



DEPARTMENT OF THE NAVY
THE ASSISTANT SECRETARY
(ENERGY, INSTALLATIONS, AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, DC 20350-1000

August 7, 2024

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2 MEMORANDUM FOR CHIEF OF NAVAL OPERATIONS
3 COMMANDANT OF THE MARINE CORPS

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5 SUBJECT: Sundown Policy for Foam-Based Fire Suppression Systems in Department of Navy
6 Hangars

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8 Reference: (a) Department of Air Force Study “Assessment of Risks with Respect to Options for
9 Replacing Fluorinated Aqueous Film Forming Foam (AFFF) Fire Suppression
10 Systems in Department of Defense Facilities” 31 MAR 2021
11 (b) Interim Technical Guidance (ITG)-FY23-02 (AFFF Systems)
12 (c) National Defense Authorization Act for Fiscal Year 2020 (NDAA FY20)
13 (d) MIL-PRF-32725, Fire Extinguishing Agent, Fluorine-Free Foam (F3) Liquid
14 Concentrate, For Land-Based, Fresh Water Applications 6 JAN 2023
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17 In 2021, the Assistant Secretary of the Air Force for Installations, Environment, and Energy
18 led a joint effort across the Departments of the Air Force, Army, and Navy, along with the
19 Defense Logistics Agency, to assess risks associated with replacing Aqueous Film Forming
20 Foam (AFFF) fire suppression systems (FSS) in DoD facilities (ref. (a)). After reviewing 32
21 years of historical data and 15 years of safety mishap data, the assessment team did not find a
22 single instance where a hangar fuel-related fire resulted in the loss of an aircraft or life. However,
23 the historical data did show a series of inadvertent activations of foam systems across the DoD at
24 a rate of one every two months (84 mishaps from 2006 to 2020). The mishap cost associated with
25 these events was more than \$24.5 million, caused one death, injured 21 people, and damaged
26 more than 120 aircraft. In just the 30 months since reference (a) was released, the DON had 60
27 reportable AFFF events (emergency use and accidental) for a total AFFF release of 500 thousand
28 gallons. Of these reportable events, there were 36 accidental releases at 21 DON facilities,
29 constituting AFFF releases of 425 thousand gallons, which is 85% of the total AFFF released
30 during that period. Remediation of these accidental discharges will impose significant costs –
31 both reputational and fiscal – on the DoD and DON for decades to come.
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33 Based on the findings of this risk-informed analysis and the cost of continuing maintenance
34 and cleanup of accidental discharges of foam systems, existing foam-based FSS are not an
35 acceptable option for fire suppression in DON hangar facilities. As such, the DON will
36 immediately move to cease operations of installed foam FSS in all DON hangars. To implement
37 this policy, the Navy and Marine Corps shall complete the following:
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39 1. No later than 180 days after release of this memo, develop and submit to my office for
40 approval an Enterprise Framework plan to ensure the continued safe operation of activities
41 within existing hangar facilities. These framework plans should include any mitigations and risk-
42 informed decisions in place for interim use. The provisions of UFC 3-600-01, Fire Protection
43 Engineering for Facilities, are applicable to all DOD facilities and must be used as the minimum
44 standard for the planning and development of projects and procurement of facilities. Examples of

45 code compliant solutions under UFC 3-600-01, which is consistent and incorporates the
46 provisions of National Fire Protection Association (NFPA) 409, Standard on Aircraft Hangars,
47 include, but are not limited to, the Ignitable Liquid Drainage Floor Assembly (ILDFA), F3
48 systems, or NFPA 409 Fire Risk Assessment and Performance-Based Designs. These plans
49 should also include estimated timelines and resources required to bring existing hangars into
50 code compliance.

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52 2. Utilizing mitigations and risk-informed decisions in place for interim use until such
53 time as permanent code compliant solutions are in place, immediately place existing foam-based
54 FSS in all current DON hangar facilities out of service and initiate removal and disposal of
55 existing AFFF in accordance with current ongoing AFFF replacement plans. Hangar facilities
56 must keep existing containment systems active until permanent code-compliant solutions are
57 completed.

58
59 3. Any exceptions to discontinuing use of foam-based FSS must be requested in the plans
60 directed in section 1. Exceptions may include temporary transitions to fluorine-free foam (F3) for
61 critical facilities, on a case-by-case basis, until mitigations are in place.

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63 4. Immediately incorporate requirements for solutions that do not require foam-based
64 FSS into all new Military Construction (MILCON) projects, and future Restoration &
65 Modernization (R&M) projects as appropriate for DON hangar facilities.

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67 5. Modify applicable policy, process, Unified Facilities Criteria (UFC), and criteria
68 documents, as appropriate, to align with this memorandum.

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70 Non-hangar facilities, such as fuel or hazardous material storage, and mobile fire-fighting assets
71 will continue to shift to F3 or other appropriate alternatives in accordance with current transition
72 plans submitted to, and approved by, DoD's PFAS Task Force. Reference (c) prohibits the
73 purchase of fire-fighting foam that contains in excess of one part per billion of per- and
74 polyfluoroalkyl (PFAS) after 1 OCT 2023 and prohibits its use after 1 OCT 2024, with
75 authorization for Secretary of Defense Waivers to allow use until 1 OCT 2026. Reference (d) is
76 the military specification (MILSPEC) for F3.

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78 My point of contact for this effort is CAPT Angelique McBee, Director, Military Construction
79 and Capital Improvements for the Office of the Assistant Secretary of the Navy (Energy,
80 Installations, and Environment). She can be reached by telephone at (703) 614-0898 or by email
81 at angelique.n.mcbee.mil@us.navy.mil.

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85 Meredith Berger
86 Assistant Secretary of the Navy
87 (Energy, Installations and Environment)

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- 93 Deputy Chief of Naval Operations, Fleet Readiness and Logistics
- 94 Deputy Chief of Naval Operations, Warfighting Requirements and Capabilities
- 95 Deputy Commandant of the Marine Corps for Aviation
- 96 Deputy Commandant of the Marine Corps for Installations and Logistics
- 97 Naval Air Systems Command
- 98 Commander, Naval Air Forces
- 99 Commander, Navy Installations Command
- 100 Marine Corps Installations Command
- 101 Naval Facilities Engineering Systems Command
- 102 Naval Safety Command
- 103 Marine Corps Safety Division