



BRIEFING ON WATTS BAR UNIT 2 LICENSE APPLICATION REVIEW

October 30, 2014

Mark Satorius

**Executive Director for Operations
U.S. Nuclear Regulatory Commission**

Watts Bar 2 Overview

William Dean, Director

**Office of Nuclear Reactor
Regulation**

AGENDA

- **The Part 50 Process and Watts Bar's Unique History**
- **Licensing Framework and Status of Licensing Review**
- **Construction Program Overview**
- **Status of Inspection Activities**

WRAG Provides Oversight and Management Direction to Ensure Unit 2 Meets All Relevant Requirements

WRAG Public Outreach Meeting September 2014



WRAG Observes Construction Progress of FLEX Building



Watts Bar 2

Part 50 Process and Watts Bar Licensing History

Michele Evans, Director

**Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation**

The Part 50 Process – An Overview

- **Construction Permits and Operating License Issued Separately**
- **Path Forward for Commission Granting Authority to NRR**

Watts Bar's Unique History Has Defined the Project

- **Construction Permit Issued for Units 1 and 2 in 1973**
- **Operating License Application Submitted for Units 1 and 2**
- **Hearing for Construction Permit; Operating License Opportunity for Hearing**
- **Work Stoppage in 1985**
- **Full Power Operating License for Unit 1 in 1996**
- **Resume Construction on Unit 2 in 2007**

Watts Bar 2 Licensing Framework and Status of Licensing Review

Justin Poole

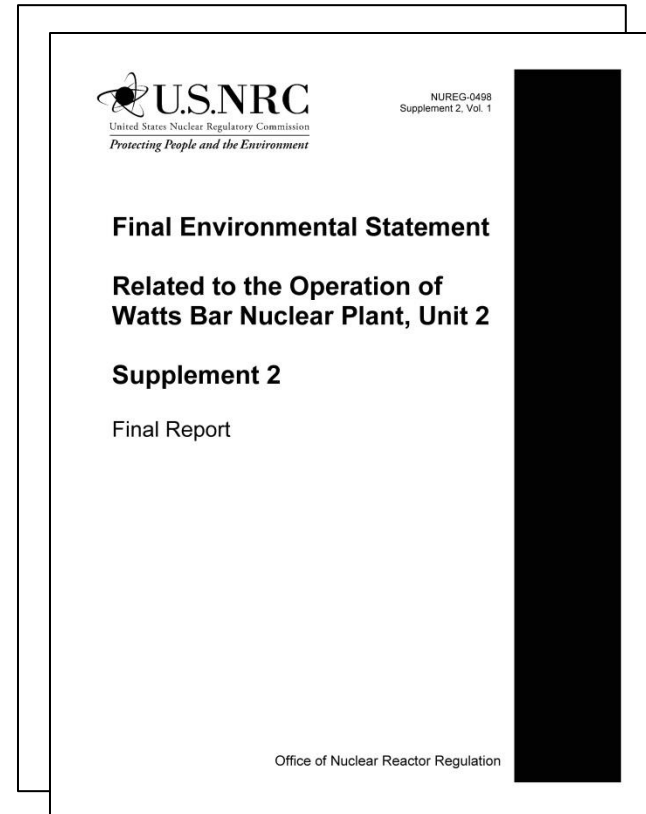
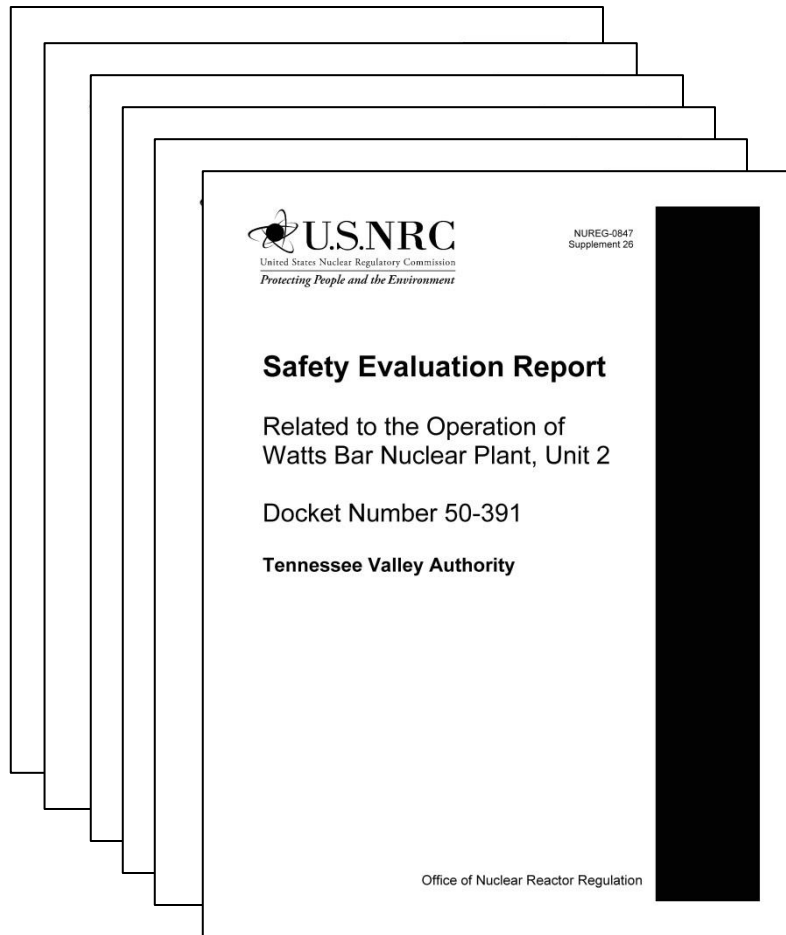
Senior Project Manager

**Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation**

Established Clear Framework for Licensing

- **SRM-SECY-07-0096 Provided Commission Direction on aligning the licensing basis**
- **Issued NRR Office Instruction LIC-110 to guide staff review**
- **Regulatory Framework Review and Issuance of Safety Evaluation Report Supplement 21**

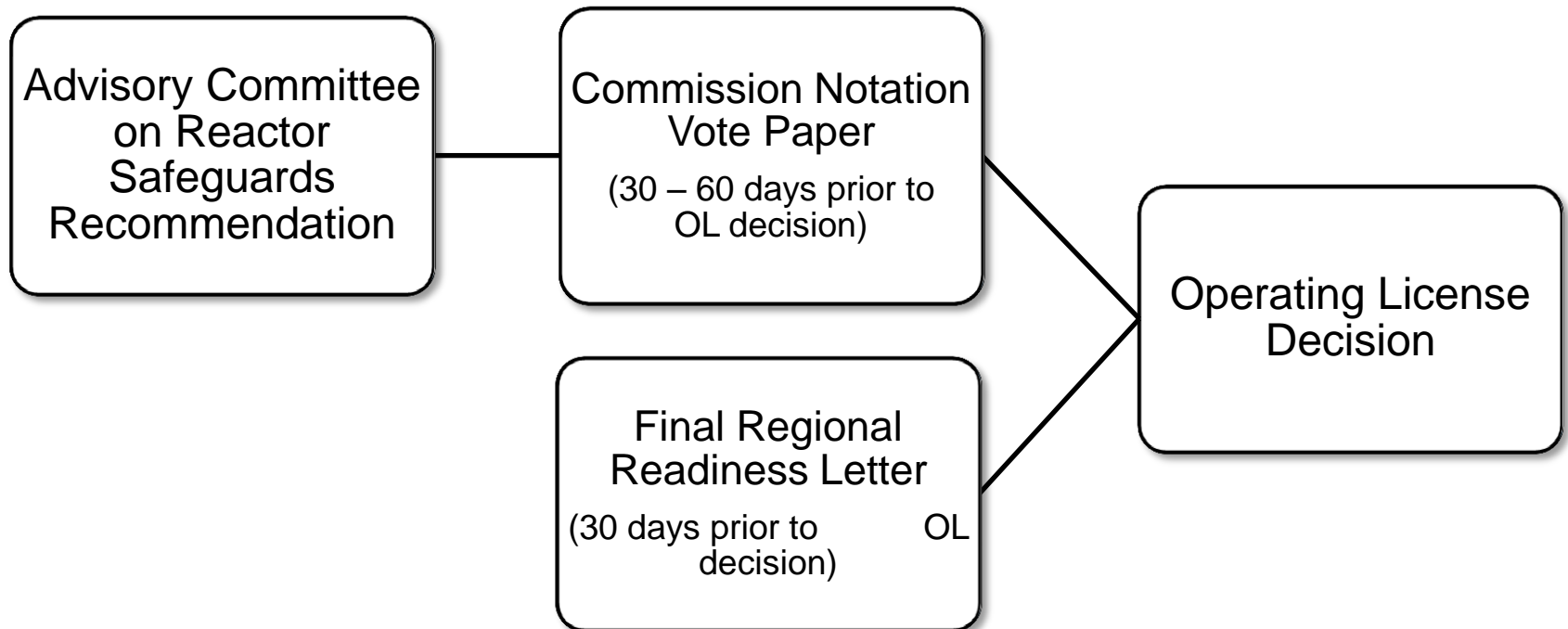
Majority of the Licensing Review Has Been Completed



Remaining Licensing Actions to Support a Licensing Decision

- **Completion of Hydrology Review**
- **Review of As-Built Fire Protection Report**
- **Closure of Open Items of Interest to the Advisory Committee on Reactor Safeguards**
- **Implementation of Continued Storage Rulemaking**
- **Review of Fukushima Orders**

Major Milestones for the NRC Staff to Accomplish Prior to Licensing



Watts Bar 2 Construction Inspection

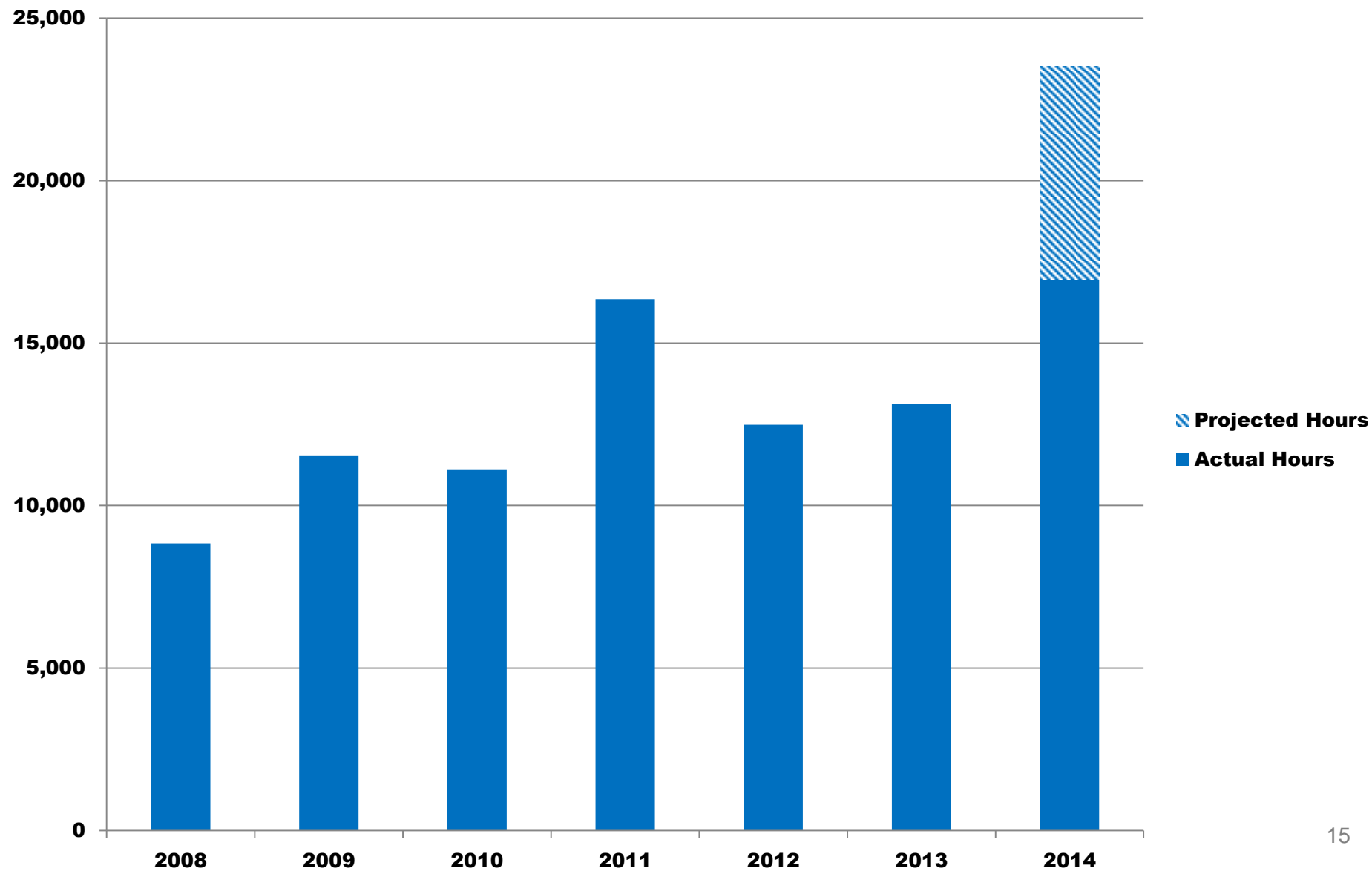
**Victor McCree
Regional Administrator**

NRC Region II

Developed a Customized Construction Inspection Program

- **Credited previously completed inspections**
- **Addressed legacy programmatic issues and refurbishment**
- **Comprehensively addresses remaining activities, including new requirements**

Substantial Inspection Effort Expended on Watts Bar Unit 2



Watts Bar 2 Construction Inspection

**Tomy Nazario
Senior Resident Inspector**

Watts Bar 2

Inspections On-Track to Support Licensing Decision

- **Majority of construction inspections completed**
- **Good progress on inspections of historical and unique Unit 2 items**
- **Inspections of operational readiness and new requirements (cyber, Fukushima) planned**

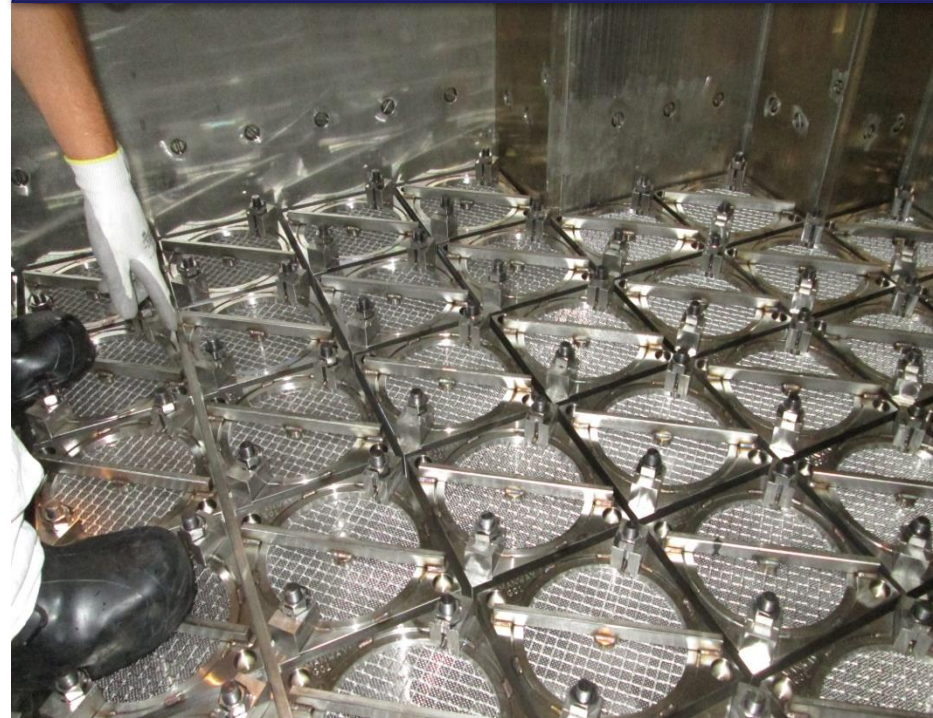
Verifying Construction to Licensing Basis

- **Reactor Vessel Reassembly**
- **As-Built Verifications**

Inspection of Reactor Vessel assembly



Inspection of full flow filter



Verifying Refurbishment Activities

- **Key to addressing aging questions**
- **Equipment replacement and repair**

Inspector entering the reactor coolant pump bowl



Receipt/Storage inspection of vital inverter



Verifying Implementation of Recent Requirements

- **Inspection of Cyber Security Requirements**
- **Inspection of Mitigating Strategies Order**

Inspection of rebar placement



Inspection of vent installation



Overall Construction Activities Have Met Requirements

- **Plant built according to design**
- **Inspections have added value**
- **Currently no potentially significant open issues or findings**

Closing Remarks

**Bill Dean and Vic McCree
Tour of Unit 2 Control Room**



**Bill Dean and Vic McCree
Tour of Unit 2 Ice Condenser**

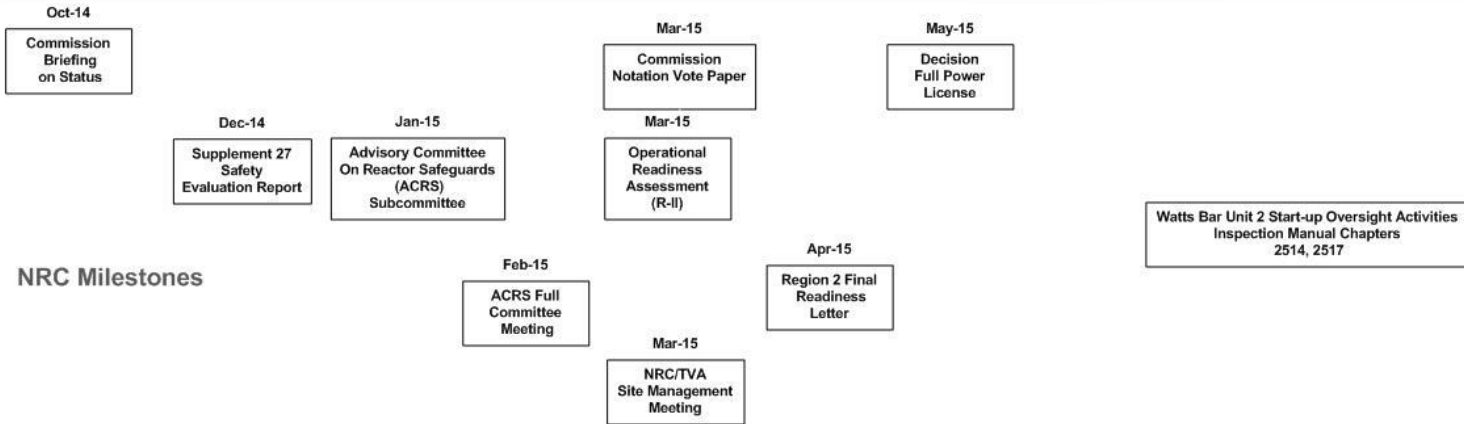


Acronyms

- **NRC – Nuclear Regulatory Commission**
- **NRR – Office of Nuclear Reactor Regulation**
- **OL – Operating License**
- **SECY – Office of the Secretary**
- **SRM – Staff Requirements Memorandum**
- **WRAG – Watts Bar Reactivation Group**

Backup Slides

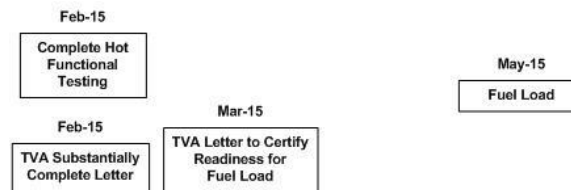
Major Milestone Timeline



Reviews, Hearings, and Briefings Supporting Operating License Issuance

Oversight Prior to Commercial Operation

TVA Milestones



Watts Bar Nuclear Plant Unit 2 Licensing Timeline
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation

As of October 22, 2014
Dates are subject to change

Reactor Oversight Process Transition Plan

- **Transition will be on an individual cornerstone basis**
- **Four of seven cornerstones expected to be transitioned at license issuance**
- **Performance indicator validity addressed with additional inspections**