

CAMPBELL COUNTY OFFICE OF EMERGENCY MANAGEMENT POLICY & OPERATIONS GUIDELINE

Subject: Response to Lithium-Ion Battery Incidents

Policy Number: OEM-2025-04

Effective Date: May 8, 2025

Approved By: William R. Turner, Director

Supersedes: N/A

Review Date: July 2025

1. PURPOSE

This policy and operational guideline establishes a uniform response framework for all emergency incidents involving lithium-ion (Li-ion) batteries in Campbell County. It outlines responder safety protocols, hazard assessment procedures, and declares that specified Li-ion battery incidents are to be managed as Hazardous Materials (HazMat) events.

2. POLICY STATEMENT

Campbell County OEM designates that **any incident involving the damage, combustion, thermal runaway, off-gassing, rupture, or hazardous material release from a lithium-ion battery** shall be classified and managed as a **Hazardous Materials (HazMat) response**. This classification applies to:

- Residential and commercial battery systems
- Electric vehicles (EVs)
- Micro-mobility devices (e-bikes, scooters)
- Battery energy storage systems (BESS)
- Recycling and manufacturing facilities

Responding personnel must follow HazMat protocols as outlined in this guideline and ensure appropriate notifications, containment, and safety measures are taken.

3. SCOPE

This policy applies to all emergency response personnel within Campbell County, including:

- Fire and Rescue
- Emergency Medical Services
- Law Enforcement
- Hazardous Materials Response Teams

- Emergency Management Personnel
 - Public Works and Environmental Health Officials
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4. RISK OVERVIEW

4.1 Hazards Associated with Li-ion Batteries:

- **Thermal runaway** and spontaneous re-ignition
 - **Toxic and flammable gases** (hydrogen fluoride, carbon monoxide)
 - **Water-reactive components** in certain chemistries
 - **Electrolyte leakage** and fire-resistant casings
 - **Delayed ignition hours or days post-incident**
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5. INITIAL RESPONSE GUIDANCE

5.1 Scene Size-Up:

- Establish a **minimum 50-foot safety perimeter**
- Identify signs of danger: hissing, bulging, smoke, or unusual odors
- Use **thermal imaging cameras (TICs)** to detect abnormal heat

5.2 Personal Protective Equipment (PPE):

- Full structural firefighting gear and **self-contained breathing apparatus (SCBA)**
- HazMat suits when handling ruptured or leaking battery components

5.3 Suppression Recommendations:

- Use **large volumes of water** for active battery fires; cool thoroughly to prevent reignition
 - Avoid use of foam or dry chemical agents unless supplementing water
 - Prevent runoff from entering storm drains or waterways when feasible
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6. SPECIAL CONSIDERATIONS FOR EV INCIDENTS

- Identify EVs visually (badging, charging ports, dashboard indicators)
 - Disable high-voltage system per manufacturer guidelines
 - Stabilize vehicle without cutting into the battery compartment
 - Watch for undeployed airbags, laminated glass, and automatic locks
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7. POST-INCIDENT MONITORING & CLEANUP

- Continue thermal monitoring for **minimum of four hours** post-extinguishment
 - Coordinate with OEM or environmental contractors for **hazardous waste disposal**
 - Decontaminate tools, PPE, and apparatus used in suppression
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8. NOTIFICATIONS & REPORTING

- Report all qualifying incidents as **HazMat Events** in department logs
 - Notify Campbell County OEM and KYEM for incidents involving:
 - Energy storage systems
 - EV collisions with battery compromise
 - Major structural damage due to Li-ion fires
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9. TRAINING & COMPLIANCE

- All responders shall receive **annual training** on lithium-ion battery hazards
 - OEM will offer and support access to the following courses:
 - **BatteryIQ Technician Training**
 - **EV Response: Hands-On Tactics**
 - FEMA HazMat Awareness & Operations Courses
 - Familiarity with NFPA 855, NFPA 70, and DOT regulations is strongly encouraged
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10. RESOURCES

- NFPA Lithium-Ion Battery Safety Hub
 - [U.S. DOT Lithium Battery Transportation Guidelines](#)
 - [KYEM HazMat Protocols](#)
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11. POLICY REVIEW

This policy shall be reviewed annually or upon significant regulatory or technological developments. All agencies operating within Campbell County are expected to integrate this policy into their standard operating procedures.