

Engine Nacelle Halon Replacement



Federal Aviation
Administration

Presented to: International Aircraft Systems Fire
Protection Working Group

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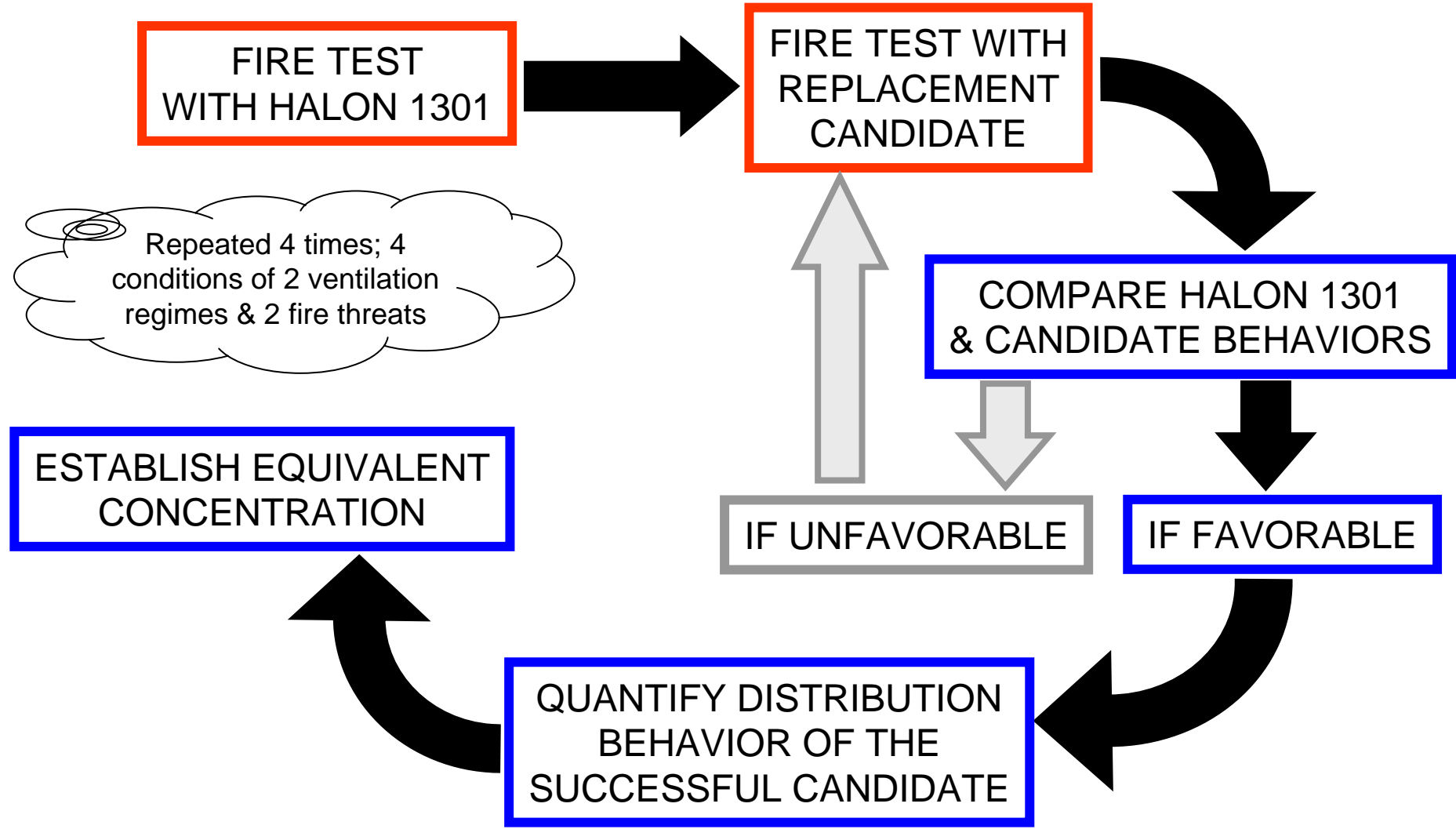
Presentation Overview

- **Revise the Minimum Performance Standard for Engine Nacelles and APU Compartments (MPSe)**
 - Currently known as revision 3
 - Will remove Halon 1301 fire test requirement
 - With Halon 1301 removal, revision 4 results

MPSe, Revision 3

- **Fire testing required for Halon 1301 and replacement candidate**
- **Successful quantity of replacement candidate :**
 - is established by fire test
 - demonstrates parity with Halon 1301 fire test results
 - is likely found by iterative process
- **Equivalent concentration established from the distribution of the successful replacement candidate**

MPSe Revision 3 – Schematic flow



MPSe, Revision 4 – Preliminary Thoughts

- **Remove fire testing required for Halon 1301**
 - utilize a surrogate for Halon 1301
 - maintain relation to historical Halon 1301 results
- **Optimize process based on past experiences with HFC-125, CF₃I, & FK-5-1-12**

MPSe, Revision 4 – Preliminary Thoughts

- **Suspected equivalent concentration :**
 - must be known by representative prior to MPSe testing
 - must be distributed in the test fixture prior to MPSe testing
- **Successful quantity of replacement candidate :**
 - will remain proven by fire test for the 4 conditions
 - if suspected equivalent concentration fails, will be found by iterative process of rev03

MPSe Revision 4 – Preliminary schematic flow

