UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

June 19, 2001

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: PUBLIC MEETING SUMMARY - PLANT PERFORMANCE AND PLANNED MAJOR PROJECTS - BROWNS FERRY DOCKET NOS. 50-259, 50-260 AND 50-296

Dear Mr. Scalice:

This refers to the meeting conducted at your request at the Region II Office in Atlanta, Georgia, on June 18, 2001, at 10:00 a.m. The meeting's purpose was to discuss plant performance and planned major projects. Enclosed are a list of attendees and the presentation handout.

The discussions included the following topics: plant performance summary, site focus plan, strategic performance initiatives, cross-cutting issues, performance indicators, and long-term projects. The meeting was informative and did not result in specific action items or decisions.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Should you have any questions concerning this meeting, please contact me at (404) 562-4530.

Sincerely,

/RA/

Paul E. Fredrickson, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosures: 1. List of Attendees
2. Handout - Browns Ferry Nuclear Plant - Plant Performance

Docket Nos. 50-259, 50-260, 50-296
License Nos. DPR-33, DPR-52, DPR-68

cc w/encls: (See page 2)

cc w/encls:
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Senior Vice President
Nuclear Operations
Tennessee Valley Authority
Electronic Mail Distribution

Jack A. Bailey, Vice President
Engineering and Technical Services
Tennessee Valley Authority
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Karl W. Singer
Site Vice President
Browns Ferry Nuclear Plant
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General Counsel
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Robert J. Adney, General Manager
Nuclear Assurance
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Ashok S. Bhatnagar, Plant Manager
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Mark J. Burzynski, Manager
Nuclear Licensing
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Athens, AL 35611

Distribution w/encls: (See page 3)

Distribution w/encls:
R. W. Hernan, NRR
H. N. Berkow, NRR
RIDSNRRDIPMLIPB
A. Boland (Part 72 Only)
PUBLIC

PUBLIC DOCUMENT (circle one): YES NO

OFFICE	DRP/RII						
SIGNATURE	PTaylor:vyg						
NAME	pf (for)						
DATE	6/19/2001						
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: I:\RPB6\BF\MEETINGS\BF Mtg Summary 6-18-01.wpd

LIST OF ATTENDEES

Nuclear Regulatory Commission

L. Reyes, Regional Administrator, Region II (RII)
L. Plisco, Director, Division of Reactor Projects (DRP), RII
H. Christensen, Deputy Director, Division of Reactor Safety, RII
P. Fredrickson, Branch Chief, Reactor Projects Branch 6, DRP, RII

Tennessee Valley Authority

A. Bhatnagar, Site Vice President
R. Jones, Plant Manager
M. Skaggs, Assistant Plant Manager
T. Abney, Licensing & Industry Affairs Manager
R. Wiggall, Site Engineering Manager
G. Little, Operations Manager
T. Niessen, Site Support Manager

Tennessee Valley Authority
Browns Ferry Nuclear Plant
Plant Performance

TVA/NRC Meeting

NRC Region II - Atlanta, Georgia

June 18, 2001

Tennessee Valley Authority

Browns Ferry Nuclear Plant

Plant Performance

Introduction

Agenda

Site Management Team	Ashok Bhatnagar
Plant Performance	Gilbert Little
Performance Indicators	R. G. Jones
Strategic Performance Initiatives	R. G. Jones
Cross Cutting Issues	Tom Niessen
Occupational Radiation Safety Cornerstone	Tom Niessen
Initiating Events Cornerstone	Ric Wiggall
Mitigating Systems Cornerstone	Mike Skaggs
Looking Ahead	Ashok Bhatnagar
Conclusions	Ashok Bhatnagar

Site Management Team

ASHOK BHATNAGAR
Site Vice President

MIKE SKAGGS
Assistant Plant Manager

R. G. JONES
Plant Manager

TIM ABNEY
Licensing and Industry Affairs

LARRY CLARDY
Nuclear Assurance

TOM NIESSEN
Site Support Manager

JOHN COREY
Radiological Control & Chemistry

DAN SANCHEZ
Maintenance & Modifications

ELVIS HOLLINS
Outage & Work Control

GIBERT LITTLE
Operations

DAVID MATHERLY
Training

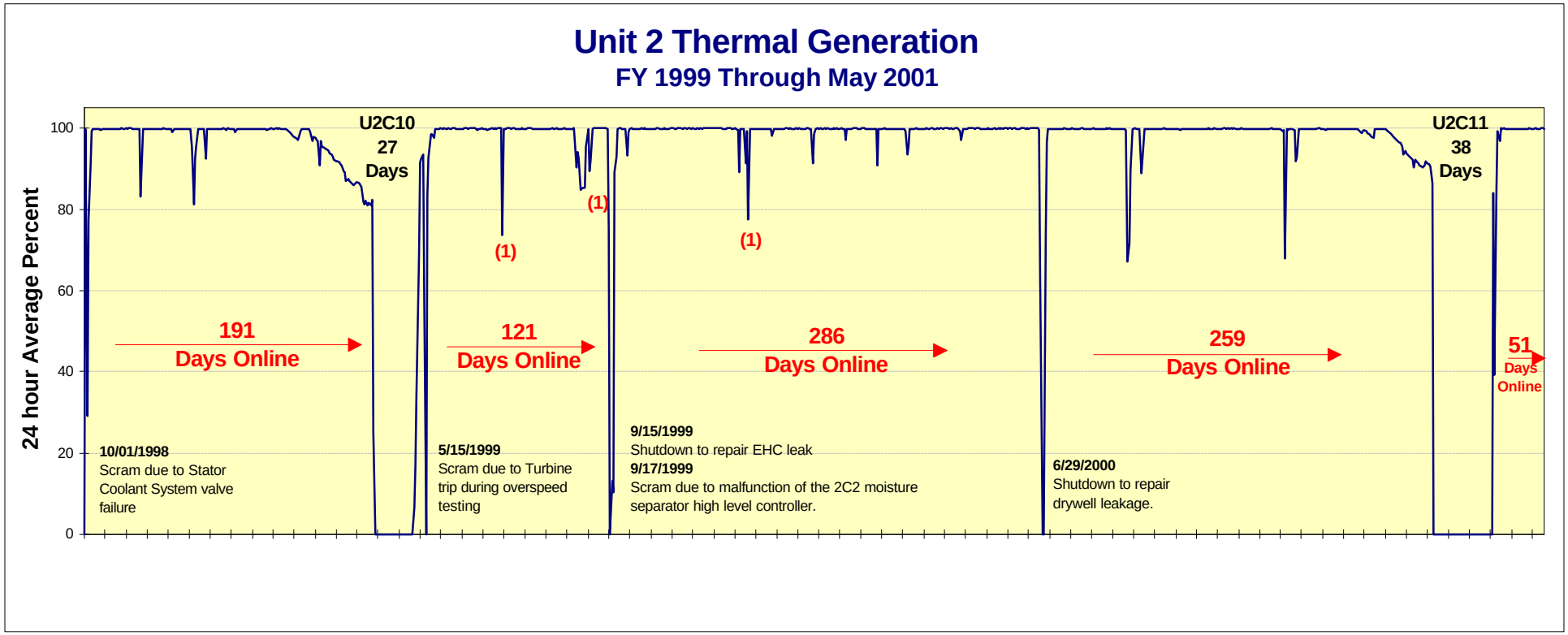
LEE MAILLET
Business & Work Performance

JERRY SCHLESSEL
Projects

RIC WIGGALL
Site Engineering

Plant Performance

Power History Curve - Unit 2

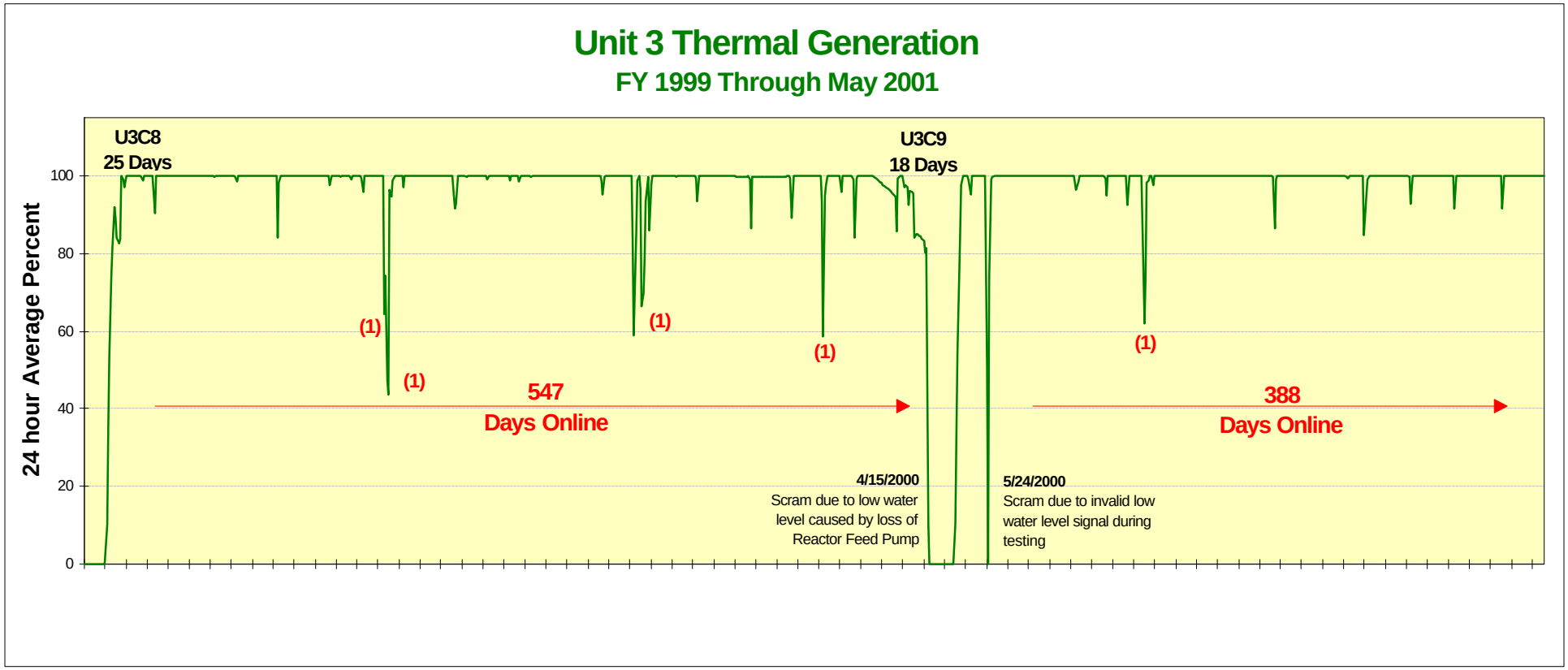


Notes:

(1) Unplanned power reduction caused by Recirculation system

Plant Performance

Power History Curve - Unit 3



Notes:

(1) Unplanned power reduction caused by Recirculation system

Plant Performance

Unit 2 Cycle 11 Outage Highlights

- Enhance Nuclear Safety
  - Replaced/upgraded several containment isolation valves
  - Completed main steam line ruggedness modifications
- Improve Equipment Reliability
  - Main Generator refurbished
  - EHC System upgraded
  - Temporary leak repairs permanently repaired
  - Main transformer cooling system enhanced
- Scram Frequency Reduction
  - Reactor low water level scram setpoint changed
  - Turbine trip logic upgraded
- Reduce Radiological Dose
  - Chemical decontamination of piping
  - Noble metals application

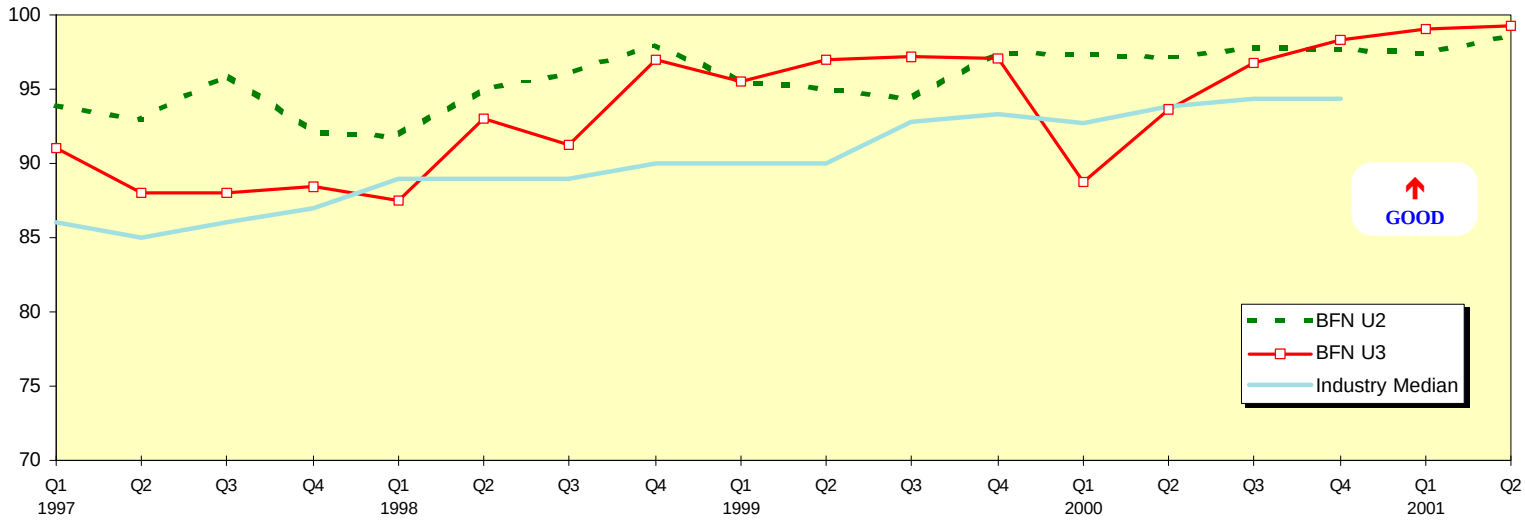
Plant Performance

Unit 2 Cycle 11 Outage Highlights

- Outage Activities Completed:
  - Design Changes 71
  - Work Orders 2102
- Plant Conditions at Startup:
  - Operator Workarounds 0
  - Temporary Alterations (which existed prior to outage) 0
  - Control Room Deficiencies 0
  - Disabled Alarms 0
  - Instruments Out of Service 0
  - Outage NRC Commitments 0
  - Temporary Leak Repairs 0
  - Control Air Leak Repairs 0
  - Catch Devices 0
  - Oil Leakage 0
  - Radwaste Inleakage WOs 0
  - Outstanding Technical Operability Evaluations 0

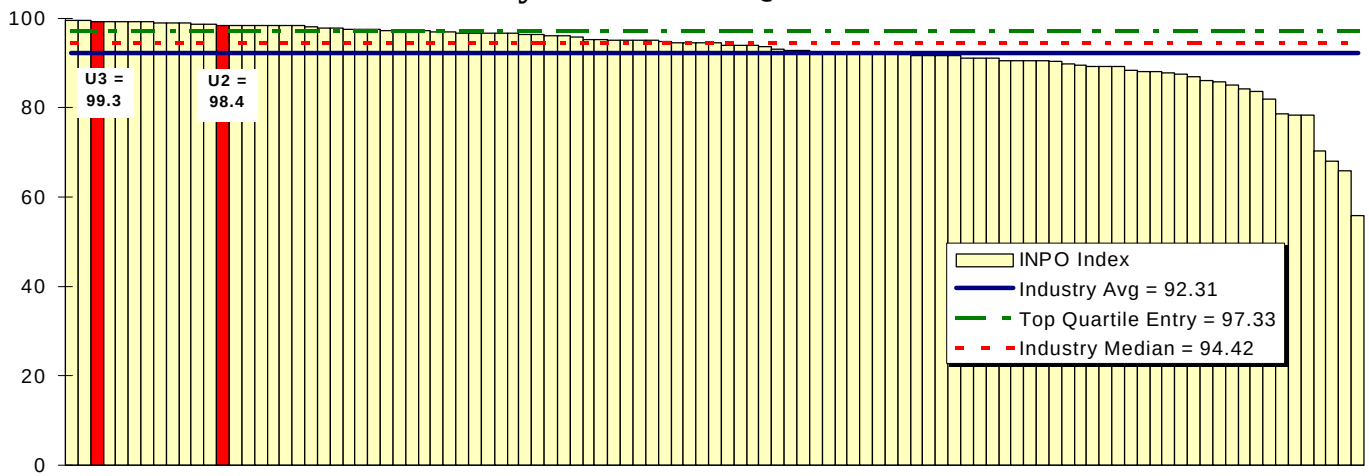
Performance Indicators

INPO Index



INPO INDEX

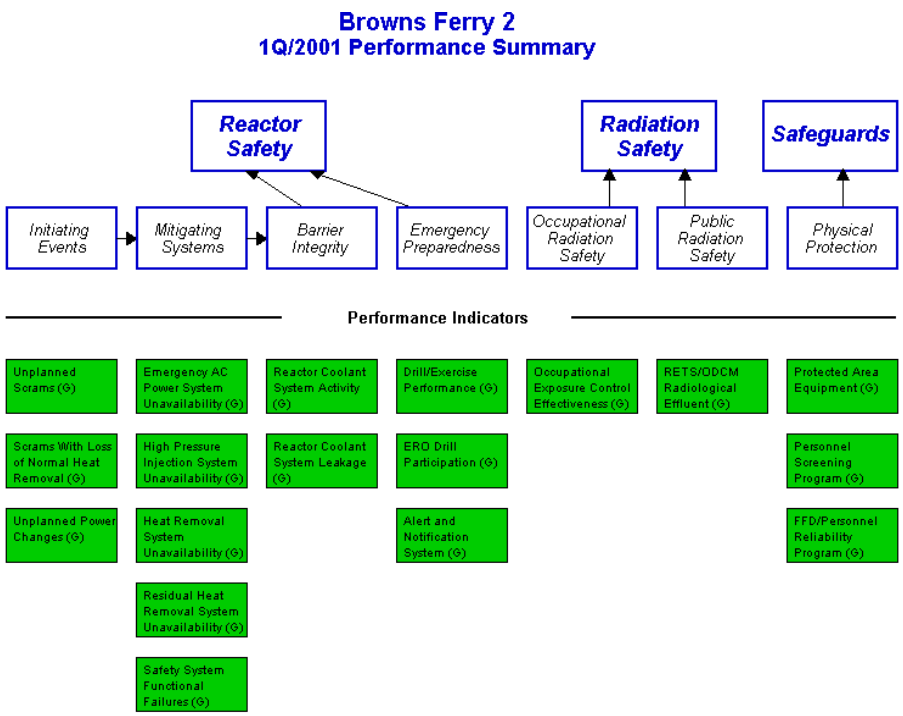
Industry Data - 4th Quarter 2000

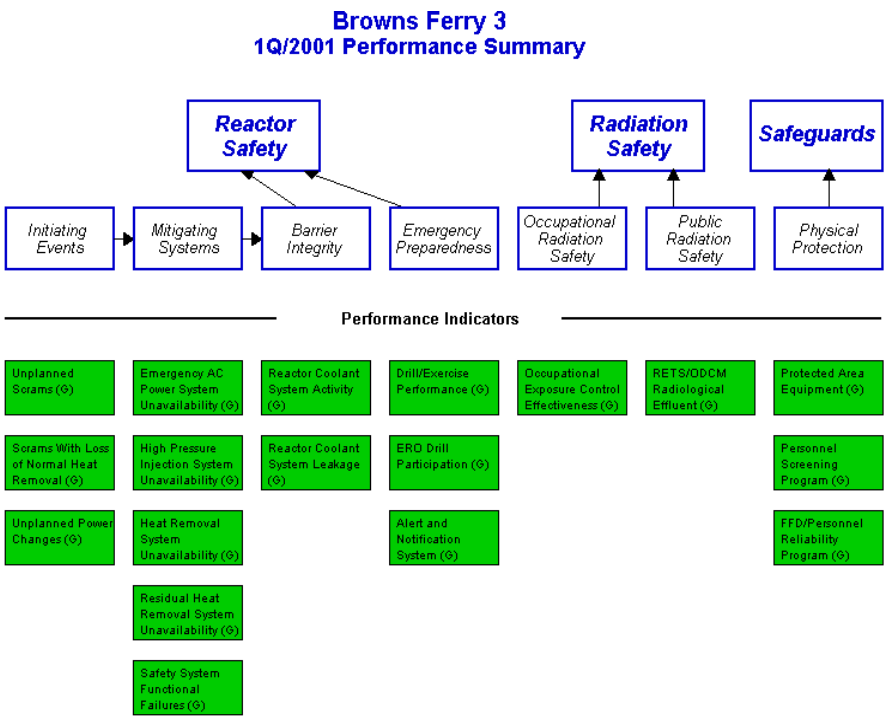


U.S. Nuclear Units

Performance Indicators

NRC Performance Indicators





Strategic Performance Initiatives

FY2001 Site Focus Plan

Focus Area	Management Sponsor
◆ Plant Initiatives	
➢ Unplanned Capability Loss/Scram Reduction	Ric Wiggall
➢ Safety System Availability	Bob Moll
➢ Radiological Source Term Reduction	John Corey
◆ Process Initiatives	
➢ Plant Risk Management	Gilbert Little
➢ Work Management	Elvis Hollins
➢ Troubleshooting	Mike Skaggs
➢ O&M / Capital Budgets	Lee Maillet
◆ People Initiatives	
➢ Supervisory Development	Dan Sanchez
➢ Management Observation	Tom Niessen
➢ Communication Plan	Ashok Bhatnagar
➢ Attrition & Succession Planning	R. G. Jones
➢ Human Performance	Tom Niessen

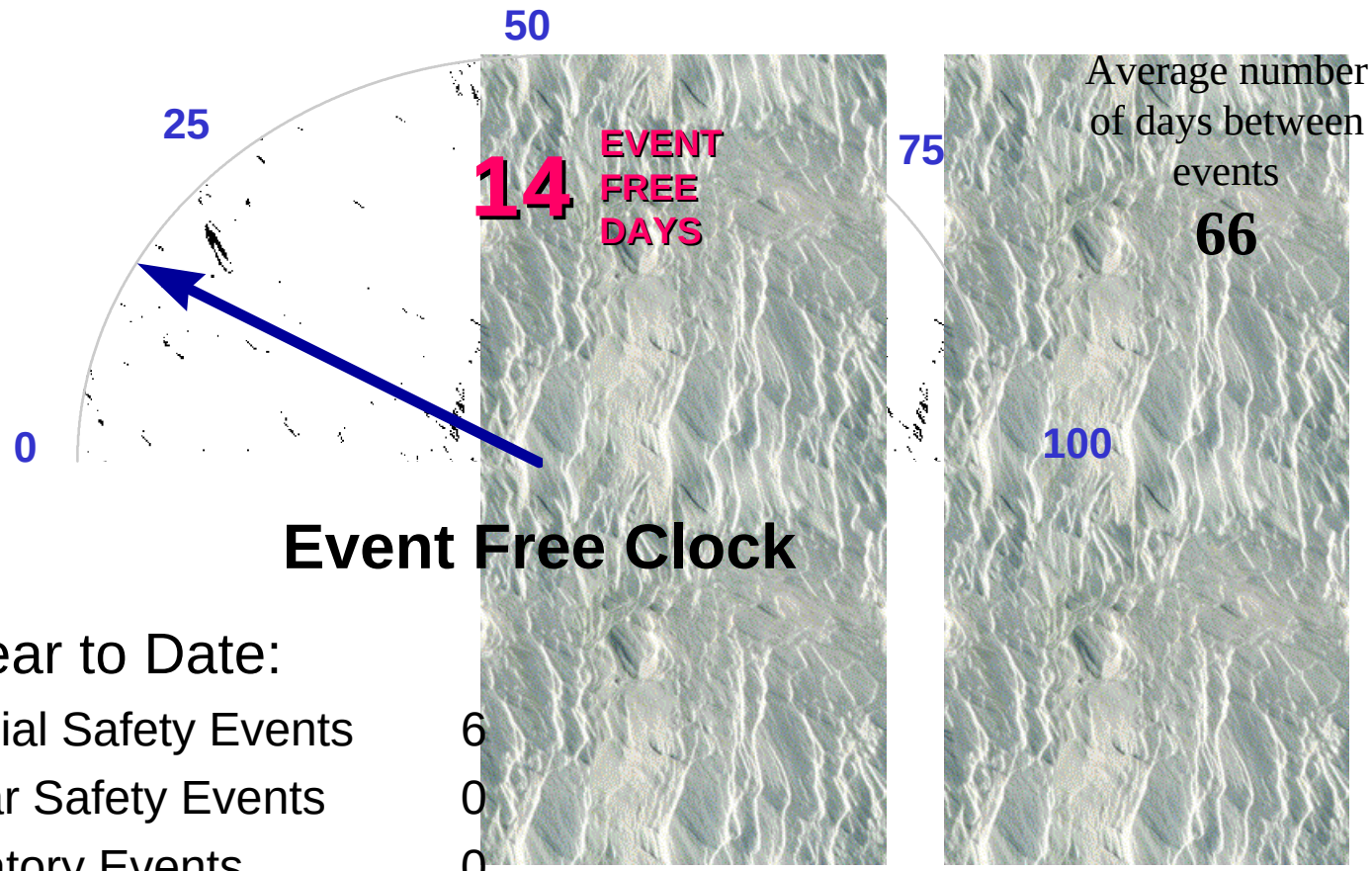
Cross Cutting Issues

Human Performance

- Comprehensive long-term strategy to improve human performance
- Individuals
  - Back to basics campaign
  - Quarterly human performance stand-downs
  - INPO human performance fundamentals added to continuing training
  - Excellence in Performance program
- Supervisors
  - Supervisory Training Program
    - One full week of training for all first line supervisors
    - Topics designed to enhance full range of supervisory skills
    - One day dedicated to human error detection and prevention
    - Taught by key members of BFN Management Team
  - Excellence in Performance program
- Management
  - Internal TVA Nuclear benchmarking program
  - Management Observation Program
    - Formal program with scheduled observations and written reports
    - Reports are trended for effectiveness
  - Management Excellence in Performance program

Cross Cutting Issues

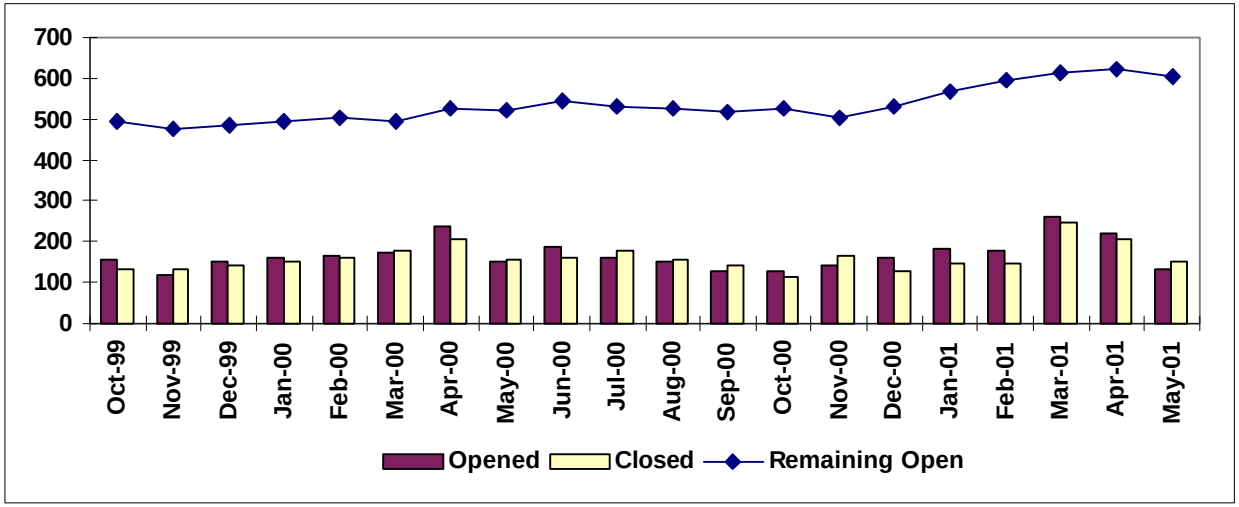
Human Performance



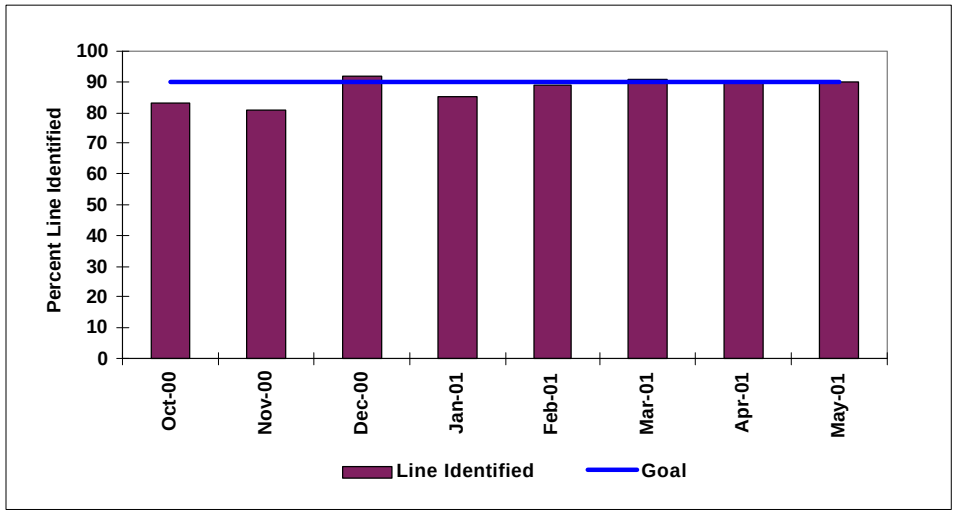
- Fiscal Year to Date:
  - Industrial Safety Events 6
  - Nuclear Safety Events 0
  - Regulatory Events 0
  - Radiation Safety Events 0
  - Generation Loss Events 0

Cross Cutting Issues

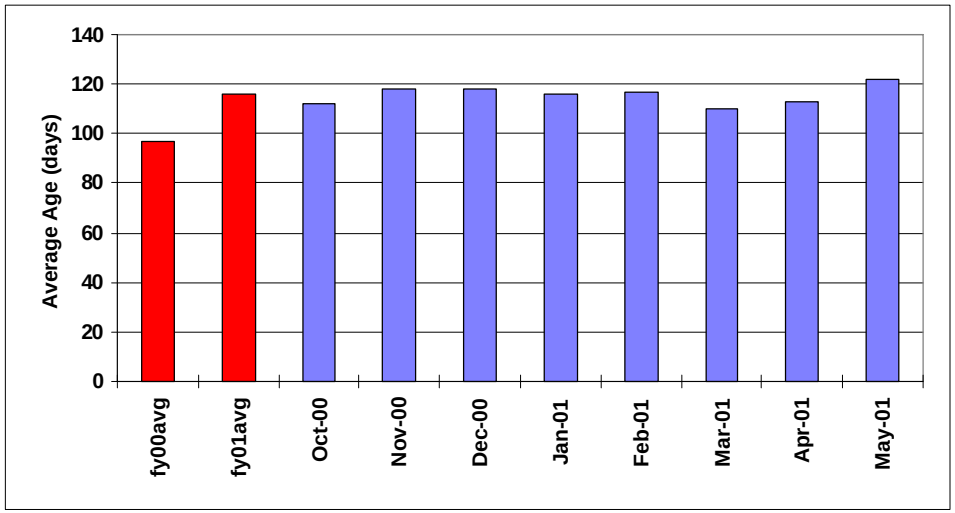
Problem Identification and Resolution



PERs Opened, Closed, and Remaining Open



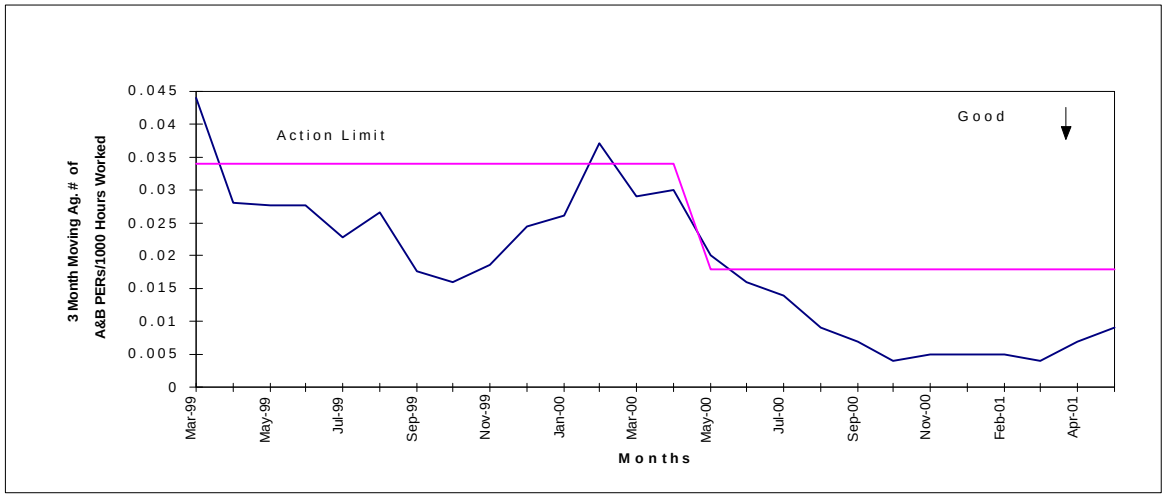
Self-Identification of PERs



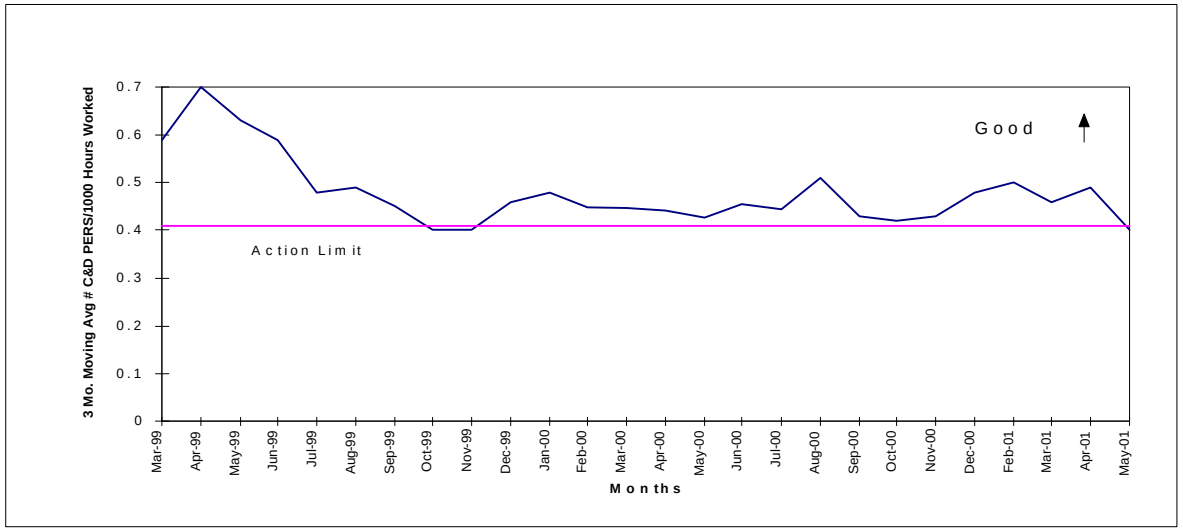
Average Age of Open PERs

Cross Cutting Issues

Problem Identification and Resolution



Human Performance Success Rate

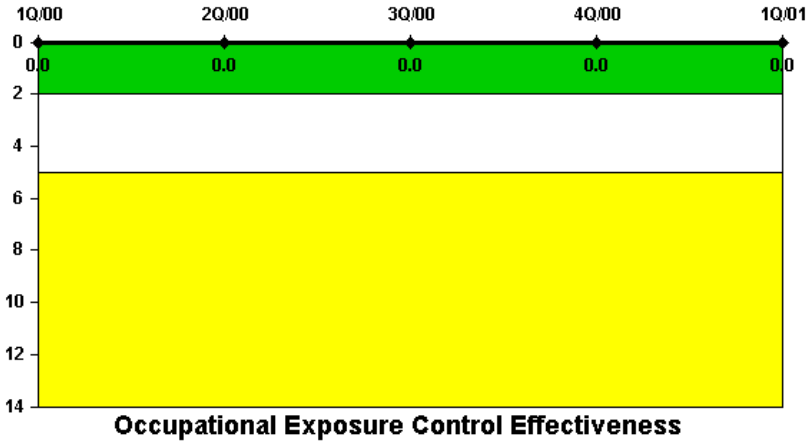


Human Performance Leading Indicator

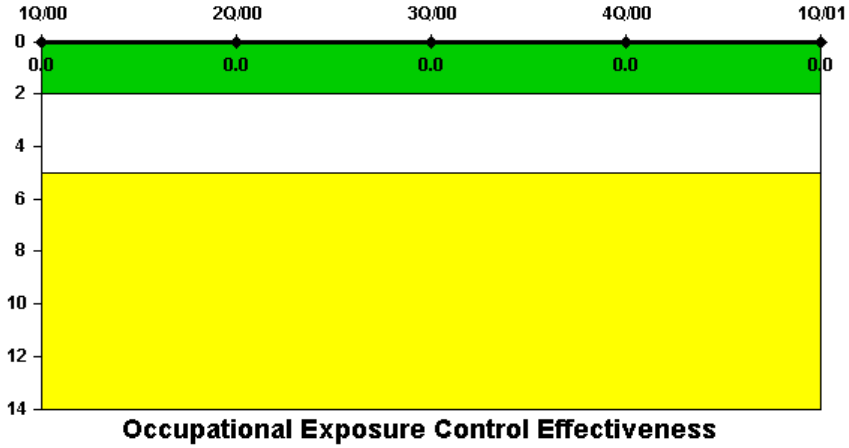
Occupational Radiation Safety Cornerstone

Performance Indicators

BFN Unit 2



BFN Unit 3



Occupational Radiation Safety Cornerstone

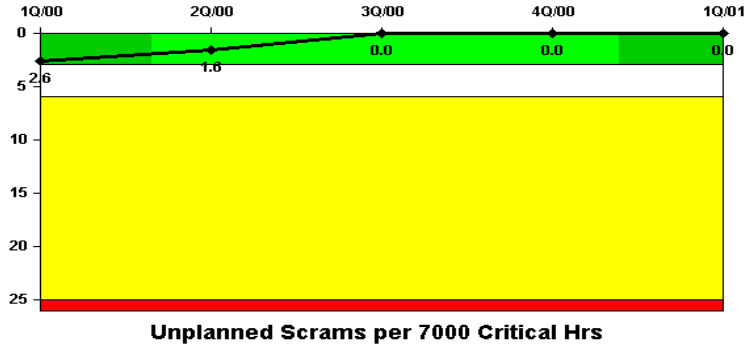
Focus Areas

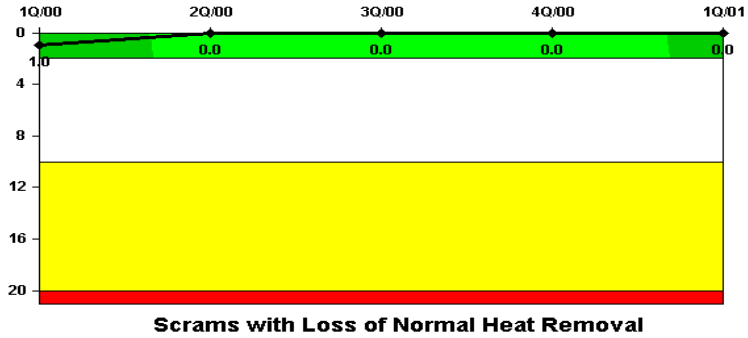
- Unit 2 Cycle 11 Dose Reduction
  - Chemical Decontamination
    - Outage dose 164 man-rem
    - Estimated savings of greater than 150 man-rem
    - Less than expected decontamination factors in upper Drywell area
  - Noble Metals Application
    - Expect a dose reduction of 3X with Hydrogen Water Chemistry in service
  - Risk-Informed ISI
    - Reduced inspections saved approximately 6-8 man-rem
  - Increased Allowable MSIV Leakage
    - All MSIVs passed LLRT saving approximately 7 man-rem
- Currently benchmarking best BWRs to identify best dose reduction practices
  - Goal is to reduce dose to less than 120 man-rem per year per unit

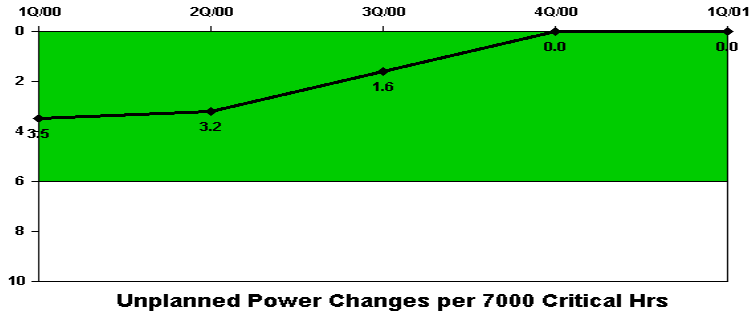
Initiating Events Cornerstone

Performance Indicators

BFN Unit 2







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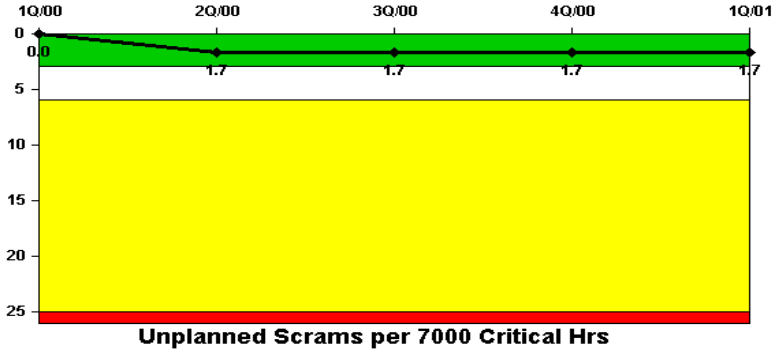
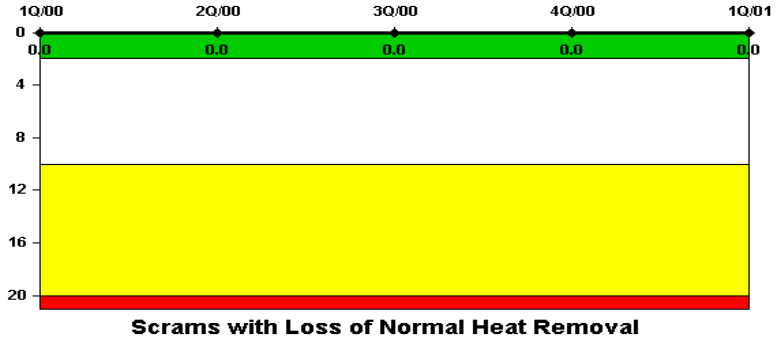
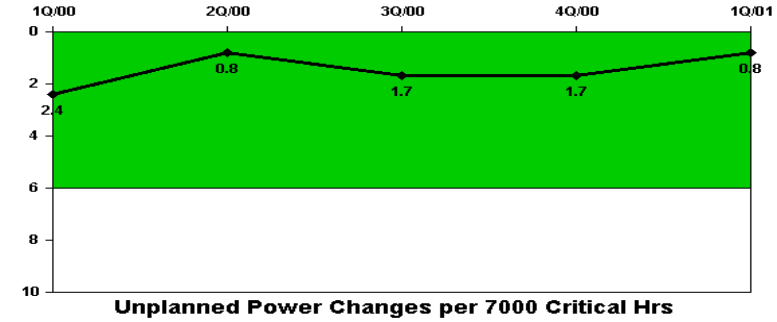






Initiating Events Cornerstone

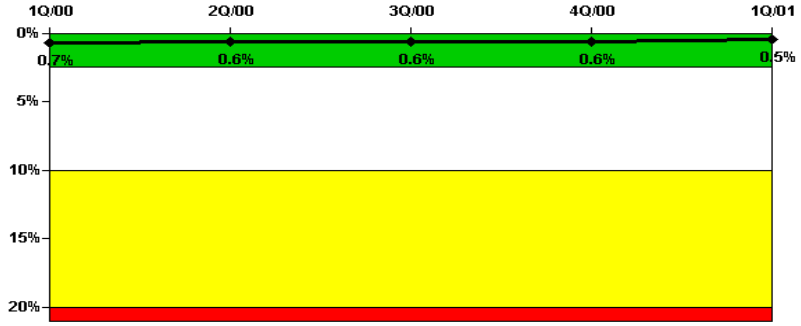
Focus Areas

- Refocused System Engineering on system improvements
- Identify Operations equipment challenges
- Address generation risk equipment issues
- Implement TVAN Scram Frequency Reduction Action Plan
- INPO Assistance Visit
- Generation Risk Equipment Upgrades
  - Digital EHC system installation and testing
  - Recirculation MG Set inspection/maintenance
  - Other single-point failure vulnerabilities eliminated
  - Main Transformer sudden pressure relay and logic upgrade
  - Planned replacement of Recirculation MG Sets with variable frequency drives

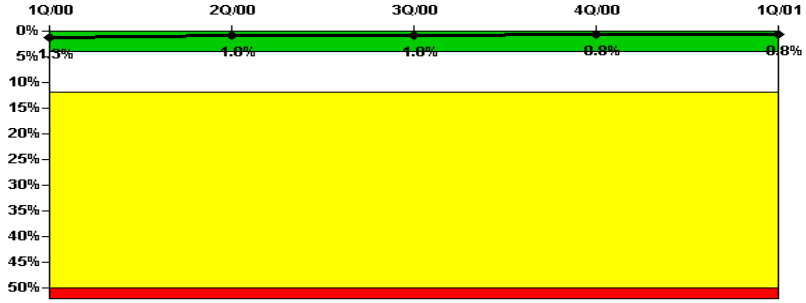
Mitigating Systems Cornerstone

Performance Indicators

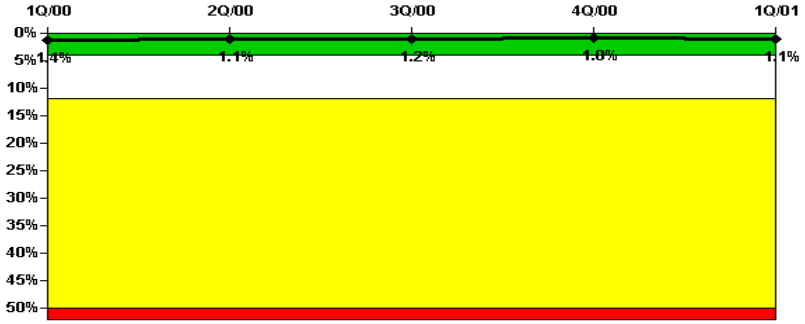
BFN Unit 2



Safety System Unavailability, Emergency AC Power, >2EDG

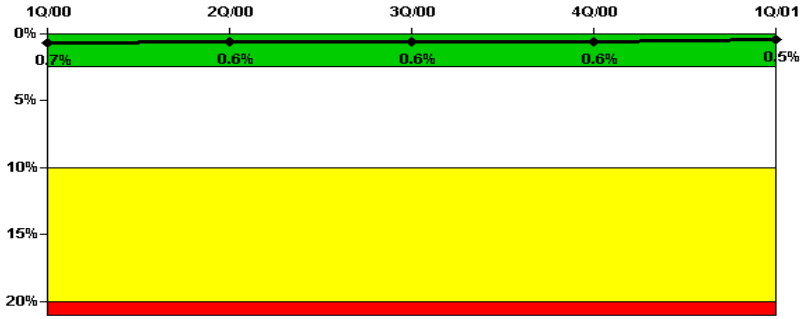


Safety System Unavailability, High Pressure Injection System (HPCI)

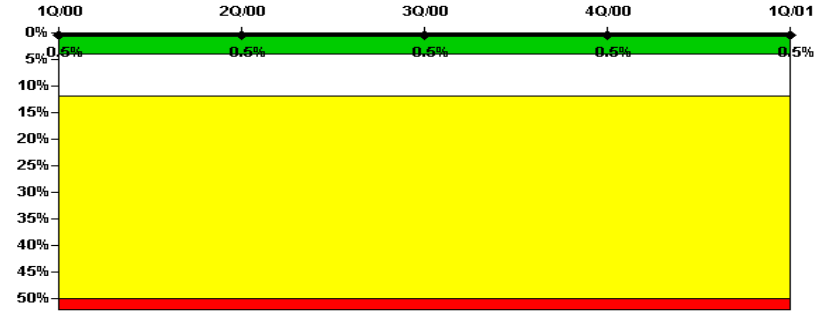


Safety System Unavailability, Heat Removal System (RCIC)

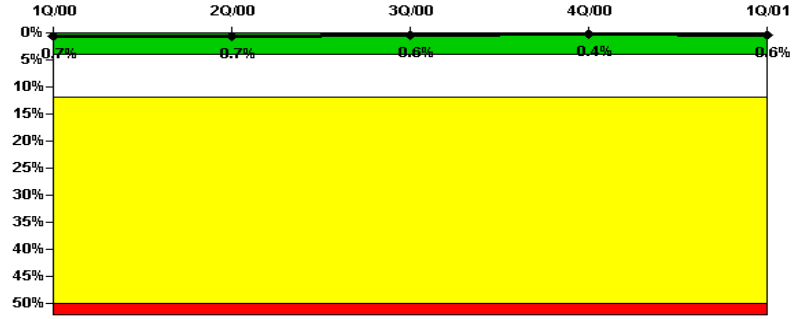
BFN Unit 3



Safety System Unavailability, Emergency AC Power, >2EDG



Safety System Unavailability, High Pressure Injection System (HPCI)

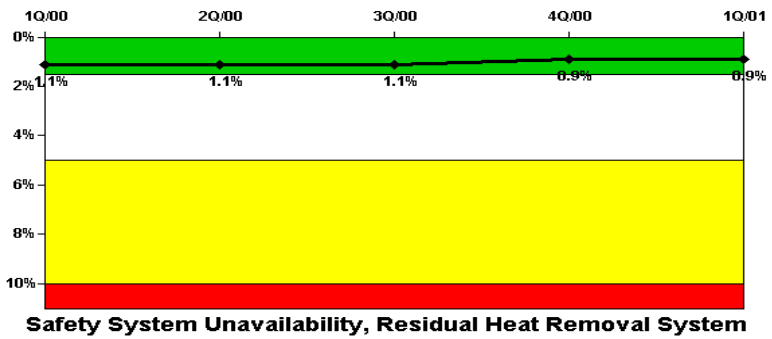


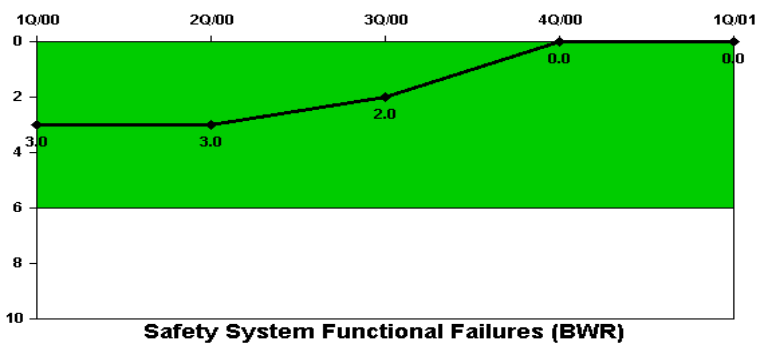
Safety System Unavailability, Heat Removal System (RCIC)

Mitigating Systems Cornerstone

Performance Indicators

BFN Unit 2





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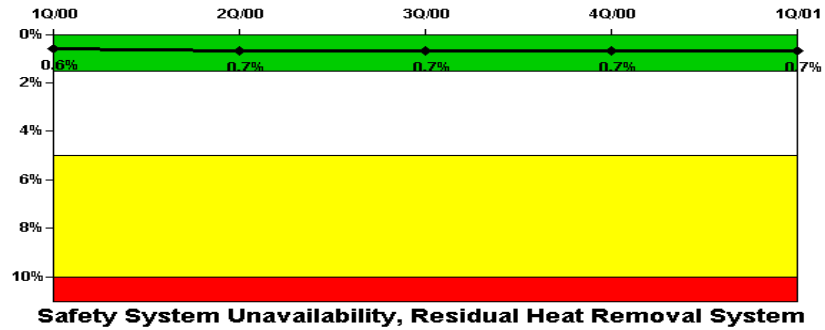

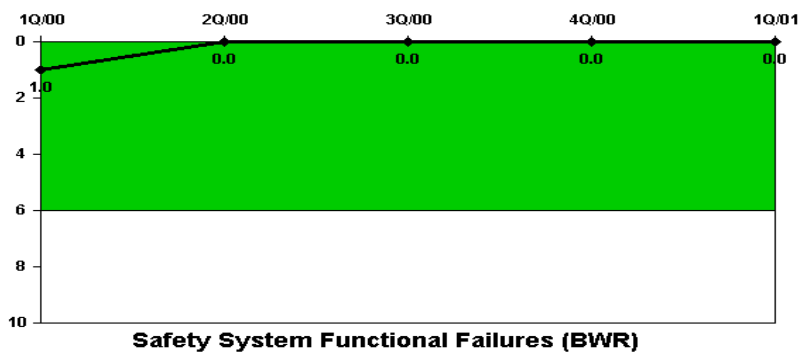

Mitigating Systems Cornerstone

Focus Areas

- Work Management
  - Schedule work to balance system unavailability and reliability
  - Streamline plant activities to minimize work delays
  - Implement Functional Equipment Groups (FEGs)
  - Results to Date

	FY 2000	FY 2001
Maintenance Backlog	962	789
Activities performed (avg./month)	732	773
Schedule performance	92%	94%

  - Additional focus for risk-significant activities
    - Coordination with other TVA Nuclear units
    - Scheduled Management observations
  - Work the right things at the right time
  - Safety System Reliability/Availability Improvements
    - Replaced Diesel Generator redundant start relays
    - Reduced unnecessary RHR unavailability due to testing
    - Containment Isolation Valve upgrade program
    - HPCI and RCIC controller upgrades planned

Looking Ahead

- Five-Year Project Plan
  - Extended Power Uprate
  - License Renewal
  - Dry Cask Storage
  - Blended Low Enrichment Uranium (BLEU) Fuel

Conclusions/Summary