

Environmental Standard Operating Procedures (ESOP)

TITLE: ESOP X.X | MANAGEMENT OF AQUEOUS FILM FORMING FOAM

PURPOSE: This Environmental Standard Operating Procedure (ESOP) establishes procedures for the management of Aqueous Film Forming Foam (AFFF) aboard Marine Corps Installations East - Marine Corps Base Camp Lejeune (MCIEAST - MCB CAMLEJ). Per- and polyfluoroalkyl substances (PFAS) are a set of toxic chemicals including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) which are a growing public health concern. The U.S. Environmental Protection Agency (EPA) issued health advisories for PFOS and PFOA in 2016. These chemicals are found in AFFF used for firefighting and the most common release of PFAS is associated with its testing, training, firefighting and other emergency responses. Military specification (MILSPEC) for AFFF has been amended to establish maximum permissible levels for PFOS and PFOA concentrations under Naval Sea Systems Command (NAVSEA) MIL-PRF-24385F with Amendment 2, 7 Sept 2017. MCIEAST - MCB CAMLEJ will establish controls meant to prevent uncontrolled environmental release of AFFF, with the exception of emergency responses. In addition, non-compliant AFFF in installed and uninstalled systems will be removed, disposed and replaced with compliant product. **This ESOP must be placed into the unit's Environmental Hazardous Waste/Hazardous Material Operations (EHW/HM Ops) Binder.**

APPLICABILITY: This ESOP applies to all organizations organic to or tenanted aboard MCIEAST - MCB CAMLEJ, Marine Corps Air Station New River (MCASNR) and those in transit or otherwise temporarily resident because of training or mobilization.

RESPONSIBILITY: All organizations or personnel who procure, manage or use AFFF.

PROCEDURE:

1. **Management of AFFF:** AFFF is considered a HM. The procurement, management, storage, usage, and disposal of AFFF should conform to procedures for HM identified in ESOP 9.01.
2. **AFFF in Installed Systems:** AFFF in installed systems (i.e., fire suppression systems, mobile fire equipment, etc.) will be tested, as necessary, in order to determine if PFOS and/or PFOA in the product is in exceedance of NAVSEA MIL-PRF-24385F with Amendment 2. All testing shall be performed in accordance with requirements found in NAVSEA MIL-PRF-24385F with Amendment 2 to include using a laboratory certified by the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP). AFFF in installed systems known to exceed PFOS and/or PFOA limits set by the MILSPEC do not require testing. Units and organizations that have AFFF in installed systems must contact RCRS/EMD at 451-1482 or 451-5306 for coordination of procedures described below.
 - a. Upon notification of AFFF in an installed system, EMD/RCRS will coordinate testing of the AFFF as necessary. If testing demonstrates PFOS and/or PFOA concentrations exceed maximum permissible levels, the AFFF will

be removed, disposed, and replaced with compliant AFFF meeting the NAVSEA MIL-PRF-24385F with Amendment 2 MILSPEC. EMD/RCRS will coordinate removal and disposal of non-compliant AFFF. Units and organizations will be responsible for replacement of non-compliant AFFF with compliant AFFF to include procurement and installation of the new product.

b. If AFFF is removed from an installed system due to testing, the installed system must be triple rinsed. Units and organizations are responsible for triple rinsing AFFF systems as applicable. Contact EMD/RCRS for assistance and coordination.

c. All AFFF testing records and replacement actions will be maintained by the system's owner (i.e., unit or organization).

i. EMD/RCRS will provide copies of testing records to the unit or organization.

ii. Replacement actions will be documented by the unit or organization.

iii. All AFFF testing records and replacement actions should be retained in the unit's EHW/HM Ops Binder.

3. Uninstalled AFFF: Unit and organization supply managers will ensure the following requirements for uninstalled AFFF are met.

a. Uninstalled AFFF product not meeting the NAVSEA MIL-PRF-24385F with Amendment 2 MILSPEC will be identified and segregated. Unit and organization supply managers should consult product labels and specifications to determine AFFF product compliance status.

b. Uninstalled, non-compliant, AFFF products that are identified will be disposed of. Unit and organization will prepare the uninstalled, non-compliant AFFF products for turn-in to EMD/RCRS in accordance with ESOP 9.01.

c. Unit and organization supply managers will ensure that uninstalled, non-compliant AFFF is replaced with AFFF meeting the NAVSEA MIL-PRF-24385F with Amendment 2 MILSPEC.

4. AFFF Product Procurement: Unit and organization supply managers will ensure the following requirements for AFFF product procurement.

a. Procured AFFF must meet the NAVSEA MIL-PRF-24385F with Amendment 2 MILSPEC.

b. Purchased AFFF products must be listed on the qualified product list (QPL). According to Deputy Assistant Secretary of the Navy (DASN) (E) Policy Memo, "Additional Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal," 6 March 2018, QPL number 24385 (QPL-24385) products can be procured.

5. Use of AFFF: Units and organizations using AFFF will ensure the following requirements are met.

a. Use of AFFF will be avoided, when feasible.

b. Any necessary, non-emergency use of AFFF such as controlled outdoor training or testing of AFFF systems (fixed or mobile) will have appropriate controls in place for containment, capture, and proper disposal of AFFF.

c. Water contaminated with AFFF must be treated and disposed utilizing granular activated carbon, solidification/landfill, or incineration in accordance with DASN (E) Policy Memo, "Additional Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal," 6 March 2018. Contact EMD/RCS at 451-1482 or 451-5306 for assistance.

6. Tracking AFFF Usage: EMD/RCS will track all AFFF spills and uses when there is exposure to the environment, through the Headquarters Marine Corps Environmental Data Repository (EDR) at <https://em.usmc.mil/Pages/Contacts.aspx>. This includes emergency and non-emergency use of the product.

7. Spill Reporting and Response Requirements:

a. All units are required to have a Unit Level Contingency Plan (ULCP) per Marine Corps Installations East - Marine Corps Base Camp Lejeune Order (MCIEAST-MCB CAMLEJO) 5090.4. Ensure the ULCP contains policies and procedures for the control and prevention of oil and hazardous material spills. The ULCP must be posted prominently.

b. Any releases or spills that occur in and around the area of responsibility must be reported immediately to the Base Fire and Emergency Services Division (FESD) by dialing 911. A Spill Report, Form MCIEAST-MCB CAMLEJ/G-F/EMD/5090.91/18, must be completed and forwarded to the command Environmental Compliance Coordinator (ECC) via the unit ECO or Alternate Environmental Compliance Officer (AECO). A copy of the completed Spill Report must also be maintained in the unit EHW/HM Ops Binder. Forms can be obtained by the unit ECO or command ECC and may also be downloaded at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/HW-MM/UNIT%20LEVEL%20SPILL%20FORM.pdf>.

c. Units must stock appropriate amounts of spill containment and control equipment onsite for use in the event of a spill.

d. Signs are to be posted in the vicinity of the used oil, off spec fuel, used antifreeze, hazardous material, or pollution abatement facilities that will indicate the following information:

**IN CASE OF AN OIL OR HAZARDOUS MATERIALS SPILL
CALL FIRE and EMERGENCY SERVICES DIVISION AT 911
NOTIFY YOUR COMMANDER/SUPERVISOR IMMEDIATELY**

The sign must have yellow background and black lettering. Information to purchase the signs can be acquired from the cognizant ECC.

TRAINING: Unit personnel shall be trained on all provisions of this ESOP. All training must be requested through unit ECO or AECOs -> ECC-> EMD/Environmental Compliance Branch (ECB)

a. Unit commanders shall ensure that personnel who perform operations such as vehicle maintenance, fueling, or washing are properly trained in the operation and maintenance of pollution abatement facilities. Personnel shall be trained on the environmental impact of oil and HM spills, and prevention of such incidents.

b. EM 101 - Initial Hazardous Material and Hazardous Waste Training - Required for all ECOs, AECOs, ECCs, and AST Operators

c. EM 102 - Refresher Hazardous Material and Hazardous Waste Training - Required annually for all ECOs, AECOs, ECCs, and AST Operators who have received EM 101

d. EM 103 - HM Transportation for Drivers - Required annually for all ECOs, AECOs, ECCs, and AST Operators

e. EM 104 - ECO/ECC Training Class - Required annually for ECOs, AECOs, and ECCs

f. EM 105 - UST and Veeder-Root Training - Required for all Marine Corps Community Services (MCCS) ECOs, AECOs, ECCs, and MCCS UST operators

g. EM 106 - Air Quality Training - Required for all ECOs, AECOs, ECCs, and Air Emission Source Operators

h. EM 107 - AST and Spill Prevention Control and Countermeasures (SPCC) Training - Required for all ECOs, AECOs, ECCs, and AST operators

i. EM 108 - PAF/OWS Training - Required for all ECOs, AECOs, ECCs, PAF, and OWS operators

j. Shop-Level Training Modules - Modules which involve various environmental media topics applicable to shop level personnel.

k. Computer-Based Training (CBT) - Numerous CBTs are provided within the Environmental Learning Management System (eLMS) for military & civilian Marines to utilize to improve their environmental knowledge. These CBTs can be accessed at <https://www.marinenet.usmc.mil/marinenet/Courses/Catalog.aspx>

l. Training should be documented in the individuals' training record using Form MCIEAST-MCB CAMLEJ/G-F/EMD/5090.9/27. This form can be found at [https://www.lejeune.marines.mil/Portals/27/Documents/EMD/MCIEAST-MCB_CAMLEJ_G-F_EMD_5090.9_27_\(Environmental_Personnel_Training_Record\).pdf](https://www.lejeune.marines.mil/Portals/27/Documents/EMD/MCIEAST-MCB_CAMLEJ_G-F_EMD_5090.9_27_(Environmental_Personnel_Training_Record).pdf).

REFERENCES:

- a. EPA Perfluorinated Chemical (PFC) Health Advisories, 19 May 2016
- b. DASN (E) Policy Memo, "Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal," 17 June 2016

c. DASN (E) Policy Memo, "Additional Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal," 6 March 2018

d. Naval Sea Systems Command (NAVSEA) MIL-PRF-24385F with Amendment 2, 7 Sept 2017

e. DoD Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1.1, Feb 2018

DEFINITIONS:

a. Aqueous Film Forming Foam (AFFF) - Low expansion foam commonly used as a fire suppression agent. Fluorinated surfactants used in AFFF formulations are a topic of environmental scrutiny.

b. Per and Polyfluoroalkyl Substances (PFAS) - A set of approximately 100 man-made chemicals manufactured and used in many industries and products. Some PFAS can be retained in the body and the environment for long periods of time and may lead to adverse health effects in humans.

c. Perfluorooctane Sulfonate (PFOS) - Man-made fluorosurfactant and global pollutant and is one of the PFAS chemicals. PFOS has raised environmental and health concerns due to its toxicity, mobility and bioaccumulation potential.

d. Perfluorooctanoic Acid (PFOA) - Man-made fluorosurfactant and global pollutant and is one of the PFAS chemicals. PFOA has raised environmental and health concerns due to its toxicity, mobility and bioaccumulation potential.

Record of Revision

Revision Number	Date	Summary of Change	Signature
INITIAL DISTRIBUTION	XXXX2020	DISTRIBUTED UNDER POLICY LETTER TO DISTRIBUTION A	<i>X.X. XXXX</i> ECB/EMD

MCIEAST-MCB CAMP LEJEUNE SPILL REPORT

SHADED AREAS ARE FOR RCRS USE ONLY

TITLE/LOCATION

DATE TIME

RESPONSE NAME/UNIT:

SPILL CATEGORY (SELECT ONE) HAZMAT HAZWASTE POL WASTEWATER OTHER

PRODUCT SPILLED

QUANTITY SPILLED

LATITUDE LONGITUDE

HOW WAS SPILL DISCOVERED

SOURCE OF THE SPILL

CAUSE OF THE SPILL

MISSION IMPACT

WERE SAMPLES TAKEN (CHECK ONE) YES NO

ANALYSES REQUESTED / PERFORMED ON SAMPLES

DID THE SPILL (CHECK ONE)	ENTER A WATERWAY?	REACH WITHIN 100' OF SURFACE WATER?	REACH WITHIN 1500' OF A WATER SUPPLY WELL?	GO OFF BASE?
<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO

HOW WAS THE SPILL CONTAINED?

WHAT DANGERS DID THE SPILL PRESENT?

WHAT WERE THE ENVIRONMENTAL IMPACTS?

WHAT RECOVERY EFFORTS WERE USED?

IF OIL SPILLED, WHAT PERCENT WAS RECOVERED?

HOW WERE RESIDUALS DISPOSED OF?

WEATHER CONDITIONS?

REPORTABLE SPILL? (CHECK ONE) YES NO WAS A REGULATORY AGENCY CONTACTED: YES NO

AGENCY NAME (IF) NCDEQ NCDEQ REPORT# NCDEM NCDEM REPORT#

REGULATORY DRIVER

NRC NOTIFIED YES NO NRC INCIDENT NUMBER:

WHAT MEASURES WERE PUT IN PLACE TO PREVENT RECURRENCE?

ADDITIONAL INFORMATION OR COMMENTS

SPILL POC E-MAIL PHONE

