

2007 OCT -2 PM 3: 11

September 20, 2007

RECEIVED

Rulemaking, Directives, and Editing Branch  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-00017/16/07  
72FR 38845

(5)

Subject: Comments Concerning Draft Regulatory Guide DG-1132,  
"Qualification of Safety-Related Cables and Field Splices for Nuclear  
Power Plants" (Federal Register Notice 72FR38845, dated July 16,  
2007)

Exelon Generation Company, LLC (Exelon) and AmerGen Energy Company, LLC (AmerGen) are submitting this letter in response to a request from the Nuclear Regulatory Commission (NRC) for comments concerning Draft Regulatory Guide DG-1132, "Qualification of Safety-Related Cables and Field Splices for Nuclear Power Plants," published in the Federal Register (i.e., 72FR38845, dated July 16, 2007).

DG-1132 describes a method acceptable to the NRC for complying with the regulations associated with the qualification of safety-related cables and field splices for nuclear power plants.

Exelon/AmerGen appreciate the opportunity to comment on DG-1132, and offer the following comments for consideration by the NRC.

#### General Comments

1. On page 2, in the last paragraph in Section B, "Discussion," the NRC makes reference to "...field splices for medium-voltage cables in inaccessible locations should not be permitted...." Exelon/AmerGen request that the NRC provide clarification concerning the intent of this statement. Specifically, is it the NRC's intent to preclude pulling splices into inaccessible locations?
2. On page 3, Section C, "Regulatory Position, Item 10 states: "Power and instrumentation and control cables for which failures could disable risk-significant equipment should have condition monitoring programs to demonstrate that the cables can perform their safety function when needed. " Exelon/AmerGen believe that this issue warrants further discussion and request that additional clarification be provided in the following areas:

SONSI Review Complete  
Template = ADM-013E-RIDS = ADM-03  
Call = S. Aggarwal  
(SK9)

- A. The scope of DG-1132 is primarily for Class 1E cables located in harsh environments. "Risk-significant" equipment is not necessarily defined in scope of DG-1132, and therefore, Exelon/AmerGen recommend clearly defining the scope of the guidance provided in DG-1132.
- B. Generic Letter (GL) 2007-01, *"Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients,"* recommends that licensees should have power cable condition monitoring programs for Maintenance Rule systems. The GL does not specifically mandate cable condition monitoring programs, and the regulatory basis for requiring a cable condition monitoring program is not established or clearly defined in any NRC documentation. Therefore, Exelon/AmerGen request further clarification concerning the basis for requiring a cable condition monitoring program.
- C. DG-1132 discusses that the need for equipment qualification is to prevent common mode failure due to harsh environments resulting from a Design Basis Earthquake (DBE). As such, any cable condition monitoring program would be limited to those cables whose qualification aging conditions were not consistent with actual installed plant conditions. Exelon/AmerGen would not expect to find too many Class 1E cables, which would be subject to a post DBE environment, to be in any environment not enveloped by the qualification plan. One possible exception would be if a Class 1E harsh environment cable was continuously immersed in water; this probably would not be considered a qualification aging technique. Therefore, Exelon/AmerGen request further clarification concerning this issue.
- D. DG-1132 explains that the need for equipment qualification is to prevent common mode failure due to harsh environments resulting from a DBE. Section C, "Regulatory Position," Item 10 does not limit the scope of cable condition monitoring to cables in harsh environments. There is no identified common cause, other than the harsh environment, that would cause multiple cables to fail. Therefore, Exelon/AmerGen request further clarification concerning this issue.
- E. DG-1132 does not appear to include a discussion about Regulatory Position Item 10 in the Regulatory Analysis section of the draft Regulatory Guide. The Conclusion section indicates that the proposed action will reduce unnecessary burden. Imposing cable condition monitoring programs could have a significant impact on licensees with no clear benefit. Therefore, Exelon/AmerGen request further explanation and clarification regarding the perceived benefit.

- F. Exelon/AmerGen does not believe that there is an assured means of monitoring cables to determine if they can perform their intended safety function. Comments were provided to the NRC on the draft GL 2007-01 relative to this specific issue. The industry attempted to portray that cable condition monitoring technology is not capable of determining the remaining life in a cable. HiPot testing will fault cables that have pre-existing conditions; however, many view this destructive testing methodology as overly stressful on cables. This testing can potentially cause failures in cables that have considerable life remaining. Other non-destructive testing methodologies, such as Partial Discharge (PD) and Polarization Index (Tan-Delta), can provide advance indications of changes in the cable's characteristics, but there is not enough library information on these tests to provide acceptance criteria. IEEE 400, "*Guide for Field Testing and Evaluation of the Insulation of Shielded Power Cable Systems*," does provide criteria for PD tests on XLPE insulated cables; however, EPR insulated cables are predominant in the nuclear industry. EPR cables do not trend linearly to failure; they tend to test well, and then cascade to failure over a period of a few months. Therefore, Exelon/AmerGen request that the NRC provide additional explanation and clarification concerning the basis for cable condition monitoring.

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

Respectfully,



David P. Helker  
Manager - Licensing