



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
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WASHINGTON, DC 20310-0600

DAIM-ISE

25 March 2019

MEMORANDUM FOR
COMMANDER, ARMY MATERIEL COMMAND
DIRECTOR, NATIONAL GUARD BUREAU
COMMANDER, INSTALLATION MANAGEMENT COMMAND
CHIEF, U.S. ARMY RESERVE

SUBJECT: Aqueous Film Forming Foam (AFFF), Removal, and Disposal – Corrected

1. References:

- a. Memorandum, DAIM-ISE, 4 Sep 18, subject: Army Guidance for Addressing Releases of Per- and Polyfluoroalkyl Substances.
- b. MIL-PRF-24385F with Amendment 2, 7 Sep 17.
- c. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1.1, Feb 18.

2. This guidance applies to the Active Army, the Army National Guard, the United States Army Reserve, the Army Materiel Command, and to all installations and activities under control of the Department of Army (DA) by ownership, lease, license, public land withdrawal, or any similar instrument.

3. Background:

a. Per- and polyfluoroalkyl substances (PFAS) (formerly referred to as perfluorinated compounds (PFCs)) contain a suite of over 1,000 chemicals, several of which are of emerging public health concern to the Department of the Army, U.S. Environmental Protection Agency (EPA), State regulatory agencies, and the general public. PFAS are widely used chemicals found in various industrial and consumer products. The most frequent and documented occurrences in Army stem from activities that resulted in the release of PFAS to the environment from the use of aqueous film forming foam (AFFF) for testing, training, firefighting, and other life-saving emergency responses. Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are among the suite of PFAS compounds that are the contaminants of concern in AFFF. The EPA issued a lifetime health advisory (LHA) for drinking water of 70 parts per trillion (ppt) for the combined value of PFOS and PFOA on 19 May 16.

b. PFAS are a diverse group of compounds resistant to heat, water, and oil. For decades they have been used in hundreds of industrial applications and consumer products such as carpeting, apparel, upholstery, food paper wrappings, fire-fighting

DAIM-ISE

SUBJECT: Aqueous Film Forming Foam (AFFF), Removal, and Disposal – Corrected

foams, and metal plating. PFAS have been detected both in the environment and in the blood samples of the general U.S. population. These chemicals are persistent, and resist degradation in the environment. They also bioaccumulate, meaning that their concentration increases over time in the blood and organs. At high concentrations, certain PFAS have been linked to adverse health effects in laboratory animals that may reflect associations between exposures to these chemicals.

(<https://www.epa.gov/chemical-research/research-and-polyfluoroalkyl-substances-pfas>).

As such, the Army has implemented guidance for releases of PFAS (reference 1.a). This guidance sets forth direction across the Army for collection and disposal of AFFF not meeting the amended military specification (MILSPEC) for AFFF (reference 1.b) which establishes the maximum permissible levels of PFOS and PFOA concentration, individually, at the current limit of quantification of 800 parts per billion (ppb) in AFFF.

4. Installations and activities who have begun the removal of legacy AFFF not meeting the new MILSPEC can use the recently acquired Defense Logistics Agency (DLA) contract to dispose of legacy AFFF, PFOS/PFOA contaminated soil or rinse water (rinsate), to include containers and PFOS/PFOA contaminated equipment.

5. This guidance directs the following actions be taken by Army Activities:

a. AFFF in exceedance of the current MILSPEC's maximum permissible levels for PFOS and/or PFOA (800 parts per billion (ppb)) should be disposed of properly utilizing DLA. Testing may be used to determine PFOS and PFOA content. Existing AFFF known to exceed the maximum permissible levels for PFOS/PFOA need not be tested to support removal and disposal.

b. Testing of AFFF product and AFFF-contaminated water shall be conducted in accordance with analytical requirements using a laboratory that is accredited by the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP). This accreditation must include the ability to test for PFOS and PFOA in AFFF concentrate in accordance with the requirements of DoD Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1.1, Appendix B, Table B-15 (reference 1.c). Records of all testing results and replacement actions shall be maintained by the system owner.

c. Presently, incineration using the DLA contract is the preferred method of disposal of non-compliant AFFF. It is important to note that AFFF is not and has not been designated nor characterized as a hazardous waste in accordance with the Resource Conservation and Recovery Act (RCRA).

d. Containers, to include firetrucks, hoses, pipes, etc., which currently contain non-compliant AFFF and which will be re-used, must be triple rinsed to remove residual PFOS concentrations. If research and development projects or an auditable procedure provide quantified data to support a reduction in the number of rinse cycles necessary or other equivalent methods to reduce residual concentrations, this requirement may be waived or modified by the proponent Command. Documentation such as sampling

DAIM-ISE

SUBJECT: Aqueous Film Forming Foam (AFFF), Removal, and Disposal – Corrected

results and regulatory approvals supporting waiver or modification must be maintained by proponent Command.

e. Containers that currently contain non-compliant AFFF and will not be refilled with AFFF should be either disposed of using the DLA contract or, if to be reused, the container must be rinsed properly to remove any residual PFOS and PFOA concentration. The rinsate should also be disposed by using the DLA contract for incineration, unless it can be shown that other treatment methods will reduce the rinsate PFOS/PFOA levels below the EPA's LHA of 70 ppt. Rinsate not sent for incineration must be tested using a DoD ELAP accredited laboratory to determine PFOS/PFOA levels. Before any rinsate is disposed of in the sanitary or storm sewer, HQDA recommends the receiving authority be notified and a recordable acceptance of the rinsate received and retained (reference 1.a). Due to the evolving Federal, state and local regulatory landscape, different PFAS disposal levels may apply. Local regulations and/or authorities must always be checked before disposing of PFAS contaminated material.

f. PFAS are NOT classified as a hazardous waste by definition because PFAS are not regulated by RCRA. However, individual states have been and can be more stringent than the EPA. At the installation, AFFF disposal would be handled through the Department of Public Works (DPW) Environmental Office. Waste should be labeled as a "Non-Regulated Waste" or other state mandated labeling requirements with special instruction to the TSDF to use thermal destruction as the means to destroy waste. This classification can change depending on individual state definitions.

g. Presently AFFF replacement, testing and disposal for non-compliant AFFF contained in and used by Army fire trucks is being funded by the Fire and Emergency Services QEMS account. AFFF replacement, testing and disposal for non-compliant AFFF contained in tanks associated hangars and other structures would be funded from the Real Property Maintenance QRPA account.

h. Non-emergency AFFF operations, when deemed necessary, must include mechanisms and procedures for complete containment, capture, and proper disposal to ensure no AFFF is released to the environment. See previously issued Headquarters, Department of the Army guidance.

i. In order to ensure proper disposal, contact your DPW Environmental Office, who will coordinate with DLA and environmental regulators.

6. Due to the uncertainty in the regulatory and legal environment surrounding AFFF and its composition in general, this guidance is subject to frequent updates.

DAIM-ISE

SUBJECT: Aqueous Film Forming Foam (AFFF), Removal, and Disposal – Corrected

7. My point of contact for this action is Mr. Francis Douglas, (571) 256-9721 or francis.a.douglas.civ@mail.mil.



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