# STATUS OF NFPA STANDARD 2001

Phillip J. DiNenno, P.E.
Hughes Associates, Inc.

An initial draft for clean fire suppression agents, NFPA 2001, "Standard on Clean Agent Fire Extinguishing Systems," is available for public comment. The draft standard deals with six potential clean agent halon alternatives. These agents include FC-3110, HBFC-22B1, HCFC-227ea, HFC-125, HFC-23, and an HCFC Blend. The basic philosophy and structure of the document will be presented. The status and schedule of the standard development process will be described. Unresolved technical issues including toxicity, environmental, decomposition products, agent mixing, and flow properties will be described. Recommendations for the resolution of these issues for the near and moderate term will be made.

Standardization issues related to testing, protocols, data presentation, and analysis will be discussed. The interaction between the standard with independent third-party testing and evaluation and testing is described.

# "STATUS OF NFPA 2001"

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## Halon Alternatives Technical Working Conference 1992

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# Proposed "NFPA 2001, Standard on Clean Agent Fire Extinguishing Systems"

**Scope:**
- Total flooding, clean agent fire extinguishing systems
- Excludes halons, $CO_2$, and water

**History:**
- Committee project approved by NFPA Standards Council 11/90
- First committee meeting 6/91
- Submittals from manufacturers selected Summer 91
- Draft Standard available for public comment 1/31/92

## Current Status:

- Preliminary draft available
- Data gathering
- Resolving technical issues
- Preparing TCR (by September 30, 1992)

# NFPA 2001: Proposed Schedule

| | |
|---|---|
| Data Available for Proposals | 1/31/92 |
| Public Proposal Closing Date | 7/17/92 |
| Complete Technical Committee Report (TCR) | 10/9/92 |
| Public Comments Due | 4/9/93 |
| Prepare Technical Committee Documentation (TCD) | 6/18/93 |
| Association Meeting | 11/18/93 |
| Issued by Standards Council | 1/12/94 |

# NFPA Technical Committee on Alternative Protection Options to Halons

**Committee Scope:**

1. Develop documents on alternative protection options to halons

   excludes $CO_2$, dry chemical, water, foam, and Halons 1301, 1211 and 2402.

2. Develop documents for comparing properties of suppression systems relative to occupancies being protected

## Committee Project on Comparison of Extinguishing Agents (with Occupancy)

- TG documents
- To enter Annual 1994 Cycle

| | |
|---|---|
| Draft available and public proposals | 7/31/92 |
| issued | 7/13/94 |

Contents:

1. General
2. Occupancy Characteristics
3. Agent Characteristics
4. Suppression System Characteristics
5. Detection System Characteristics
6. Decision Methodologies

# NFPA 2001: Contents
# (very similar to NFPA 12A)

**Chapter 1. General**
- Scope, Purpose, Definitions
- Use and Limitations, Safety
- Environmental Factors



**Chapter 2. Components**
- Quantity, Quality
- Storage Containers
- Distribution (piping, nozzles)
- Detection, Actuation, and Control

# NFPA 2001: Contents
## (very similar to NFPA 12A)

**Chapter 3. System Design**
- Specs, Plans
- System Flow Calculations
- Enclosure
- Design Concentration
- Total Flooding Quantity

**Chapter 4. Inspection Maintenance Testing and Training**

# NFPA 2001: Agents Submitted for Consideration

| Manufacturer | Identifier |
|---|---|
| DuPont | HCFC-124 |
| DuPont | HFC-23 |
| DuPont | HFC-125 |
| 3M | FC-3110 |
| GLCC | HBFC-22B1 |
| GLCC | HFC-227ea |
| NAFG | HCFC Blend |

# NFPA 2001: Current Technical Issues

1. Discharge Time vs. Fire Size
   - Decomposition products
   - Measurement methods
   - Test protocols
   - Develop requirements/guidance on discharge time
2. Agent Hold Time
   - Deep seated fires
3. Use of Different Agents Concurrently
4. Treatment of Environmental Factors
5. Toxicity Requirements
6. Flow Calculations
7. Listing Test Methods

# SUMMARY

- Document is preceeding at pace dictated by information/data developed