

# Westinghouse Owners Group



Executive Management Group/NRC Meeting

March 9, 2004

Capital Hilton, Washington, DC.

# Agenda

---

1:00	<b>Introductions and Opening Remarks for WOG</b>	Rick Muench
1:05	<b>Opening Remarks for NRC</b>	Jim Dyer
1:10	<b>Westinghouse Owners Group Overview</b>	Ted Schiffley
1:20	<b>WOG Strategic &amp; Product Issues</b>	Ted Schiffley
1:50	<b>WOG Topical Reports</b>	Denny Buschbaum
2:10	<b>NRC Topics of Interest</b>	NRC Representative
2:40	<b>Open Discussion</b>	ALL
2:50	<b>Review of Action Items</b>	Drew Holland
2:55	<b>Future Meeting Dates</b>	Rick Muench
3:00	<b>Adjourn</b>	

# WOG Organization Overview

---



## 26 US Members

AMEREN UE

AMERICAN ELECTRIC POWER CO.

ARIZONA PUBLIC SERVICE CO.

CONSTELLATION ENERGY GROUP

DOMINION NUCLEAR CONNECTICUT

DOMINION VIRGINIA POWER

DUKE ENERGY

ENTERGY NUCLEAR NORTHEAST

ENTERGY NUCLEAR SOUTH

EXELON GENERATION CO., LLC

FIRST ENERGY NUCLEAR OP. CO.

FPL GROUP

NUCLEAR MANAGEMENT CO.

OMAHA PUBLIC POWER DISTRICT

PACIFIC GAS & ELECTRIC CO.

PROGRESS ENERGY

PSEG NUCLEAR

ROCHESTER GAS & ELECTRIC CO.

SOUTHERN CALIFORNIA EDISON

SOUTH CAROLINA ELECTRIC & GAS

SOUTHERN NUCLEAR OPERATING CO.

STP NUCLEAR OPERATING CO.

TENNESSEE VALLEY AUTHORITY

TXU ELECTRIC

WOLF CREEK NUCLEAR OP. CO.

WESTINGHOUSE ELECTRIC

# WOG Organization Overview

---

## 9 International Members



- **British Energy LTD**



- **Electrabel**



- **Electricité de France**



- **Kansai Electric Co., Ltd.**



- **Korea Hydro and Nuclear Power Corporation**



- **Nuklearna Elektrarna Krško**



- **Ringhals AB**



- **Spanish Utilities**



- **Taiwan Power Company**

# WOG Organization Overview

---

- The WOG represents
  - 34 utility organizations
  - 153 operating reactors
  - 71 sites
  - 10 countries
- One-third of the world's operating reactors are in the WOG
- Presents unparalleled opportunities to share best practices on a global scale

# WOG Officers

---

- WOG Officers

- Rick Muench (WCNOC)
- Gregg Overbeck (APS)
- Ted Schiffley (Exelon)
- Dave Pilmer (SCE)

WOG EC Chairman  
WOG EC Vice Chairman  
WOG Chairman  
WOG Vice Chairman

- Subcommittee Chairmen

- Dave Bajumpaa (DNC-Millstone)
- Dennis Buschbaum (TXU)
- Mo Dinger (WCNOC)
- Alan Hackerott (OPPD)
- Cal Walrath (Exelon)
- Greg Gerzen (Exelon)

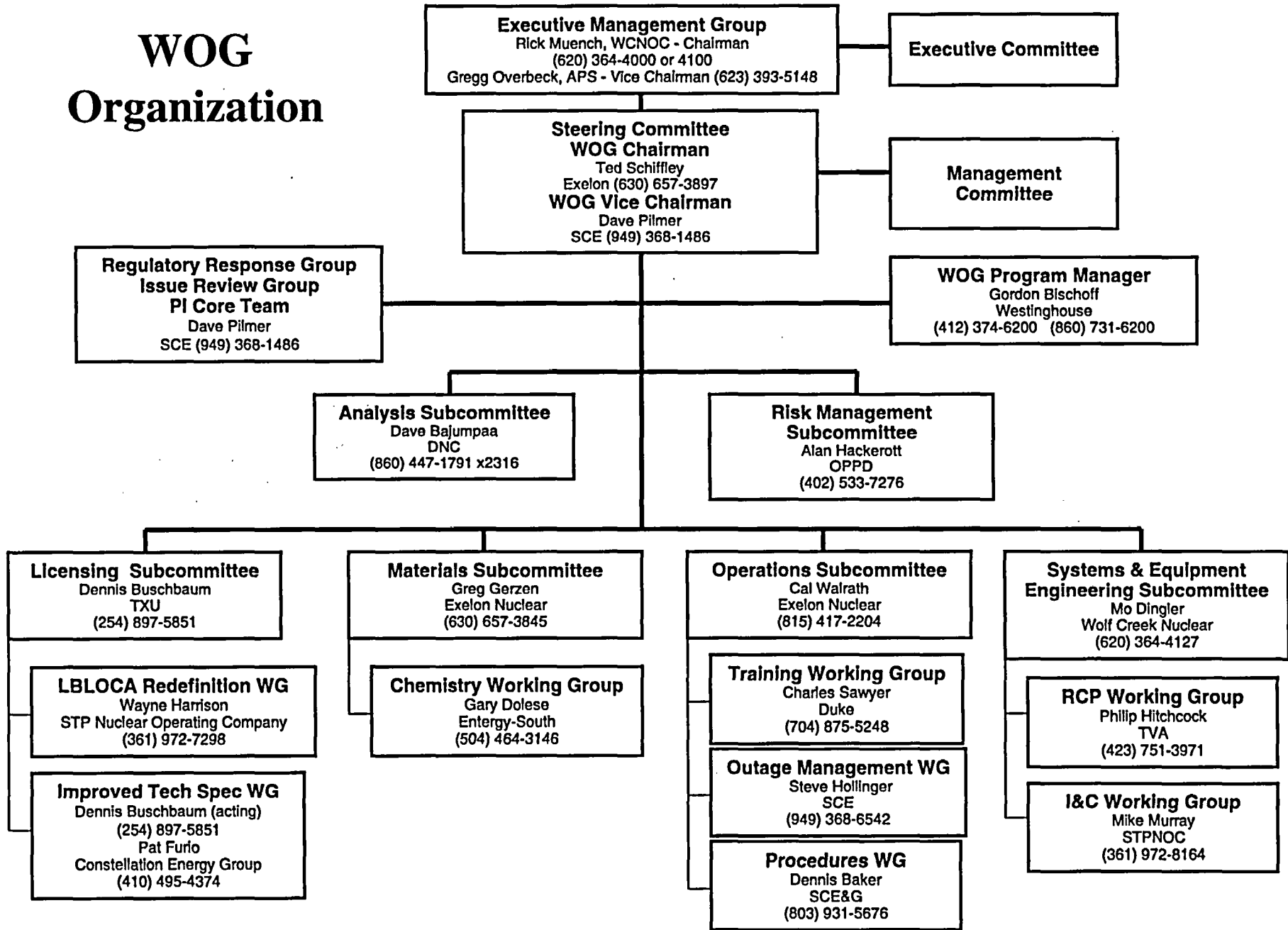
Analysis  
Licensing  
Systems & Equipment  
Risk Management  
Operations  
Materials

# WOG Mission

---

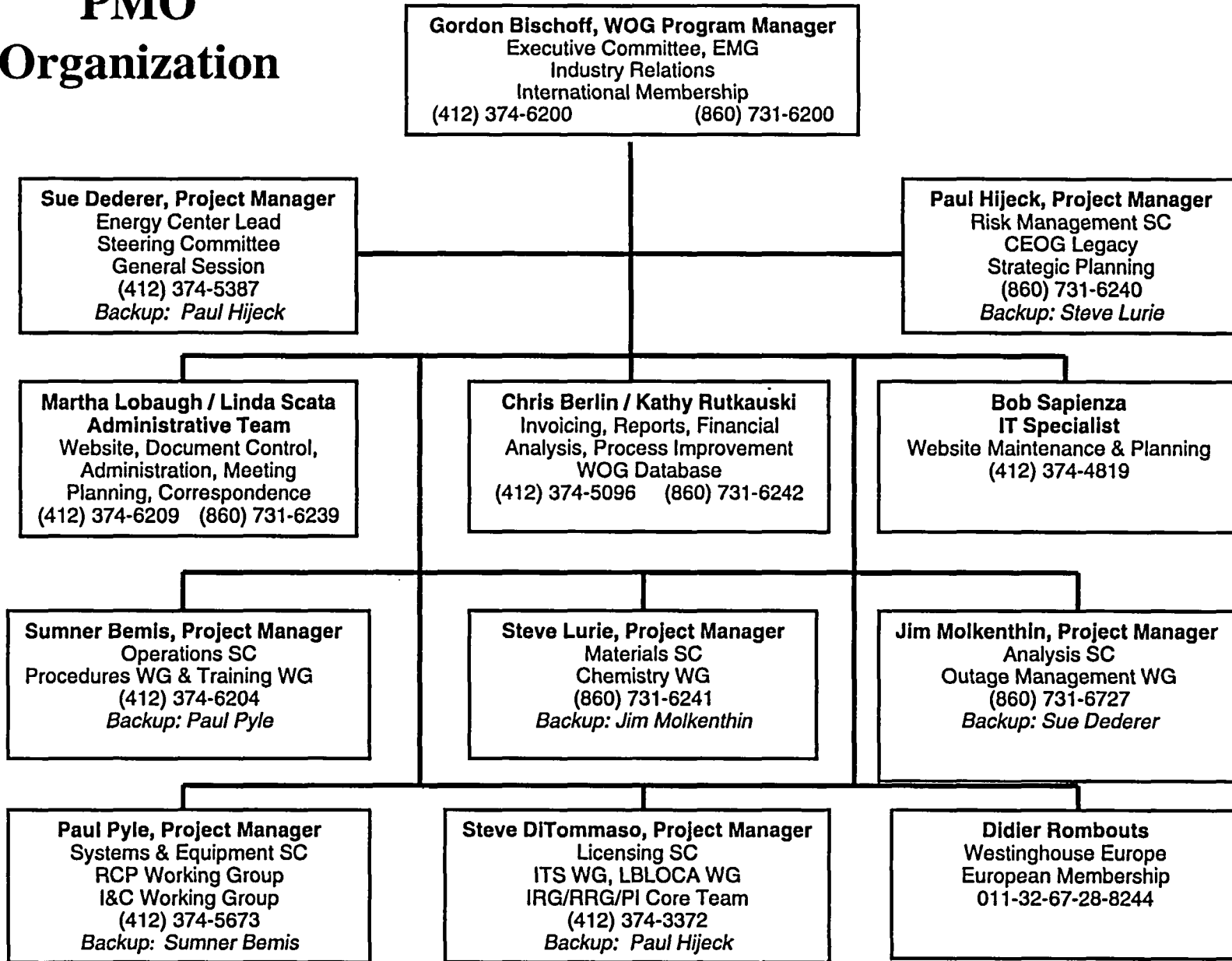
- Support Safe and Reliable Plant Operations
- Effectively Leverage the Resources of its Members
- Provide a Forum for Joint Discussion and Resolution of Common Issues
- Share Best Practices and Lessons Learned among US and International Members

# WOG Organization





# PMO Organization



# WOG Strategic Issues

- International Participation
- Industry Coordination
  - *Materials*
  - *Chemistry*
- Risk Informed Regulation
  - *LBLOCA Redefinition*
  - *PRA Scope and Quality*
- Critical Skills
- Succession Planning

*most important issues*

*EPR1 best suited for Research*

*WOG good for short term implementation*

*75% of note building recommendations for the fleet*

*removes from Ch 15*

# WOG Strategic Issues

---

## Industry Coordination—Materials

- Objective
  - Increase role of WOG in implementation of plant level solutions to materials degradation issues
- Background
  - WOG/EPRI need to work to their strengths
    - EPRI strength is on research to address materials degradation in general
    - WOG strength is in implementation of solutions and coordination of utility responses

# WOG Strategic Issues

---

## Industry Coordination—Materials

- Status
  - WOG responding to MTAG/MEOG requests
  - Participation in NEI Materials Survey
  - WOG/W participating in industry meetings
  - WOG charter change to allow Execs to issue binding commitments
    - Similar to CE heater sleeve issue

# WOG Strategic Issues

---

## Risk Informed Regulation—LBLOCA Redefinition

- Objective
  - Redefine LB LOCA pipe size in all NRC Regulations to reduce costs and increase safety and operating flexibility
- Background
  - LB LOCA using double guillotine break of largest RCS pipe impacts all aspects of plant design and operation
  - Technologies have evolved to explicitly demonstrate piping integrity and illustrate current LB LOCA break size is unrealistic

# WOG Strategic Issues

---

## Risk Informed Regulation—LBLOCA Redefinition (cont.)

- Status
  - Have had difficulty finding a volunteer pilot plant
  - Original plan required more analysis effort (cost) for the utility
  - Uncertainty in NRC acceptability makes the investment risky
- Have restructured the LBLOCA pilot plant project to address these and other concerns

# WOG Strategic Issues

---

## Risk Informed Regulation—LBLOCA Redefinition (cont.)

- Restructured project focuses only on eliminating the large LOCA accident analysis from the FSAR
  - Maximum break size would be defined based on break likelihood and by plant specific Probabilistic Risk Analysis
  - No reduction in plant capability with this phase
  - Future changes to TS requirements require separate license amendment
  - Mitigation capability to be maintained consistent with requirements of Maintenance Rule and Reg. Guide 1.174, and expectations of Severe Accident Management

# WOG Strategic Issues

---

## Risk Informed Regulation—LBLOCA Redefinition (cont.)

- Restructured project to address current regulatory environment
  - Address NRC PRA Scope and Quality concerns
    - Scope and quality needs to be appropriate for application
    - Address December 2003 SRM on PRA quality phases
  - Clarify March 2003 SRM issues
    - Reversibility of plant changes
    - Reductions in ECCS and containment capabilities
    - Analysis Methodology for remaining Design Basis LOCAs
  - Minimize licensee, NRC and WOG resource expenditures



# WOG Strategic Issues

---

## Risk Informed Regulation—LBLOCA Redefinition (cont.)

### Conclusions

- WOG believes that LBLOCA redefinition is important to risk-informing the regulations.
- WOG encourages the NRC to complete the Large Break LOCA expert elicitation effort.
- WOG encourages the NRC to clarify the March 2003 SRM on Risk Informed Changes to Technical Requirements of 10 CFR Part 50 (Option 3).
- WOG requests feedback from NRC on this plan of action

# WOG Strategic Issues

---

## Risk Informed Regulation—PRA Scope and Quality

- Objective

- Fully support all members in achieving full scope, all mode, high quality PRAs for complete implementation of risk informed plant operations (design, operations, licensing, enforcement, maintenance, etc)

- Background

- Risk informed decision making has been at the front of the industry since 1997
- PRA and Risk Informed Decision Making are increasing in scope of application
- NRC Commission Policy Statement of 12/03 outlines an approach for resolving PRA attribute issues that is consistent with WOG direction

# WOG Strategic Issues

---

## Risk Informed Regulation—PRA Scope and Quality

- Status
  - WOG is addressing PRA Quality and Scope
  - On-going WOG programs since 2000 which address PRA quality
    - PRA quality roadmap for Option 3, LBLOCA
    - Resolution of PRA Uncertainties in LOCA/LOOP
    - Pilot Applications for Option 2 covering
      - PRA scope and quality
      - Component categorization process and results
    - WOG risk informed strategic plan
      - Matrix of PRA attributes, applications, benefits, costs
    - Standard PRA Modeling Guidance

# WOG Strategic Issues

---

## Risk Informed Regulation—PRA Scope and Quality

### Conclusion

- WOG is in agreement with PRA approach outlined in Dec. SRM and recent ACRS/NRC meeting
- WOG efforts will demonstrate PRA scope and quality considerations under Option 2
  - WOG to submit two plant applications in 2004 (Wolf Creek and Surry)
- WOG requests that NRC commit to provide the resources to support these applications

# WOG Product Issues

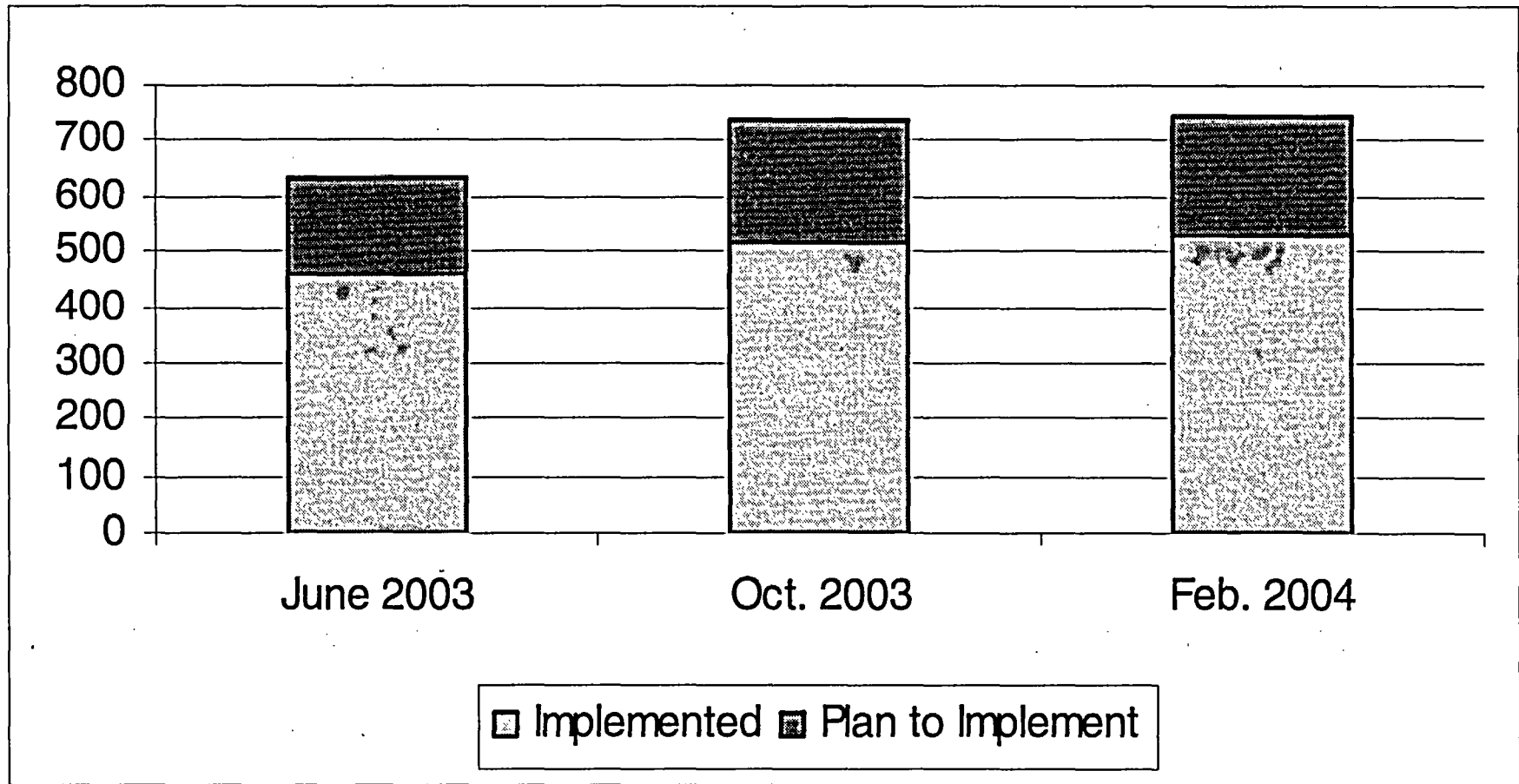
---

## WOG Product Implementation

- Key WOG metric to gauge the success of the WOG
- Tracking plant-specific implementation of ~130 WOG/CEOG products produced since 1998
- Aid in determining the types of products that are implemented

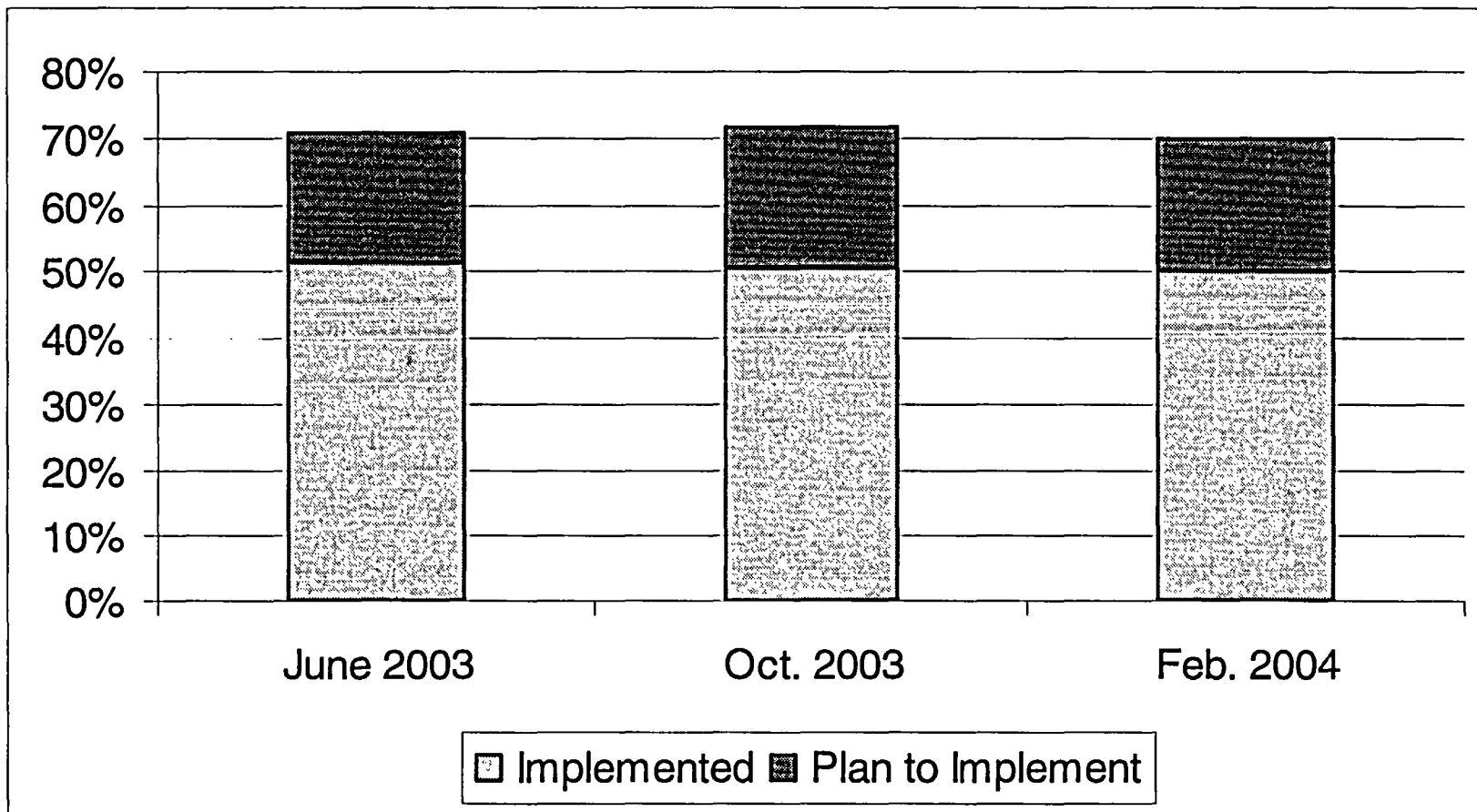
# WOG Product Issues

## Plant Specific Implementation 1998 - 2003



# WOG Product Issues

Percentage of WOG/CEOG Products being Implemented 1998 - 2003



# WOG Product Issues

---

## WOG Product Implementation (cont.)

- Implementation rate of ~ 70% corresponds to approval percentages (67%-75%) needed for approval of WOG programs over the 1998-2003 time frame.
- WOG/CEOG program that result in NRC approved Topical Reports have higher implementation rates  
~70-100% implementation

WOG and NRC resources spent on NRC approval of generic Topical Reports pay future dividends by reducing resources necessary to support plant specific submittals



# WOG Product Issues

---

## Topical Report Reviews

- NRC Review Process
  - WOG/NRC Meetings
    - *NRC needs* to support WOG meeting requests
  - Fee Waivers
    - Determination of fee waiver requests *is delaying reviews*
  - Establishment of Review Schedule
    - Establishing a mutually agreed upon review schedule upfront will benefit both the NRC and the WOG
  - Draft Safety Evaluations (SE)
    - Excellent new process, will help resolve interpretation issues

# WOG Product Issues

---

## Topical Report Reviews

- NRC Review Process (cont.)
  - **Technical Branch Reviews**
    - NRC needs to ensure the necessary TBs are involved from the start of the review process
  
  - **NRC Reviewers**
    - NRC has changed reviewers on several Topical Reports, resulting in additional costs to WOG
    - Limited NRC resources is delaying the review of several TRs
  
  - **WOG/NRC Monthly PM Conference Call**
    - Appreciate NRC commitment to support monthly calls
    - Identifies higher priority actions
    - Keeps reviews moving forward

# WOG Product Issues

---

## Topical Report Reviews

- NRC Review Process (cont.)
- **WOG and NRC need to help each other to reduce the time for review of Topical Reports:**

**TR submittal to RAIs** **10 months**

**RAIs to RAI responses** **7 months**

*(will try to do in 90 days)*

**RAI responses to Final SE** **8 months**

**(Average of actual and estimated review times associated with 16 Topical Reports currently under NRC review)**

# WOG Product Issues

## Topical Reports/TSTFs Submitted for Review

WCAP	Title	Final SE Expected	TSTF
15622	Risk-Informed Evaluation to Extensions to AC Electrical Power System Completion Times	8/04	√
15973	Low Alloy Steel Analyses to Support A600/A690 Nozzle Repairs	5/04	
16175	Failure of RCP Seals for a Loss of Seal Cooling	9/04	
15872	Alternate Decay Heat Removal in Mode 6 Refueling	6/04	√
15830	Staggered Integrated ESF Testing	7/04	√
16125	Risk-Informed Modifications to Selected 3.0.3 Tech Specs for Conditions Leading to Exigent Plant Shutdown w/2 trains OOS	6/04	√
15791	Risk-Informed Evaluation of Extensions to CIV Completion Times	8/04	√

*adv. notification*

# WOG Product Issues

## Topical Reports/TSTFs Submitted for Review (cont.)

WCAP	Title	Final SE Expected	TSTF
15977	Reliability Assessment of Cutler-Hammer Relays	6/04	
15996	Technical Description Manual for CENTS Code - Dose Model	7/04	
16011	Startup Test Activity Reduction	TBD	√
15831	Risk-Informed ATWS Assessment and Licensing Implementation Process	7/04	
15773	Implementation of Risk-Managed Technical Specification for HPSI	TBD	√
15691	Containment Integrated Leak Rate Test Interval Extension	8/04	
16168	Risk Informed Extension of Reactor Vessel ISI Intervals	9/04	
MPR-2524	Periodic Verification MOVs GL 96-05	TBD	

# WOG Product Issues

## Topical Reports to be Submitted in 2004

WCAP	Title	Submit	Fee Wavier	Prop.	TSTF
WCAP-16083	Best Estimate Fluence Methodology (FERET code)	3/04			
WCAP-15957	Risk Informed AOT Extensions: Fluid Systems	3/04		√	√
WCAP-15472-S2	RI Methods to Piping ISI - Responses to Concerns	3/04	√		
WCAP-15981	PAM Systems Requirements: A Technical Basis	3/04	√		√
WCAP-16168-S1	RI Extension of RVISI Intervals - B&W Plants	4/04			
WCAP-TBD	Risk Informed Tech Spec End States	5/04	√		√
WCAP-TBD	Pilot Plant Implementation of 10CFR50.69 (WC)	7/04	√		
WCAP-TBD	Pilot Plant Implementation of 10CFR50.69 (Surry)	8/04	√		

**7 of 9 of these TRs will need to be reviewed by the PRA Branch**

# WOG Product Issues

---

## Measuring Our Performance and Conclusions

- WOG will continue to measure and track performance based on overall length of reviews (submittal to SE) as well as individual aspects (acceptance letter, RAIs, RAI responses, SE, hours)
- Request NRC support on continuation of PM conference calls
- WOG and NRC plan to meet 3 times per year to provide feedback and check TR review progress
- Need NRC *and* Westinghouse/WOG to meet commitments in order for all of us to be successful...

# Closing Points

---

- Open Discussion
- Review of Action Items
- Future meeting dates
  - November 18, 2004
  - Day before the RIC meeting 2005
- Adjourn