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AIRCRAFT OPERATIONS
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RICHMOND, VIRGINIA 23297

DCMA-AO

December 04, 2019

MEMORANDUM FOR RECORD

SUBJECT: POLICY NOTICE FOR TESTING AFFF SYSTEMS ON ARFF VEHICLES

This policy notice provides information and guidance regarding optional methods and equipment for use in testing Aqueous Film Forming Foam (AFFF) systems on Aircraft Rescue and Firefighting (ARFF) vehicles. This guidance only modifies the AFFF systems test requirements. All other test and performance requirements remain in effect.

Background: Recently, there has been growing concern over the use, discharge, and safe handling of fluorinated AFFF. The molecular composition of specification MIL-PRF-24385 contains a compound suspected to potentially contaminate drinking water. This concern has led to several states and agencies (to include the U.S. Air Force) issuing guidance to reduce or eliminate the discharge of fluorinated AFFF **except** for use in actual emergencies. However, testing ARFF vehicles' AFFF systems is essential to safety. This guidance gives ARFF departments the flexibility to ensure they maintain their ARFF vehicles' readiness, while also addressing environmental concerns by encouraging test methods that do not require discharge of AFFF.

Requirements: The following ARFF vehicle AFFF systems testing guidance may be used to meet these testing requirements contained in NAS 3306, Facility Requirements for Aircraft Operations, Revisions 1 thru 3.

1. Minimum ARFF vehicle AFFF system test requirements to be accomplished at least once every 12 consecutive calendar months:

    a. Proportioning. Proportioning testing method must verify/validate the system is providing correct percentage of AFFF concentrate to the system (see NFPA 412, 2020 Edition, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment, Section 5.2). Proportioning testing may be accomplished by:

        i. Any of the three methods contained in NFPA 412, **or**
        ii. Via use of one of the systems identified in FAA CertAlert No 19-01, Aqueous Film Forming Foam (AFFF) Testing at Certificated Part 139 Airports, **or**
        iii. By ARFF vehicle Original Equipment Manufacturer (OEM) guidance, **or**
        iv. A method approved by a competent person as defined by NAS 3306 Revision 3, as long as data is presented to support the method will verify/validate the system is providing correct percentage of AFFF concentrate to the system.

    Note, two of the NFPA 412 methods are output methods (require discharge of AFFF) and one method is an input method (does not require discharge of AFFF). Use of output methods may require containment of the discharged AFFF. Contractors are responsible

to adhere to applicable environmental rules and regulations. None of the systems listed in FAA CertAlert No 19-01 require discharge of AFFF.

b. Discharge pattern test. Discharge pattern testing requirements in NFPA 412 may be modified and accomplished using water only (discharge of AFFF not required).

c. Pump discharge test. The pressure and flow characteristics of each vehicle outlet must be verified. This includes verification that the pump can perform at rated capacity. Test methods may be modified and accomplished using water only discharge (discharge of AFFF not required). Recommended source of guidance is OEM manuals and/or NFPA 414, Standard for Aircraft Rescue and Fire-Fighting Vehicles.

2. The expansion and drainage testing required by NFPA 412 is **not** required.

Recommendations:

1. This guidance encourages the use of test methods that do not require discharge of AFFF during testing. However, if a method of testing is used that requires discharge of AFFF, consider establishing local Standard Operating Guidelines/Standard Operating Procedures (in conjunction with your local or state environmental regulatory organizations) to identify a suitable location/storage container to discharge AFFF for training and/or testing.
2. Consider establishing safe and environmentally effective handling and disposal procedures during testing and re-servicing of each ARFF vehicle with AFFF.
3. Consider contacting your ARFF vehicle manufacturer for information on vehicle modifications required to begin using the optional testing systems identified in FAA CertAlert No 19-01.

For any further questions regarding this matter, please contact my policy branch at john.p.heib.civ@mail.mil or michael.a.fludovich2.civ@mail.mil or DCMA-TDSA at james.b.abbott.civ@mail.mil.

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