



DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND
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Ser CHE/021
4 Jun 20

From: Commander, Naval Facilities Engineering Command

Subj: INTERIM TECHNICAL GUIDANCE FISCAL YEAR 2020-01 – NAVY AND
MARINE CORPS FACILITIES WITH AQUEOUS FILM FORMING FOAM FIRE
SUPPRESSION SYSTEMS

Ref: (a) National Defense Authorization Act for Fiscal Year 2020 (NDAA FY20)
(b) MIL-F-24385F, Fire Extinguishing Agent, Aqueous Film-Forming Foam (AFFF)
Liquid Concentrate, for Fresh and Sea Water of 7 May 19
(c) UFC 4-211-01, Aircraft Maintenance Hangars, Change Two of 18 May 20
(d) UFC 1-200-01, DoD Building Code of 8 Oct 19
(e) UFC 3-460-01, Design: Petroleum Fuel Facilities, Change One of 1 May 20
(f) UFC 3-600-01, Fire Protection Engineering for Facilities, Change Four of 7 Feb 20

1. Purpose. The purpose of this Interim Technical Guidance (ITG) is to address the phased elimination of the use of Aqueous Film Forming Foam (AFFF) as identified in reference (a) for Military Construction and Facilities, Sustainment, Restoration and Modernization projects that are in planning, design, or construction phases. Existing AFFF systems are not addressed by this ITG.

2. Background. Reference (a) prohibits the purchase of AFFF concentrate after 1 October 2023 and prohibits its use after 1 October 2024. Requirements addressed herein have been coordinated with ASN (EI&E) and align with current criteria and prohibition dates as published in the NDAA FY20.

3. Discussion.

a. AFFF contains perfluoroalkyl and polyfluoroalkyl substances commonly identified as PFAS that are persistent in the environment.

b. Presently, based upon research conducted, there is no acceptable replacement foam for AFFF. Alternative foams continue to go through testing but to date, none of the alternative foams have proven to meet the requirements of reference (b). Testing has found certain aspects of some of the alternative foams tested, to be “relatively” close to meeting specific requirements of reference (b) fire extinguishing capability; however, none of the foams have confirmed to be as efficient as AFFF regarding extinguishment times, flow rates, proportioning methods, discharge devices (spacing), quantity and application rate, among other tests.

4. Applicability. This ITG applies to all projects that include an AFFF system that are in planning, design, or construction for the Department of the Navy (DoN) worldwide. This ITG is effective until 1 October 2023 or superseded by additional guidance and does not apply to existing AFFF systems. The Navy will continue to review, evaluate, and develop new

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technologies for a final long-term solution.

5. Action. All Navy and Marine Corps Installations and Naval Facilities Engineering Commands will incorporate the following requirements as applicable:

a. Aircraft Hangars:

(1) Planning. Follow the requirements of reference (c).

(2) Design or Request for Proposal (RFP) Development. Implement the requirements of reference (c) per reference (d) as follows: Design-Bid-Build projects less than 35 percent design completion implement the requirements of reference (c); and RFP prior to RFP issuance implement the requirements of reference (c).

(3) Construction (including Design-Build). Continue as planned and designed.

b. Petroleum Fuel Facilities in planning, design, or construction and not yet occupied. For projects (inclusive of renovation and repair) where project execution is in:

(1) Planning: Comply with reference (e).

(2) Design: If an AFFF system is included (Design-Bid-Build or Design-Build), delete the AFFF system and consult the Facilities Engineering Command (FEC) Fire Protection Engineering (FPE) Technical Discipline Coordinator (TDC) to determine alternative fire protection for the facility.

(3) Construction: Consult with the FEC FPE TDC to determine course of action.

c. Storage Facilities in planning, design, or construction and not yet occupied. For projects (inclusive of renovation and repair) where project execution is in:

(1) Planning: Comply with reference (f).

(2) Design: If an AFFF system is included (Design-Bid-Build or Design-Build), delete the AFFF system and consult with the FEC FPE TDC to determine alternative fire protection for the facility.

(3) Construction: Consult with the FEC FPE TDC to determine course of action.

d. Alternative Protection. Other methods of fire suppression or control can be considered to replace an AFFF system. Alternative protection must be discussed and acceptable to the Naval Facilities Engineering Command Chief Engineer and the Chief Fire Protection Engineer. High expansion (Hi-X) foam is not an alternative protection method for Navy or U.S. Marine Corps aircraft hangars and should not be considered.

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6. Point of Contact. For clarification or additional information related to fire protection systems, please contact the Chief Fire Protection Engineer, Mr. Joe Simone, P.E., at commercial: (202) 685-9177, or e-mail joseph.simone@navy.mil.

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Chief Engineer and
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