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December 14, 2016

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Ms. Cindy Bladey
Office of Administration
Mail Stop: OWFN-12-H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Comments on Draft NUREG/CR-XXXX, "Response of Nuclear Power Plant Instrumentation Cables When Exposed to Fire Conditions - Test Plan" (Federal Register 81FR80688, dated November 16, 2016, Docket ID NRC-2016-0232)

This letter is being submitted in response to the U.S. Nuclear Regulatory Commission's (NRC's) request for comments concerning the subject draft NUREG/CR-XXXX, "Response of Nuclear Power Plant Instrumentation Cables When Exposed to Fire Conditions - Test Plan," published in the *Federal Register* (i.e., 81FR80688, dated November 16, 2016).

This draft NUREG/CR describes a draft test plan instituted to better understand the fire-induced failure modes of instrumentation cables and evaluate the potential effect those failure modes could have on plant instrumentation circuits (i.e., circuit, component, and/or system response). Specifically, this research is intended to better quantify the signal leakage characteristics that may occur before catastrophic failure in instrumentation circuits.

Exelon Generation Company, LLC (Exelon) appreciates the opportunity to comment on the subject draft NUREG/CR and offers the following comments for consideration by the NRC.

General Comments

1. Section 3.1.2 describes the temperature heating profile being proposed for the test. Exelon believes that a bias is being given to longer/slower heating times, by using heat fluxes that are just slightly above the cable's damage threshold. In previous cable fire testing where a similar profile was used, abnormal experimental results occurred and the data was not usable, as it was found to not be representative of real fire conditions (e.g., NUREG/CR-7100, DESIREE-FIRE Test #43).

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2. In the first paragraph of Section 3.2.1.1 (Page 17), the last four sentences state:

"...Although not shown on the diagram, if the cable has a shield, it will be grounded at the meter consistent with common practice. The drain wire will also be grounded, which mirrors typical practice for a shielded cable which is to ground the shield/drain. If twisted pairs have a shield, it will not be grounded. This was discussed with the industry working group for the project and it was determined that not grounding the twisted pairs shield is common industry practice."

With regard to the statements in the last two sentences (underlined above), Exelon believes that these statements are incorrect and also contradict the first sentence in the above paragraph. Common industry practice is to ground the shield at one end (not both ends).

3. During early interactions between the NRC and industry representatives regarding the development of this draft test plan, it was suggested that the NRC review information previously submitted related to fire testing on instrument circuits that was performed at the River Bend Nuclear Generating Station in the 1997-1998 timeframe. Exelon believes that this information is directly relevant to the test program described in the draft NUREG/CR. Therefore, Exelon recommends that NRC reconsider reviewing this prior testing as part of their test program, and include a discussion regarding this prior testing in Appendix A, "*Literature Search on Research Related to Instrumentation Cable Fire Tests.*"

If you have any questions or require additional information, please do not hesitate to contact Richard Gropp at (610) 765-5557.

Respectfully,



David P. Helker
Manager, Licensing and Regulatory Affairs
Exelon Generation Company, LLC