NRR-PMDAPEm Resource

From: Wiebe, Joel
Sent: Wednesday, September 09, 2015 9:07 AM
To: Joseph Bauer
Subject: Clarification of RAIs Regarding LAR to Install New Degraded voltage Relays and Timers dated August 12, 2015

In response to your clarification request during our teleconference on August 26, 2015, we have determined that the last sentence of RAI 1 should read: ". . . and none of the safety-related loads will be degraded with the proposed degraded voltage relay setpoints (voltage and time delay)."

Your response to the RAIs is requested within 30 days of this e-mail.

Joel

From: Wiebe, Joel
Sent: Wednesday, August 12, 2015 10:28 AM
To: Joseph Bauer <Joseph.Bauer@exeloncorp.com>
Subject: Preliminary Follow Up RAIs Regarding LAR to Install New Degraded voltage Relays and Timers

The purpose of preliminary RAIs is to ensure the questions are clear and understandable. If you need a clarifying conference call, let me know within 1 week.

Exelon's letter dated April 30, 2015, submitted responses to the NRC staff's RAIs. We have the following follow up RAIs regarding your response:

1. In response to the NRC staff's RAI Question No. 2 concerning safety-related loads to start and run without damaging and actuating their protective devices, your response dated April 30, 2015, stated the following in Section F.

   > BTP PSB-1, "Adequacy of Station Electric Distribution System Voltages," Section B.1.b.2 states in part, "The second time delay should be of a limited duration such that the permanently connected Class 1 E loads will not be damaged." The BTP does not specifically require that loads be capable of starting under low degraded voltage conditions; therefore, the Byron Station and Braidwood Station low degraded voltage evaluations did not specifically analyze the potential starting of loads under low degraded voltage conditions.

   To complete its review of Exelon's application dated April 24, 2015, the NRC staff requires information that addresses the capability of safety-related loads to start under degraded voltage conditions. The staff position is that for a time delay period of 340 seconds, for Byron and Braidwood Stations, the licensee must demonstrate that safety-related loads will have adequate voltage to start and run without damaging or actuating protective devices that can disable safety related equipment. The staff position and requirements have been further clarified in Regulatory Issue Summary 2011-12, "Adequacy of Station Electric Distribution System Voltages," Revision 1. Therefore the staff requests that the licensee provide a summary of the analysis to show that all safety-related loads can start and run without actuating their protective devices, including control circuit fuses, and none of the safety-related loads will be degraded with the existing degraded voltage relay setpoints (voltage and time delay).

2. In response to the NRC staff's RAI Question No. 3.c. concerning evaluations to show that a momentary voltage dip lasting approximately 3 seconds to a value marginally above the loss of voltage relay setpoint, with a recovery to the reset point of the LDVR will not adversely impact any important to safety

equipment which may be required to operate for more than 5 minutes, in its response dated April 30, 2015, the licensee stated the following:

> Valves were not evaluated because they are not continuous loads and are not expected to operate during a degraded voltage condition. Therefore, valves were considered outside the scope of the BTP PSB-1 requirements.

To complete its review of Exelon's application dated April 24, 2015, the NRC staff requires information regarding the evaluation of valves for the degraded voltage condition. In accordance with the guidance delineated in Generic Letter No. 89-10: "Safety Related Motor-Operated Valve Testing and Surveillance" licensees demonstrated that all safety-related motor operated valves (MOV) can perform key safety functions at the degraded voltage relay setpoint. The response to RAI 3.c indicates that voltages at MOV terminals may drop below the LDVR setpoint for approximately 3 seconds. Provide a summary of the evaluation for the motor operated valves including any impact due to momentary voltage dips lasting 3 seconds.

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