



Town of Brunswick, Maine

Incorporated 1739

Brunswick Fire Department

"Working Today for a Safer Tomorrow"



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RE: Notice of violation, supplemental letter

The Maine Fire Marshal's Office has adopted NFPA 409 "Standard on Aircraft Hangars" 2011 Edition as the enforceable code for aircraft hangars. The fire protection requirements for a hangar are dependent on the hangar classification. Hangars 5 & 6 are classified as Group I Hangars due to their size per NFPA 409 – 2011, 4.1.1. NFPA 409 – 2011, Chapter 6 outlines Group I Hangars' fire protection requirements. The options provided all include the use of a foam system.

The current use of Hangars 5 and 6 requires a foam suppression system. On September 19, 2024, a notice of violation letter was issued by this office requiring MRRA to put in place a corrective action plan to address the deficiencies in the hangar fire and life safety systems identified in the inspection report. The plan of corrective action should include a short-term temporary action and a permanent plan due to the complexity of the situation. A licensed fire protection engineer must be engaged immediately to adequately implement an appropriate plan of corrective action.

NFPA 409-2011, 6.1.2 allows Group I Hangars, used for the storage of unfueled aircraft, to follow the fire protection requirements of Chapter 12, which allows the use of a water fire suppression system. In the letter dated August 26, 2024, The Brunswick Fire Department approved the use of a non-foam water suppression system to return fire protection to Hangar 4. The requirements for classifying an aircraft as defueled can be found in the prior letter.

Immediate operational changes are recommended to defuel the aircraft in lieu of repairs and maintenance to the AFFF system due to the potential for accident release and inherent environmental impact.

The following steps are required if the foam system is shut down and the hangar is used for defueled aircraft.

1. Written acknowledgment from your insurance carrier.
2. Written notice to the tenant in the building
3. Posted notices in the hangar area stating the requirement for planes to be defueled
4. Any parts of the foam system not used for water suppression are required to be covered and labeled out of service or removed.

NFPA 13 2016 27.2.1 Where all or part of an inactive sprinkler system is abandoned in place, components including sprinklers, hose valves and hoses, and alarm devices shall be removed.

There are many options available for a permanent plan of code-compliant fire suppression. Consultation with a fire protection engineer is required to evaluate the systems in place, hangar use, and potential risks. NFPA 409-2011 1.3 allows for the use of equivalent systems, methods, and devices to meet the fire protection requirements. NFPA 409-2011 1.4 allows for the application of new technologies as long as the safety standard is not lowered.

A review of equivalency and new technologies would include AFFF alternatives such as but not limited to F3 foam or an ignitable liquid drainage floor assembly. Alternatively, you may also consider a fire protection risk-based design approach or a performance-based design approach as outlined by NFPA 409 – 2022 Chapters 4 and 5. Both a fire protection risk-based design approach or a performance-based design approach require design documents from a licensed professional engineer.

The Brunswick Fire Department is the authority having jurisdiction. It is our role to review and approve engineered plans. It is not within the purview of the fire department to analyze research documentation and determine how the information applies to alternative situations



Joshua Shean
Deputy Chief, Fire Prevention Division

CC: Julia Henze, Brunswick Town Manager