

Nuclear Risk Research Center (NRRC)
Central Research Institute of the Electric Power Industry (CRIEPI)
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Dr. George Apostolakis
Head, NRRC

June 29, 2015

Mr. J.W. Stetkar
Chairman
Technical Advisory Committee

Subject: TAC Letter dated June 6, 2015 on Fire Research Activities

Dear Chairman Stetkar:

On behalf of the Nuclear Risk Research Center (NRRC), I am responding to the recommendations offered by the Technical Advisory Committee in the subject letter.

Recommendation

NRRC should increase priority for fire research and testing programs in the following areas to improve the information that is available to support development and application of realistic assessments of the risk from fires in Japanese nuclear power plants.

- (a) Development of realistic estimates of ignition frequencies, fire growth times, and heat release rates based on physical characteristics of electrical cabinets

Response: We agree with TAC's recommendation. The NRRC staff intends to review NUREG-2178 and will give priority to the development of technical information for the realistic estimation of fire risks.

- (b) Development of realistic estimates of ignition frequencies, fire growth times, and heat release rates based on physical characteristics of transient combustible materials.

Response: The NRRC staff agrees with TAC's recommendation. Japanese utilities have been aware of the importance of controlling the risk from transient combustible materials and have been managing such materials in the plants as a routine manner. We will develop a research program to meet this recommendation.

- (c) Testing to measure the response times and effectiveness of incipient fire detection systems in prototypical nuclear power plant electrical cabinets.

Response: We agree with TAC's recommendation. NRRC staff are aware that some Japanese

utilities have been introducing incipient fire detection systems after evaluating their effectiveness. As part of NRRC's fire PRA guideline development, NRRC will consider TAC's recommendation and will develop a test plan, if necessary.

We will consult with the utilities and prioritize our research activities combining TAC's recommendations and utility requests to support their near-term and long-term fire risk-management activities.

We appreciate the time and effort that TAC has devoted to this important subject and we look forward to continued interactions.

Sincerely,

A handwritten signature in black ink, appearing to read "George Apostolakis". The signature is fluid and cursive, with a long horizontal stroke at the end.

George Apostolakis