

BNP - USNRC Region II Update

Neil Gannon
January 28, 2005



Introductions

- Neil Gannon Site Vice-President
- Tim Cleary Director of Site Operations
- Ed Quidley Manager of Outage & Scheduling
- Ed O'Neil Manager of Nuclear Services & Reg. Affairs
- Allen Brittain Superintendent of Security

Today's Discussion Topics

- Introduction & Overview Neil Gannon
- Plant Update Tim Cleary
- Outage and EPU Ed Quidley
- EP Update & License Renewal Ed O'Neil
- Security Allen Brittain

Company Organizational Changes

- Skip Orser, Energy Supply Group President retirement effective March 1, 2005. The position will not be re-filled.
- Bill Johnson promoted to President and Chief Operating Officer, Progress Energy Inc.
- CNO, Scotty Hinnant, will report directly to Bill Johnson

Brunswick Management Changes

- Tim Cleary, Director- Site Operations
- Annette Pope, Manager Maintenance

Voluntary Early Retirement

- Large Number Eligible Employees
- Election Period March 15 to April 15
- Effective Dates June 1 to December 1
- Retention Caps Pre-Determined
- Knowledge Transfer in Process

Brunswick Plant Update

Tim Cleary



Progress Energy

Plant Status

Unit 1 100% Power 162 Days in service

Unit 2 93% Power 178 Days in service

Coast in progress

Unit 2 Refueling Outage – March 5

Unit 1 Mid-Cycle Outage – April 15

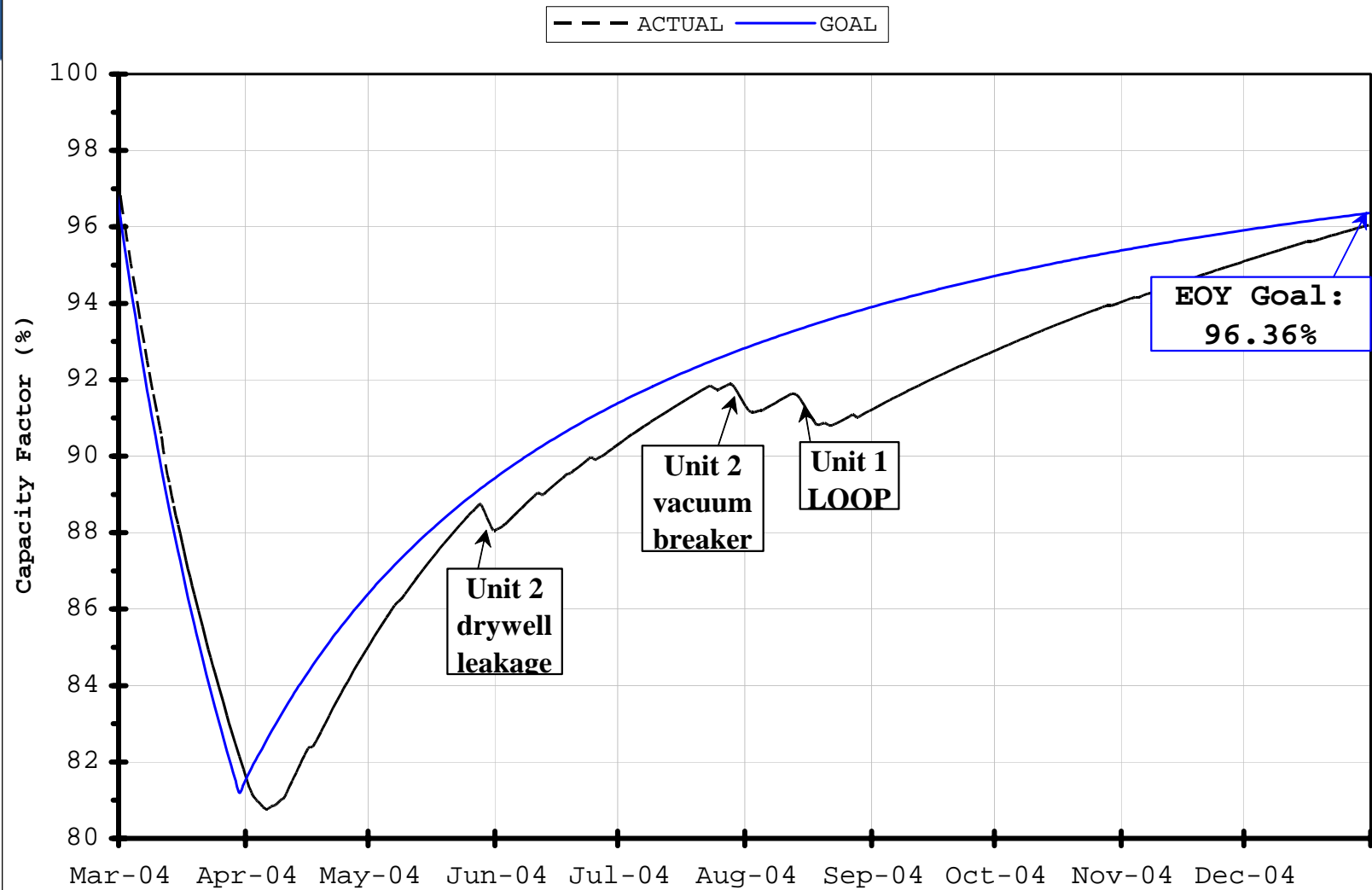
Plant Update

- 2004 Highlights
 - ◆ Full Compliance with Security Orders
 - ◆ License Renewal Submittal
 - ◆ Lowest Radiation Exposure Year Ever
 - ◆ Triennial Fire Protection Insp.
 - ◆ Graded Emergency Preparedness Exercise
 - ◆ Unit 1 Power Uprate to 120%

Plant Update

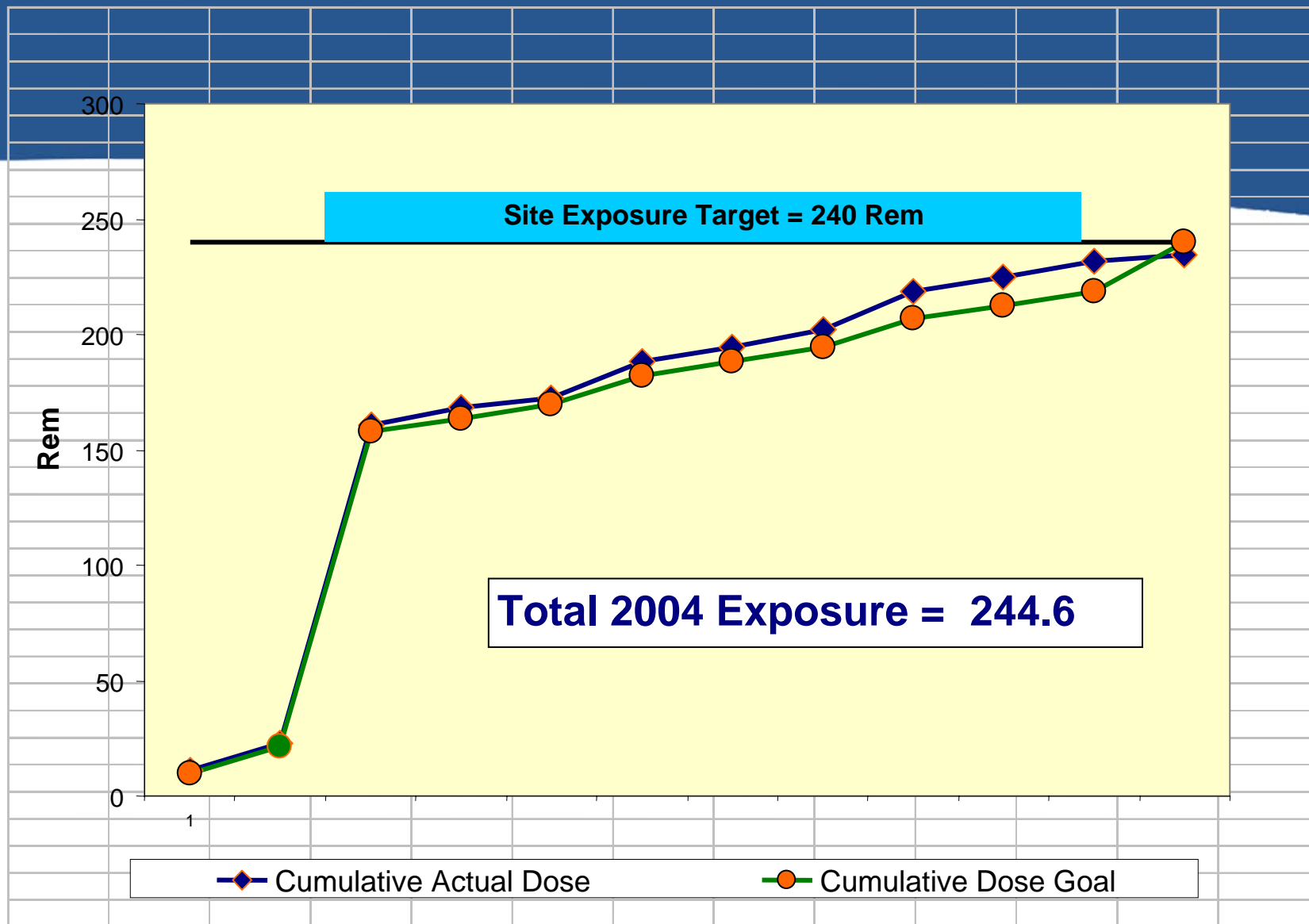
- 2004 Challenges
 - ◆ Forced outages
 - ◆ Fuel reliability
 - ◆ Human Performance
 - ◆ Switchyard Performance

BNP 2004 Y-T-D Capacity Factor

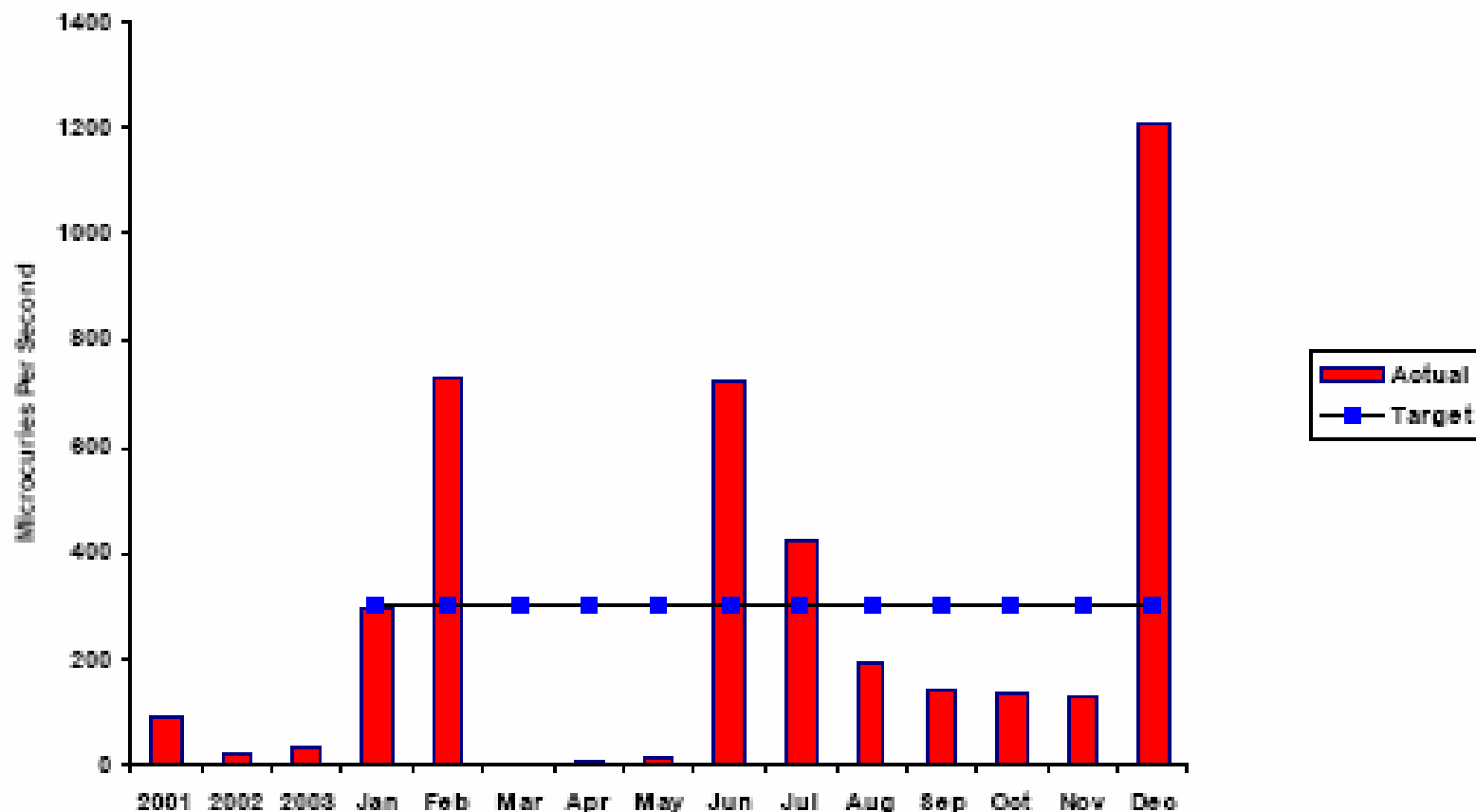


2004 HU Events

- Motor Removed from Wrong Recirc Valve
- Diver Radiation Exposure Administrative Limit Exceeded
- EDG Load Shed Relay Cover Mispositioned

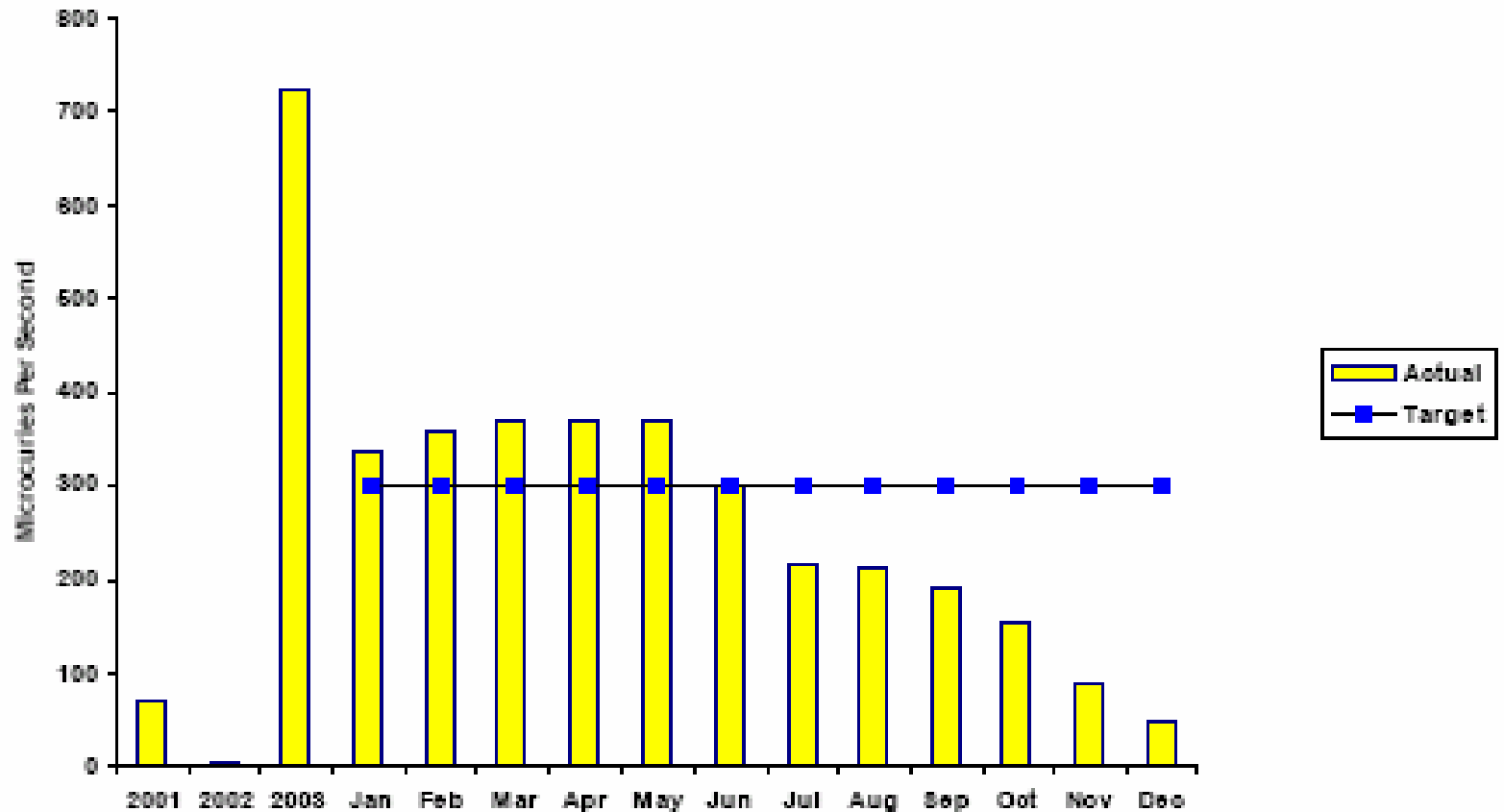


INPO Fuel Reliability Index-U1



Month	2001	2002	2003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Actual	90.2	19.94	58	292	728		9.2	17	720	420	192	144	134	132	1209
Target	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Status	GREEN	GREEN	GREEN	YELLOW	RED	N/A	GREEN	GREEN	RED	RED	YELLOW	YELLOW	YELLOW	YELLOW	RED

INPO Fuel Reliability Index-U2



Month	2001	2002	2003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Actual	69.2	5.274	724	335	359	372	369	371	297	215	214	192	152	87	48.7
Target	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Status	GREEN	GREEN	RED	RED	RED	RED	RED	RED	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW

PCB 24B Failures

- 8/14/2004 – Hurricane Charley exiting service area
- Transmission Line Insulator Failed
- PCB 24B cycled open as designed, but fault current was erroneously still detected which resulted in B 230KV bus lockout; LOOP to U1.
- PCB 24 B was repaired and returned to service.

2nd Failure; Reason for Fault

- October 2004 - PCB 24B failed again.
- Based on Visual Inspection and Vendor Input
- B Phase Bus Side Bushing Experienced Internal Fault
- Bushing Sent to ABB for Analysis
- Determined that standard pressure test had not been performed & would have identified assembly error
- Newly Installed & Recent Shipment (3) Rebuilt Bushings were pressure tested within spec.

Bushing

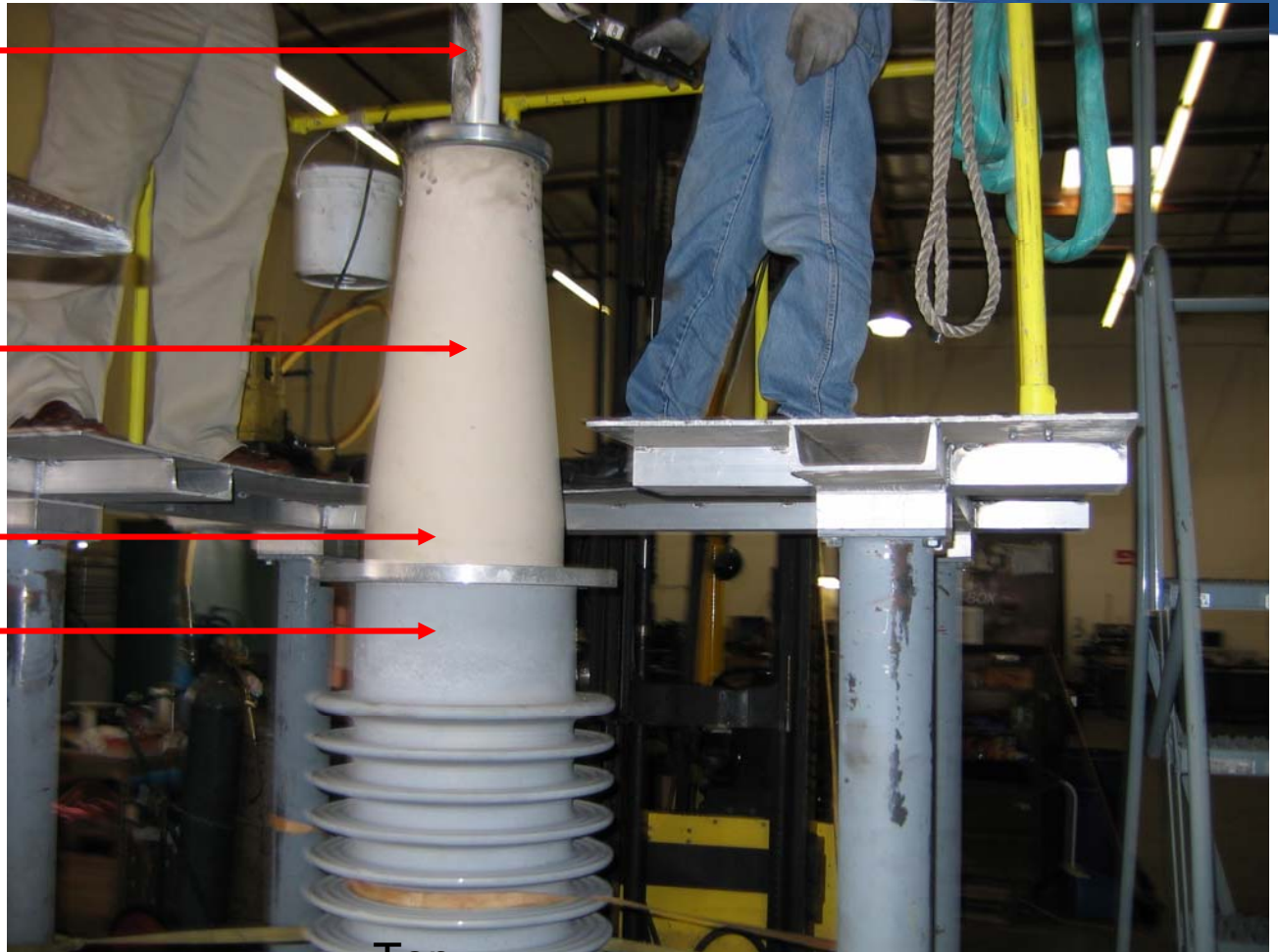
Bottom

Stem

Lower
Porcelain

Flange

Upper
Porcelain



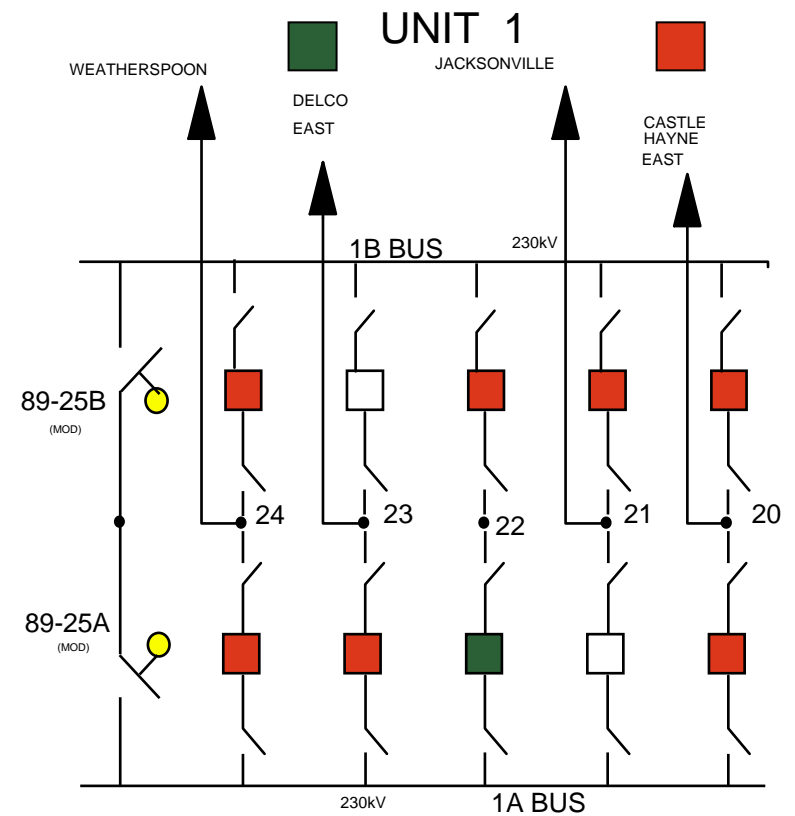
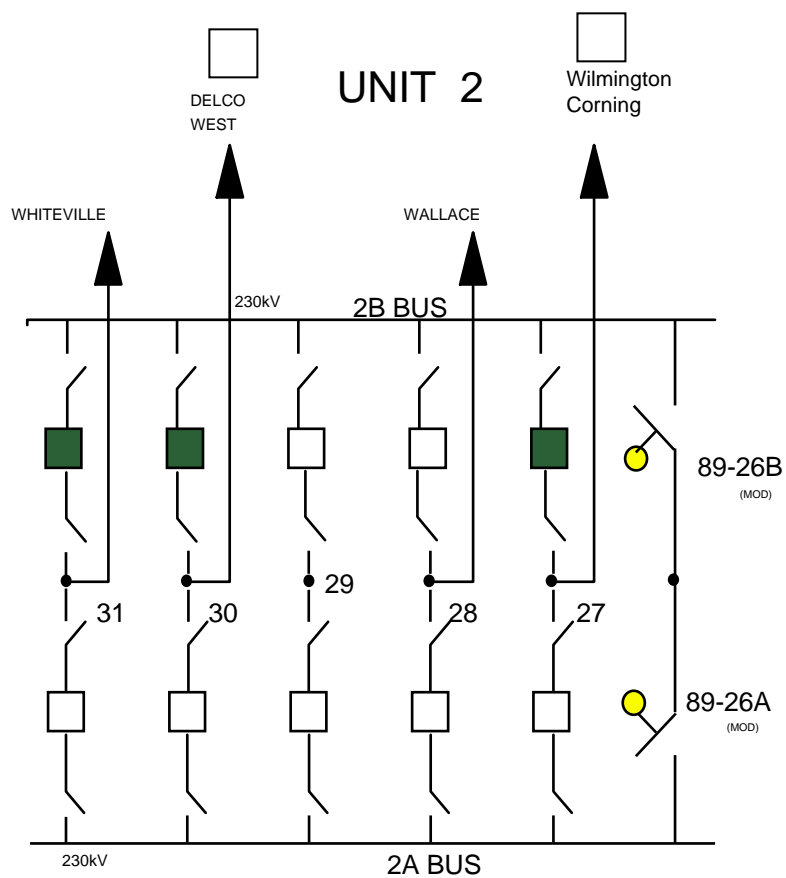
Top

Upper Flange






PCB leaks

- Breaker returned to service following rebuild
- PNSC reviewed investigation on 12/15/04
- Identified 8 additional PCB's requiring maintenance due to minor leaks
- PCB 24B determined to be highest priority
- PCB 24 B removed from service for leak repair on January 4, 2005
- Bushings replaced from stock obtained from ABB rebuild facility



Legend

-  5 - Repair Leak w/breaker in Service
-  8 - Repair Leak w/breaker Out of Service Service
-  11 - No Leaks Detected

Sample Leak Locations



3rd Bushing Failure

- 1/7/05 - Bushing Failed During Restoration
 - ◆ PCB Was Open
- Shipped to ABB 1/9/05
- Observations - Teardown in Carson, CA
 - ◆ Personnel Not Using Checklist
 - ◆ Adhesive was Inadequate
 - ◆ Personnel Training was Inadequate
 - ◆ Chain Hoist was used vs. Cable Hoist

24B PCB Photos



24B PCB Photos



Plans

- ABB Review With Station Management
- Continue with Leak Repairs on Low Risk Leaks (PCB in Service)
- Witness Bushing Rebuilds to Gain Confidence
- Return PCB 24B Back to Service
- Determine if correlation between as-found leak rates and time to failure
- Present Plan for Repairing Leaking PCB's
- Evaluate Possible Compensatory Measures until leaking PCBs can be repaired

U2 Spring Refuel Outage

Ed Quidley



Progress Energy

B217R1 Outage Overview

- Outage begins 3/5/05
- Duration: 30 days (breaker to breaker)
- Final EPUR outage
- Critical path – Electrical Systems/Refuel Floor

Extended Power Uprate Margin Improvements

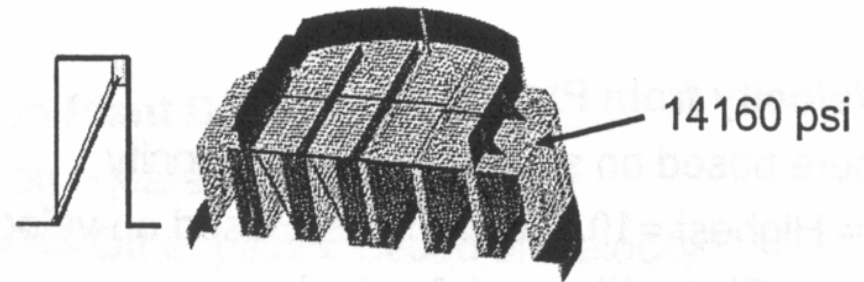
Plant Change	Margin Impact
SLC Boron Increase (ATWS)	Improves SLC Margin Requires only 1 Pump Versus 2 for ATWS
Power Range Instrumentation	Improves Operating Margin, Operator Interface and reduces required Maintenance/Testing Addresses Obsolescence
Upgrade Condensate & Feedwater	Provides Standby Pumps and Increased Capacities Accommodates Feedpump Trips for all Power Levels
Power System Stabilizer	Improves Grid Stability

Steam Dryer

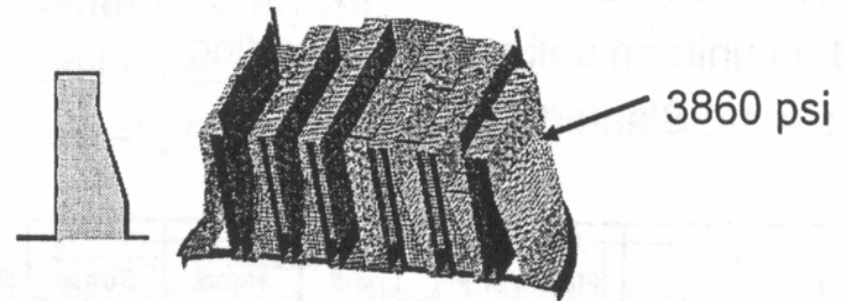
- Prompted by Quad Cities failures
- GE recommended design changes
 - ◆ BNP has a less susceptible design
 - ◆ Based on very conservative load calculations
- Design changes
 - ◆ Increases weld size to strengthen vulnerable areas
 - ◆ Adds Gussets for additional support
 - ◆ Significantly improves design margin

Relative Stresses on Dryer Hood

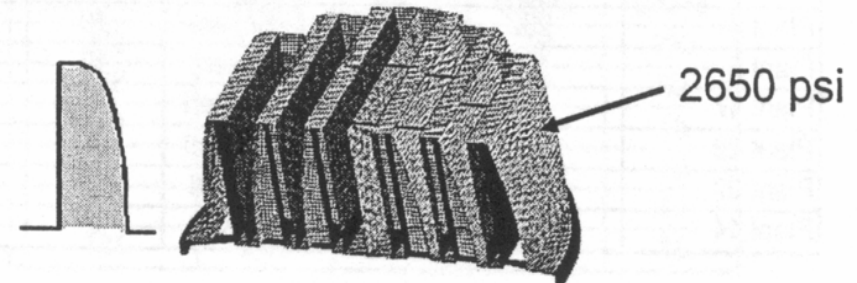
- Square Hood
Quad Cities Design



- Slanted Hood
Brunswick Design

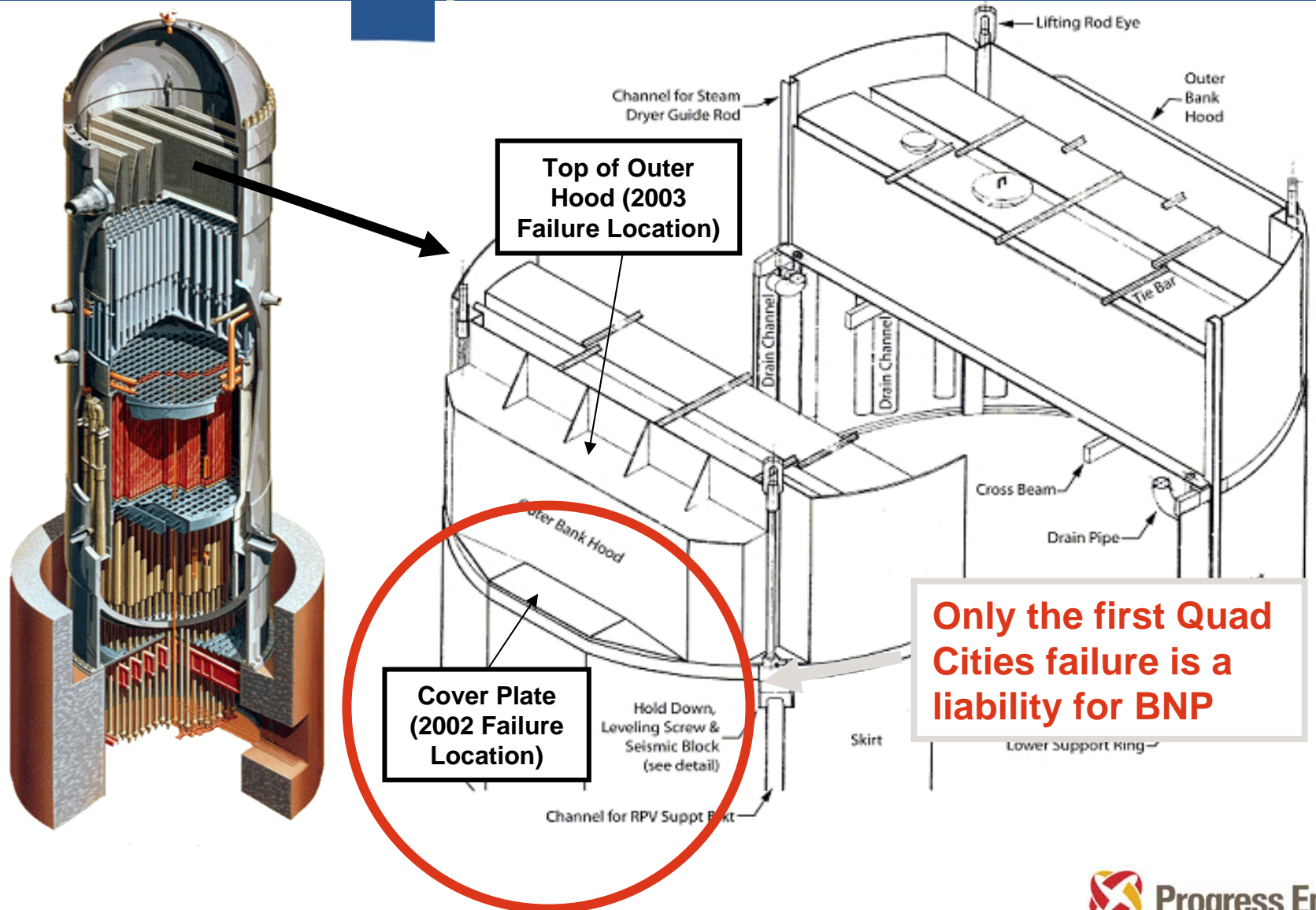


- Curved Hood
BWR 6 Design



Steam Dryer Modification

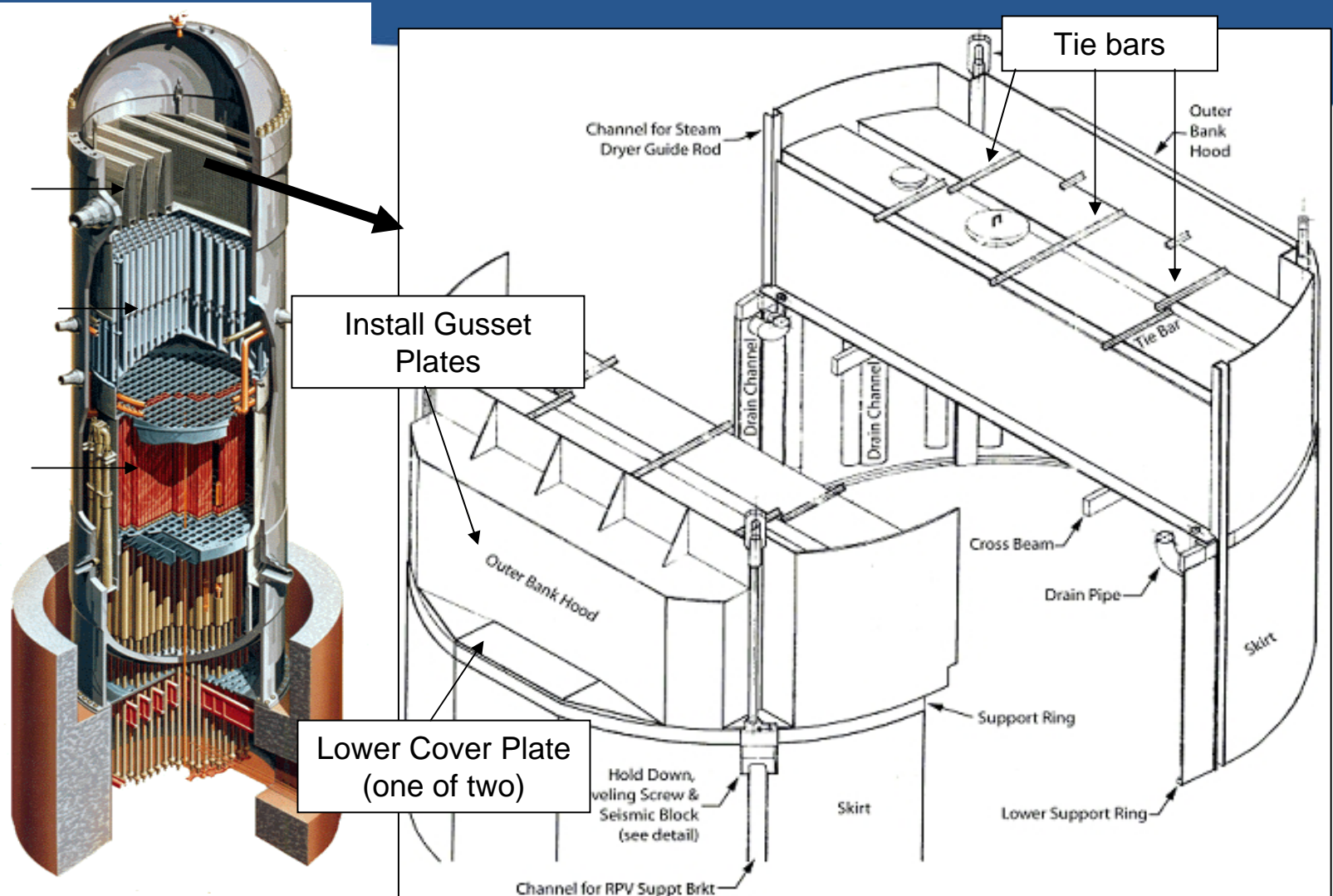
Quad Cities Dryer Failures



Steam Dryer Modification

- **Scope**
- Modify welds (increase bead size) on the steam dryer cover plate (including manway).
- Install gusset plates to the Outer Bank Hood @ 90 and 270 degrees.
- Replace all ten tie bars on the top of the steam dryer.

Steam Dryer Modification



B217R1 Outage Overview

- Electrical Systems (26.6 days)
 - ◆ DG Test Sequence
 - ◆ Main Transformer Replacements
 - ◆ SAT Work – Including Breaker Mod Installation
 - ◆ 2D, E3, E7 Bus Outages

B217R1 Outage Overview

- Refuel Floor Work (24.75 days)
 - ◆ Steam Dryer Modification
 - ◆ RPV Disassembly/Reassembly
 - ◆ Fuel Shuffle
 - ◆ Blade Exchange
 - ◆ LPRM Replacements
 - ◆ ILRT
 - ◆ Hydro

B217R1 Outage Overview

- Turbine Inspections (25.2 days)
 - ◆ Low Pressure Rotor (B) 10 Year Inspection
 - ◆ Crossover Relief Valve Replacements (EPUR)
 - ◆ Turbine Casing Leak Repair
 - ◆ MSR Shielding Mod
 - ◆ Routine Outage Inspections and Repairs

B217R1 Outage Overview

- Service Water System (17.1 days)
 - ◆ Nuclear SW Inspection and Repairs
 - ◆ RHR SW Repairs (Includes Conventional Header)

B115M1 Outage Plan

- Scheduled to begin on 4/15/05
- 8 Day Schedule
- Avoids unplanned peak season impact
- Two significant drivers
 - ◆ Fuel leaks
 - ◆ DW Floor Drain inleakage
- Challenges
 - ◆ Refuel Floor preparations
 - ◆ DW leakage repairs

Emergency Preparedness and License Renewal

Ed O'Neil



Progress Energy

2004 BNP EP Drills

- Strong Drill Focus on EP/Operations/Security Integrated Response
 - ◆ EP/Operations/Security Integrated Drills
 - ◆ Physical Attack Involving Imminent Occupancy
 - ◆ Intruder VA Penetration Permitted
 - ◆ Control Room Participation
 - ◆ Offsite SWAT Response into PA
 - ◆ Imminent Threat To Plant Safety
 - ◆ Telephone Threat
 - ◆ K-9 PA Response

2004 BNP EP Drills

- Imminent Threat To Plant Safety
 - ◆ Loss of Large Area (table-top)
 - ◆ County EMS, Local & State Law Enforcement, Fire Response Team
 - ◆ Mass Casualties
- Toxic Fume Release
 - ◆ NC Regional Hazmat Response Team
 - ◆ Team & Equipment Response into PA

BNP EP SFS Response Drill



BNP EP

- EP Evaluated Exercise Completed 11/16/04
 - ◆ RASCAL Implementation
 - ◆ Fleet RASCAL Capability
- Additional Offsite Response (REACTS) Trng.
 - ◆ 32 First Responders, EMT, Nurses, MDs
- Hurricane Charley
 - ◆ EP Facilities Staffed
 - ◆ NRC/FEMA Restart Authorization

BNP EP Looking Forward...

- Continued Focus on:
 - ◆ Off-Site Response Organization Communications & Coordination
 - ◆ Strengthening Memorandums of Understanding
 - ◆ Practice, Practice, Practice
 - ◆ Identify and Apply Lessons Learned

License Renewal Milestones

- Submitted 10/25/04
- Deadline for hearing requests was 01/21/05
- RAls issued May 2005
- Final public meeting on SEIS October, 2005
- Regional Administrator's letter May, 2006
- SER issued June, 2006
- ACRS July, 2006
- Commission Decision April, 2007 (Sept. 2006 if no public hearings)

Security Briefing

Allen Brittain



Progress Energy

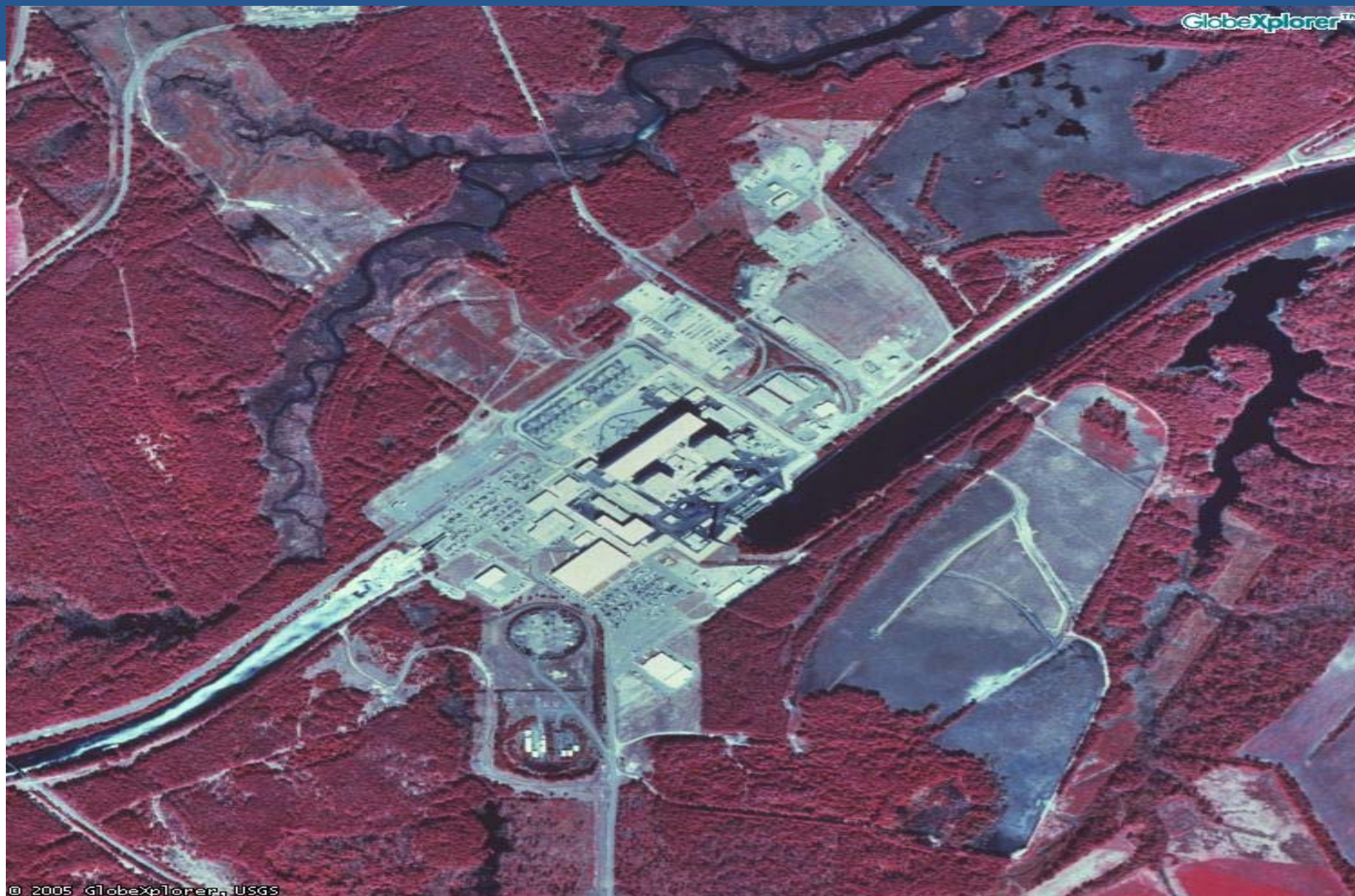
Owner Controlled Area (OCA) Access Control Point (ACP)



Vehicle Barrier System (VBS)



Natural Barriers



OCA Protection Measures



Waterborne Protection



Waterborne Protection



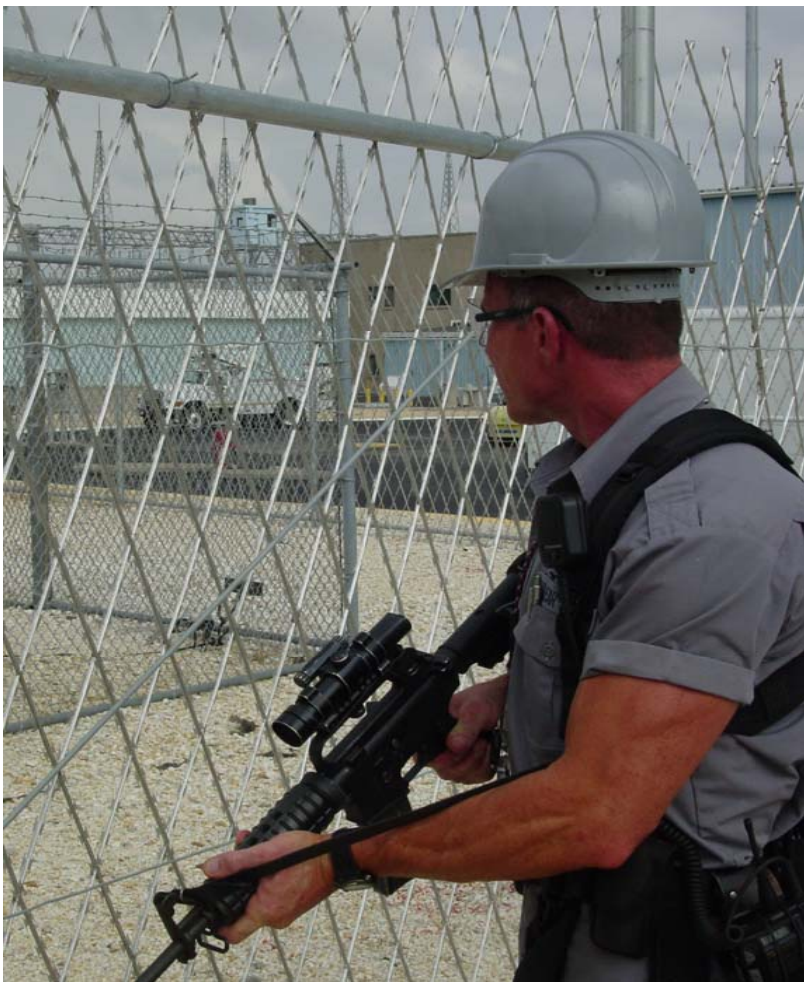
Waterborne Protection



Adversary Delay Barriers



Adversary Delay Barriers



Welded Razor Fence



Protected Area Protection Measures



Primary & Secondary Fighting Positions



Sighting Devices



LLEA Response & Coordination

- Emergency Preparedness Drills
- Force-on-Force Drills
- Table Top Drills
- Self Assessments
- LLEA OCA Patrol



Focus Areas

- Progress Energy Composite Adversary Team
 - Four from each site currently trained
- Metal detector replacement
- OCA CCTV monitoring – 6 additional positions
- Continue to train and evaluate defensive strategy (Emergency Preparedness, Operations and Security)

BNP - USNRC Region II Update

Neil Gannon
2005 Focus Areas



BNP Focus - 2005

- Safely Operate the units
- Safely complete the U2 Outage
- Successfully complete OSART May 2005
- Manage Organizational Transition - VERP

BNP - USNRC Region II Update

Questions



Progress Energy