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SESSION 3A	Understanding the Significance of Aircraft Hangar Fire Protection Water Supply Demands
SESSION DESCRIPTION	<p>This Case Study will discuss how with accuracy of water supply testing information (in accordance with NFPA 291, “Recommended Practice for Fire Flow Testing and Marking of Hydrants”) and other shortfalls were exposed when implementing the test information into the final design of an aircraft hangar and the required fire protection foam suppression system. During the final system commissioning of the hangar low level high expansion foam system, the municipal water supply system experienced negative system pressure during the fire pump start-up. Also, the pressure at the fire pump suction flange was negative for some period of time after initial pump start-up, and the fire protection system experienced a potentially damaging water hammer. The presenters will explain the process the group used to identify and resolve the water supply issues, share the problems they encountered and ‘lessons learned,’ and discuss ways in which attendees can implement a similar approach in their own design of fire protection systems when given flow data that may or may not be in accordance with NFPA 291. Learning objectives include: Review the general requirements of NFPA 291 for the testing of water supplies and identify other factors for a successful design; Identify design parameters for fire protection systems when they are connected to a municipal water supply; Identify key pathways (key personnel) for a successful design; and Understanding the fire protection system design implications that go beyond the black and white of the code.</p>
SPEAKERS BIO	<p>Tom Gardner holds a BS in General Science from Fordham University and a BS in Fire Protection Engineering from the University of Maryland. He is a registered Professional Engineer (Fire Protection Engineering) in 14 states and has over 36 years of experience. He was the editor of the 6th and 7th Editions of the NFPA 99 Handbook, and co-authored two editions of NFPA’s Fire and Life Safety in Health Care Facilities. Tom is the Past Chair of the SFPE’s Engineering Education Committee, Past Chair of the NFPA’s Health Care Section, is a Fellow in the Society of Fire Protection Engineers, and is a Senior Fire Protection Engineer with GHD Inc.</p> <p>Andrew M Wahl is a registered Senior Fire Protection Engineer with GHD, Inc. Mr. Wahl is a graduate of the University of Maryland, with more than 25 years’ specialized experience in fire protection engineering, including experience as Lead Engineer and manager of fire protection and life safety system design for a wide range of projects. His experience includes design and commissioning of fire alarm and detection systems, automatic sprinkler systems, fire pumps, and foam fire suppression systems. Previous publication work includes "Water and Water Additives for Fire Fighting" chapter in the 17th & 18th Edition of NFPA's Fire Protection Handbook.</p>