FAQ Number	**14-0071**	**FAQ Revision**	**0a**
FAQ Title	**Acceptable Uses for Non IEEE 383 cables**		

Plant:	ENERCON	Date:	April 13, 2015
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Purpose of FAQ:

FAQ provides clarification for the acceptable use of Non-IEEE Std 383 or equivalent cables to Fundamental Fire Protection Program and Design Elements Transition Review (NFPA 805, Chapter 3).

Is this Interpretation of guidance? Yes / No

Proposed new guidance not in NEI 04-02? Yes / No

Details:

NEI 04-02 guidance needing interpretation (include section, paragraph, and line numbers as applicable):

NEI 04-02, Section 4.3.1, Fundamental Fire Protection Program and Design Elements Transition Review, and Appendix K, "NFPA 805 Chapter 3 Clarifications".

3.3.5.3 Electrical Cable Flame Propagation Limits. Electrical cable construction shall comply with a flame propagation test as acceptable to the AHJ.

Circumstances requiring guidance interpretation or new guidance:

Clarification of the NFPA 805 Chapter 3 requirement of Section 3.3.5.3, which requires that "Electrical cable construction shall comply with a flame propagation test as acceptable to the AHJ." The industry requires clarification as to what types of applications may not be required to have cables that meet the IEEE Std 383 flame spread requirements, or equivalent tests endorsed by NFPA 805 FAQ 06-0022.

Detail contentious points if licensee and NRC have not reached consensus on the facts and circumstances:

None

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Potentially relevant existing FAQ numbers: FAQ 06-0022, Acceptable Electrical Cable Construction Tests.

Response Section:

Proposed resolution of FAQ and the basis for the proposal:

Section 3.3.5.3 of NFPA 805 has the following requirement:

3.3.5.3 Electrical Cable Flame Propagation Limits. Electrical cable construction shall comply with a flame propagation test as acceptable to the AHJ.

In order to provide clarity for the language above regarding “Electrical cable construction shall comply with a flame propagation test as acceptable to the AHJ,” this statement should be expanded upon for those cases when non-IEEE Std 383 or equivalent cables are necessary for certain plant applications. One example is:

Cables that require special properties (e.g., high flexibility) are specifically designed and constructed for crane applications and are not always qualified to IEEE Std 383 or equivalent. Where the use of these cables is required for crane applications and an IEEE Std 383 or equivalent cable cannot be used, the use of these cables is permissible, provided that the cable is still classified as fire retardant and that their use does not have an adverse impact on the Approved Fire Protection Program, Safe Shutdown, and the Fire PRA.

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***If appropriate, provide proposed rewording of guidance for inclusion in the next Revision*:**

Modify Appendix K to add the following clarification:

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K.X NFPA 805 Section 3.3.5.3 (FAQ 14-XXXX)

Specific clarification for NFPA 805 section 3.3.5.3, from FAQ 14-0071;
To comply with the requirement “Electrical cable construction shall comply with a flame propagation test as acceptable to the AHJ” where used in section 3.3.5.3, one acceptable method is as follows:

Cables that require special properties (e.g., high flexibility) are specifically designed and constructed for crane applications and are not always qualified to IEEE Std 383 or equivalent. Where the use of these cables is required for crane applications and an IEEE Std 383 or equivalent cable cannot be used, the use of these cables is permissible, provided that the cable is still classified as fire retardant and that their use does not have an adverse impact on the Approved Fire Protection Program, Safe Shutdown, and the Fire PRA.

Long, exposed lengths of highly flexible cable may not be capable of meeting a currently acceptable fire propagation test because of its application. Cranes that use festoon cables and/or moving cable trays are typically located in the Turbine Building, Spent Fuel Pool, and Reactor Building. Highly flexible cables commonly meet the low intensity test methods identified in FAQ 06-0022. These tests are the VW-1 Vertical Wire Flame Test (UL 1581 and CSA C22.2 No. 0.3, and referenced in UL 83 and UL 44), the FT-1 Vertical Flame Test (UL 1581 and CSA 22.2 No. 0.3 and referenced in UL 83 and UL 44), Flame Test (ICEA S-61-402), and the FT-2 Horizontal Flame Test (UL 1581, CSA 22.2 No. 0.3, and referenced in UL 83 and UL 44). Cables that meet these tests are classified as fire retardant cables; however, due to the vast differences between the IEEE 383-1974 and low intensity test methods the low intensity test cannot be directly compared to IEEE 383-1974.