

## PHMSA Interpretation Confirms Non-Hazardous Characteristics from OnTo's Treatment of Lithium Batteries

Bend, Oregon –

The Pipeline Hazardous Materials Safety Administration (PHMSA) provided a letter of interpretation (LOI) about the safety of waste-batteries processed through OnTo's patented neutralization technology (US12,021,202). PHMSA reviewed this in light of Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). PHMSA interpreted the third-party data, submitted by OnTo, demonstrating non-hazardous characteristics of the product. These data demonstrate low ignitability and no RCRA hazardous metals present in the neutralized coproduct from processing batteries. The resulting implication is waste batteries processed by OnTo can be shipped without hazardous restrictions.

The LOI request was performed by a third party, ProteQ. Ben Smith, Sr. Multimodal Dangerous Goods Specialist with ProteQ, indicated "This is a very significant LOI, that, combined with Dr. Sloop's technology could up-end the entire Lithium battery recycling industry saving untold millions in commercial transportation cost." ProteQ is a leader in logistics, system integration, health and safety risk review.

OnTo Technology is a recognized world leading developer of recycling technologies including battery neutralization and direct recycling cathode healing™. OnTo's technologies make lithium-ion batteries economically and environmentally sustainable.



### Battery Neutralization Demonstration:

October 2024: Marine Corps Base Hawaii  
Army Garrison Hawaii, Schofield Barracks

- Battery Neutralization at Hazardous Waste Accumulation Areas
- OnTo Technology & ProteQ
- Neutralized LIB and Li-SO2 batteries
  - **Incumbent liability** is ~\$12/Li-ion battery and \$16/Li Battery
  - Breakthrough value-adding manufacturing is \$+15/Li-ion and +\$32/Li metal
  - Value based upon high value cobalt compound (LCO) and Li<sub>2</sub>CO<sub>3</sub> equivalent from lithium metal battery.
- Confirmed neutralized, non-hazardous state: with PHMSA interpretation
- Shipped to OnTo Tech as neutralized co-product without hazardous characteristics



DLA Data Rights, US Patent 12,021,202

Steve Sloop



16