



FIREFIGHTER SAFETY CONSIDERATIONS FOR LITHIUM-ION BATTERY INCIDENTS

Roles of the Health Safety Officer/Incident Safety Officer

Prepare:

- Know hazards associated with Li-ion battery fires.
- Ensure, develop, and be knowledgeable of response guidelines for response to the various Li-ion emergencies.
- Create a response protocol that deploys a Safety Officer to all Li-ion events.
- Work with department and regional agencies to ensure training is being delivered on this subject and deliver safety considerations on the response.
- Work with on-duty crews to know where these systems are in your response area, i.e. residential battery walls, energy storage facilities.
- Work with operations/environmental services to ensure a contractor/entity is available for disposal of batteries after incident stabilization has been reached.

Respond:

- Safety Officer response and coordination with the Incident Commander is critical to ensure on-scene firefighter safety.
- **For all responses, ensure a Risk Management Plan is implemented.**
 - All operating personnel shall work within a standard Risk Management Plan during all emergency operations on every emergency incident. This application will be continuously re-assessed at all levels of the incident until all units leave the scene.
 - 1. We Will risk our lives a lot, in a calculated manner, to save savable lives.
 - 2. We Will risk our lives a little, in a calculated manner, to save savable property.
 - 3. We Will Not risk our lives at all for lives or property that are already lost.

All types of energy fires involving Li-ion batteries have similar hazards. The size and scope of the problem is directly tied to the size of the battery and the state of charge.
- Ensure that the proper level and type of resources are there, i.e. hazmat resource for air monitoring, etc.
- If in the roadway, ensure all roadway safety protocols are utilized.

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Response Continued -

- Ensure all firefighters are in the proper PPE for the incident.
- Ensure Hazard Zones are identified and monitored.
- Utilize Assistant Safety Officers, as needed.
- ISO general duties – identification of Risk and identification of Hazards, Recon, Communicate, and Utilize Hazard **MEDIC** – **M**onitor incident and Risk/Hazards, **E**valuate potential interventions, **D**evelop preventative measures, **I**ntervene if needed, and **C**ommunicate concerns and needs (this includes the ability to listen).
- Read firefighters – continually evaluate their work, stressors, and be conscious of the overexertion potential of your firefighters.
- Ensure appropriate and adequate **REHAB** has been established – **R**est, **E**nergy nutrition, **H**ydration, **A**ccommodation for weather, and **B**LS monitoring and care.

Recover:

- Ensure firefighters have been evaluated in REHAB and are ready to respond to the next event before going available.
 - If vital signs or physical condition is outside of norm, treat and transport to hospital.
- Complete follow-up exposure reports if your firefighters have had an exposure to the toxic potential of the fire.
 - If high-level exposure has occurred, conduct medical evaluation and transport to a hospital.
 - Consider ongoing monitoring of your firefighters from the exposure.
- If this is a traumatic event, provide behavioral health resources to the firefighters.
- Safety Officer should be involved with After Action of the event.
- Depending on the outcome and success of the response, response protocols may need to be approved and addressed in future guideline changes.

Visit www.safetystanddown.org for more information and resources.

www.safetystanddown.org/

