
- Website Updates and Increased Social Media Presence
- Family and Community Events





Closing Remarks

Conclusion

- Work to complete Watts Bar 2 is being done safely, in a quality manner, and in accordance with stringent standards.
- The combination of construction, refurbishment, improvements, and ongoing pre-startup testing will demonstrate systems, structures, and components have achieved "like new" condition.
- Startup testing and system turnovers support a May 2015 fuel load date.
- Project challenges are being identified and addressed.
- Regulatory and licensing issues remain a risk to receipt of the operating license.
- Readiness for dual-unit operation with a strong nuclear safety culture continues to be a focus of the operating organization
- Fukushima response and hydrology actions continue to progress in support of the operating license schedule.
- A comprehensive outreach plan is being implemented.

Questions