

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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July 1, 2010



The Honorable Steven Chu  
Secretary of Energy  
U. S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1000

Dear Secretary Chu:

The Defense Nuclear Facilities Safety Board (Board) has received the Department of Energy's (DOE) deliverable under Commitment 5.3.2 of DOE's implementation plan for the Board's Recommendation 2008-1, *Safety Classification of Fire Protection Systems*. This response includes the interim guidance issued by the Office of Environmental Management on February 4, 2010, and by the National Nuclear Security Administration on March 10, 2010. This guidance provides useful information for current and future projects relying on safety-class and safety-significant fire protection systems. DOE's implementation plan for the recommendation commits to incorporate specific design and operational criteria into DOE Standard 1066, *Fire Protection Design Criteria*. Personnel from the Office of Health, Safety and Security indicated that the revision to DOE Standard 1066 would simply incorporate the interim guidance. The interim guidance does not provide a comprehensive set of attributes of safety-related fire protection systems. Therefore, inserting only the interim guidance into DOE Standard 1066 would not meet the intent of the Board's recommendation.

DOE projects are becoming increasingly reliant on fire suppression systems as a primary means for radiological hazard protection. Consistent with the Board's recommendation, DOE should strengthen DOE Standard 1066 by incorporating the interim guidance as well as additional guidance on (1) a complete description of critical system functions and characteristics, (2) a comprehensive list of applicable design codes and standards, (3) approaches and processes applicable to preparing safety-related designs, (4) quality assurance requirements for unique fire protection elements, (5) examples of comprehensive technical safety requirements, limiting conditions of operation and compensatory measures, and (6) examples of documents used to support facility safety basis development, system assessments, and operations.

The Board notes that the implementation plan incorporates some flexibility in the scheduling of deliverables; however, the Board requests to be notified promptly if DOE anticipates any delays in carrying out the implementation plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter S. Winokur".

Peter S. Winokur, Ph.D.  
Chairman

c: Mr. Glenn S. Podonsky  
Mrs. Mari-Jo Campagnone