CBA
Canadian Battery Association
Representing the Industry Since 1970

2012 Annual Report to the Director, British Columbia Ministry of Environment

Products within the Plan	Lead-Acid Batteries: • >2kg; • Consumer and Industrial;
Program Websites	www.canadianbatteryassociation.ca

Recycling Regulation Part 2 Reference	Topic	Summary
Section 8(2)(a)	Public Education Materials and Strategies	• Update BC Recycling Handbook; • Finalize CBA Recycling Decal for batteries; • www.recyclemybattery.ca; • Sponsorship of RCBC's Hotline; • Sponsorship of RCBC's Recyclepedia.
Section 8(2)(b)	Collection System and Facilities	• 170 Return Collection Facilities for consumer batteries; • 21 Warehouse Operations for industrial batteries; • Special projects for remote communities – e.g., Bella Bella pilot project;
Section 8(2)(c)	Product Environmental Impact Reduction, Reusability and Recyclability	• Information Bulletins on Transportation of Dangerous Goods and Waste Management; • Operational, Contingency and Closure Plans developed for warehouse operations; • 100% of all Lead-acid batteries processed at the following smelters in Canada and the USA*: ○ Teck, Trail, BC; ○ Metalex, Richmond, BC ○ USA Smelters; ○ Tonolli, Mississauga, Ontario; ○ Newalta, St Catherine, Quebec. The market share of the different smelters is considered confidential information by the CBA and is not reported.

Section 8(2)(d)	Pollution Prevention Hierarchy and Product Component Management	Prevention: The lead-acid battery is a technology that has been in commercial use for 150 years in commercial applications. Few DfE applications are available to the industry. Reuse: There are no estimates on re-use; however, the CBA can report that batteries are refurbished and sold to the public where economically feasible. Note that because LABs have a value at the end –of-life, the batteries are not "owned" by the Stewardship Agency. As such, the recyclers and distributors that manage used LABs will determine if the battery can be refurbished and sold as a used battery. Recycle: Preliminary Information on the Recycling of Lead-Acid Batteries (LABs). • Lead: LABs contain on average approximately 60% lead, lead oxides and alloys of antimony, tin or other elements. About 52% of an average battery is elemental lead. A secondary smelter will recover. a. 99% of the elemental lead in the secondary smelting process. Lead ingots are then shipped in to battery manufacturers. 1% of the elemental lead is lost in Slag that is sent to landfills; b. Alloys of tin, antimony etc. are also recovered in the secondary smelting process and incorporated in the lead ingots; c. Oxides are burned off in the smelting process and are not recovered; • Plastic: LABs contain about 5% plastic. The casing of SLI and Motive batteries are primarily made of polypropylene and the separators are made of a more pliable plastic. The plastic in Stationary batteries is typically clear polycarbonate so that each cell can be visually inspected. a. 80% of plastic is recycled and used to make new battery casings; b. 20% of plastic is used in the smelting process to create a "reducing environment" necessary for smelting • Electrolyte: About 35% of the weight of a lead-acid battery is electrolyte (range is 25% to 40% depending on the battery design). In an end-of-life LAB, the electrolyte is dilute sulphuric acid. The sulphuric acid is recovered and frequently used to make fertilizer. Shipping Materials at the Smelter: • Plastic wrap – put in smelter to help create a "reducing environment" for the smelting process; • Cardboard – put in smelter to help create a "reducing environment" for the smelting process; • Pallets – reused or shredded for co-generation of electricity.

Section 8(2)(e)	Product Sold and Collected and Recovery Rate	Consumer SLI* Lead-Acid Batteries CBA SLI Sales: 14,251,209kg CBA SLI Collection: 11,891,349kg CBA SLI Recovery Rate: 83% Interstate SLI Sales: 2,030,000kg Interstate SLI Collection: 3,528,630kg Interstate SLI Recovery Rate: 174% Combined SLI Sales: 16,281,209kg Combined SLI Collection: 15,419,979kg Combined SLI Recovery Rate: 94.7% Consumer SLI and Industrial Lead-Acid Batteries CBA & Interstate Combined Sales: 18,711,005kg CBA & Interstate Market Share: 83.8% Unaccounted Lead-Acid Battery Sales: 3,600,000kg Non-Compliant Brandowner Market Share: 16.2% Total Sales of Lead-Acid Batteries: 22,311,005kg Recovery Based on Export & Smelter Data: TBD Overall Lead-Acid Battery Recovery Rate: TBD * SLI = Starting, Lighting and Ignition
Section 8(2)(e.1)		Lead-Acid battery sales and recovery cannot be determined on a Regional District basis for the following reasons: • There are no eco-fees at point of sale and no requirement for reporting sales of LABs by retailers for consumer batteries; • LAB sales and recovery are based on a mobile distribution system from warehouses located in the large urban centres. The distribution networks are very large and a single trip can cover hundreds of miles and cross multiple Regional Districts. • About 25% of lead-acid batteries are recovered by recyclers that are not affiliated with the CBA's Stewardship Program. These recyclers will not report the quantity or source of their recovered batteries;
Section 8(2)(f)	Summary of Deposits, Refunds, Revenues and Expenses	LABs have a value at the end-of-life. As such, there is no deposit-refund or Advanced Disposal Fee at the time of purchase. The CBA operates a National Stewardship Program for lead-acid batteries. The CBA operates two mandatory stewardship programs in Manitoba and BC. A summary of our National Revenues and Expenditures are as follows: • 2012 Revenues: $88,500 • 2012 Expenses: $109,275 • Contingency Fund as of Dec 31, 2012: $10,000 Revenue losses due to non-compliance of "Brandowners" is >25% of the CBA's Annual Budget.

Comparison of Key Performance Targets		
Part 2 Section 8(2)(g); See full list of targets in Plan Performance		
Priority Stewardship Plan Targets	Performance	Strategies for Improvement
1. Awareness: - 75% Consumer Awareness	Consumer Awareness Study postponed to coordinate with the study to be conducted by the Stewardship Agencies of BC www.bcstewards.com	Awareness program to be completed in 2014 by SABC and the CBA will be a participant in the coordinated survey. The Awareness survey for lead-acid batteries will initially focus on the retailers and workers that install the lead-acid batteries for consumers.
2. Accessibility: - 150 RCF for Consumers; - 10 RCF for Industrial LABs; *RCF = Return Collection Facility	2012 Performance: - 170 RCF for Consumers; - 21 RCF for Industrial LABs - www.recyclemybattery.ca for locations of RCF	Undertake analysis to determine if RCF's meet SABC standard of - 30 minutes for urban areas; - 45 minutes for rural areas.
3. Collection: - 85% Recovery Rate for SLI* batteries; *Starting, Lighting & Ignition	2012 Performance: - CBA 83% - CBA and Interstate: 94.7%	Continue to refine the recycling infrastructure for LABs to provide greater understanding of the fate of LABs
4. Generation, Storage and Transportation of used and waste LABs: - compliance with Federal and Provincial laws	2012 Performance - 19 warehouse operations will require registration under Hazardous Waste Regulation (HWR); - need to clarify MoE transportation requirements for used LABs and designation of when a used LAB becomes a "Hazardous Waste".	Complete registration of warehouse operations under the Hazardous Waste Regulation. Waiting for clarification from MoE of when a used LAB becomes a "Hazardous Waste".
5. Operational Efficiency	2012 Performance - the CBA is not directly involved with the coordination of the collection, transportation and recycling of lead-acid batteries. That responsibility is borne by the recyclers. - 16.2% of lead-acid battery sales by non-compliant brandowners	The CBA will cooperate with Call2Recycle and any other battery stewards to improve its communication to the public and program delivery in British Columbia and across Canada. - reduce the level of non-compliance to less than 10% of sales.