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To: <mlc@nrc.gov>
Date: 2/5/01 9:24AM
Subject: response to slave relay sti extension license amendment request

Mac,
Attached is our response to the NRC <<rai response.doc>> questions regarding the Byron/Braidwood Slave Relay STI Extension License Amendment Request. Thanks, Kelly

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Response to NRC questions from Mahesh Chawla (NRC) to Kelly Root (Exelon), "ComEd submittal dt: 11/7/2000 - Request for TS change to extend the STI for SSPS relays to 18 mos." emailed January 23, 2001

Q1:

The licensee submittal does not define whether AR relay with DC coils are included in the request for surveillance test interval extension. It should be noted that Westinghouse Owners Group Topical report, WCAP-13877 does not cover AR relay with DC coil. Therefore, if AR relay with DC coil are included in the extension request then provide the basis for extending the applicability of the topical report to these relays based on the analysis similar to ac relays. Also attachment E of the submittal does not provide the similarity of the relays in the topical reports to the relays in the plant.

Response to Q1:

There is no application of Type AR slave relays with DC coils in the Solid State Protection System (SSPS) at Braidwood and Byron Stations. The WCAPs are applicable to the

Westinghouse Type AR slave relays with AC coils and the Potter & Brumfield MDR Series slave relays with AC coils. These are the types of slave relays used in the SSPS at the Braidwood and Byron Stations. We are not proposing any deviations from the referenced WCAPs.

The applicability analyses performed to address NRC Item 1 in Attachment E confirmed that the slave relays used in the SSPS at the Braidwood and Byron Stations are identical to those evaluated in the referenced WCAPs.

Q2:

The licensee plan to extend the applicability of the topical reports to the future relays, which will be used to replace existing relays. It is staff's understanding that these relays could be purchased from any vendor and could be of different model. The licensee should submit their request in the future when they replace the relay with a specific relay with the analysis similar to topical report for staff's approval at that time.

Response to Q2:

Section F, "Safety Analysis of the Proposed Changes," in Attachment A of our license amendment request (LAR) states, "The changes being proposed involve the extension of the SSPS slave relay STI from the current 92-day STI to an 18-month STI for the Westinghouse Type AR slave relays and for the Potter & Brumfield MDR Series slave relays, **or future replacement slave relay types that meet the acceptance criteria for the reliability assessments performed in accordance with the NRC approved methodology described in the Westinghouse Electric Corporation Topical Reports, WCAP-13877, WCAP-13878 and WCAP-13900.**"

This practice is consistent with past precedence. WCAP-14036-P-A, Revision 1, "Elimination of Periodic Protection Channel Response Time Tests," provides technical justification for deleting periodic Response Time Testing (RTT) of the electronic signal processing between the primary sensors and the final actuated devices for the Reactor Trip System (RTS) and the ESFAS. A portion of the TS and TS Bases changes identified in WCAP-14036-P-A were previously incorporated into the Braidwood Station TS in Amendment #76 and into the Byron Station TS in Amendment #84, which implemented Westinghouse WCAP-13632-P-A, Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements." During the conversion to the Improved Standard TS (ISTS), all of the changes to the TS identified in WCAP-14036-P-A were incorporated into the Braidwood Station and the Byron Station TS (Braidwood Amendment #98/Byron Amendment #106, approved December 22, 1998). By letter from R.M. Krich (Exelon) to NRC Document Control Desk, dated January 7, 2000, we notified the NRC of our intent to fully implement WCAP-14036-P-A, Revision 1. This notification was provided since no license amendment was necessary. We confirmed that the Westinghouse Failure Modes and Effects Analysis (FMEA) presented in the WCAP was valid for and applicable to the installed RTS and ESFAS equipment at Braidwood Station and Byron Station, with the exception of one newer loop power supply card. Our in-house evaluation and testing demonstrated that the WCAP-14036-P-A response time allocation was applicable to this newer card, and provided in the reference letter documenting our evaluation and associated conclusions. Similarly, the application in the SSPS at Braidwood and Byron Stations of future replacement slave relay types that meet the acceptance criteria for the reliability assessments performed in accordance with the NRC approved methodology described in WCAP-13877, WCAP-13878, and WCAP-13900 should not require a LAR.

We have procedures and processes in place for the evaluation of replacement components,

which is a normal activity and often results from part obsolescence or reliability improvements. This activity does not require NRC approval unless a 10 CFR 50.59 evaluation indicates that a license amendment is required. The replacement of a Westinghouse Type AR or a Potter & Brumfield MDR Series slave relay would be in accordance with approved station procedures and processes. Any slave relay that would replace a Westinghouse Type AR or a Potter & Brumfield MDR Series slave relay would be verified to meet the acceptance criteria for the reliability assessments performed in accordance with the NRC approved methodology described in WCAP-13877, WCAP-13878, and WCAP-13900. In our LAR we included for information only the Technical Specifications (TS) Bases changes associated with the proposed change. The Bases for SR 3.3.2.8 and SR 3.3.6.5 were revised to state that future slave and auxiliary relay replacement types in the Engineered Safety Feature Actuation System (ESFAS) and the Containment Ventilation Isolation Instrumentation circuits shall meet the acceptance criteria for the reliability analyses performed in accordance with the methodology described in the referenced WCAPs.

Q3:

The licensee has requested to extend the topical report for Containment Ventilation Isolation System without providing enough justification. In order for the staff to determine the acceptability of the request, provide details to justify the applicability of the topical report to these relays.

Response to Q3:

We are not requesting "to extend the topical report for Containment Ventilation Isolation System." The TS requirement for containment ventilation isolation instrumentation in NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized Water Reactor," is in TS 3.3.2. The TS markups in WCAP-13900 are based on NUREG-0452. In WCAP-13900, TS 3.3.2, Functional Unit 3c, contains the markup for containment ventilation isolation instrumentation. The Braidwood and Byron TS are based on NUREG-1431, "Standard Technical Specifications Westinghouse Plants." In NUREG-1431, the TS requirement for containment ventilation isolation instrumentation is in TS 3.3.6. The requirements in NUREG-0452 and in NUREG-1431 for performing a slave relay test for containment ventilation isolation instrumentation are identical. Only the location of the requirements is different. Additionally, the same change was approved in Amendment 17 for Watts Bar Nuclear Plant, Unit 1, on December 30, 1998.

Q4:

Attachment B3 and B4, Table 3.3.2-1, page 1 of 6, function 1d and page 4 of 6, function 5b for Unit 2 has a change bar marked at the top line but Attachment B1 and B2 do not show any change. Please resubmit these pages correcting the discrepancies.

Response to Q4:

It has been our practice, since the conversion to the ISTS (i.e., since Braidwood Amendment #98 and Byron Amendment #106) to retain the revision bars from previous TS amendments. Only the changes marked up in Attachments B-1 and B-2 are associated with this license amendment request.

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