



NATIONAL FIRE PROTECTION ASSOCIATION

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

MEETING MINUTES

NFPA Technical Committee on Recreational Vehicles (REC-AAA) NFPA 1192 and NFPA 1194 Second Draft Meeting (A2025)

August 28th, 2024
1:00 pm – 5:00 pm (ET)

Microsoft Teams

1. **Call to order.** Ryan Hyer, chair, called the meeting to order at 1:00 pm on 8/28/24.
2. **Introductions.** Attendees introduced themselves and identified their affiliation and staff took attendance.
3. **Chair report.** Ryan Hyer welcomed attendees and provided an overview of the meeting.
4. **Staff liaison report.** Stephen Ganoe provided an overview of the standards development process and the revision cycle schedule.
 - a. No members declared that they had been retained to represent the interest of an entity that would be classified in an interest category different from their own with respect to a specific issue or issues that were addressed by the committee.
5. **Previous meeting minutes.** The minutes from July 2023, Denver, CO were approved with the following revisions:
6. **NFPA 1194 Second Draft.**
 - a. **Review of Public Comments and Committee Inputs.** The Technical Committee reviewed the Public Comments and Committee Inputs and developed Second Revisions as necessary. These will be available in the Second Draft Report at www.nfpa.org/1194.
 - b. **Reconstituted Task Group(s).** The following task groups provided their reports and recommendations and have been reconstituted to continue their work:
 - i. **Lithium-ion and RV Life Safety.**
 1. Evaluate all fire and life safety aspects in regard to RVs and lithium-ion batteries.
 2. Chair: David Mihalick. Members: Chris Bloom, Bryan Ritchie, Leo Atkins, Homer Staves, Ben Knox, Curt Richardson, Tim Schlabach, Bill Koffel, Jeff Christner, Ryan Bergen.
 - c. **Discharged Task Groups.** The following task groups provided a report and have been discharged with thanks:

These minutes are considered preliminary until approved at the next committee meeting.

i. Document Organization.

1. Scope. Reorganize NFPA 1192 for better readability as well as prepare the document for future technology.
2. Chair: David Mihalick. Members: Jeff Christner, Leslie Woodward, Bryan Ritchie, Curt Richardson, Timothy Schlabach, Leo Akins.

7. NFPA 1194 Second Draft.

- a. **Reconstituted Task Group(s).** The following task groups provided recommended Second Revisions and have been reconstituted to continue their work:

i. Lithium-ion and RV Life Safety.

1. Evaluate all fire and life safety aspects regarding RVs and lithium-ion batteries.
2. Chair: David Mihalick. Members: Chris Bloom, Bryan Ritchie, Leo Atkins, Homer Staves, Ben Knox, Curt Richardson, Tim Schlabach, Bill Koffel, Jeff Christner, Ryan Bergen.

8. Other Business.

- a. Chris Bloom discussed a TIA he will be submitting.

- 9. Future meetings.** This was the final meeting of this committee for this revision cycle. A meeting notification will be posted at www.nfpa.org/1194next when the next meeting is scheduled.

- 10. Adjournment.** The meeting was adjourned at 3:35 pm on 8/28/24.

Attendees

Committee Members:

✓	Ryan Hyer	Chair	Testing Engineers International
•	Charles N. Ballard	Principal	Pacific West Associates, Inc.
✓	Bruce J. Swiecicki	Principal	National Propane Gas Association
✓	Homer A. Staves	Principal	Staves Consulting Inc.
•	Thomas R. Arnold	Principal	T. R. Arnold & Associates, Inc.
✓	Christopher J. Bloom	Principal	CJB Fire Consultants
✓	David M. Mihalick	Principal	Thor Industries Inc.
✓	Leslie Woodward	Principal	Fairview USA Inc.
✓	Khaled E. Habib	Principal	CSA International
•	Paul Sinclair	Principal	Bucars RV Centre

Attendees**Committee Members:**

✓	Leo Akins	Principal	Forest River, Inc.
✓	Jeffrey A. Christner	Principal	Grand Design RV, LLC/Winnebago
✓	Shane Devenish	Principal	Canadian RV Association
✓	Al Johnson	Principal	Recreational Adventures Company
✓	Curt Richardson	Principal	Recreation Vehicle Industry Association (RVIA)
•	William E. Koffel	Principal	Koffel Associates, Inc.
•	Brian Vandrak	Principal	Enerco Group, Inc.
✓	Kerry Parrott	Principal	Parrott Fire LLC
•	Tyler Ramsey	Principal	Parker County ESD 1
•	Douglas R. Stahl	Voting Alternate	Stahl Engineering & Failure Analysis, LLC
✓	Ryan Bergen	Voting Alternate	Kampgrounds of America, Inc.
✓	Joe Kleinknight	Alternate	Keystone RV Company
✓	Neil Staves	Alternate	Staves Consulting, Inc.
•	Dale Jordal	Alternate	Winnebago Industries, Inc.
✓	Mike R Becker	Alternate	Forest River Inc.
•	David C. Delaquila	Alternate	Aquila Consulting LLC
✓	Mandy Leazenby	Alternate	T. R. Arnold & Associates, Inc.
✓	Bryan Ritchie	Alternate	Recreation Vehicle Industry Association (RVIA)
✓	Stephen Ganoe	Staff Liaison	NFPA

Guests:

Timothy Schlabach

Thor Industries

*Participated by teleconference

Total number in attendance: 21

NFPA 1192 and NFPA 1194 Lithium-Ion Task Group Report

The Lithium-Ion (LI) task group for NFPA 1192 and NFPA 1194 met on twice. Once on February 13, 2024 and August 26, 2024 via a Zoom conference calls. Task Group Members included:

- Chris Bloom – CJB Fire Consultants
- Bryan Ritchie – RV Industry Association
- Curt Richardson – RV Industry Association
- Leo Akins – Forest River
- Jeff Christner – Grand Design
- Tim Schlabach – THOR Industries
- Homer Staves – Staves Consulting
- Bill Koffel – Koffel Associates
- Ryan Bergen - KOA
- James Cote – Cote Marine
- Stephen Ganoe - NFPA
- David Mihalick – Chair – THOR Industries

The LI task group was created by CI-71-NFPA 1192-2023 and CI-6-NFPA 1194-2023. The task group was tasked with reviewing the requirements surrounding fire and life safety in regard to Lithium-Ion batteries when used recreational vehicles and recreational vehicle parks and campgrounds. The task group was to provide recommendations to the NFPA 1192/1194 technical committee during its second draft meeting that will occur in August 2024.

During the two meetings of the task group, discussion was had surrounding the hazards of Lithium-Ion batteries and their installation in recreational vehicles and use in campground environments. Meeting minutes of those two meetings are attached. Due to the rapidly changing landscape of these battery systems, the task group has no formal recommendations to the full committee at this time but has suggested changes to associated recreational vehicle standards documents that cover the installation of Lithium-Ion battery systems, mainly ANSI/RVIA DC Voltage Standard for Recreational Vehicles. Examples of those changes are metal enclosures for battery compartments and fire detection and alarm systems for the battery enclosures. Those suggested changes have been communicated to industry and will be addressed in the future documents. The task group requests to stay intact and continue to meet based upon future Lithium-Ion battery advancements or changes to provide input to the committee.

Respectfully submitted,

David Mihalick

Task Group Chairman