

# Vermont Primary Battery Product Stewardship Plan Pursuant to 10 V.S.A. Chapter 168 Act 139

## Addendum to Section V. Transportation & Recycling, D. Processing Facilities - October 3, 2016 -

*Submitted by:*

Carl Smith  
CEO & President  
Call2Recycle, Inc.  
1000 Parkwood Circle, Ste. 200  
Atlanta, GA  
30339

[csmith@call2recycle.org](mailto:csmith@call2recycle.org)  
[www.call2recycle.org](http://www.call2recycle.org)

*Submitted to:*

Deb Markowitz  
Secretary  
Vermont Agency of Natural Resources  
1 National Life Drive, Davis 2  
Montpelier, VT 05620



## A. Processing Facilities

Call2Recycle’s approved primary battery stewardship plan establishes INMETCO as the processor of primary batteries collected in Vermont. In addition, the Plan indicated Battery Solutions Recovery, LLC (formerly Battery Solutions LLC) as being vetted for approval as a future processor of single-use/primary batteries. Call2Recycle has now completed the formal vetting process and has approved Battery Solutions Recovery, LLC as a battery processor.

While Battery Solutions Recovery, LLC will be the main processor of used non-lithium primary batteries collected in Vermont; the lithium primary batteries collected in Vermont will continue to be processed at INMETCO. In addition, INMETCO will continue to serve as a secondary processor of alkaline batteries.

Recycling Facility	Contact Information
	<p>INMETCO            One Inmetco Dr.            Ellwood City, PA 16117            724-758-2830  <a href="http://www.inmetco.com">www.inmetco.com</a></p>
	<p>Battery Solutions Recovery, LLC            7266 Kensington Rd.            Brighton, MI 48116            800-852-8127  <a href="http://www.batteryrecycling.com">www.batteryrecycling.com</a></p>

The addition of Battery Solutions Recovery, LLC as a processor for Call2Recycle was based on the following qualifications:

- **Recycling Efficiency Rate (RER):** Battery Solutions Recovery, LLC has a self-reported RER of 97.98%, which exceeds INMETCO’s 85% RER. Both facilities significantly exceed the prevailing global standard of 50%, as decreed by the European Union (EU). Even in Ontario, Canada, where the most stringent standard of 80% is used, both facilities exceed it.
- **Efficiency & Cost:** With Battery Solutions Recovery, LLC now providing both sorting and processing capabilities, Call2Recycle is able to achieve greater cost savings and efficiency measures, as a result of not having to transport these batteries several states away for final processing. In addition, Battery Solutions Recovery, LLC provides further efficiency as it is the only facility with optical sorting capabilities.

Batteries collected in Vermont will continue to be shipped directly to Battery Solutions Recovery, LLC where they will be recorded by site, sorted by chemistry, consolidated into truckload shipments and sent, if applicable, to Call2Recycle’s qualified processing network.

Non-lithium primary batteries will be processed by Battery Solutions Recovery, LLC using a room temperature, mechanical separation process where the battery components are separated into three end products. The three end products are –

- 1) Zinc & Manganese concentrate; 2) Steel; 3) Paper, Plastic & Brass Functions

These three end products are marketed and sold by Battery Solutions Recovery, LLC to manufacturers to be used as feedstock to make new materials. Most notably, the Zinc and Manganese concentrate, is combined with other materials to ultimately manufacture a granular fertilizer. Battery Solutions Recovery, LLC does not manufacture the final end product of granular fertilizer.

The lithium primary batteries, along with button and coin cell batteries, will be processed by INMETCO using a rotary hearth and an electric arc furnace for thermal metal reclamation. The reclaimed materials from this process are used in road and construction aggregate and stainless steel products. Below are flow charts (Figure 1) that detail how these are handled at INMETCO.

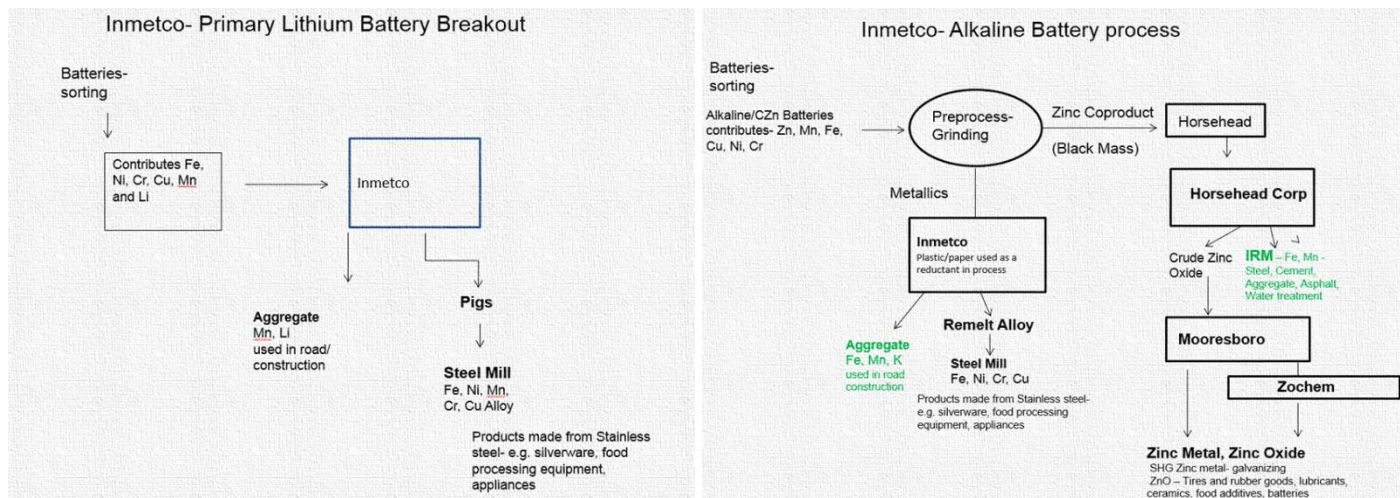


Figure 1: INMETCO Battery Processes

Call2Recycle continuously monitors and evaluates the efficiency and quality of its downstream vendor’s reclamation process as well as other potential primary battery processors. All approved vendors must continue to meet Call2Recycle’s rigorous guidelines for sorting and processing. They are periodically required to submit to audits performed by CHWMEG (a non-profit association which reviews commercial facilities that treat, store, dispose, recycle or transport waste). Routinely, the program arranges for audits of vendors by major generators of batteries that want assurance that their batteries are properly disposed. All consolidation, sorting and processing facilities are open to inspection and audit. The most recent environmental audit summary for each INMETCO and Battery Solutions Recovery, LLC can be found in Appendix A.

Call2Recycle, Inc. may employ other sorting facilities in the future as appropriate at its sole discretion.

# Appendix A