MILITARY SPECIFICATION 24385F
AQUEOUS FILM FORMING FOAM (AFFF) CONCENTRATE

ISSUE: The current military specification for firefighting foams mandates the use of fluorinated chemicals that are harmful to military personnel and the environment. New technologies are available that avoid these risks, but the specification has not been updated to allow their use. What must be done to correct this situation?

- Original Military Specification Issued in the 1970's.
- Current Military Specification for firefighting foam dated August, 1994 (F Version)
- Requires all Products on the **Q**ualified **P**roducts **L**ist (QPL) to contain fluorinated chemicals, which was the state of the art in the 1960's.
- The Specification does not allow for newer alternative technologies that are safer and less expensive
- Specific problems with current specification:
    - The fluorinated chemicals used in current Military Specification are:
        - Environmentally **P**ersistent
        - **B**io accumulative
        - **T**oxic
    - Fluorinated foams will remain in the environment for centuries, no biodegradation
    - The 2015 USEPA Voluntary Stewardship Program targets:
        - Elimination (99.9%) of Toxic Fluorosurfactants
        - 2015 Compliance Date
        - All Current QPL Products must be re-qualified to Comply
        - Military Firefighters cannot conduct live training with Fluorinated Foams due to the safety and environmental concerns. The resulting lack of live fire training affects preparedness
    - Military Specification foam is the most expensive of all firefighting foams
        - Fluorine is the most expensive ingredient
        - Military Specification foam requires the greatest level of fluorine
        - Military Specification foam is the most environmentally persistent of all foams

I understand that there are newer technologies available that avoid these problems, but those products are not allowed under the outdated specification:

- Re-Healing Fluorine Free Firefighting Foam
    - 100% Biodegradable
    - More effective in fighting fires, extinguishes more rapidly and requires less reapplication than fluorinated foams
    - Globally Approved to all current International Standards
        - UL, FM, ICAO, EN, ULC, SSL, Among others
- Fluorine Free foam does not expose Military Personnel to dangerous PBT Chemicals
- Lack of fluorine allows live exercises that improve readiness
- Because of lack of fluorine, cost is significantly less
- Sample list of Current Customers:
    - Statoil Norway
    - ConocoPhillips
    - British Petroleum
    - All Australian Airports
    - Copenhagen, Frankfurt, Dubai, Manchester Airports
    a. Enbridge
    b. Flint Hills Refinery
    c. Alert Disaster Control

What can be done to modify the specification to allow fluorine alternatives?