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

Plant:	DC Cook	Date:	May 27, 2014
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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. Two examples are:

1) The term “integral” is not defined in IEEE Std 383; however, this is commonly understood to mean “necessary to make a whole or complete component; essential or fundamental.” IEEE Std 1202 states, “This standard shall apply to multi-conductor cables and single insulated conductors that are allowed to be installed in cable tray, or to other cables and conductors for which a flame rating to the requirements of this standard is desired.” Cables that are integral to a device would not be within the scope of IEEE Std 383 or equivalent.

2) Another application is cables that require special properties (e.g., high flexibility cable, special instrumentation cable, communication cable, fiber optic cable, etc.) are specifically designed and constructed for specific applications and are not always qualified to IEEE Std 383 or equivalent. Where the use of these cables is required for a specific application and an IEEE Std 383 or equivalent cable cannot be used, the use of these cables is permissible, provided that their use is evaluated to 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, two acceptable methods are as follows:

1) The IEEE Std 383 standard Flame Test qualification states, "Cable shall be flame retardant in accordance with the requirements of IEEE Std 1202-1991 or NFPA 262-2002." The scope of IEEE Std 383 states, "This standard provides general requirements, direction, and methods for qualifying Class 1E electric cables, field splices, factory splices, and factory rework for service in nuclear power generating stations. Categories of cables covered are those used for power, control, and instrumentation services, including signal and communication cables. Field cables, wires, and splices are within the scope of this standard. Cables, wires, and splices within or integral to other devices (e.g., instruments, panels, motors, etc.) should be qualified using the requirements in the applicable device standard or IEEE Std 323-1983, as appropriate." IEEE Std 1202 states, "This standard shall apply to multi-conductor cables and single insulated conductors that are allowed to be installed in cable tray, or to other cables and conductors for which a flame rating to the requirements of this standard is desired." The term "integral" is not defined in IEEE Std 383; however, this is commonly understood to mean "necessary to make a whole complete; essential or fundamental." Cables that are integral to a device are not considered to be within the scope of IEEE Std 383 or equivalent.

2) Cables that require special properties (e.g., high flexibility, special instrumentation cable, communication cable, fiber optic cable, etc) are specifically designed and constructed for specific applications and are not always qualified to IEEE Std 383 or equivalent. Where the use of these cables is required for a specific application and an IEEE Std 383 or equivalent cable cannot be used, the use of these cables is permissible, provided that their use is evaluated to not have an adverse impact on the Approved Fire Protection Program, Safe Shutdown, and the Fire PRA.