



NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

M E M O R A N D U M

TO: Technical Committee on Aircraft Rescue and Firefighting

FROM: Yiu Lee, *Committee Administrator*

DATE: March 14, 2022

SUBJECT: NFPA 440 Second Draft Technical Committee FINAL Ballot Results
(CustF2022)

According to the final ballot results, all ballot items received the necessary affirmative votes to pass ballot.

34 Members Eligible to Vote

12 Members Not Returned (*Back, Colet, Curell, Dandona, Deniston, Gray, Hawthorne, Lanter, Lonergan, Maddox, Major, Rhode*)

The attached report shows the number of affirmative, negative, and abstaining votes as well as the explanation of the vote for **each** revision.

To pass ballot, **each** revision requires: (1) a simple majority of those eligible to vote and (2) an affirmative vote of $\frac{2}{3}$ of ballots returned. See Sections 3.3.4.3.(c) and 4.3.10.1 of the ***Regulations Governing the Development of NFPA Standards***.



Second Revision No. 24-NFPA 440-2022 [Global Comment]

Change 'halogenated agent(s)' to 'clean agent(s)' throughout the document.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
Global_changes_to_Clean_Agents.docx	For staff use	

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Wed Feb 23 08:55:55 EST 2022

Committee Statement

Committee Statement: These changes are being made because the committee believes that by using the term “clean agents” throughout this document it will ensure that the document reflects current industry terminology, stays current for a longer period, and it moves away from halogenated agents and towards a more environmentally acceptable alternative. Saying “clean agent” does not eliminate the user from deploying a halogenated product but using the term “halogenated agent” does potentially close the door for another clean agents that will be approved.

Response Message: SR-24-NFPA 440-2022

[Public Comment No. 8-NFPA 440-2021 \[Section No. 12.5.2\]](#)

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.

Barthram, Gary David

Costa, Howard ?Ted?

Flores, Michael

Heitman, Denny J.

Hendel, Elizabeth A.

Herron, Rene

Jones, Ronald E.

Krusleski, Ronald J.

Listerman, Stephen

Martel, Paul

Matheson, Graydon L.

Mathis, Robert C.

McDonald, John W.

McLoughlin, John E.

Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 12-NFPA 440-2021 [Section No. 2.2]

2.2 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2022 edition.

402 *Guide for Aircraft Rescue and Fire-Fighting Operations*, 2019 edition.

~~NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*, 2018 edition.~~

~~NFPA 405, *Standard for the Recurring Proficiency of Airport Fire Fighters*, 2020 edition.~~

NFPA 407, *Standard for Aircraft Fuel Servicing*, 2022 edition.

NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*, 2022 edition.

424, *Guide for Airport/Community Emergency Planning*, 2018 edition.

~~NFPA 460, *Standard for Aircraft Rescue and Firefighting Services at Airports, Recurring Proficiency of Airport Fire Fighters, and Evaluating Aircraft Rescue and Firefighting Foam Equipment*, 2024 edition.~~

NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*, 2019 edition.

NFPA 1600[®], *Standard on Continuity, Emergency, and Crisis Management*, 2019 edition.

NFPA 1900, *Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances*, 2024 edition.

NFPA 2500, *Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services*, 2022 edition.

Fire Protection Research Foundation, “Best Practices for Emergency Response to Incidents Involving Electric Vehicles Battery Hazards: A Report on Full-Scale Testing Results,” 2013 edition.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Mon Dec 06 08:09:45 EST 2021

Committee Statement

Committee Statement: Deleting these as they are now part of the consolidated document, NFPA 460.

Response Message: SR-12-NFPA 440-2021

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.

Barthram, Gary David

Costa, Howard ?Ted?

Flores, Michael

Heitman, Denny J.

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Listerman, Stephen

Martel, Paul

Matheson, Graydon L.

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McLoughlin, John E.

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Powell, Paul W.

Shively, Jason

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Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 13-NFPA 440-2021 [Section No. 2.4]

2.4 References for Extracts in Advisory Sections.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2018 2022 edition.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, 2021 edition.

NFPA 17, *Standard for Dry Chemical Extinguishing Systems*, 2021 edition.

NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*, 2020 edition.

~~NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*, 2017 edition.~~

~~NFPA 460, *Standard for Aircraft Rescue and Firefighting Services at Airports, Recurring Proficiency of Airport Fire Fighters, and Evaluating Aircraft Rescue and Firefighting Foam Equipment*, 2024 edition.~~

NFPA 470, *Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders*, 2022 edition.

NFPA 600, *Standard on Facility Fire Brigades*, 2020 edition.

NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*, 2020 edition.

NFPA 921, *Guide for Fire and Explosion Investigations*, 2021 edition.

NFPA 1051, *Standard for Wildland Firefighting Personnel Professional Qualifications*, 2020 edition.

NFPA 1145, *Guide for the Use of Class A Foams in Fire Fighting*, 2017 2022 edition.

NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services*, 2019 edition.

NFPA 2500, *Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services*, 2022 edition.

Submitter Information Verification

Committee: AIR-AAA

Submittal Date: Mon Dec 06 08:11:45 EST 2021

Committee Statement

Committee Statement: Updating edition dates.

Response Message: SR-13-NFPA 440-2021

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

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Uhler, Adam



Second Revision No. 2-NFPA 440-2021 [Section No. 3.3.53.1]

3.3.54.1* Aqueous Film Forming Foam (AFFF) Concentrate.

A concentrate based on fluorinated surfactants plus foam stabilizers to produce a fluid aqueous film for suppressing hydrocarbon fuel vapors and usually diluted with water to a 4 percent, 3 percent, or 6 percent solution. [11, -2021]

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:03:39 EST 2021

Committee Statement

Committee Statement: The committee has chosen to remove the percentages as they believe that by listing those specific percentages, it would be limiting.

Response Message: SR-2-NFPA 440-2021

[Public Comment No. 4-NFPA 440-2021 \[Section No. 3.3.53.1\]](#)

Ballot Results

✓ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

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Matheson, Graydon L.
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McLoughlin, John E.
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Pierce, Danny M.
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Uhler, Adam



Second Revision No. 3-NFPA 440-2021 [Section No. 4.1.2]

4.1.2

In addition to routine training programs, airport aircraft rescue and ~~fire-fighting~~ firefighting (ARFF) services and all structural fire departments and community emergency services with jurisdictions adjacent to an airport or its traffic patterns are encouraged to frequently schedule and participate in ~~multi-agency~~ multiagency training sessions based on the material in this guide. The objective of these sessions should be to focus on achieving maximum unity, compatibility, and effectiveness during aircraft emergencies on or off the airport premises property . (See *Section 4.5.*)

Submitter Information Verification

Committee: AIR-AAA

Submittal Date: Fri Dec 03 11:06:18 EST 2021

Committee Statement

Committee Statement: The committee is making this change as they believe this word choice reads better.

Response Message: SR-3-NFPA 440-2021

[Public Comment No. 6-NFPA 440-2021 \[Section No. 4.1.2\]](#)

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

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Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
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Shively, Jason
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Tonnacliff, Marc S.
Uhler, Adam






Second Revision No. 14-NFPA 440-2021 [Section No. 5.2.3]

5.2.3

Where a more direct means of communication cannot be established, a designated ARFF individual should go to the left side (pilot's left) of the aircraft nose and establish direct eye contact and voice communication with the captain of the flight deck crew. It might be necessary to resort to hand signals to communicate. Figure 5.2.3 depicts standard international ground-to-aircraft hand signals that should be used by ARFF personnel to communicate with the captain during emergencies. These hand signals are established for emergency communication between the ARFF incident commander and/or ARFF firefighters and the cockpit and/or cabin crews of the incident aircraft. ARFF emergency hand signals should be given from the left front side of the aircraft for the cockpit crew. (Note: In order to communicate more effectively with the cabin crew, emergency hand signals may be given by ARFF firefighters from other positions.) With helicopters and aircraft with different seating configurations, ARFF individuals should establish communication from the other side of the aircraft.

Figure 5.2.3 Standard International Ground-to-Aircraft Signals. (Photos courtesy of the Air Line Pilots Association.)

<p>Recommend Evacuation — Evacuation recommended based on ARFF incident commander's assessment of external situation.</p>  <p>Arm extended from body and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Nonbeckoning arm held against body.</p> <p>Night — same with wands.</p>
<p>Recommend Stop — Recommend evacuation in progress be halted. Stop aircraft movement or other activity in progress.</p>  <p>Arms in front of head, crossed at wrists.</p> <p>Night — same with wands.</p>
<p>Emergency Contained — No outside evidence of dangerous condition or "all clear."</p>  <p>Arms extended outward and down at a 45-degree angle. Arms moved inward below waistline simultaneously until wrists crossed, then extended outward to starting position (umpire's "safe" signal).</p> <p>Night — same with wands.</p>

Supplemental Information

File Name

Description

Approved

SR_14_440_Hand_Signal_Figure.docx

This figure needs to be added to the SR and it is being added back into the document. It was in the legacy NFPA 402 and also included in the consolidated draft 440, but the committee removed it during the first draft stage and they want to put the figure back into the document.
For staff use

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Mon Dec 06 08:18:20 EST 2021

Committee Statement

Committee Statement: The committee has chosen to add some text and this figure depicting hand signals back into the document as they believe it is important that these hand signals are included as they are still used by many air carriers and ARFF departments.

Response Message: SR-14-NFPA 440-2021

[Public Comment No. 2-NFPA 440-2021 \[New Section after 5.2.3\]](#)

[Public Comment No. 3-NFPA 440-2021 \[Section No. 5.2.3\]](#)

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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Rhode, Eric Keoki

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Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 15-NFPA 440-2021 [Section No. 8.3.3]

8.3.3

Wide-body aircraft have provisions for additional fuel storage within both the horizontal and vertical stabilizers. Damage to these tanks in the event of an aircraft accident poses a number of problems, including those where fuel or vapors might enter occupied sections of the aircraft and become ignited. These additional fuel storage locations can complicate the firefighting operations and will require additional agent. (See also *NFPA 403 460*.)

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Mon Dec 06 08:35:36 EST 2021

Committee Statement

Committee Statement: This is being updated due to the ERRS consolidation plan.

Response Message: SR-15-NFPA 440-2021

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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Major, William K.

Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.

Barthram, Gary David

Costa, Howard ?Ted?

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Heitman, Denny J.

Hendel, Elizabeth A.

Herron, Rene

Jones, Ronald E.

Krusleski, Ronald J.

Listerman, Stephen

Martel, Paul

Matheson, Graydon L.

Mathis, Robert C.

McDonald, John W.

McLoughlin, John E.

Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 16-NFPA 440-2021 [Section No. 8.4.10]

8.4.10

Fires can occur within a cargo hold either from onboard electrically operated equipment or from the cargo carried. Doors to cargo holds have external operating devices that are manually or electrically operated. Upon failure of electrical power, doors normally have a secondary means of operation. ARFF personnel should be trained in opening the cargo doors on aircraft using their airport. This should be incorporated into recurrent training programs (see *NFPA 405 460*).

Submitter Information Verification

Committee: AIR-AAA

Submittal Date: Mon Dec 06 08:36:35 EST 2021

Committee Statement

Committee Statement: This is being updated due to the ERRS consolidation plan.

Response Message: SR-16-NFPA 440-2021

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

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Major, William K.
Rhode, Eric Keoki

Affirmative All

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Barthram, Gary David
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Flores, Michael
Heitman, Denny J.
Hendel, Elizabeth A.
Herron, Rene
Jones, Ronald E.
Krusleski, Ronald J.
Listerman, Stephen
Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
Palmer, Greg
Pierce, Danny M.
Powell, Paul W.
Shively, Jason
Sooter, Darrell
Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 5-NFPA 440-2021 [Section No. 15.6.5]

15.6.5

~~For~~ The ARFF agency should have a water rescue plan in place for aircraft incidents that occur in or near airports located in close proximity to bodies of water, such as oceans, lakes, and rivers, ~~the ARFF agency should have an appropriate plan and resources prepared for an aircraft incident that occurs in or near these bodies of water~~ . The ARFF agency might choose to have its own water rescue resources and/or utilize mutual aid resources coordinated through the appropriately prepared section of the AEP. The ARFF agency should reference Chapters 16 through 22 of NFPA 2500 for more information.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:10:19 EST 2021

Committee Statement

Committee Statement: These changes are being made to provide a more accurate and clearer statement.

Response Message: SR-5-NFPA 440-2021

[Public Comment No. 9-NFPA 440-2021 \[Section No. 15.6.5\]](#)

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James
Maddox, John Anderson
Major, William K.
Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.
Barthram, Gary David
Costa, Howard ?Ted?
Flores, Michael
Heitman, Denny J.
Hendel, Elizabeth A.
Herron, Rene
Jones, Ronald E.
Krusleski, Ronald J.
Listerman, Stephen
Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
Palmer, Greg
Pierce, Danny M.
Powell, Paul W.
Shively, Jason
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Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 6-NFPA 440-2021 [Section No. 15.14]

15.14 Emergency Management.

The airport's emergency plan should be integrated with the local comprehensive emergency plan and local search and rescue teams. Consideration should be given to the role the airport might play as a result of coordination with emergency management officials and in support of ~~any comprehensive or local~~ any local emergency plan requirements.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:11:50 EST 2021

Committee Statement

Committee Statement: The committee is making this change as they believe this is a more accurate statement.

Response Message: SR-6-NFPA 440-2021

[Public Comment No. 10-NFPA 440-2021 \[Section No. 15.14\]](#)

Ballot Results

✓ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

Maddox, John Anderson

Major, William K.
Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.
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Costa, Howard ?Ted?
Flores, Michael
Heitman, Denny J.
Hendel, Elizabeth A.
Herron, Rene
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Listerman, Stephen
Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
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Uhler, Adam



Second Revision No. 7-NFPA 440-2021 [Section No. 16.2.1]

16.2.1

Air traffic control (ATC) services should initiate an emergency response using the alarm communications system. When an alarm is ~~received from any source, when~~ received or an accident is observed, or when there is reason to consider that an accident is imminent, airport ARFF services should be alerted immediately.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:13:01 EST 2021

Committee Statement

Committee Statement: This change is being made as the committee believes it is a more accurate statement.

Response Message: SR-7-NFPA 440-2021

[Public Comment No. 11-NFPA 440-2021 \[Section No. 16.2.1\]](#)

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

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Major, William K.
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Affirmative All

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Palmer, Greg
Pierce, Danny M.
Powell, Paul W.
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Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 8-NFPA 440-2021 [Section No. 16.4.2 [Excluding any Sub-Sections]]

The first security/police officer to arrive should coordinate with the IC and, to the extent possible, immediately establish ~~traffic-~~ free traffic lanes on ingress and egress roads for emergency vehicles, initiate security responsibility, and request reinforcements as needed.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:14:04 EST 2021

Committee Statement

Committee Statement: This change is being made as the committee believes it is a more accurate statement.

Response Message: SR-8-NFPA 440-2021

[Public Comment No. 12-NFPA 440-2021 \[Section No. 16.4.2 \[Excluding any Sub-Sections\]\]](#)

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

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Second Revision No. 9-NFPA 440-2021 [Section No. 16.6]

16.6 Action by Emergency Medical Services.

The medical group supervisor should coordinate with the medical transportation officer and medical services to perform the following:

- (1) Verify that mutual aid medical and ambulance services have been alerted and arrive at the rendezvous point or staging area and that a medical communication network is established.
- (2) Ensure an EMS representative is available at the emergency operations center or incident command post.
- (3) Provide ~~prophylactic (preventative) medical~~ preventative medical treatment for all personnel engaged in response, investigation, and recovery.
- (4) Determine the necessity for patient decontamination and set up a decontamination area if required.
- (5) Organize the triage and treatment of casualties, as well as their eventual evacuation by appropriate means of transport.
- (6) Dispatch casualties to the appropriate hospitals by land, sea, or air.
- (7) Maintain an accurate list of the casualties, including names, as available, and their destinations for treatment.
- (8) Coordinate with the airport operator and aircraft operator concerning the transportation of the uninjured to the designated holding area.
- (9) Arrange for the restocking of medical supplies if necessary.
- (10) Provide medical analysis and transportation for the walking wounded or traumatized.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:14:36 EST 2021

Committee Statement

Committee Statement: This change is being made as the committee believes it is a more concise.

Response Message: SR-9-NFPA 440-2021

Public Comment No. 13-NFPA 440-2021 [Section No. 16.6]

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.

Barthram, Gary David

Costa, Howard ?Ted?

Flores, Michael

Heitman, Denny J.

Hendel, Elizabeth A.

Herron, Rene

Jones, Ronald E.

Krusleski, Ronald J.

Listerman, Stephen

Martel, Paul

Matheson, Graydon L.

Mathis, Robert C.

McDonald, John W.

McLoughlin, John E.

Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 10-NFPA 440-2021 [Section No. 16.8.4]

16.8.4

The aircraft operator representative who is in command of the uninjured holding area should oversee the overall operations by making arrangements for commissary items, clothing, telephone facilities, and additional medical services if required. It might also be advisable to have an ~~aircraft operator~~ air carrier representative available in the facilities to which the injured are transported.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:15:22 EST 2021

Committee Statement

Committee Statement: This change is being made as the committee believes it is better terminology.

Response Message: SR-10-NFPA 440-2021

[Public Comment No. 14-NFPA 440-2021 \[Section No. 16.8.4\]](#)

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

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Deniston, Hanh

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Rhode, Eric Keoki

Affirmative All

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Flores, Michael
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Herron, Rene
Jones, Ronald E.
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Listerman, Stephen
Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
Palmer, Greg
Pierce, Danny M.
Powell, Paul W.
Shively, Jason
Sooter, Darrell
Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 11-NFPA 440-2021 [Section No. 23.1.2]

23.1.2

The responsibilities of emergency medical system personnel should include all the aspects of medical care at the scene of an accident or incident, such as triage, treatment, and transportation.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Fri Dec 03 11:15:58 EST 2021

Committee Statement

Committee Statement: This change is being made as the committee believes it is a more accurate statement.

Response Message: SR-11-NFPA 440-2021

[Public Comment No. 15-NFPA 440-2021 \[Section No. 23.1.2\]](#)

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

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Uhler, Adam



Second Revision No. 21-NFPA 440-2022 [Section No. A.3.3.71]

A.3.3.71 Incident Commander (IC).

Per A.3.4.4 .3-37 in NFPA 472 470 , the IC has overall authority and responsibility for conducting and managing all incident operations.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Wed Jan 26 14:42:12 EST 2022

Committee Statement

Committee Statement: This change is to update to the correct cross reference.

Response Message: SR-21-NFPA 440-2022

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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Rhode, Eric Keoki

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Uhler, Adam



Second Revision No. 23-NFPA 440-2022 [Section No. A.15.15.1]



A.15.15.1

The close proximity of an airport to surrounding communities and the possibility of an off-airport aircraft accident give rise to the need for mutual aid emergency agreements.

A mutual aid emergency agreement should specify initial notification and response protocols.

Mutual aid emergency agreements should be prearranged and duly authorized. A sample of a letter of emergency mutual aid agreement is shown in Figure A.15.15.1. (~~See also Annex I, "Sample Mutual Aid Agreement," of NFPA 402.~~) Should more complicated jurisdictional or multiagency agreements be necessary, the airport operator may have to act as the coordinating agency. This annex entry contains guidelines compiled to assist with the preparation of mutual aid emergency agreements with local fire departments for accidents occurring on and off the airport.

Procedure for Local Fire Department(s) — Aircraft Accident On-Airport. The following steps should occur:

- (1) A call to an aircraft accident on the airport will normally be received from ATC services.
- (2) The mutual aid fire department(s) should report to the rendezvous point or staging area on arrival at the airport. Escort by airport police/security should be provided from the rendezvous point or staging area to the accident site.
- (3) Upon arrival at the accident site, the following should occur:
 - (a) The senior officer of the airport ARFF service receiving mutual aid should have full authority at the scene, unless other laws or agreements contradict this statement.
 - (b) Fire department mutual aid communications should be carried out on the predesignated communications channel.
 - (c) Communications transmissions should be prefaced by a call sign.

Figure A.15.15.1 XYZ (International) Airport Emergency Plan Letter of Emergency Mutual Aid Agreement.

<p>AGENCY (Name and Address):</p> <p>_____</p> <p>_____</p> <p>Endorses the XYZ (International) Airport Emergency Plan, associated airport emergency plan document dated (insert date), and attached procedures and agrees to comply with all the procedures and instructions, and fulfill all applicable responsibilities therein.</p> <p>_____</p> <p>Signature of Authorized Representative</p> <p>_____</p> <p>Date</p>

Procedure for Local Fire Department(s) — Aircraft Accident Off-Airport. The following steps should occur:

- (1) A call to an aircraft accident off-airport will normally be received from ATC services or police. If that is not the case, the local fire department should notify ATC services or police via radio or telephone that an accident has occurred, giving the approximate location on the grid map.
- (2) Upon arrival at the accident site, the local fire department should perform the following:
 - (a) Ensure that the mutual aid emergency agreement is initiated.
 - (b) Establish an ICP. (This post can be temporary until the airport operator mobile

- command post is available and operative.)
- (c) Ensure that all communications are on the designated aircraft accident channel.
- (3) The local fire department should provide the following information to ATC services or police:
- (a) Exact location of the accident site
 - (b) Location of the ICP
 - (c) Specific location/rendezvous points on the grid map to which fire units should respond
 - (d) Any request for specialized equipment, if necessary

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Wed Jan 26 14:56:45 EST 2022

Committee Statement

Committee Statement: This change is being made as the sample mutual aid agreement form does not exist any longer in this or the legacy document NFPA 402.

Response Message: SR-23-NFPA 440-2022

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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Rhode, Eric Keoki

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Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
Palmer, Greg
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Uhler, Adam



Second Revision No. 22-NFPA 440-2022 [Section No. A.24.1.2]

A.24.1.2

In the U.S. US , major aircraft accidents are investigated by the NTSB, except those delegated by the Board to the Federal Aviation Administration. Part 830, "Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail Cargo, and Records" of the NTSB, Section 830.10 reads as follows:

"Civil aircraft accident investigation is normally conducted by a number of investigators of the NTSB or their designees interested in establishing the probable cause. Federal or state governments are usually charged with the official responsibility but the operators, pilot groups, airport management, and others may be active in accident investigation work. Fire officials normally make their own investigation."

For guidance on preservation of evidence, see NFPA 402 , Chapter 13 and Annex E .

In the U.S. US , the Aviation Disaster Family Assistance Act of 1996 tasks the NTSB with coordinating the disaster response resources of federal, state, local, and volunteer agencies to meet the needs of aviation disaster victims and their families. Family counseling, victim identification and forensic services, communicating with foreign governments, and translation services are some of the services the Board coordinates. The NTSB will play a primary on-scene role in family assistance and victim identification.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Wed Jan 26 14:44:08 EST 2022

Committee Statement

Committee Statement: This change is being made since 402 is now part of this consolidated document.

Response Message: SR-22-NFPA 440-2022

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

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Major, William K.
Rhode, Eric Keoki

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Costa, Howard ?Ted?
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McDonald, John W.
McLoughlin, John E.
Palmer, Greg
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Powell, Paul W.
Shively, Jason
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Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 17-NFPA 440-2021 [Section No. L.1.1]

L.1.1 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 2, *Hydrogen Technologies Code*, 2023 edition.

NFPA 10, *Standard for Low-, Medium-, and High-Expansion Foam*, 2021 edition.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, 2021 edition.

NFPA 407, *Standard for Aircraft Fuel Servicing*, 2022 edition.

NFPA 410, *Standard on Aircraft Maintenance*, 2020 edition.

NFPA 470, *Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders*, 2022 edition.

~~NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2018 edition.~~

NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*, 2023 edition.

NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*, 2019 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.

Fire Protection Guide to Hazardous Materials, 2010 edition.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Mon Dec 06 09:31:47 EST 2021

Committee Statement

Committee Statement: Updating due to ERRS consolidation plan.

Response Message: SR-17-NFPA 440-2021

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.
Curell, Joshua
Dandona, Matthew
Deniston, Hanh
Gray, Neil
Hawthorne, Edward M.
Lanter, David Scott
Lonergan, James
Maddox, John Anderson
Major, William K.
Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.
Barthram, Gary David
Costa, Howard ?Ted?
Flores, Michael
Heitman, Denny J.
Hendel, Elizabeth A.
Herron, Rene
Jones, Ronald E.
Krusleski, Ronald J.
Listerman, Stephen
Martel, Paul
Matheson, Graydon L.
Mathis, Robert C.
McDonald, John W.
McLoughlin, John E.
Palmer, Greg
Pierce, Danny M.
Powell, Paul W.
Shively, Jason
Sooter, Darrell
Tonnacliff, Marc S.
Uhler, Adam



Second Revision No. 1-NFPA 440-2021 [Section No. L.1.2.2]

~~L.1.2.2~~ FAA Publications.

~~Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591.~~

~~FAA AC 150/5200-31C, Airport Emergency Plan, 2009. (AAS 310) (Consolidated AC includes Change 2).~~

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Thu Dec 02 13:29:47 EST 2021

Committee Statement

Committee Statement: No longer exists.

Response Message: SR-1-NFPA 440-2021

Public Comment No. 16-NFPA 440-2021 [Section No. L.1.2.2]

Ballot Results

✔ **This item has passed ballot**

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

Dandona, Matthew

Deniston, Hanh

Gray, Neil

Hawthorne, Edward M.

Lanter, David Scott

Lonergan, James

Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

Bagot, Keith W.

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Flores, Michael

Heitman, Denny J.

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Matheson, Graydon L.

Mathis, Robert C.

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McLoughlin, John E.

Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 19-NFPA 440-2022 [Section No. L.2.1]

L.2.1 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

~~NFPA 10, *Standard for Portable Fire Extinguishers*, 2022 edition.~~

~~NFPA 407, *Standard for Aircraft Fuel Servicing*, 2022 edition.~~

~~NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*, 2022 edition.~~

NFPA 409, *Standard on Aircraft Hangars*, 2022 edition.

NFPA 415, *Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways*, 2022 edition.

NFPA 418, *Standard for Heliports*, 2021 edition.

~~NFPA 460, *Standard for Aircraft Rescue and Firefighting Services at Airports*, 2024 edition.~~

NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, 2019 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

~~NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.~~

NFPA 1660, *Standard for Emergency, Continuity, and Crisis Management: Preparedness, Response, and Recovery*, 2024 edition.

~~NFPA 1900, *Standard for Aircraft Rescue and Fire-Fighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances*, 2024 edition.~~

NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services*, 2019 edition.

~~*Fire Protection Guide to Hazardous Materials*, 2010 edition.~~

Submitter Information Verification

Committee: AIR-AAA

Submittal Date: Tue Jan 25 10:58:41 EST 2022

Committee Statement

Committee Statement: These changes are being made in order to comply with the NFPA MOS.

Response Message: SR-19-NFPA 440-2022

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

Curell, Joshua

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Gray, Neil

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Maddox, John Anderson

Major, William K.

Rhode, Eric Keoki

Affirmative All

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Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

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Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 20-NFPA 440-2022 [Section No. L.2.5]

L.2.5 FAA Publications.

Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591.

FAA AC 150/5200-12C, *First Responders' Responsibility for Protecting Evidence at the Scene of an Aircraft Accident/Incident*, 2009 (AAS-100). Furnishes general guidance for airport employees, airport management, and other personnel responsible for ~~fire-fighting~~ firefighting and rescue operations, at the scene of an aircraft accident, on the proper presentation of evidence.

FAA AC 150/5200-18C, *Airport Safety Self-Inspection*, 2004 (AAS-310). Suggests functional responsibility, procedures, a checklist, and schedule for an airport safety self-inspection.

FAA AC 150/5210-6D, *Aircraft Fire Extinguishing Agents*, 2004 (AAS-100). Outlines scales of protection considered as the recommended level — compared with the minimum level in Federal Aviation Regulation Part 139.49 — and tells how these levels were established from test and experience data.

FAA AC 150/5210-13C, *Airport Water Rescue Plans and Equipment*, 2010 (AAS-300). Suggests planning procedures, facilities, and equipment to effectively perform rescue operations when an aircraft lands in a body of water, swamp, or tidal area where normal aircraft ~~fire-fighting~~ firefighting and rescue service vehicles are unable to reach the accident scene.

FAA AC 150/5210-5D, *Painting, Marking, and Lighting of Vehicles Used on an Airport*, 2010 (AAA-120). Provides guidance, specifications, and standards — in the interest of airport personnel safety and operational efficiency — for painting, marking, and lighting of vehicles operating in the airport air operations areas.

~~FAA AC 150/5210-7D, *Aircraft Rescue and Fire Fighting Communications*, 2008 (AAS-120). Provides guidance and information for planning and implementing an airport communications system for airport fire and rescue service.~~

FAA AC 150/5220-4, *Water Supply Systems for Aircraft Fire and Rescue Protection* (AAS-120). Provides guidance for the water source selection and standards for a water distribution system designed to support aircraft rescue and ~~fire-fighting~~ firefighting (ARFF) service operations on airports. (Canceled 9-19-2011)

FAA AC 150/5220-10E, *Guide Specification for Aircraft Rescue and Fire Fighting Vehicles*, 2011 (AAS-100). Assists airport management in the development of local procurement specifications.

FAA AC 150/5230-4B, *Aircraft Fuel Storage, Handling, and Dispensing on Airports*, 2011 (AAS-300). Provides information on aviation fuel deliveries to airport storage and the handling, cleaning, and dispensing of fuel into aircraft.

FAA AC 150/5370-2F, *Operational Safety on Airports During Construction*, 2011 (AAS-300). Concerns operational safety on airports — with special emphasis on safety during periods of construction activity — to assist airport operators in complying with Part 139.

AC 139.49-1, *Programs for Training of Fire Fighting and Rescue Personnel* (AAS-100). Suggested training programs for airport ~~fire-fighting~~ firefighting and rescue personnel.

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Tue Jan 25 11:01:04 EST 2022

Committee Statement

Committee Statement: This change is being made in order to comply with the NFPA MOS.

Response Message: SR-20-NFPA 440-2022

Ballot Results

✔ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

Not Returned

Back, Gerard G.

Colet, Ralph B.

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McLoughlin, John E.

Palmer, Greg

Pierce, Danny M.

Powell, Paul W.

Shively, Jason

Sooter, Darrell

Tonnacliff, Marc S.

Uhler, Adam



Second Revision No. 18-NFPA 440-2021 [Section No. L.4]

L.4 References for Extracts in Informational Sections.

NFPA 2, *Hydrogen Technologies Code*, 2020 edition.

NFPA 11, *Standard for Low-, Medium-, and High-Expansion Foam*, 2021 edition.

NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*, 2020 edition.

NFPA 470, *Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders*, 2022 edition.

~~NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2018 edition.~~

NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*, 2020 edition.

NFPA 921, *Guide for Fire and Explosion Investigations*, 2021 edition.

~~NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services*, 2019 edition.~~

Submitter Information Verification

Committee: AIR-AAA

Submission Date: Mon Dec 06 09:33:56 EST 2021

Committee Statement

Committee Statement: Updating due to ERRS consolidation plan and to comply with the NFPA MOS.

Response Message: SR-18-NFPA 440-2021

Ballot Results

✓ This item has passed ballot

34 Eligible Voters

12 Not Returned

22 Affirmative All

0 Affirmative with Comments

0 Negative with Comments

0 Abstention

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Uhler, Adam