Options to the Use of Halons for Aircraft Fire Suppression Systems - Report Update

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Outline

• Update the report “Options to the Use of Halons for Aircraft Fire Suppression Systems--2002 Update”

• Report was developed by a task group of this working group, IASFPWG.

• Describe 2002 report

• New task group is being formed to update this document

• Solicit participants of new Halon Options Task Group
Table of Contents: 2002 Report

• Introduction.
• Halocarbon Replacements.
• Alternative Technologies.
• Applicability of Technologies to Aircraft Applications.
• References.
• Companies and Manufacturers.
Chapter 1: Introduction

- Overview of Fire Protection.
- Environmental Overview.
- Toxicology Overview.
- Options.
Chapter 2: Halocarbon Replacements

• Toxicology.
  ➢ Acute Toxicological Indices
  ➢ Subchronic and Chronic Tests
  ➢ Exposure Limits

• Environmental Considerations.
  ➢ Ozone Depletion Potential
  ➢ Atmospheric Lifetime
  ➢ Global Warming Potential
  ➢ Atmospheric Impacts of Blends
  ➢ Regulatory Restrictions

• Commercialized Halocarbon Replacements.
Chapter 3: Alternative Technologies

• Foams.
  - Low-Expansion Foam
  - High- and Medium- Expansion Foams

• Water Sprinklers.

• Dry Chemicals.
  - Monammonium Phosphate
  - Sodium Bicarbonate
  - Potassium Bicarbonate
  - Proprietary
Alternative Technologies (cont.)

- Carbon Dioxide.
- Loaded Stream.
- Water Misting Systems
- Fine Particulate Aerosols
  - Spectrex Fire-Extinguishing Agent
  - PyroGen and Firepak
  - Soyus
  - Aero-K
  - KD-A96
Alternative Technologies (cont.)

- Inert Gases.
- Solid Propellant Gas Generators.
  - Primex Aerospace Inert Gas/ Powdered Aerosol Blend
  - Walter Kidde Aerospace/ Atlantic Research Corporation Consortium
- Combination and New Foam Agents
  - Envirorogel
  - Cease Fire
  - FlameOut
  - ColdFire
  - Fire-X-Plus
Chapter 4: Applicability of Technologies To Aircraft Applications

- Requirements.
- Engine and APU Compartments.
  - HCFCs, HFCs, PFCs, and Blends
  - Trifluoromethyl Iodide (FIC-13I1) and FIC-13I1 Blends
  - Gas Generators
- Hand-Held Extinguishers
  - Halocarbons and Halocarbon Blends
  - Carbon Dioxide
  - Combination Agents and Foams
Applicability of Technologies To Aircraft Applications (cont.)

• Cargo Compartment.
  ➢ Water and Water-Based Agents
  ➢ Halocarbons and Halocarbon Blends
  ➢ Particulate Aerosols

• Lavatory Trash Receptacle
  ➢ Water-Based and Combination Agents
  ➢ Halocarbon and Halocarbon Blends
Other

• References.

• Appendix A - Companies and Manufacturers.
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