



Maryland
Green Registry
MEMBER

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

Ball Aerosol & Specialty Packaging, Baltimore Plant



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Manufacturer of specialty metal packaging
Member since March 2011

Management and Leadership

Environmental Policy Statement

Ball Corporation seeks continuously to minimize the environmental effects of our operations on communities and the environment through pollution prevention and waste minimization efforts. It is the policy of our company to conduct business activities and operations in compliance with government environmental regulations and requirements. Ball promotes environmental responsibility.

*Approved by
David A. Westerlund
Executive Vice President, Administration and Corporate Secretary
Ball Corporation*

From the Baltimore QMS Manual:

It is the policy of Ball Corporation ("BALL") to conduct all business activities and operations in a manner that minimizes impacts to the environment, conforms with government requirements, and promotes the commitment to be a responsible corporate citizen. Proper environmental measures shall ensure compliance at all levels with relevant environmental legislation, regulations and other requirements to which the organization subscribes, which govern the conduct of Ball's domestic and foreign business. Ball is also committed to the practices of continuous improvement and prevention through voluntary commitments and will prevent pollution at the source wherever possible.

In 2010, Ball Corporation issued its second Sustainability Report. (An electronic copy is available online at www.ball.com/sustainability.) The report presents to Ball's stakeholders information about the company's sustainability activities, successes, and challenges over the past two years. The following is a brief summary of some of the efforts detailed in the report:

- *Ball has invested more than \$36 million in energy savings projects since 2007.*
- *Ball has reduced total energy use by 11 percent and improved energy efficiency per 1000 units produced by 9 percent since 2007.*
- *Ball's normalized greenhouse gas emissions have declined 13 percent since 2005.*
- *Ball's absolute water usage declined by 8.6 percent and water efficiency improved by 5.5 percent since 2007.*
- *Ball has improved its recordable accident rate by 39 percent since 2007.*

Annual Environmental Goals

In line with the company's sustainability efforts, Ball plant operations are charged with managing 'the Big Six.' The goals, in no particular order, are:

1. *Reduce electricity use*
2. *Reduce natural gas use*
3. *Reduce materials use/increase recycling*
4. *Analyze and reduce water consumption*
5. *Reduce volatile organic compounds (VOCs)*
6. *Improve safety performance*

Environmentally Preferable Products and Services

As a leader in metal packaging for food, beverage, and household products, Ball has subconsciously focused on sustainable business practices for many years. The base materials from which we manufacture our metal packaging products are grounded in sustainability.

- *Aluminum cans manufactured for the beverage industry are infinitely recyclable.*
- *Recycling aluminum cans saves 95% of the energy required to make aluminum cans from virgin ore.*
- *In addition, recycled aluminum cans return to store shelves in as little as 60 days.*
- *The BASC Baltimore plant manufactures the vast majority of its products from tinplate, North America and the world's most commonly recycled material. (In fact, each year, more steel is recycled than aluminum, paper, glass and plastic combined.)*

Environmental Restoration or Community Environmental Projects

In an ongoing effort to improve community awareness of recycling, the plant sponsored a 2010 recycling project. The plant purchased and supplied collection receptacles for a local park. In summer 2010, these receptacles helped the community recycle an additional 237 lbs of aluminum. Proceeds benefit a local Boy Scout troop which helps facilitate the program.

Independently-Audited Environmental Management System

Ball Aerosol and Specialty Container Inc. (BASC) is a wholly-owned subsidiary of Ball Corporation. The BASC Baltimore site maintains an Environmental Management System (EMS) similar in format to ISO 14001. The plant's EMS is a management tool enabling the organization to identify and control the environmental impact of its activities, products or services, and to continuously improve its environmental performance, and to implement a systematic approach to setting environmental objectives and targets.

Waste

Solid Waste Reduction and Reuse

The Baltimore plant is the first Ball facility in the continental US to achieve landfill-free status. In 2010, through extensive recycling programs the plant reduced solid waste sent to a landfill by 60%. Beginning in September 2010, the plant made its last shipment of landfill waste. Any non-recyclable materials are shipped to incinerator plants which burn waste to produce energy. In addition to the current recycling programs for aluminum and steel cans, various types of packaging plastics, wood, cardboard, paper, etc., the plant also operates programs for cleaning and reusing all rags and absorbent mats, eliminating the necessity for disposal of these products.

Recycling

The Baltimore plant collects and recycles all wood, paper, and corrugated materials, plastic bottles, plastic packaging materials (stretch wrap, separator blocks, pallet strapping). Wood scrap from damaged pallets and skids is recycled into mulch. Waste copper wire from the can body welding process is also recycled. For many years, the plant has recycled the tinplate scrap generated by the production process. For 2010, the plant's efforts yielded the following results:

Plastic:	2.75 tons
Misc. steel:	4.55 tons
Office paper:	8.31 tons
Corrugated material:	22.0 tons
Tinplate steel:	715.0 tons
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Total Recycled:	752.61 tons

Hazardous Waste/Toxic Use Reduction

Through engineering changes and other process improvements, the Baltimore plant has recorded a 40% reduction in Volatile Organic Compound (VOC) emissions and a 75% reduction in Hazardous/Toxic Air Pollutant (HAP/TAP) emissions since calendar year 2008. New product development initiatives seek to identify low-VOC process solutions. The last two permitted installations used “low VOC” materials, with VOC content below 0.1g/L.

Energy

Energy Efficiency

After raw materials and labor/benefits, energy is Ball’s third largest manufacturing cost center. The plant uses best practices and engineering controls to improve energy efficiency. Every other year, company-wide internal energy efficiency audits are conducted, helping the plant identify new opportunities and benchmark its progress against other Ball facilities. In 2010, BASC Baltimore reduced its total electricity usage by 5%. A plant-wide retrofit to high-efficiency fluorescent lighting was completed in late 2009. The plant also seeks to control consumption by:

- *upgrading older, lower efficiency electric motors,*
- *monitoring and reducing compressed air demand*
- *maintaining manufacturing and warehouse lighting at best practice levels*

For the past two years, the Baltimore plant has also participated in a “Demand Response” program. In addition to helping PJM Interconnection, the regional electricity transmission organization, reduce grid demand during peak periods, the program educates and financially rewards participants. With participation, the plant receives access to online, web-based tracking software which facilitates real-time electricity consumption analysis. In 2010, the plant participated in three demand response events, curtailing demand by approximately 85% during each event.

Over the past two years, the plant has also implemented several natural gas consumption projects, including:

- *Installation of a synthetic belt curing oven with high-efficiency burner. (As the synthetic belt passes through heated zone, the lower thermal mass requires less energy to heat than a conventional mild steel belt.)*
- *Internal energy efficiency audit spurred the installation of programmable timers for all plant and warehouse heating systems. During winter months, plant and warehouse are maintained at lower temperatures during non-working hours. Audit also identified warehouse area was being maintained 10 degrees warmer than 'best practice' level of 55F during occupied periods of winter months. Heating costs have been significantly reduced through maintaining 55F through winter months.*
- *Four-day week work schedule reduces natural gas consumption required for comfort heating.*

Transportation

Employee Commute

The plant offers a four-day (10 hours/shift) work week which helps reduce automotive emissions by reducing employee commute. Ball has also integrated video conferencing at all manufacturing facilities cutting down the need for business travel.

Water

Water Conservation

Ball-Baltimore has less than \$1,000.00 of annual water consumption. The plant uses a closed loop system for water used in production processes.



Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.

Learn more at green.maryland.gov

