Tennessee Valley Authority
Watts Bar Nuclear Plant
Plant Performance

TVA/NRC Meeting

NRC Region II - Atlanta, Georgia

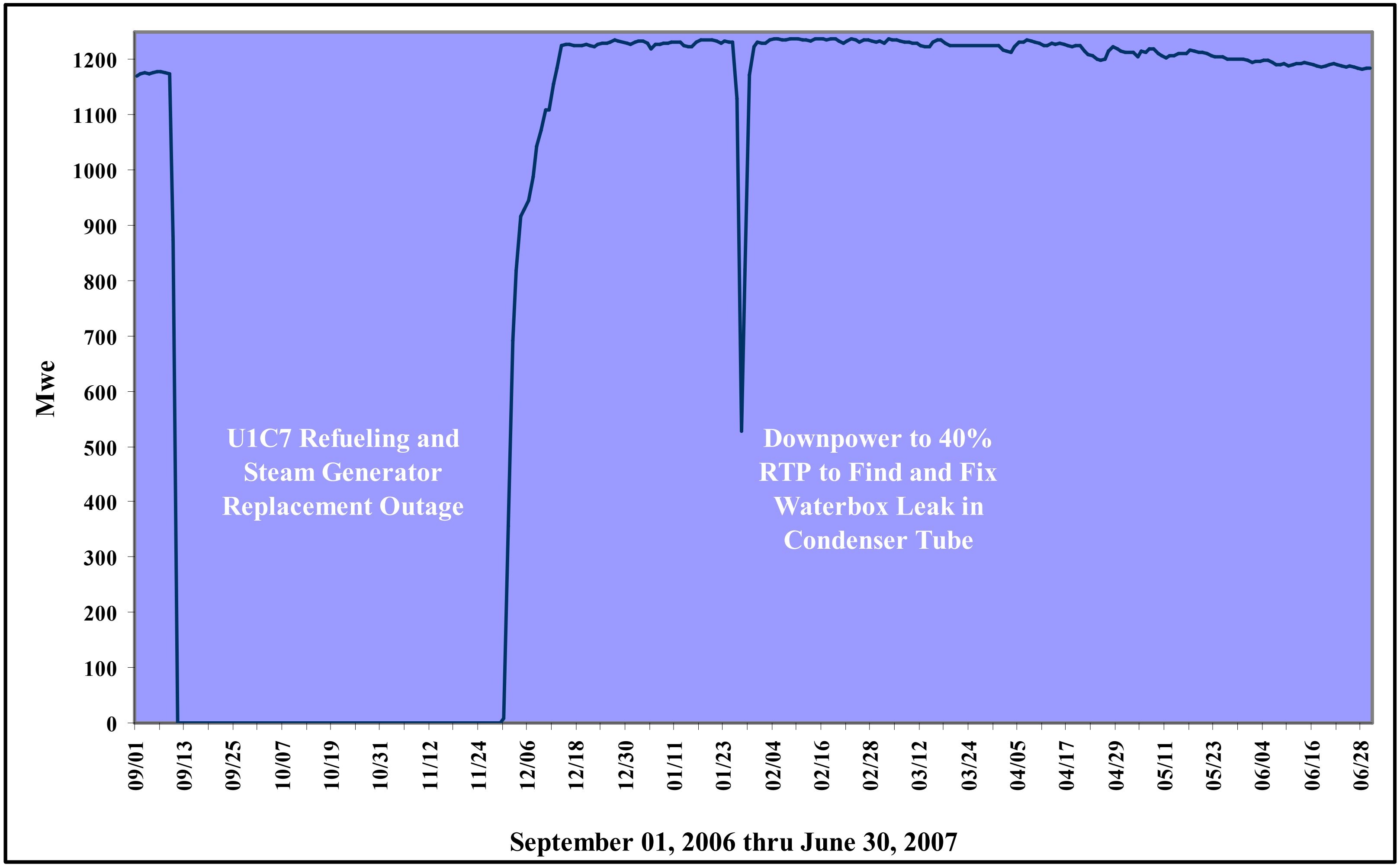
July 23, 2007

Agenda

• Introduction	Mike Skaggs
• Plant Performance – Power History – Performance Indicators – Outage Performance	Mike Lorek
• Operations Initiatives – Integrated Staffing Plans – Clearances – Procedure Use and Adherence – Error Reduction Techniques	Adam Scales
• Equipment/System Health Initiatives	Alvin Hinson
• Radiation Protection Program Initiatives	Paul Sawyer
• Corrective Action Program Health	Mike Lorek
• Focus Areas	Mike Lorek
• Conclusion	Mike Skaggs

Plant Performance

Power History - Unit 1 Average Daily Power Level



Performance Indicators

Reactor Safety — *Initiating Events*, *Mitigating Systems*, *Barrier Integrity*, *Emergency Preparedness*

Radiation Safety — *Occupational Radiation Safety*, *Public Radiation Safety*

Safeguards — *Physical Protection*

Performance Indicators

Initiating Events	*Mitigating Systems*	*Barrier Integrity*	*Emergency Preparedness*	*Occupational Radiation Safety*	*Public Radiation Safety*	*Physical Protection*
Unplanned Scrams (G)	Safety System Functional Failures (G)	Reactor Coolant System Specific Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/ODCM Radiological Effluents (G)	Protected Area Equipment (G)
Unplanned Scrams with Complications (G)	Emergency AC Power Systems (G)	Reactor Coolant System Leakage (G)	ERO Drill Participation (G)			Personnel Screening Program (G)
Unplanned Power Changes	High Pressure Injection System (G)		Alert and Notification System (G)			FFD/Personnel Reliability Program (G)
	Heat Removal System (G)					
	Residual Heat Removal System (G)					
	Cooling Water Systems (G)					

Data as of 06/2007

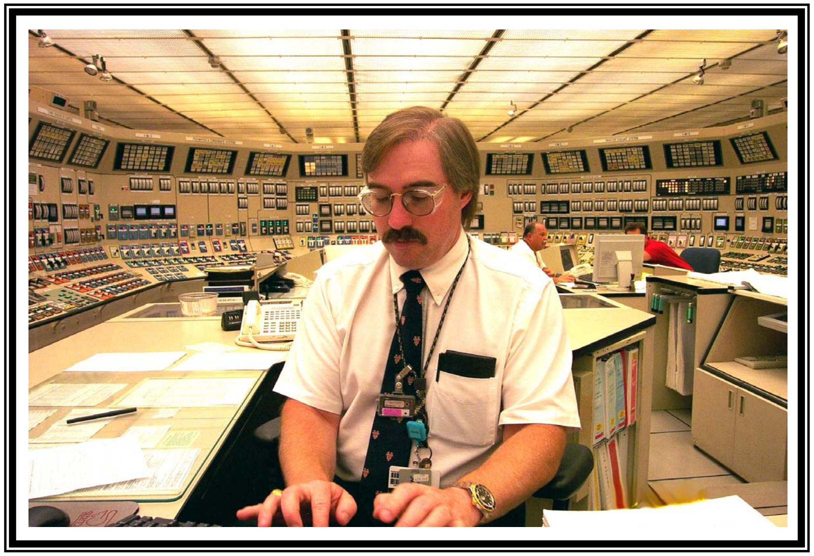
Plant Performance
Refueling Outage - Cycle 7 Accomplishments

- Safety/Reliability Improvements
  - √ Four Steam Generator (SG) Replacements
  - √ Cooling Tower Fill Replacement and Trash Rack Modifications
  - √ Containment Sump Screen Modification
  - √ Reactor Coolant Pump #1 Seal Replacement
  - √ 1-A-A Containment Spray Heat Exchanger Leak Repair
  - √ Spare Inverter Modification
  - √ MFW Level Control Solenoid Valves Modification
  - √ Fuel Assembly Leak Inspections
- Work Scope
  - – Work Orders Completed: 2053
  - – PMs Completed: 1193
  - – SIs Completed: 1502
  - – Total DCNs Completed: 37 (73 Stages)
- 2nd Best Duration for Ice Condenser SG Replacement
- 2nd Quartile Dose Performance for SG Replacement

- √ Reactor Core exit thermocouple cable and connector change out
- √ Various Pump Motor Rebuilds
- √ Reactor Thimble Tube replacements
- √ ERCW Strainer Shaft Replacement
- √ CRDM Motor Replacements
- √ STBY Main Feed Pump Seal replacement
- √ Replaced MSIV air pressure regulators with more robust design.
- √ Replaced Unreliable Kerotest Valves on Charging and Reactor Coolant Systems

WBN Operations Initiatives

- Integrated Staffing Plan
  - Training Program Improvements
  - Improved Selection Process for License Class Selection
- Clearances
- Procedure Use and Adherence
- Error Reduction Techniques
  - Peer Checks
  - Teamwork
  - Precise Communications



Adam Scales

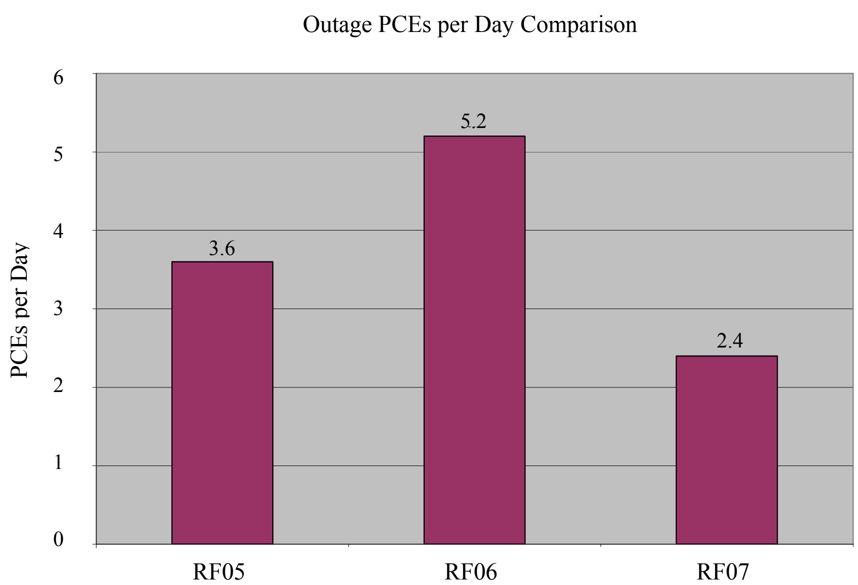
WBN Equipment/System Health Initiatives

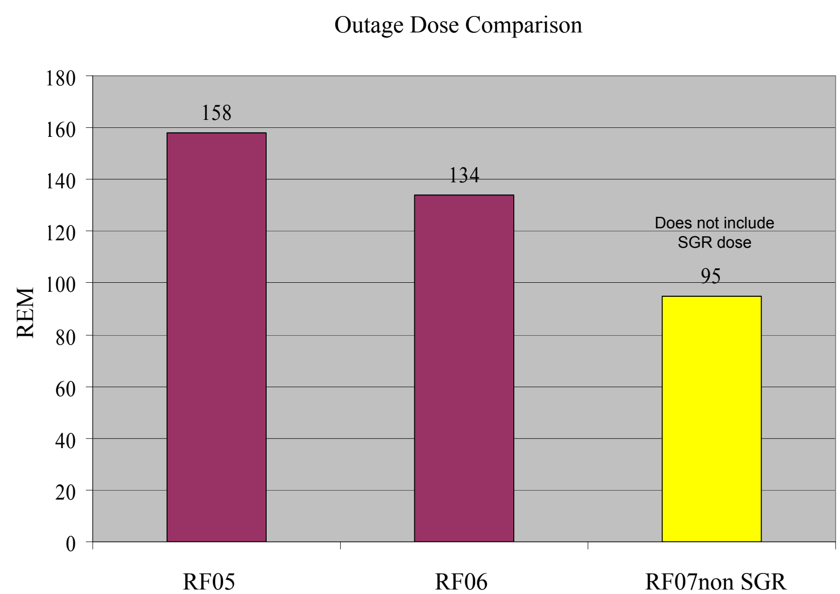
- Overall system health windows have shown improving trend, but the rate has slowed.
- Revised roles and responsibilities of System Engineers in our work control processes.
- Changed content and priority of Plant Health committee.
- Established a Plant Health Subcommittee
- Walk downs performed by System Health Teams
- Results include: improved alignment on priorities, knowledge transfer, and issue resolution at working level

WBN Radiation Protection Initiatives

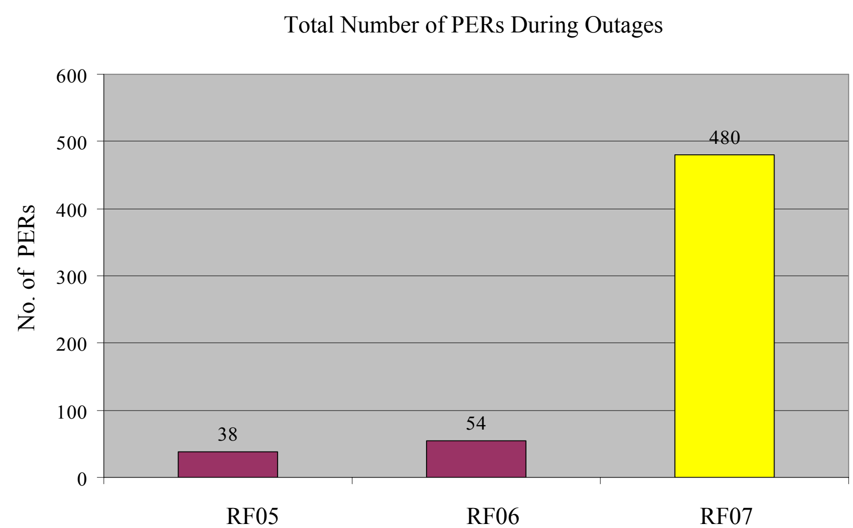
- **Radiation Protection Program Initiatives**
  - Radiation Protection Cornerstones
    - Dose control
    - Radioactive material control
    - Collective radiation dose reduction
    - Contamination control
  - Other Areas for Improvement
    - High Impact Teams (HIT) focused to improve performance
      - TLD process,
      - Labor organization focus,
      - Remote exposure monitoring
      - Improved use of benchmarking and industry operating experience/lessons learned
    - Outage ALARA Initiatives
      - Shielding Package for Head Stand
      - Temporary Shielding Package Review
      - Scheduled ALARA Windows
      - Zinc Injection
    - Results

WBN Radiation Protection Initiatives





- Improved High Radiation Controls
- Improved Rad Material Controls
- Improved Contamination Controls
- Improved Corrective Action Program



Paul Sawyer

WBN Corrective Action Program Health

- Line Ownership
- Use of CAP to Find & Fix Issues
- Integrated Trend Reviews
- Focus Areas
  - Quality of Corrective Action Documents
  - Timely Resolution of Corrective Actions

WBN Initiatives – Focus Areas

Work Control

Do what we say we will do

- Right work
- Plan, prepare, execute
- Improve and innovate

Performance Improvement

Find and fix our problems

- Right solutions
- Value our Corrective Action Program
- Continually learn

Training

Train to perform well

- Training owns performance, line owns training
- Right training, right time
- Use training to improve plant performance

Team Up

Teamwork: Our plan for success

- Right actions, every time, all the time
- Listen to understand, speak to be understood
- Seek opinions, value differences

Conclusion