NRC FORM 658
(9-1999)

U.S. NUCLEAR REGULATORY COMMISSION

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DATE OF MEETING
6/12/01

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Docket Number(s): N/A

Organization ~~Plant/Facility Name~~: BWROG

TAC Number(s) (if available):

Reference Meeting Notice: May 23, 2001

Purpose of Meeting (copy from meeting notice): To discuss issues with NRC management that are key to the Boiling Water Reactor Owners Group.

NAME OF PERSON WHO ISSUED MEETING NOTICE	TITLE
Robert M Pulsifer	Project Manager

OFFICE: NRR

DIVISION: DLPM

BRANCH: PDI-2

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DF03

NRC/BWR OWNERS' GROUP
MANAGEMENT MEETING – JUNE 12, 2001

AGENDA

12:30 Opening Remarks — **BWROG/NRC**

H_2/O_2 Analyzers and Combustible Gas Control Systems — BWROG

- BWROG submittal that justifies non-safety classification for $H_2/0_2$ monitors and combustible gas control systems delayed until July 2001

Integrated Risk Informed Regulation (IRIR) — BWROG

- Discuss key Committee activities

Option 2 — BWROG

- Brief review of categorization results
- Brief discussion of special treatment
- Latest schedule for the program

Option3 — BWROG

- Discuss BWROG approach to risk informing 10CFR 50.46

Pipe Break inside Containment — BWROG

- Discuss strategy for review of NRC prioritization of pipe break effects inside containment for SEP III plants

BWR VIP — BWROG

- Report status of ongoing work under the BWR VIP Program

Emergency Procedures — BWROG

- BWROG will provide a summary of the Committee's activities including an upcoming EPG/SAG Revision 2 Training Workshop

Risk Informed Tech Specs — BWROG

- Progress on Initiative 2 approval
- Status on Initiative 3 TSTF and BWROG Initiative 1
- Report Plans for other initiatives

NRC/BWR OWNERS' GROUP
MANAGEMENT MEETING – JUNE 12, 2001

AGENDA

NRC STATUS ISSUES

DC Motor Methodology — NRC

- BWROG is awaiting NRC issuance of industry communication (such as a Regulatory Issue Summary) and anticipates that the communication will reference the availability of the BWROG methodology as a method for addressing the DC Motor performance issue.

Fluence Methodology — NRC

- Provide status of NRC review of fluence methodology

PASS — NRC

- Status of NRC review of topical.
- Tech Spec Travelers have been developed and will be sent to NRC for use in the CLIIP

RCIC Reportability — NRC

- Region III issued a letter to NRR (Suzanne Black), dated March 15, 2001 addressing the BWROG position re RCIC reportability (BWROG letter 00087, dated October 24, 2000). Since the original BWROG request was to NRR, BWROG is requesting an NRR response directly to the BWROG which supports the Region III position.

Combustible Gas Control Systems and H_2/O_2 Monitors Regulatory Relaxations

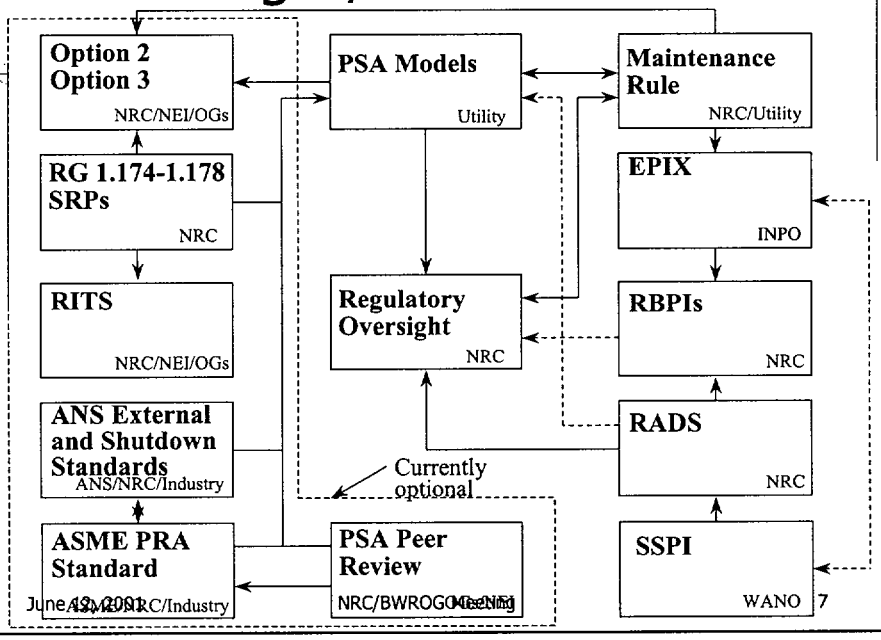
Presentation for

NRC/BWROG Management Meeting

June 12, 2001

Washington, DC

RIR Linkages/BWROG Breadth



Summary

- Significant BWROG resources have and are being dedicated to risk informed activities
  - Progress has been slow
  - Recent meetings indicate a possible positive trend
- Progress is needed
  - Industry and NRC assign project managers
  - Establish mutually agreeable schedules
  - Report progress at BWROG/NRC Management Meetings

Combustible Gas Control Systems and H_2/O_2 Monitors Regulatory Relaxations

Committee Objective:

- Declassify H_2/O_2 monitors to non-safety related
- Eliminate requirements for H_2 recombiners and Containment Air Dilution (CAD) systems or relax to non-safety

Combustible Gas Control Systems and H_2/O_2 Monitors

Regulatory Relaxations

- Deterministic evaluation not successful if core iodine release is in accordance with NUREG -1465
  - Detonable gas mixture could occur

Combustible Gas Control Systems and H_2/O_2 Monitors Regulatory Relaxations

- **BWROG drafting Licensing Topical Report asking for declassification to non-safety based on low probability of events leading to high iodine concentrations**
  - **Severe accident scenarios only**
  - **Consistent with findings by NRC from risk informing 10CFR50.44 program**
- **Submittal delayed until July 2001**
  - **Realistic iodine release issues for DBA**
- **Request NRC review of BWROG Topical in parallel with risk informing 10 CFR 50.44**

Integrated Risk Informed Regulation Committee

BWR Owners' Group/NRC
Management Meeting
Rockville, MD

Richard A. Hill (GE)

Purpose of the Presentation

- Provide the status of the Committee activities
- Communicate the breadth of risk informed regulation in the BWROG

Purpose of the Committee

- Act as the technical integrator of all risk informed activities in the BWROG
  - Streamline integration of risk informed concepts into all applicable BWROG products
- Interact with industry to ensure BWR is appropriately represented
- Implement risk informed policy issues

BWROG RI Regulation Background

- Significant resources have been dedicated to risk informed initiatives
  - Approximately 25% of the entire BWROG budget
- Risk informed inclusion will support both NRC and industry needs
  - Improve safety
  - Improve regulatory efficiency
  - Reduce unnecessary regulatory burden
  - Increase public confidence

Key Roles of IRIR

- Single BWROG PRA resource
  - Maintains risk informed Template to help other Committees with risk needs
    - Recognizes limitations on PRA personnel
  - Continues to enhance BWR PRA quality
    - Responding to NRC RAI on Peer Review Process
    - Merging industry standards to reflect Peer Review Process
    - Supporting Maintenance Rule PRA techniques
    - Ensuring consistency of PRA methods within BWR industry

Key Roles of IRIR

- Integrator of Risk Information
  - Developed and maintains BWROG risk informed strategic plan
    - Recommends balance and moderation in risk activities
  - Maintains membership on NEI risk informed Working Groups and Task Forces
  - Represented in the Potential Issues Resolution Team
  - Recommends which risk informed activities should be funded by the BWROG

BWROG
RIP50 OPTIONS 2

BWROG/NRC Management Meeting

Washington, DC

June 12, 2001

Richard A. Hill (GE)

PURPOSE OF THE PRESENTATION

- Option 2
  - Provide status of pilot program
  - Discuss issues

OPTION 2 PILOT
Purpose of the Committee

- The objective of this committee is to complete a pilot on three common systems.
- The pilot program will:
  - Test the draft NEI classification methodology and
  - Provide economic benefit (or at least cost neutral) for the BWR utilities.

Pilot System Selection

- SBGTS
  - Not in PRA
  - Generally assumed to be low safety significance at all BWRs
- Feedwater
  - In PRA
  - Generally assumed to be high safety significance at all BWRs
- Low Pressure Core Spray
  - In PRA
  - Not clear if safety significant at all BWRs

Methods

- NEI 00-02 to assure quality
  - Internal events PRA
  - Fire PRA
  - Seismic Margins
  - Low power/shutdown – NUMARC 9301
  - Others evaluated
- NEI 00-04 for categorization and treatment

Draft Pilot Results

System Component	Function	Assessment Characteristic						Conclusion
		Internal Events PRA	Fire Events PRA	Seismic Margins	Other External Events Screening	Shutdown	Integrated Results	
Core Spray	RPV Injection	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Containment Isolation/RPV Boundary	HSS	LSS	LSS	LSS	HSS	HSS	HSS
	Spray Distribution	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Debris Retention	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Flood Prevention	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Keep-Fill	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Containment Flooding	LSS	LSS	LSS	LSS	LSS	LSS	LSS
SBGTS	Filtration	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Maintain Negative Pressure in RB	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Containment Vent	LSS	LSS	LSS	LSS	LSS	LSS	LSS

Draft Pilot Results

System Component	Function	Assessment Characteristic						Conclusion
		Internal Events PRA	Fire Events PRA	Seismic Margins	Other External Events Screening	Shutdown	Integrated Results	
Feedwater	RPV Make-Up	HSS	LSS	LSS	LSS	LSS	LSS	HSS
	Containment Isolation	HSS	LSS	LSS	LSS	HSS	LSS	HSS
	HPCI, RCIC, SSMP, RWCU Flow Paths	HSS	LSS	LSS	LSS	HSS	LSS	HSS
	Zinc and H_2 Flow Path to RPV	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	High Pressure FW Heating	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	Low Pressure FW Heating	LSS	LSS	LSS	LSS	LSS	LSS	LSS
	FW Flow Regulation	HSS	LSS	LSS	LSS	LSS	n/a	HSS

CONCLUSIONS

Core Spray is low safety significance for all functions and for all inputs to the IDP with the following exception:

- Containment isolation valves (injection valves) and RPV Pressure Boundary which are found to be safety significant

SBGTS is low safety significance

Feedwater functions of RPV Injection, RPV boundary, injection pathway, and containment isolation are safety significant based on the internal events PRA

CONCLUSIONS

- We support using NEI 00-02 and 00-04 which provide a clear and effective approach to Option 2 Risk Informed Regulation
  - Quality
  - Completeness
- Use of NEI Guides is BWROG preferred method

OPTION 2 PILOT Actions/Issues

- Complete the pilot plant evaluation
  - Current version of NEI documents being used
- Conduct IDP during the summer
- Lack of final guidelines and exemption uncertainty puts Option 2 Pilot on hold in the fall.
- Encourage resolution of outstanding issues

BWROG
RIP50 OPTION 3

BWROG/NRC Management Meeting

Washington, DC

June 12, 2001

Terry Rieck (Exelon)

Purpose of the Presentation

- Provide a status of the BWROG effort
- Discuss Option 3 issues

Purposes of the Committee

- Identify Risk-Informed Part 50 Option 3 programs
  - Prioritize alternatives for the BWR
  - Ensure consistency with NRC direction
  - Assess potential benefit of industry alternatives

BWROG Alternatives

- LBLOCA Redefinition
- ECCS acceptance criteria
- More realistic decay heat
- Control room habitability
- LOOP timing – long term requirements
- ATWS requirements
- ASME Section XI 10 year updates
- Rod drop accident

NRC's Alternatives

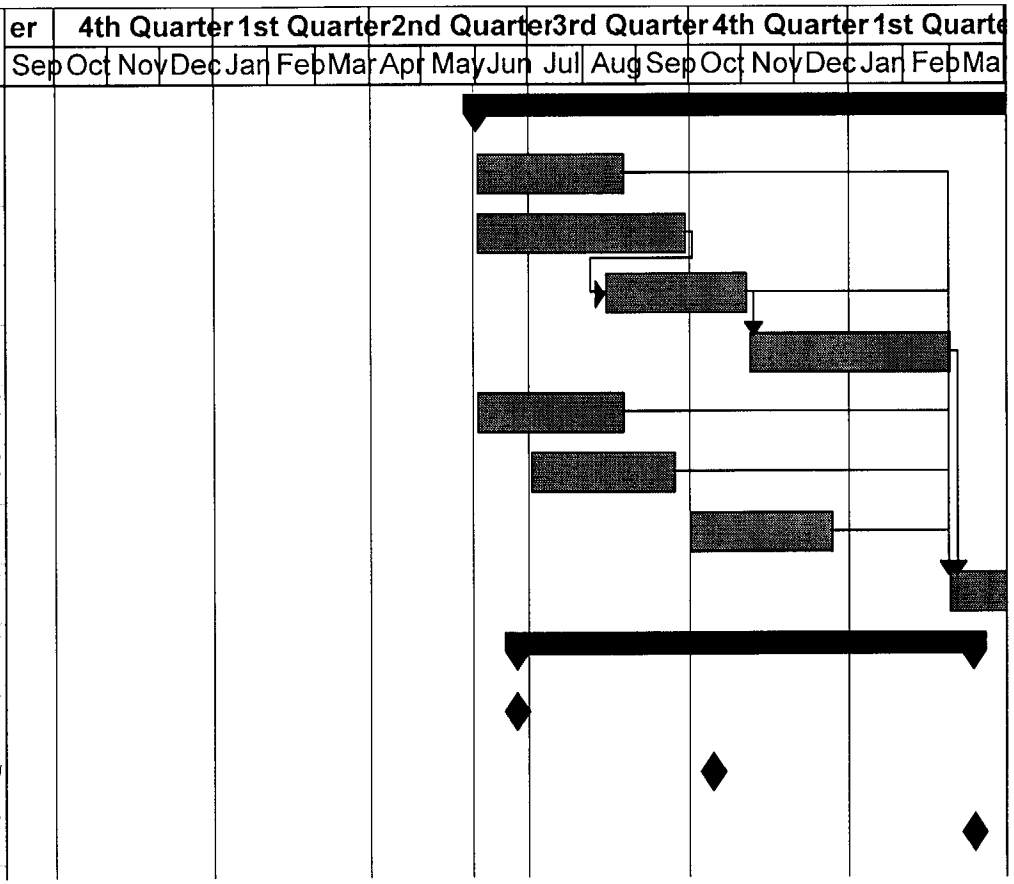
- Short Term
  - Delete LOOP for some or all LOCAs
  - Reduce decay heat conservatism
  - Exclude highly unlikely combinations of single failures and LOCA initiators
  - Other enhancements based on risk insights
- Longer Term
  - LBLOCA redefinition
  - Replace other conservatisms in Appendix K with more realistic models/assumptions
  - Improve efficiency of best estimate ECCS performance analysis and reviews
  - Modify ECCS acceptance criteria
  - Modified treatment of uncertainties

Committee Plan

- Pursue the following alternative regulations
  - LOOP plus LOCA
    - Break size information will be needed
  - Decay Heat
    - Recommend this be accelerated
    - Change 50.46 to allow 1994 standard
  - Single failure in combination with LOCA/transients
    - Understand NRC concept

Committee Schedule

ID	Task Name	Duratic	Start
1	**RIP 50 Option 3 in 2001**	**224**	**6/1/(**
2	IGSCC	60	6/1/(
3	LBB	4.05	6/1/(
4	Break size	60	8/13/
5	Leak detection	3.95	11/5/
6	LOOP and LOCA	60	6/1/(
7	Decay heat	60	7/2/(
8	Single failure	60	10/1/
9	Integrated Docs	30	2/28/
10	**NRC interface**	**189**	**6/25/**
11	PFM meeting	0(	6/25/
12	Preliminary results meet	0(	10/15/
13	Final results meeting	0(	3/15/



Issues

- Break size determination
  - BWR specific issues (IGSCC)
  - Piping groups
  - Initiating event frequencies
  - Need meeting with NRC
- Possible direct and final rule petition on:
  - Decay heat
  - 10CFR50.46 reporting requirements
- Need better understanding of NRC's concept of single failure changes

BWRVIP/NRC
Management Meeting

June 12, 2001

NRC Offices
Rockville, MD

BWRVIP

BWRVIP Major 2001 Activities

- Crack growth model for irradiated stainless steel
- Fracture toughness of irradiated stainless steel
- Obtain approval of ISP and begin implementation
- Continue assessments of BWRVIP implementation
- NMCA experience and application/monitoring guidelines
- Optimizing coolant chemistry using DZO and NMCA
- Re-issue all BWRVIP NRC reviewed reports incorporating NRC Safety Evaluations (SEs)

BWRVIP

Integrated Surveillance Program

- Discussions with NRC on BWR Integrated Surveillance Program (ISP) began in 1998
- BWRVIP submitted ISP in December 1999 (BWRVIP-78) and implementation plan in December 2000 (BWRVIP-86)
- BWRVIP responded to second RAI May 30, 2001
- Desire to minimize fluence recalculations while related BWRVIP work is in process
- Expect near-term NRC concurrence on content and implementation of ISP
- Plan to meet with NRC on August 22, 2001 to review fluence and ISP implementation issues

BWRVIP

BWRVIP Implementation Assessments

- Conducted three pilot assessments of utility implementation of BWRVIP products to date
  - concluded that all three utilities have thoroughly and effectively implemented BWRVIP products
  - identified several areas where BWRVIP guidance can be improved or clarified
- INPO will lead future assessments similar to steam generator "Review Visits"
- INPO-led "pilot" review visits to begin in Summer 2001. Official review visits to begin in late 2001 or early 2002

BWRVIP

BWRVIP Document Completion

- **Awaiting NRC SEs on several items, including:**
  - License renewal appendices
  - Integrated Surveillance Program
  - Inspection relief for HWC/NMCA
  - Crack growth evaluation in SS and Ni-base alloys
  - RPV I&E guidelines
  - Revised GL 88-01 inspection schedules
- **BWRVIP to revise documents to incorporate SEs**
- **Periodically meet with NRC to review and agree on specific content of revised documents**
- **Finalized documents important to assessment implementation**
- **Need continued NRC focus to ensure timely document completion**

BWRVIP

BWRVIP Direction in 2001+

- **Executive oversight and timely response to industry issues will be maintained**
- **Key organizational participants to continue (utilities, EPRI, etc.)**
- **Need to continue close coordination between BWRVIP and NRC activities to ensure future timely approval, implementation and required updating of BWRVIP products**

BWRVIP

Review of the Prioritization of GSI 156.6.1

Presentation for
BWROG/NRC Management Meeting
June 12, 2001
Washington, DC

Jack Gray
Entergy Nuclear Northeast

Review of GSI 156.6.1 Prioritization Presentation Objective

- Provide NRC Management with current status of BWROG work

Review of GSI 156.6.1
Prioritization
Background

- RES has prioritized GSI 156.6.1 as "high priority"
- RES is currently assessing whether affected plants should be individually reevaluated
- BWROG established a committee of all affected plants to review the prioritization

Review of GSI 156.6.1
Prioritization
BWROG Work Scope/Schedule

- Survey of affected plants to identify the current licensing basis is ongoing - responses vary in detail and some will need to be augmented
- Review of NRC prioritization and assumptions is ongoing
- Provide feedback to the NRC on prioritization
  - Targeted for completion in October 2001

BWROG EPC Update

Presentation For
NRC/BWROG Management Meeting

June 12, 2001

Presentation Purpose

- Provide the NRC with an Update of EPC Committee Accomplishments and Current Activities

EPG/SAG Rev 2 Final Activities

- Final revision brings closure to open items from NRC review of EPGs/SAGs
- No significant technical issues remain open
- Resolution of open issues will not require EPG/SAG revision - the resolution will be maintained in EPC records and shared with member utilities
- Future questions or interpretations will be addressed by individual plants on a plant-specific basis

EPG/SAG Training Seminar

- Promote uniform understanding of product
- Opportunity to train the "trainers"
- Supports transfer of knowledge from contractors to EPC and utilities
- NRC participation welcomed

RISK INFORMED TECH SPECS

BWR Owners' Group/NRC
Management Meeting
Rockville, MD

Don McCamy (TVA)

Presentation Purposes

- Mention the background
- Present work status
- Discuss issues

Purpose of the Committee

- Enhance current Technical Specifications
  - To reflect the safety significance of the condition or requirement and
  - Thereby, in most cases gain additional operating flexibility.
- Maintain strategic industry coordination
  - NEI Risk Informed Technical Specification Task Force has been formed
  - Assure common or similar implementation by the four NSSS Owners' Groups.

Background

- NRC/Industry initiated a Risk Informed Tech Spec approach in 1999.
- Industry identified 8 initiatives as "strawmen"
- NRC management has been supportive
  - Tech Spec Branch and PRA branches have been leading
  - Approvals have been slow

Industry Initiatives

- 1 Modified end states
- 2 Missed Surveillances
- 3 Flexible mode restraints
- 4 Risk Informed AOTs with a backstop
- 5 Transfer SRs to owner controlled program and optimize STIs
- 6 Modify LCO 3.0.3 to about 24 hours
- 7 Define not operable but functional
- 8 Eliminate TS that do not meet the 4 criteria

Work Status

- Initiative 1: Modified end states
  - Mode 3 and 4 model developed
  - Report submitted to the NRC 1/5/01
  - RITSTF/NRC agreement to have TSTF following CEOG & BWROG report approvals
    - CEOG SE expected by end 6/30/01, PWRs to piggy-back
    - BWROG submittal consistent/similar with CEOG submittal
    - BWROG expectation is to keep end of 2001 schedule for TSTF approval and report SE – delay will alter BWROG budget
    - TSTF will be initiated before BWROG SE based on similarity with CEOG

Work Status

- Initiative 2: Missed Surveillances
  - TSTF submitted to the NRC 9/15/2000
  - Turnaround time was to be 3 months
  - Varying reasons for delays
  - Slow progress is draining enthusiasm
  - Latest date is to post Federal Register notice by 6/30/2001

Work Status

- Initiative 3: Flexible mode restraints
  - TSTF submitted to the NRC in 2/2001
  - RAI expected by 7/31/2001
  - SE expected end of 9/2001
  - TSTF approval by end of 2001

Work Status

- Initiative 4: Risk Informed AOTs with a backstop
  - Developed pilot AOT extensions and backstops
  - Developing for BWROG submittal CIV AOT extension by end of 2001
  - RITSTF developing 4b method
    - Draft available for NRC review by July RITSTF meeting

Work Status

- Initiative 5: Transfer SRs to owner controlled program and optimize STIs
  - BWROG developing method
    - Draft available for NRC review by July RITSTF/NRC meeting
  - Defined sample STIs
  - Plan to develop a report and submit TSTF to NRC in 2001

Work Status

- Initiative 6: Modify LCO 3.0.3 to about 24 hours
  - Delayed to 2002
- Initiative 7: Define not operable but functional
  - Concept based on TSTF 372
  - Draft available for NRC review by July RITSTF/NRC meeting

Work Status

- Initiative 8: Eliminate TS that do not meet any criteria, including criteria 4
  - BWROG has developed an initial list of Tech Specs that should be eliminated (do not meet the criteria 4)
  - List will be reviewed with RITSTF in July and may be presented to NRC at July meeting
  - No rule changes to 50.36 are required

Initiative 8 Examples

- LCO 3.3.3.2 - Remote S/D Instrumentation
- LCO 3.3.4.1 - EOC-RPT
- LCO 3.3.8.2 - RPS Electric Power Monitor
- LCO 3.6.3.1 - Hydrogen Recombiners
- LCO 3.6.3.2 - Drywell Cooling Fans
- LCO 3.6.3.3 - Containment Oxygen Concentration

Issues

- Need for NRC commitment to support initiatives
  - Last NRC/RITSTF meeting provided positive trend
- Need for integrated Industry/NRC schedule which is maintained and updated

(ATTACHMENT)

BWROG Submittals (completed)

- Initiative 1
  - End State Report - Submitted February 2001
- Initiative 2
  - TSTF - Submitted Sept 2000
- Initiative 3
  - TSTF - Submitted Mar 2001

(ATTACHMENT)

BWROG Submittals (2001)

- Initiative 1
  - TSTF late 2001 (CEOG/BWROG)
- Initiative 4
  - Methodology
    - Draft for NRC review/comment - July 2001
    - Final report - December 2001
  - CIV APT Extension Submittal – End of 2001
- Initiative 5
  - Methodology
    - Draft for NRC review/comment - July 2001
  - Final report/TSTF - December 2001 (depends on NRC review of above)

(ATTACHMENT)

BWROG Submittals (2002)

- Initiative 4
  - TSTF - Early 2002 (depends on NRC review of methodology)
- Initiative 6
  - Submittals will use CEOG as model
    - Expect a methodology submittal, followed by TSTF
  - Will consider impact study with submittal (examples)
- Initiative 7
  - Expect only one generic industry submittal

(ATTACHMENT)

BWROG Submittals (2002/2003)

- Initiative 8
  - "Pilot" submittal late 2002 describing methodology and a specific LCO elimination
  - Additional LCO eliminations in 2003