



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director



## Encouraging Environmental Excellence Bronze Level Recognition

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*July 16, 2013 Summary*

Ohio EPA recognized three companies that successfully met the criteria for the Bronze Level of the Encouraging Environmental Excellence (E3) Program. Below is a summary of each company's efforts.

**Agmet, LLC – Oakwood Village and Maple Heights:** Agmet is a recycler of metal-bearing industrial products in North America with two plants in Oakwood Village and Maple Heights, and a network of affiliated companies located throughout North America. They acquire, repurpose and sell industrial byproducts as valuable metals (nickel, cobalt, copper and tin) to other companies. All metals acquired are recycled, sold and reused as part of their Recycle 100 program that results in virtually no-byproduct or waste.

Agmet is primarily being recognized for their efforts to reduce manufacturing waste generated by their Oakwood and Maple Heights facilities while increasing the amount of materials processed. Agmet has reduced outgoing trash and debris from 1.36% of the materials accepted for processing in 2011 to 0.28% in 2013. Agmet is working with other recyclers and waste companies to develop programs and identify methods to achieve their goal of 100% recycling of all incoming materials by 2015.

In addition, Agmet has begun efforts to become ISO14001 certified, completes an ongoing employee training program to promote waste reduction efforts, and tracks and reports all recycling efforts. The company's recycling improvement efforts are voluntary and has demonstrated upper management commitment through the adoption and implementation of its new Environmental Compliance policy, Recycle 100 efforts and capital appropriations to improve recycling and energy efficiency. Agmet uses its website, quarterly newsletter, press releases and authored articles to promote and disseminate information to its audience on the benefits of recycling and to advise customers on best practices and efficiencies for managing their waste recycling programs profitably. These efforts help other companies maximize the value of their waste while helping to ensure they do so in a compliant and environmentally sound manner.

Environmentally preferable purchasing is also part of Agmet's Recycle 100 program. Agmet is working to replace existing liners and bags with biodegradable alternatives that will reduce annual waste generation by 10 to 20 percent. In addition, a more efficient burner system is anticipated to reduce natural gas consumption by 10 percent annually.

**Bridgestone Research - Akron:** Bridgestone Americas Center for Research and Technology (BART) is a state-of-the-art research facility staffed with a multidisciplinary team of highly-trained and experienced scientists working in the field of polymers. Their challenge is to invent new technology that may be used in our manufacturing centers to improve the products of Bridgestone Corporation.

BART is primarily being recognized for their resource conservation efforts that include repurposing spent solvents to achieve Small Quantity Generator status, recycling 26.8 tons of cardboard and paper, reducing electricity use by 20%, reducing air emissions by 99% and reducing water use by 59%.

Historically, BART has been a large quantity generator of hazardous waste generated from the synthesis and isolation of polymers. The primary waste stream was a mixture of predominantly hydrocarbon solvents. In 2012, BART partnered with Tradebe to utilize BART's hydrocarbon solvent mixture in a barge degreasing and cleaning product Tradebe manufactures. As a result, BART became a small quantity generator of hazardous waste. Total hazardous waste was reduced by nearly 70%, from 30.8 tons in 2010 and 2011, to 9.2 tons in 2012. Assuming the product replaced an equivalent amount of hydrocarbon solvent and this solvent would have been fuel-blended, the recycling effort avoids the production of 64 tons of CO<sub>2</sub> annually. In addition, BART utilizes environmentally-friendly cleaning products from State Industrial Products. All of these products are Green Seal GS-37 certified. A cardboard and paper recycling program was implemented which has recycled 26.8 tons of cardboard and paper since its inception, saving resources and reducing waste to landfill. A 35% more efficient chiller was installed, which led to a 20% reduction in electricity. Air emissions from BART's reactor room vent tank were essentially eliminated reducing air emissions from 650 lbs/yr in 2005, to less than 0.6 lbs/yr, a more than 99.9% reduction. Recycling the cooling water used for BART's reactors reduced water use by 59% compared to 2005 levels, and saved \$45,000 annually.

BART promotes and disseminates information on its waste reduction successes to other Bridgestone facilities, has demonstrated upper management commitment to continue its environmental improvement activities, uses environmental management accounting to justify further improvements and has completed all of these activities in a voluntary manner.

**USA Lamp & Ballast Recycling, Inc. - Cincinnati:** USA Lamp & Ballast Recycling is a hazardous waste removal, universal waste disposal, electronic waste and fluorescent lamp recycling operation that recycled over 3.5 million lamps, almost 700,000 lbs. of ballasts and capacitors, and over 440,000 lbs. of various types of batteries in 2011.

USA Lamp is primarily being recognized for the improvements they have made to their recycling process that reduce impacts to the environment. They continually look for new technologies to improve upon their processes of destruction and recycling in a way that is affordable and within EPA and DOT regulations for both businesses and consumers. They have a company wide effort to eliminate hazardous materials from the environment and are always looking to improve the lamp machines at each facility. They are currently implementing a new process to remove glass fines from their reclaimed phosphor powder, which is then used in the manufacturing of new lamps. This process is a quality improvement being made for their customer's end use. They recently acquired a state of the art machine used to shred and separate certain materials allowing for a higher recovery rate to create a more sustainable process. They have a goal of being full-cycle recyclers in all areas, thereby ensuring universal and hazardous waste are being handled and recycled properly.

Employees are trained to properly disassemble and recycle every part of the material for recycling whether it is ballasts, lamps, batteries, or electronics. Administrative staff and management are trained and knowledgeable regarding the importance of recycling for the environment. They are able to field questions and concerns from customers regarding all issues involving recycling as well. Many outlets are used to promote recycling of universal waste in both their community and nationally. USA Lamp disseminates this information through its website that allows consumers and businesses to ask questions regarding proper disposal and/or recycling of e-waste and universal waste. USA Lamp is also involved in environmental organizations such as KY Excel and the Coalition for American Electronics Recycling (CAER) and is frequently featured in trade shows to support efforts in recycling awareness locally and nationally.

USA Lamp makes an effort to purchase environmentally preferable products whenever possible. Their recent focus has been on office materials but includes other operations at their facility. They also reduce waste through reuse to support their environmentally preferable products purchasing efforts.

For more information about the E3 program and the three levels of recognition, visit [www.epa.ohio.gov/ohioE3.aspx](http://www.epa.ohio.gov/ohioE3.aspx) or call (800) 329-7518.