

**NRC/BWR Owners' Group
Senior Management Meeting – March 4, 2004
Rockville, MD
Agenda**

9:00 Opening Remarks

Brian Sheron, NRC
Ken Putnam, BWROG

Joint Submittal Planning

Current Issues:

- Containment Isolation Valve Allowed Outage Time
- Bank Position Withdrawal Sequence
- Technical Specification Task Force (TSTFs) affecting BWRS

Upcoming Submittals:

- Joint Owners Group (JOG) Motor Operated Valve Report
- Alternative Source Term for Extended Fuel Burn Up
- Option 3 – Decoupling of loss-of-offsite power/loss-of-coolant accident (LOOP/LOCA)

PUBLIC COMMENT

Review of Past and New Action Items

Status of industry Efforts related to Power Uprate

BWROG

JOG MOV Periodic Verification

BWROG

DC Motor Methodology

BWROG

Other BWROG/NRC Status Issues

BWROG/NRC

Review of Past and New Action Items

BWROG/NRC

12:00 Adjourn



STATUS OF BWROG SUBMITTALS

Presentation For
BWROG/NRC Management Meeting
March 4, 2004
Rockville, MD
Ken Putnam (NMC)
BWROG Chairman

STATUS OF BWROG SUBMITTALS

◆ BANKED POSITION WITHDRAWAL SEQUENCE

- Current restrictions on control rod positions unnecessarily complicate shutdowns requiring several hundred reactivity manipulations
- Risk associated with Control Rod Drop accidents is extremely low-particularly while shutting down
- NEDO-33091 Submitted June 3, 2003, requests NRC approval to reduce this burden on plant operators
- RAI's in process
- Additional resource assigned by NRC is appreciated



STATUS OF BWROG SUBMITTALS

- ◆ **TSTF 454 EXTENSION OF COMPLETION TIMES FOR CONTAINMENT ISOLATION VALVES**
 - Current restrictions on allowed-out-of service times restrict maintenance and can challenge operators
 - Topical Report submitted February 2002 documents that risk of extending completion times is low
 - Consistent with previously approved CEOG report
 - RAI Responses July 2003
 - Desire prompt CLIIP notice following issuance of Safety Evaluation

STATUS OF BWROG SUBMITTALS

◆ TSTF 357 SAFETY LIMIT MCPR

- MCPR calculations are performed late in core reload design cycle which results in compacted schedule for Licensee submittal and NRC review
- MCPR Calculations performed using NRC approved methods
- Existing TS SLMCPR is a surrogate for the true Specified Acceptable Fuel Design Limit (SAFDL) of 99.9% of fuel rods avoiding boiling transition
- MCPR is routinely cycle specific whereas SAFDL is independent of fuel cycle
- Original TSTF submitted Oct. 1999 did not fully address compliance to 10 CFR 50.36
- TSTF 357 Rev. 1 replaces cycle specific surrogate (SLMCPR) with cycle-independent SAFDL consistent with 10 CFR 50.36

BWROG UPCOMING SUBMITTALS

- ◆ **Alternate Source Term for extended fuel burn-up**
 - Current Regulatory Guide does not address fuel burn-ups greater than 54 GWD/Ton at high power
 - BWROG is completing topical report that analyzes gap fractions for anticipated fuel burn-up
 - Anticipate submittal in second quarter requesting NRC approval for use by members
 - BWROG submittal should compliment NRC activities for reviewing extended fuel burn-up and should be fee exempt
- ◆ **Separation of LOOP and Large Break LOCA**
 - Topical Report in final review
 - Defines specific simplifications to BWR design
 - Submittal anticipated in late March or April

BWR Owners' Group Licensing Topical Report / Other Submittals of BWROG Interest												
INTEGRATED BWROG SUBMITTAL - NRC REVIEW SCHEDULE												
Document Number	PM	Title	LTR to NRC	OG Tech Spec Traveler Number	RAI Date	RAI Response Due Date	TSTF Number	TSTF TO NRC	NRC APPROVAL TOPICAL/TSTF	CLIP	CLIP ISSUE DATE	COMMENTS
TSTF-343	Hill	Containment Structural Integrity (All Owners Groups)					TSTF-343			YES		Next action is to reference the correct version of the Code. Due 3/31/04
TSTF-357, R1	Hill	Revision to TS 2.1.1.2, MCPR Safety Limit		BWROG-66			TSTF-357, R1	4/7/2003 A	2Q04 E	YES		EFFICIENCY; will significantly reduce plant specific reviews
TSTF-448	Hill	Control Room Habitability (All Owners Groups)		BWROG-111		1Q04 E for NRC comments	TSTF-448	8/19/2003 A	1Q04 E	YES		
TSTF-459	Hill	Eliminate the requirement to have one RHR Shutdown Cooling System in operation		BWROG-37, R1			TSTF-459	9/19/2003 A	3Q04 E	YES		
TSTF-460	Hill	Control Rod Scram Time Frequency (120 days - > 200 days)		BWROG-90, R1			TSTF-460	9/7/2003 A	3Q04 E	YES		
TSTF-465	Hill	Addition of Time performance Surveillance Requirement (SR) note to Source Range Monitor (SRM) SRs		BWROG-81, R1			TSTF-465	9/18/2003 A	3Q04 E			
	Flock	Joint Owners' Group MOV Response to GL 96-05 (Final Report)	2/28/04 E	NA			N/A	N/A	8/04(TOPICAL)E	NO	N/A	Will be a single JOG submittal to NRC.
NEDO-33091	Hurst	Improved BPWS Control Rod Insertion Process	6/03 A					1Q04 E	4Q04 E	NO	N/A	BWROG requested earlier review for Spring 2004 Outages
	Flock	Suppression Pool Cooling / RHR Operable Initiative	2Q04 E									
	Flock	Alternate Source Term - generic gap release fraction for high-burnup fuel	2Q04 E									
Risk Informed Tech Specs (RITS)												
Initiative - 1	Hill	Modified End States	1/5/01: NEDC 32988, R2	BWROG-87			TSTF-423	8/12/2003 A	9/27/02 (Topical-SER) A 2/03 (NEDC 32988-A) 2Q04 (TSTF) E	YES	4Q04 E	CEOG TSTF-422 BWROG TSTF-423
Initiative - 4a	Hill	CIV AOT Extension	BWROG LTR 2/21/02A	TSTF 03-04, 9/3/03	4/23/03A	3Q03 A	TSTF-454	9/5/2003 A	2Q04 (Topical SER) 3Q04 (TSTF) E	YES	4Q04 E	

E=Expected or target date
N/A=Not Applicable
Updated 3/3/04

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Initiative - 4b	Hill	Risk Informed AOTs with Backstop	Position paper 10/12/01A, revised white paper 2/27/02A	On Hold for BWR's								NA for BWROG No pilot
Initiative - 5b	Hill	Relocate Surveillance Test Interval to Licensee Control	Position paper 6/01 A, revised position paper 1Q04E	BWROG-88	Comments on position paper 2Q04 E		TSTF-425	2Q04 E	4Q04 (TSTF) E 4Q04 (SER) E	YES	1Q05 E	BWROG lead. Exelon LAR submittal to NRC scheduled for 3/04.
Initiative - 6a	Hill	Modify LCO 3.0.3 to 24 Hours	12/04 E based on favorable cost benefit evaluation									On Hold for resolution of Initiative 6b and 6c to determine if Initiative is required.
Initiative - 6b	Hill	Provide Conditions in the LCOs for those levels of degradation where no condition currently exists to preclude entry into LCO3.0.3.		On Hold for BWR's								Based on CEOG work, may consider 6b approach using (A)(4) to minimize use of LCO 3.0.3.
Initiative - 6c	Hill	Provide specific times in the LCO for those conditions that require entry into LCO 3.0.3 immediately.		On Hold for BWR's								TSTF to submit TSTF to NRC after receipt of NRC SER and receipt of information from CEOG.
Initiative - 7a	Hill	Snubbers		WOG-150			TSTF-372, R 3	11/17/2003 A		YES		No action for BWROG
Initiative - 7a	Hill	Allowance for Non-Technical SpecificationBarrier Degradation on Supported System OPERABILITY					TSTF-427	3/4/2003 A		YES		No action for BWROG
Initiative - 7b	Hill	Define Not Operable/Functional	NEI revised position paper to NRC 2Q03 A	NA						YES		
Initiative - 8	Hill	Eliminate TS-Not Meet Criteria	2005E White paper on method							YES		Low Priority
Risk Informed Activities												

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	Hill	Option 3, Elimination of LOOP Requirements with LB LOCA	1Q04 E									Exemption may be required.



BWR Owners' Group Extended Power Uprate Status

Presentation for

BWROG/NRC Management Meeting

March 4, 2004

Rockville, MD



BWR Extended Power Uprate Issues Introduction

✧ BWROG Goals

- ✧ Ensure that operating experience and lessons learned are incorporated into power uprate programs to assure safe and reliable operations
- ✧ Provide oversight for a broad range of industry efforts related to BWR power uprates



Industry EPU Initiatives

Introduction

- ✧ Exelon and GE - Evaluation for Extent of Condition
- ✧ BWRVIP and GE Initiatives - Steam Dryer and Internals
- ✧ BWROG
 - ◆ Assessment of Industry Experience
 - ◆ Oversight and Coordination of Industry Activities

Exelon and GE - Evaluation for Extent of Condition

Task	Responsibility	Scheduled Completion
EPU Extent of Condition Evaluation for Dresden and Quad Cities	GE/Exelon	May 28, 2004
Modify EPU process and evaluations as required	GE	June 2004

BWRVIP and GE Initiatives - Steam Dryer and Internals

Task	Responsibility	Scheduled Completion
Revision of SIL 644 to include more recent experience	GE	April 2004
Steam Dryer I&E Guidelines	BWRVIP	Sept 2004 submittal
Validate a methodology for determining steam dryer loading using main steam acoustic circuit analysis and verification with scaled model testing and plant data	BWRVIP/GE	TBD
Revision of BWRVIP-06 including revised guidance for addressing loose parts	BWRVIP	Sept 2004 submittal

BWROG Assessment of Industry Experience

Task	Responsibility	Scheduled Completion
Analysis of INPO Power Uprate and Cycle Events Database	BWROG	Completed Feb 17, 2004
BWROG EPU Survey summary and evaluation	BWROG	March 2004
Best practices for steam dryer performance monitoring	BWROG	3 rd Quarter 2004

BWROG Oversight of Industry Activities

Task	Responsibility	Scheduled Completion
Review EPU Extent of Condition Evaluation process and pilot for Dresden and Quad Cities	BWROG	Completed Feb 17, 2004
Review EPU-related vulnerabilities for "Tier 1" systems from EPU Extent of Condition Evaluation	BWROG	April 2004
Review EPU Extent of Condition final recommendations	BWROG	May 2004

BWROG Oversight of Industry Activities

Task	Responsibility	Scheduled Completion
Issue letter to NRC summarizing results of BWROG EPU Survey, Evaluation of INPO Database, and Integrated Industry Plan	BWROG	May 2004
Develop EPU implementation recommendations for BWR owners	BWROG	July 2004
Review results of industry programs and BWROG recommendations with NRC management	BWROG	Ongoing

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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BWR Extended Power Uprate
BWROG Review of INPO Database-Preliminary Results

- ✱ Reviewed Events from 1992 through January 2004
- ✱ 12 INPO entries considered to be significant
- ✱ All of the events that the BWROG classified as significant were caused by vibrations except one
- ✱ The other significant event was related to high transformer oil temperature



BWR Extended Power Uprate Summary

- ✧ BWRVIP, GE, and Exelon have initiated efforts to address steam dryer reliability
- ✧ Results of the GE and Exelon extent of condition evaluations will be used to improve Power Uprate processes
- ✧ BWROG is initiating additional work on vibration monitoring and evaluation based on our review of industry data
- ✧ BWROG will continue to provide oversight for all of these activities

JOG-PV MOV

PRESENTATION FOR BWROG/NRC MANAGEMENT MEETING

March 4, 2004

Rockville, MD

KEN PUTNAM (NMC)

BWROG Chairman

RECENT EVENT

- **Joint Owners' Group (JOG) submitted its Non-Proprietary Licensing Topical Report for Staff Review in February 2004.**
 - **Industry response for 98 units to GL 96-05**
 - **Is a NRC-requested "replacement" report per 1997 SER to original JOG Program LTR**
- **Waiver Request for Review Fee submitted with LTR.**
- **Concludes 5-years of industry testing:**
 - **Over 500 MOV in-situ dynamic tests.**
 - **Over 52 man-years of industry resource expenditure.**
- **Industry-Recommendation Implementation Schedule included with submittal.**

INDUSTRY EXPECTATIONS


Acceptable NRC SER anticipated within ~ 6 months.

- **JOG will continue working with the Staff to resolve any pre-SER issues.**
- **“Clean” SER will have advantages for both NRC and industry.**



DC MOV METHODOLOGY

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PROGRAM STATUS UPDATE

- ◆ **Issue:** Motor speed/output affected by stem load, supplied voltage and winding temperature.
- ◆ **BWROG Activity:** BWROG contemporary methodology was developed and submitted to the NRC in June 2000.
- ◆ **NRC RIS 2001-15:** Recognized the BWROG methodology as acceptable (August 1, 2001).

DC MOTOR METHODOLOGY

BACKGROUND

◆ **BWROG Utility Implementation Schedule:**

- **First Priority MOVs:** Evaluation to be completed by the latter of 12 months or first RFO after August 1, 2001.
- **Second Priority MOVs:** Evaluation to be completed by the second RFO after August 1, 2001.

◆ **BWROG Status:**

- **First Priority MOVs:** 100% BWRs have indicated evaluation completed.
- **Second Priority MOVs:** Period has not closed yet for most BWRs. BWROG is currently polling utilities for updated status on these priority MOVs.