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Rules and Directives Branch  
ADM, U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
U.S.A.

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Dear Sir:

I am a staff worked in Nuclear Safety Center of Beijing China and in charge of the safety review for electric power system and equipment of nuclear power plants.

Regarding to the Regulatory Guide 1.189, "Fire Protection for Operating Nuclear Power Plants", I have some comments to provide.

R.G. 1.189 subsection 4.1.3.1, "Cable Design", requires that electric cable construction should pass the flame test in IEEE Standard 383, "Standard for Type Test of Class 1E Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations," or IEEE Standard 1202, "Standard for flame testing of cables for use in cable trays in industrial and Commercial Occupancies." Subsection 4.3.5, "Cable Qualification", requires that electric cable construction should, as a minimum, pass the flame test in or IEEE Standard 1202.

I think these are not proper description, and the reasons are as follows:

1. The requirement for the flame test of cable in IEEE Standard 383 and in IEEE Standard 1202 are different. IEEE Standard 383 subsection 2.5.6, "Instrument Cable and Single Conductors from Multiconductors Assembly," includes a requirement that a specimen of each type of instrument cables or the individually insulated or insulated and jacketed conductors removed from each multiconductor control cable which is type tested should pass a flame resistance test in accordance with IPCEA Standard S-19-81, section 6.19.6. IEEE Standard 1202 does not include a similar requirement. The single conductors from multiconductor assembly may have not flame-resistance insulation according to IEEE Standard 1202.
2. IEEE Standard 420, "Standard for the Design and qualification of Class 1E Control board, Panels, and Racks Used in Nuclear Power Generating Stations", subsection 4.6, "wire selection" includes a requirement that wire for interconnection of control boards, panel, and rack modules and components shall be qualified in accordance

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with IEEE Standard 383, and that cables and wires shall have flame-retardant insulation. The cable's sheath is removed when it enters into control boards and panels, so the requirement in subsection 2.5.6 of IEEE Standard 383 is reasonable.

The Class 1E cables used in Tianwan (Lianyungang) nuclear power plant in China are purchasing now and Russian expert considers that the requirement of subsection 2.5.6 of IEEE Standard 383 is not applicable. So I hope I can receive NRC's opinion for my above comments and further position for subsection 2.5.6 of IEEE Standard 383.

Yours truly,

LANG Aiguo



Director of I&C and Electric power Division