

Fire Protection Engineering And Safety Standards Of U.S. Army And Air Force



Dammam Conference

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Gregory M. Michaels, P.E., Fire Protection Engineer | US Army Corps of Engineers

Gregory M. Michaels serves as a Fire Protection Engineer in the Building Systems Branch of the Engineering Division for the U.S. Army Corps of Engineers (USACE) Middle East District (MED), located in Winchester, Virginia. He is a member of the Engineering Division, one of three major divisions within the District responsible for accomplishing projects that meet customer requirements.

MED is responsible for providing engineering, construction, and related reach-back services in the Middle East, Central Asia, and other areas as required. Its work includes designing and constructing facilities for use by U.S. forces, performing engineering activities for other U.S. government and foreign agencies, and providing operations and maintenance services for various customers. In addition, the District provides project management, engineering, contracting and support services to USACE districts in Iraq and Afghanistan. In his position, Mr. Michaels is responsible for ensuring that fire protection engineering plans and specifications are developed to meet project goals. His duties include overseas site visits, design charrettes, managing AE firm design contracts, design hydraulics, and specification development on projects currently in Jordan, Egypt, Iraq, Kyrgyzstan, Tajikistan, Uzbekistan, Kazakhstan, Turkmenistan, Qatar and Afghanistan. His most recent assignments include fire protection engineering design for a combined Desalinization/Power Plant in Saudi Arabia, the rebuilding of electric power plants in Iraq, and nuclear waste environmental clean-up projects for the Department of Energy.

Mr. Michaels also serves as one of four engineers assigned to the Technical Center of Expertise for Fire Protection Engineering of U.S. Air Force Aircraft Hangars worldwide. He has served as a civilian with the District since May 2010.

Mr. Michaels began his engineering career as a civil engineering intern and Engineer in Training for the City of Toledo, Ohio. He then worked for the Flammability and Toxicity Group at the Center for Fire Research, National Bureau of Standards, U.S. Department of Commerce, while earning his degree in Fire Protection Engineering. Thereafter, Mr. Michaels worked at various private companies for several years investigating fires and designing and testing fire protection systems for high rise buildings, commercial manufacturing facilities, retail malls and zossil and nuclear power plants.

Mr. Michaels had 12 years experience as an instructor developing fire protection engineering training programs for engineers and property managers for the commercial insurance industry before arriving at MED. He has previously served as Adjunct Professor teaching risk management courses for the Fire Science Department of the University of New Haven in Connecticut for two years. Mr. Michaels was lead fire protection engineer for the Library of Congress with the Library Buildings and Grounds Division of the Architect of the Capitol. While at the Library of Congress he has attained certification as a Contracting Officer Technical Representative (COTR). His responsibilities included COTR for the inspection, testing, and maintenance contract of all fire protection and safety systems, as well as oversight of all fire protection design and installation work.

Mr. Michaels holds two bachelor's degrees, one in civil engineering from University of Toledo and the second in fire protection engineering from University of Maryland and is a registered professional fire protection engineer in Connecticut. Mr. Michaels is a member of Tau Beta Pi Beta Chapter and Salamander Engineering Honor Societies. U.S.

Learning Objectives

1. Differences Between Building Codes and US Military Regulations (Unified Facilities Criteria (UFC))
2. Design by Specification Versus Bill of Materials (BOM)
3. Fire Protection Engineering Design for the Specific Occupancy and the Fire Hazards
4. Mechanical Engineering Versus Fire Protection Engineering
5. Unlisted Versus Listed Fire Protection Equipment/Devices/Systems

Site 1 Protected SPFI Fire Testing

Smoke leaving doorway

Sole burning item, a small wastebasket

Note: This is PROTECTED SPFI. Unprotected SPFI exists at Site 1

Room filled with smoke

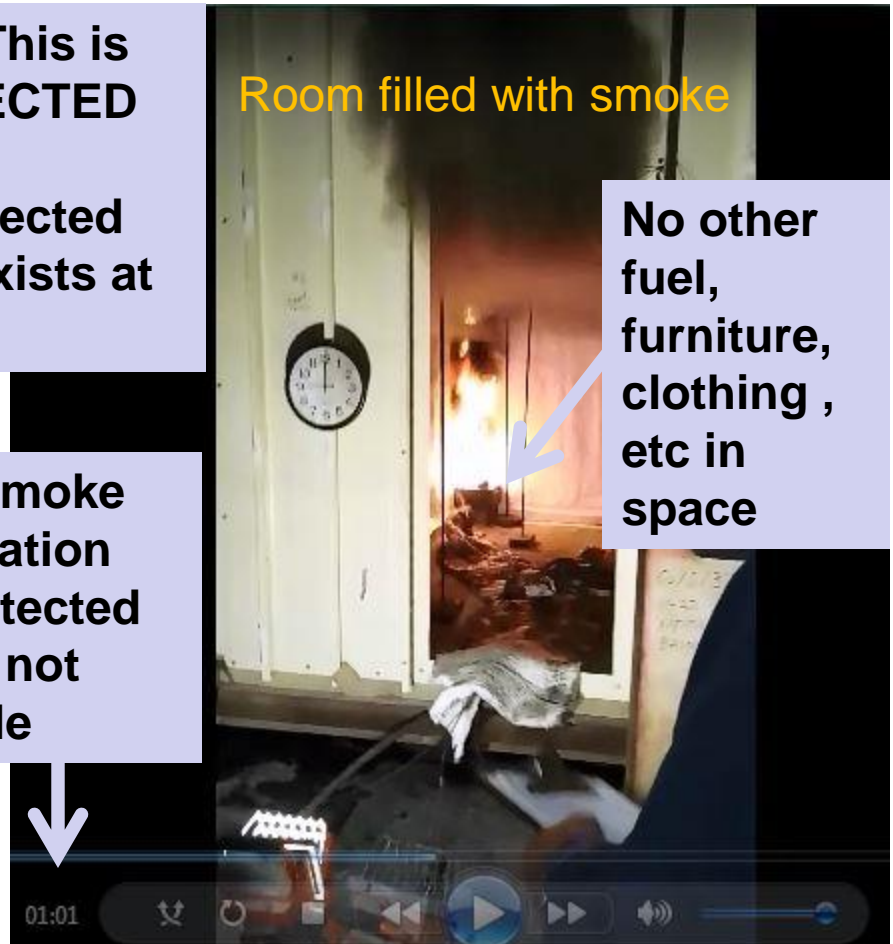
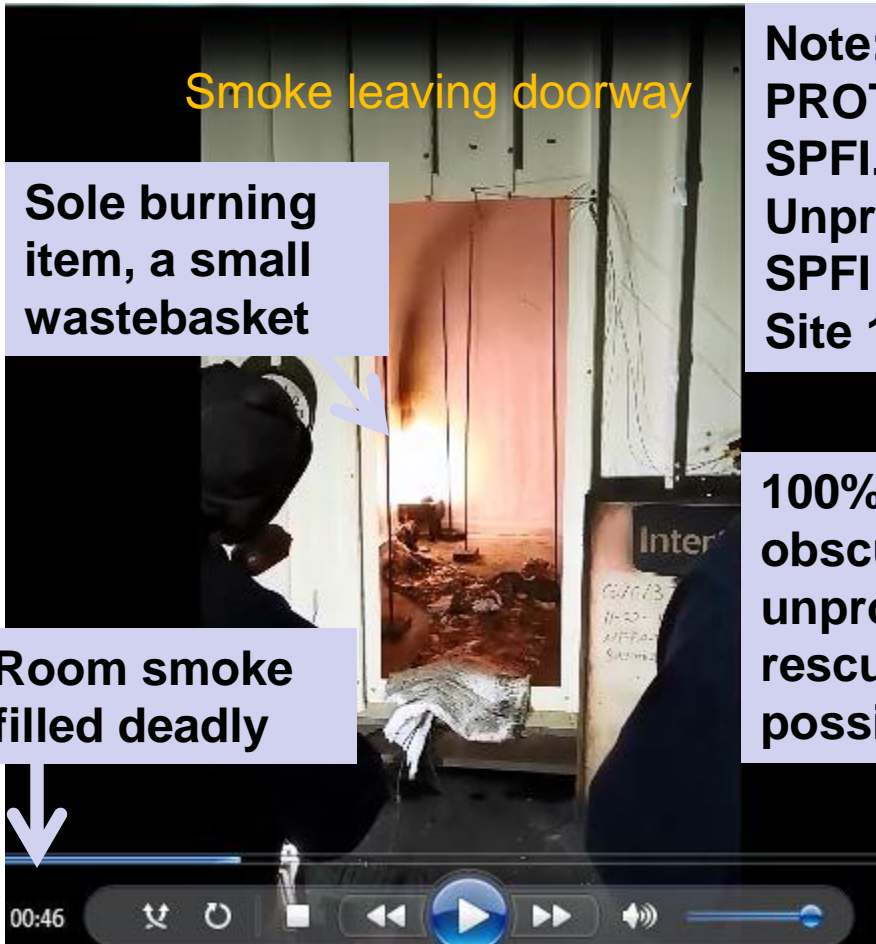
No other fuel, furniture, clothing, etc in space

100% smoke obscuration unprotected rescue not possible

Room smoke filled deadly

00:46

01:01



Site 1 Protected SPFI Fire Testing

Room fully involved and deadly

Note: This is PROTECTED SPFI. Unprotected SPFI exists at Site 1

