Battery Legislation and Programs Needed to Prevent Solid Waste Management Workers from Injury or Death

Virginia requires new legislation, policies, and programs that manage batteries separately from other materials. Solutions include product stewardship, disposal bans, fire suppression requirements, and enforcement measures to reduce the risk of battery-related hazards to Virginia's waste and recycling infrastructure.

The Issue:

Commonly used electronic devices such as cell phones, watches, cameras, thermometers, and other electronic devices contain rechargeable or button batteries containing Lithium. Lithium-ion batteries are highly dangerous when improperly disposed of and can lead to fires and explosions during solid waste collection or processing.

A recent study by Recycling and Disposal Solutions (RDS), found that about 6 Lithium-ion batteries per hour pass through the sorting system at one of the Materials Recovery Facilities (MRFs) studied, where workers are often close to materials being processed through dropping, crushing, and compacting. Another survey of MRFs found that 64% reported Lithium-ion batteries as the most prevalent cause of fires. Of survey responses, all but one had a personal experience of a fire within the last 12 months. All experienced fires in the past two years.

Between May 2019 and 2020, there were 383 fires reported, and industry experts estimate that there have actually been more than 1,800 fires at waste processing facilities in the U.S. It is estimated that these fires resulted in 48 injuries and 5 deaths.

Proposed Solution:

Virginia's experience with recycling lead-acid batteries shows that the Commonwealth can implement a successful recovery program. The Northern Virginia Waste Management Board seeks proactive engagement on the issue of Lithium-ion battery disposal through cooperation and implementation of recommendations from the industry led SWANA/ISRI/NWRA/Call2Recycle Task Force. Elements may include product stewardship, disposal bans, fire protection retrofits, and a level of producer and manufacturer responsibility for batteries, accessible recovery, and education.

Resources:

- Call2Recycle Battery Recovery: https://www.epa.gov/sites/production/files/2018-03/documents/smith_epa_webinar_03_22_18.pdf
- "Lithium ion Batteries in the Solid Waste System," Sustainable Materials Management Presentation, Mike Timpane, 2018, https://www.epa.gov/smm/sustainable-materials-management-smm-web-academy-webinar-introduction-lithium-batteries-and

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