



REGULATORY GUIDE 1.97 COMMITTEE OVERVIEW

Wes Bowers, RG 1.97 Committee
Chairman
BWROG NRC Pre-Submittal Meeting
November, 2006

R.G. 1.97 PRESENTATION

- Purpose of Committee
- Background
- Committee Work Products
- Committee Future Direction

PURPOSE OF COMMITTEE

- Assist plants in using requirements of revision 4 of R.G. 1.97, Instrumentation to Assess Plant and Environs Conditions During and Following an Accident.
- Share information on plant NRC approved deviations from R.G. 1.97, revisions 2 and 3.
- Review impacts of adoption of IEEE 497 process for determining instruments and determining applicable design and qualification requirements.
- Pursue Licensing Topical Reports (LTR) for NRC review.

BACKGROUND

- **TMI accident resulted in R.G. 1.97 revision and prescriptive requirements .**
 - List of "Type" A through E variables.
 - "Categories" assigned for design requirements.
 - Variables and design and qualification requirements.
 - BWROG developed positions used by individual plants supporting deviations.
 - BWROG position on neutron flux accepted by NRC.

BACKGROUND

- **Plant/NRC interactions resulted in approved R.G. 1.97 deviations.**
 - Drywell sump and drain
 - Neutron flux
 - Standby Liquid Control System flow
 - Radiation monitoring
 - Core thermocouples

IEEE STD 497-2002

PURPOSE – provide functional and design requirements for accident monitoring instruments.

- R.G. 1.97 noted as prescriptive.
- Addresses microprocessor-based I&C systems.
- Combines ANS 4.5 and IEEE 497 into one standard.
- Provides more flexible standard.
- RG 1.97 Revision 4 adopts IEEE 497 and notes it can be used by existing plants.

BWR APPLICATION OF IEEE 497

- Technical Report for BWR Application
 - Deterministically based on safety analysis and EOPs
- Considered two plant types
 - BWR/4
 - BWR/6
- Covers most operating plants
 - BWR/3 similar to BWR/4
 - BWR/5 combination of BWR/4 and BWR/6
- Provides the analysis needed to use RG 1.97 Rev 4
- Aligns accident monitoring with safety analysis and EOPs
- Identifies changes to existing accident monitoring requirements

COMMITTEE WORK SCOPE

- Provide input on NRC adoption of IEEE 497 for RG 1.97 Revision 4.
 - Approved June 2006
- Provide final Technical Report for BWR application of IEEE 497.
 - Verification completed in June
 - Report (NEDO-33280) released for use on June 28, 2006.
 - includes comparison and define changes from existing R.G. 1.97 requirements.
- Develop Licensing Topical Report (LTR) based on Technical Report
- Hold NRC pre-submittal meeting on draft LTR.
- Provide BWROG direction on pursuit of final LTR and NRC submittals
 - Proposed Tech Spec changes

Remaining Work Scope

- Provide final Licensing Topical Report for acceptance.
- Provides basis for BWR analysis of accident monitoring systems to support RG 1.97 Rev 4
 - conversion to RG 1.97 Rev 4
 - modifications using RG 1.97 Rev 4
- Provide basis for changes to Standard Tech Specs for BWRs
 - Defines Type A variables

SUMMARY

- Analysis for BWR Plant use of RG 1.97 Revision 4 has been completed
- NRC review of Topical Report will assist in plant use of RG 1.97 Revision 4
- Plan on providing Technical Specification Traveler (TSTF) based on results of Topical Report
- Wish to discuss most effective means for NRC review of Topical and resulting changes