

From: Lawrence Burkhart
To: Brian Sepelak
Date: 3/1/01 8:36AM
Subject: Fwd: Request for additional information for TACs MB0848/MB0849 review

Brain attached are the RAI questions that resulted from our meeting yesterday. Hulbert has added 2 questions (the previous 6 are also included).

Mail Envelope Properties (3A9E505A.537 : 6 : 21370)

Subject: Fwd: Request for additional information for TACs MB0848/MB0849 review
Creation Date: 3/1/01 8:36AM
From: Lawrence Burkhart

Created By: LJB@nrc.gov

Recipients

firstenergycorp.com
sepelakb (Brian Sepelak)

Post Office Route

firstenergycorp.com internet

Files	Size	Date & Time
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MESSAGE	646	03/01/01 08:36AM

Options

Expiration Date: None
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard

From: Hulbert Li
To: Lawrence Burkhart
Date: 3/1/01 8:24AM
Subject: Request for additional information for TACs MB0848/MB0849 review

Larry:
Please forward the attached questions to licensee for additional information. Thanks

Hulbert Li

CC: Carl S. Schulten; Evangelos Marinos; Yi-Hsiung Hsii

Mail Envelope Properties (3A9E4D71.93A : 11 : 37806)

Subject: Request for additional information for TACs MB0848/MB0849 review
Creation Date: 3/1/01 8:24AM
From: Hulbert Li

Created By: HCL@nrc.gov

Recipients

nrc.gov
owf2_po.OWFN_DO
ECM CC (Evangelos Marinos)
YGH CC (Yi-Hsiung Hsii)

nrc.gov
owf4_po.OWFN_DO
CSS1 CC (Carl S. Schulten)
LJB (Lawrence Burkhart)

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owf2_po.OWFN_DO	nrc.gov
owf4_po.OWFN_DO	nrc.gov

Files	Size	Date & Time
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REQUEST FOR ADDITIONAL INFORMATION ON BEAVER VALLEY'S 12/27/2000 SUBMITTAL

First Energy Nuclear Operating Company (licensee) submitted a request on 12/27/2000 for license amendment on Beaver Valley Units 1 and 2 Technical Specifications (TS) changes. In supporting these TS changes, the licensee also submitted four Westinghouse Topical Reports:

- (1) WCAP-11419, "Setpoint Methodology for Protection Systems for Beaver Valley Unit 1"
- (2) WCAP-11366, "Setpoint Methodology for Protection Systems for Beaver Valley Unit 2"
- (3) WCAP-15264, "Revised Thermal Design Procedure Instrument Uncertainty for Unit 1"
- (4) WCAP-15265, "Revised Thermal Design Procedure Instrument Uncertainty for Unit 2"

The following questions are related to the review of these topical reports:

- (1) The setpoint methodology reports (WCAP-11419 & WCAP-11366) stated that the methodologies for Beaver Valley Unit 1 & 2 protection system setpoints are consistent with ISA S67.04, Part 1, 1994, that was endorsed by NRC Regulatory Guide 1.105, Revision 3. However, WCAP-15264 and WCAP-15265 reports reference to RG 1.105, Revision 2. Identify and justify the areas in the instrument uncertainty study that are not conformed with RG 1.105, Revision 3.
- (2) The basic equations of Overpower Delta T for Beaver Valley Units 1 and 2 are different from the Standard Technical Specifications of Westinghouse Plants. Please explain the reason for the difference.
- (3) For the Pressurizer Pressure channel uncertainties in the protection system setpoint study (WCAP-11419), the channel statistical allowance (CSA) is about $\pm 2.5\%$ to $\pm 2.7\%$ span, while in the RTDP instrument uncertainty study (WCAP-15265), the CSA is about $\pm 4.4\%$ span. Explain the difference between these two studies.
- (4) Explain the following questions related to WCAP-15265 Table 1, "Pressurizer Pressure Control System Uncertainties": (a) How is CSA calculated? Does it include control and indication? (b) Why are the seismic effects considered for Rosemount transmitter, but not for Barton transmitters? (c) Why are the effects of radiation and temperature not considered? These effects were considered in WCAP-11366 Table 3-9 "Pressurizer Pressure - Low, SI." (d) A foot note stated that (LOE)* is treated as a bias. Another term listed as (bias+LOE). What is the difference between these two terms. (e) Why is (LOE)* for CSA -7.5 psi while (LOE)* for controller is +7.5 psi?
- (5) When did Beaver Valley Units 1 and 2 have the reactor coolant system's RTD bypass manifolds removed? How does this modification affect the setpoint study on the Tavg channel uncertainties?
- (6) In the Tavg uncertainties calculation (Page 7 in WCAP-15265), it stated that the Tavg controller accuracy is the combination of the instrumentation accuracy and the deadband. Why has the "deadband" not been considered in other controller accuracy calculation, such as pressurizer pressure control, RCS flow control, and other secondary side controls?
- (7) The loop RCS flow indication uncertainty study uses the plant computer inputs. Is the uncertainty of the plant computer components considered in the study? When a plant computer is replaced or upgraded, what would be the impact to the uncertainty study?
- (8) Explain the process used to generate and verify the uncertainty numbers listed in the setpoint documents. Describe the process used to update the setpoints when a plant protection system or RTDP instrumentation is modified.