

Environmental Standard Operating Procedure			
Originating Office: MCAS Miramar Environmental Management Department	Revision: Original	Prepared By: Environmental Management Department	Approved By: LtCol B. M. Hall
File Name: Aqueous Film Forming Foam (AFFF) Use and Discharge	Effective Date: 12 DEC 2010	Document Owner: EMD	

Title: Aqueous Film Forming Foam (AFFF) Use and Discharge

1.0 PURPOSE

This Environmental Standard Operating Procedure (ESOP) identifies responsibilities and requirements for the response and management of the use and discharge of Aqueous Film Forming Foam (AFFF) at Marine Corps Air Station (MCAS) Miramar.

2.0 APPLICATION

This guidance applies to those individuals who have the potential to use, discharge or respond to a discharge of AFFF to the MCAS Miramar's sanitary sewer and stormwater drainage systems.

3.0 REFERENCES

- 40 CFR (Code of Federal Regulations)
- 29 CFR 1910
- MCO 5090.2A
- Naval Facilities Command, *NoFoam Manual*.
- NFPA 22211.011A

4.0 PROCEDURE

4.1 Discussion:

AFFF is stored on MCAS Miramar to extinguish potential aircraft-related fires, aircraft hangar structural fires, or other fires caused by burning fuel. Releases of AFFF can be in the form of a concentrated liquid or water-diluted foam. Accidental releases of AFFF foam can occur in aircraft hangars as a result of human error or a mechanical or electrical malfunction that results in the system actuating and releasing foam. Intentional releases of AFFF foam can result from a discharge from a

deluge system during a structural aircraft hangar fire; by fire department personnel during testing of AFFF distribution systems on aircraft rescue and firefighting vehicles, and for the purposes of combating an aircraft-related fire or other fire caused by burning fuel.

AFFF concentrate storage tanks and containers and associated secondary containment equipment should be designed, maintained, and inspected routinely to avoid accidental releases of concentrate to MCAS Miramar's sanitary sewer and stormwater drainage systems.

Accidental releases of AFFF into the sanitary sewer or stormwater drainage systems should be avoided. AFFF is not considered hazardous to humans; however, it exerts a high biochemical oxygen demand (BOD) and can therefore adversely affect the bacterial cultures in the secondary treatment process of waste water treatment facilities or natural stream and river environments when directly discharged to the stormwater drainage system. This in turn may result in a violation of the MCAS Miramar's wastewater or stormwater permits.

4.2 Operational Controls:

In the event of hangar AFFF activation the following procedures shall be followed, in sequence:

Upon first notice of AFFF activation make these mandatory emergency notifications:

MCAS Miramar Fire Department 577-1962 or 9-1-1

MCAS Miramar Aircraft Rescue & Fire Fighting 577-6912/35

Upon arrival of emergency responders an investigation will be conducted to determine that the scene is safe for entry. Note: MCAS Miramar Fire department is primary response agency for structural responses with Aircraft Rescue and Fire Fighting (ARFF) being secondary response, vice versa during an aerospace response.

When authorized by the Fire Incident Commander begin to shut hangar doors to prevent AFFF from exiting the hangar and being exposed to the environment. Note: No AFFF operating valves will be attempted to be closed except by MCAS Miramar Fire department and/or ARFF department personnel.

Upon authorization of the Fire Incident Commander civilian entry and AFFF containment/clean-up process can begin. Note: Primary responsibility for clean-up lay with the responsible tenant unit. Primary responsibility for containment lay with MCAS Miramar EMD with secondary containment responsibility from the MCAS Fire agencies.

In cases where AFFF does exit the hangar all storm drains located outside the hanger must be covered with drain covers provided in unit spill kits located in each hangar and on ARFF light rescue vehicles or by MCAS Miramar EMD staff. Note: Spill and emergency equipment may be ordered through normal supply channels or assistance in ordering may be obtained by contacting MCAS Miramar Environmental Management Department

Clean-up will be conducted by the responsible tenant unit with assistance from MCAS Miramar EMD, ARFF, and additional MCAS personnel. ARFF personnel will open hangar doors wide enough to gain access with hose lines. As ARFF begins knocking down the foam with water (amount determined by the on scene incident commander) all other personnel will use brooms, squeegees, etc. to force the foam and water down drains located inside the hangars. All water and foam will be contained in holding tanks which the drains are connected to. Note: Public works division is responsible for the emptying, maintenance, and overall status of the tanks. This will continue until MCAS Environmental is satisfied with the containment/clean-up.

All testing of AFFF fire fighting equipment will be performed using non-hazardous dyes and directed toward areas not immediately accessible to storm runoff drains.

4.3 Documentation and Record Keeping:

An after action report needs to be completed by the responsible squadron and a copy must be sent to MCAS Miramar Environmental Management Department in order for proper reporting procedures to be conducted. Note: The report should contain; time of discharge, amount of AFFF released, responding agencies, actions taken, equipment used, and environmental impacts if any.

4.4 Training:

All affected personnel must be trained in this Standard Operating Procedure and the following:

1. General Environmental Awareness training.
2. Hazard Communication Training.

4.5 Emergency Preparedness and Response Procedures:

CALL 9-1-1

4.6 Inspection and Corrective Action:

The unit designated Environmental Coordinator (EC) shall designate personnel to perform equipment inspection and periodic review of this ESOP. The EC shall ensure deficiencies noted during inspections are corrected immediately. Actions taken to correct each deficiency shall be recorded on the inspection sheet.

Aqueous Film Forming Foam (AFFF) Release Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Has all fire fighting equipment containing the AFFF chemical been inspected for leaks and proper functional operation? (NFPA 22211.011A)			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____