



HSSE '17

Health, Safety, Security, and Environmental
Annual Report



brewer science

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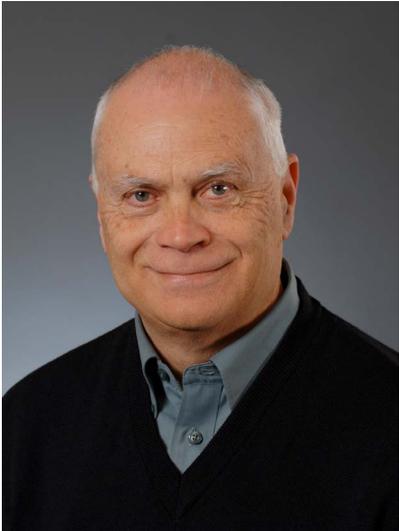
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Message from the President



For more than thirty years, our corporate vision, Of the People, By the Technology, For the Customer, has directed our business practices at Brewer Science. Our Health, Safety, Security, and Environmental (HSSE) management systems have fulfilled this vision by providing leading programs to sustain and improve the environment in which our company operates. Our mission is to continuously improve our global HSSE systems to benefit our employees and customers adding exceptional value throughout the world.

Brewer Science is proud of the results our HSSE efforts have had on our internal and external communities. Key outcomes of our improvement programs include:

- Wellness program, including fall and winter fitness programs, wellness seminars, an on-site exercise room, and the promotion of healthy foods available in the workplace
- Receipt of the "Gold Fit Friendly Award" from the American Heart Association for the sixth straight year
- Community collection of tires, household appliances, and electronics, diverting over 47,000 pounds of residential material from landfills
- Continued reuse and recycling of approximately 99% of our hazardous waste for the sixth straight year by utilizing fuel blending and recycling methods
- Recycling of 48 tons of cardboard, paper, batteries, plastic, and bulbs, diverting these items from landfills
- Continuation of OSHA® recordable injury rate that is below the average for our industry
- Receipt of the GreenCircle, LLC, "Zero Waste to Landfill" certification
- Utilization of geothermal technology at the Vichy manufacturing facility
- 1320 days since the last lost time incident
- Yearly Incident Command and Emergency Response training and exercises for employees
- Implementation of the community service leave policy, enabling employees to serve the community during work hours

Brewer Science continues to be an environmental leader in the community through its global safety, wellness, and environmental policies. Educating our employees and improving their well-being continues to be Brewer Science's number one focus.

Brewer Science has been externally reporting environmental, safety, and health performance on a yearly basis since 2006. We provide this report to our stakeholders to better communicate the continued importance we place on safety, employee wellness, and environmental and social responsibility and the value our efforts bring to our employees and our community.

We continually seek ways to improve and always welcome your feedback. It is our sincere desire that these efforts will have a positive impact on the overall health, safety, security, and environment of the global communities that we influence. Additional information can be obtained from our website at brewerscience.com/esg.

Dr. Terry Brewer

President and Founder, Brewer Science, Inc.

Why HSSE?

Brewer Science recognizes its responsibility to conserve natural resources while providing safe, secure, and environmentally responsible solutions for customers throughout the world. For this reason, Health, Safety, Security, and Environmental (HSSE) management systems based on the requirements of the ISO® 14001, OHSAS 18001, and ISO® 27002 standards are maintained. A global HSSE Team implements and maintains systems that support the company's HSSE policy and goals. Internal Safety, Security, and Environmental Departments participate with and assist the HSSE Team by educating employees and the local community about improved waste management and HSSE practices.

HSSE Policy

Brewer Science has established and is committed to maintaining health, safety, security, and environmental management systems with the overall objective of preventing pollution of the environment and providing a healthy, safe, and secure workplace. Suppliers, contractors, and customers are encouraged to follow ISO® 14001, OHSAS 18001, and ISO® 27002 standards. These systems will drive continuous improvement through planning, risk assessment and monitoring, corrective action, and management review. Brewer Science will comply with all relevant international, federal, state, and local regulations and other requirements wherever we operate.

HSSE Performance Information

All environmental, health, and safety aspects of Brewer Science processes and products are identified. Objectives and targets that minimize the company's negative impact on these systems are then developed. Management approves the objectives, while the HSSE Team manages the systems to ensure all goals are reached effectively and on time.

OPERATIONAL OUTCOMES

The following specific outcomes have been achieved to minimize environmental, health, safety, and security impacts:

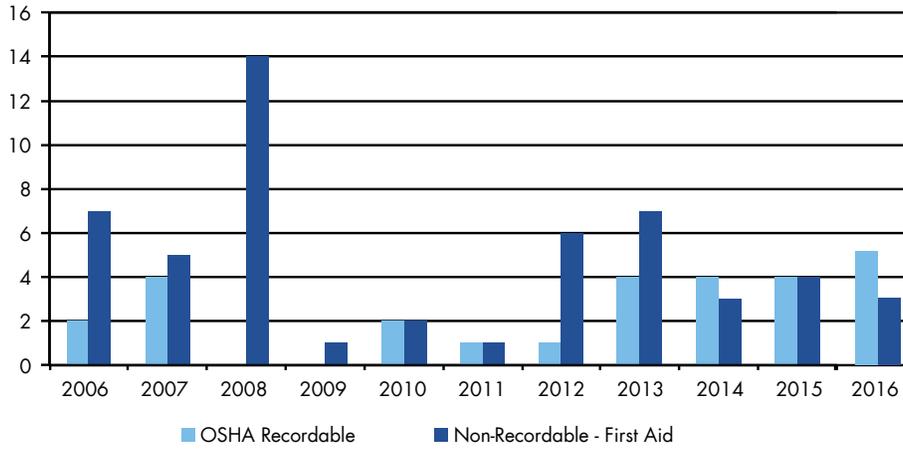
- Received the GreenCircle, LLC. "Zero Waste to Landfill" certification
- Reduced the overall occurrences of chemical spills and chemical exposures by 30% from 2015
- Reduced the overall occurrences of safety incidents by 30% from 2015
- Reduced hazardous waste generation by 20% from 2015

WELLNESS

Healthy employees must be at the helm to carry out the Brewer Science company vision, Of the People, By the Technology, For the Customer. Several wellness programs were provided for employees during 2016.

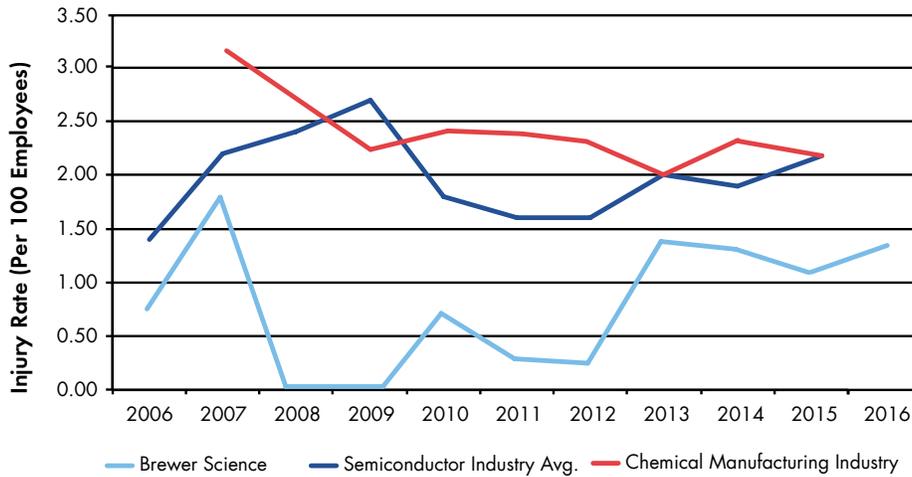
- Fall/winter fitness program
- Smoking cessation program
- Discounts provided to employees at various fitness centers
- Wellness breaks wherein employees are allotted 30 minutes per day of paid time to engage in exercise and physical activity
- On-site fitness room – treadmill, elliptical, weight machine, stationary bikes
- Healthy food options in the vending machines
- On-site yoga classes
- Sponsorship of teams for 5K and Mud Run

Summary of Recordable and Non-Recordable Injuries



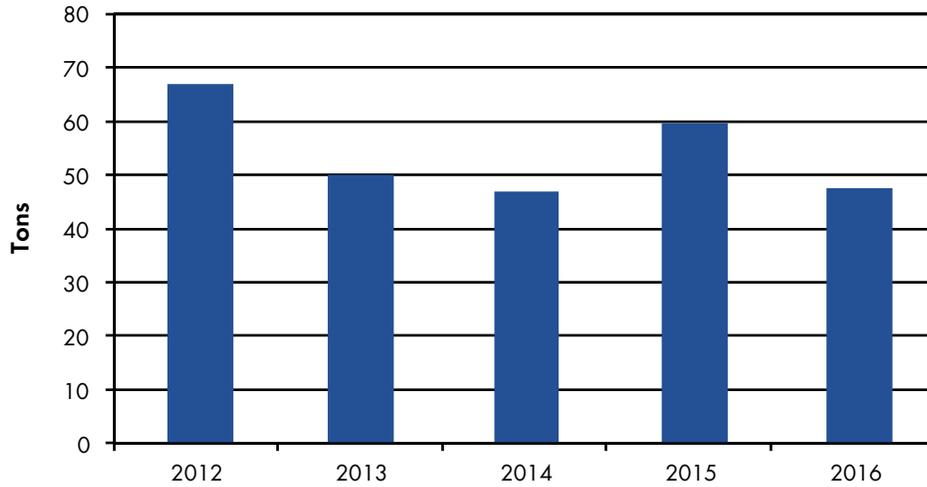
Brewer Science experienced five recordable injuries in 2016.

OSHA® Recordable Injury Rate Comparisons (U.S. Bureau of Labor Statistics)



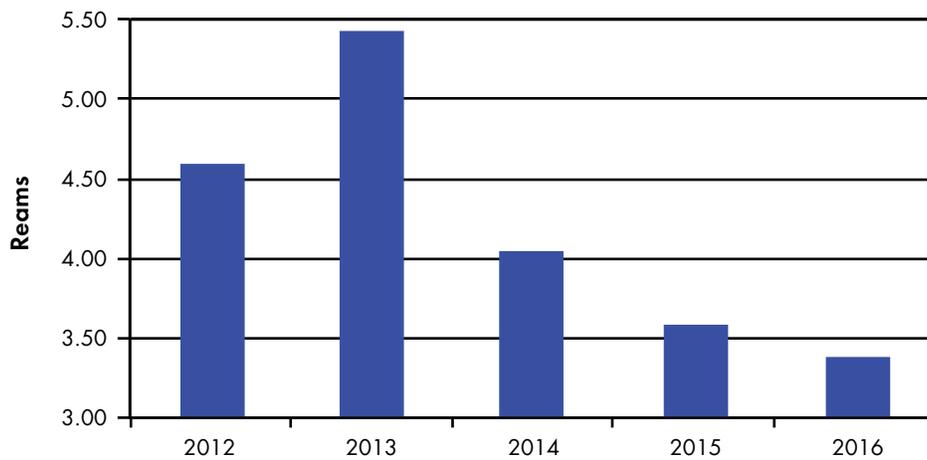
The Brewer Science safety record continues to exceed the semiconductor industry average.

Tons Recycled

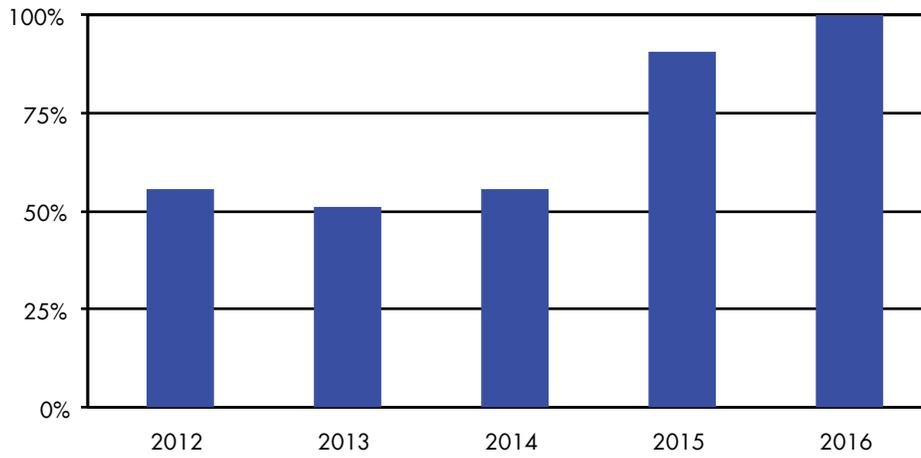


Brewer Science has recycled over 645 tons since its formal recycling program was initiated in 2002. Materials included in these numbers are all types of paper, plastic bags, shrink-wrap, bottles, and containers. The proceeds from recycling aluminum cans, cell phones, and ink-jet cartridges are donated to local non-profit organizations. Batteries, steel drums, and other metals are also recycled. Brewer Science continually looks for ways to utilize recyclable materials.

Annual Paper Usage Per Employee

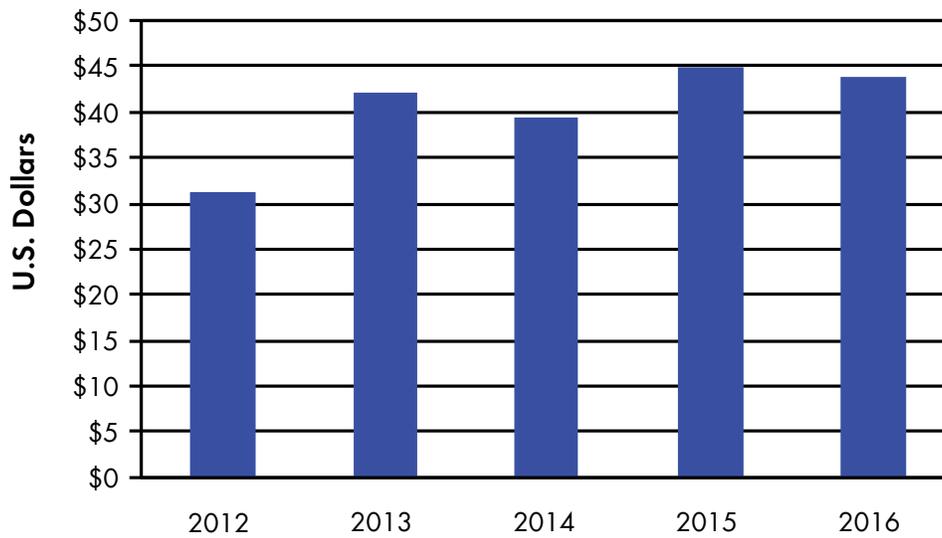


Diversion Rate of Solid Waste

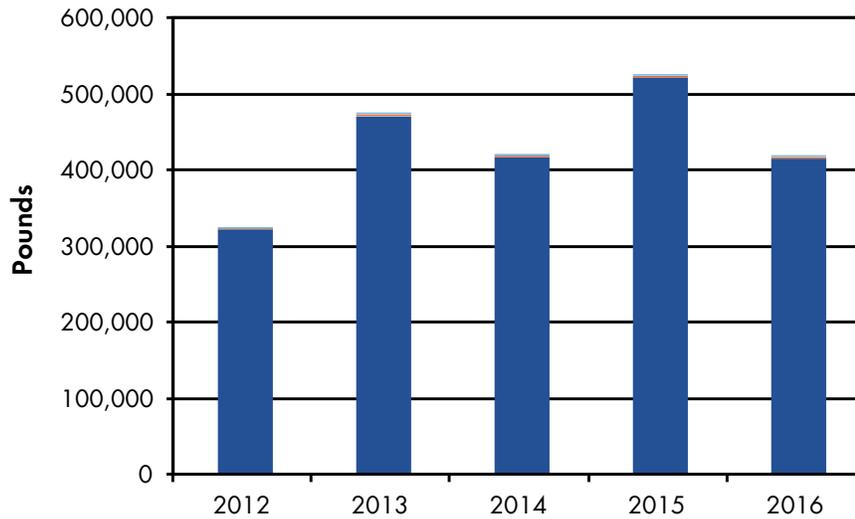


Brewer Science sustained the percentage of total solid waste diverted from landfills.

Annual Solid Waste Disposal Cost Per Employee



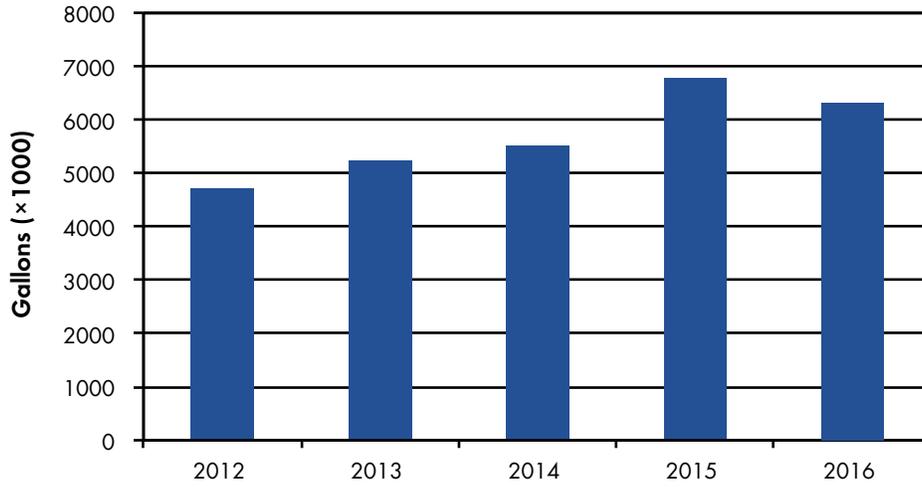
Hazardous Waste Disposal



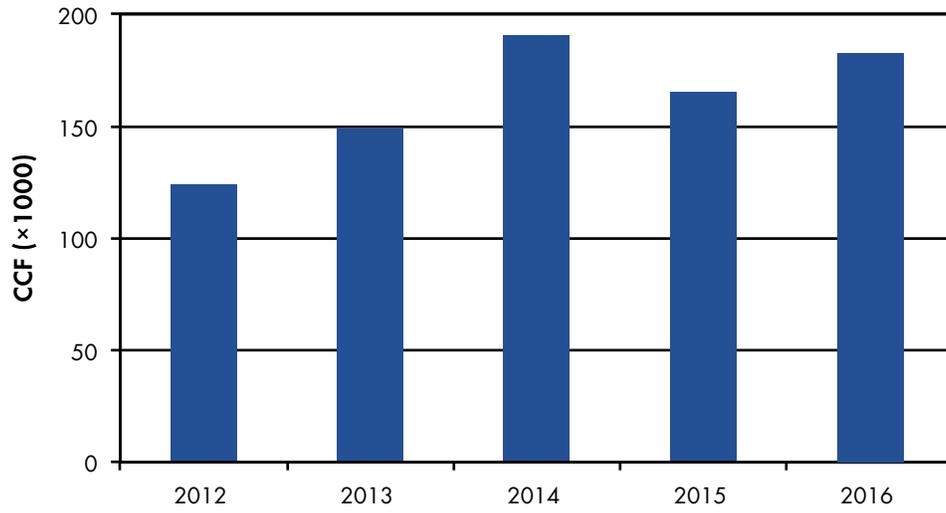
Fuel blending involves processing hazardous waste into fuels derived from liquid and solid waste, which are used as a secondary fuel source to replace coal and natural gas in cement kilns. This method is safe and effective for recovering the energy value of the waste and helps conserve our planet's finite natural resources.

Metal drums are processed as they pass through the container decontamination unit, an oven fueled by natural gas with temperatures above 1500° F. The high temperatures destroy the chemical residues, which produce ash. This ash is tested and blended on site into an alternative fuel source for cement kilns. Decontaminated drums are then crushed and sent to steel mills for recycling.

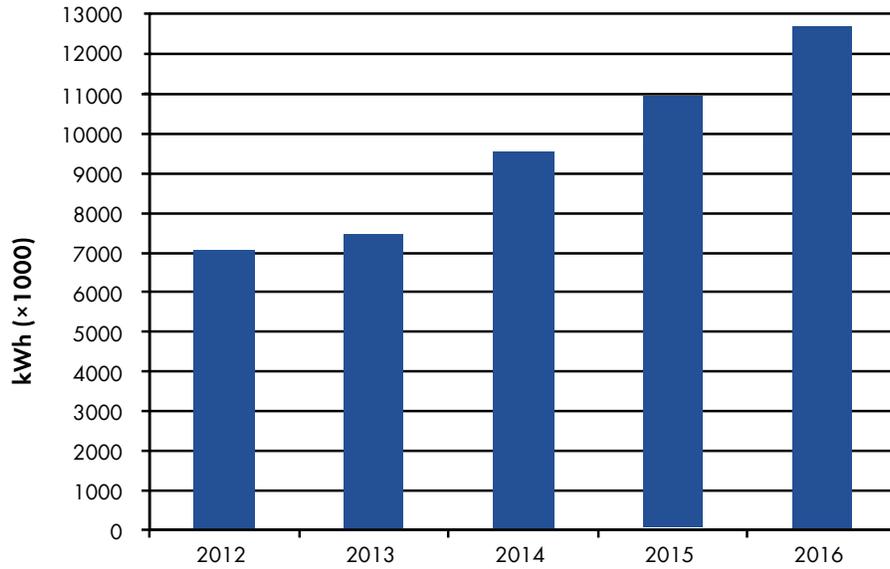
Water Usage



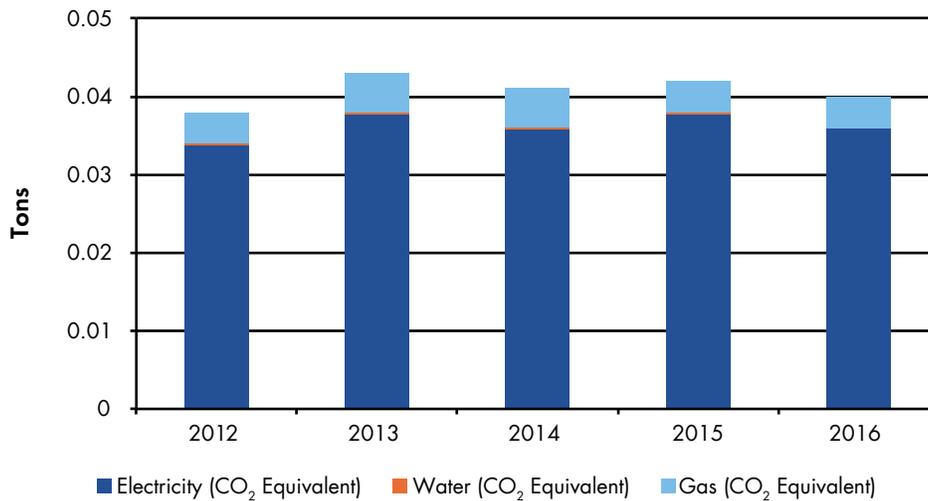
Gas Usage



Electricity Usage

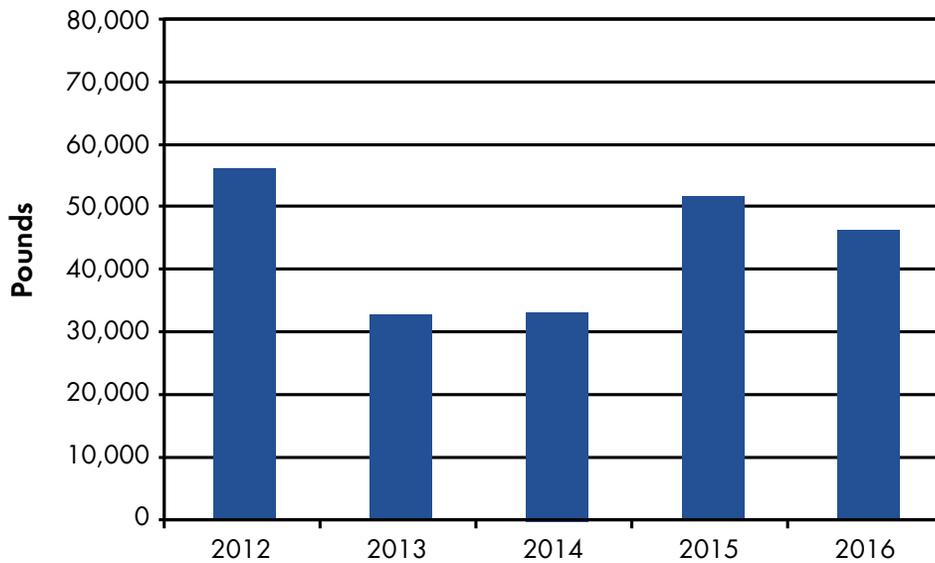


CO₂ Equivalent (Normalized to Production Volume)



Brewer Science expansions and increased production have increased the overall utility usage year over year; however, our Green Program efforts continue to retrofit existing systems and ensure energy-saving options are implemented with new construction projects. Weather patterns in the summer and winter months also have a large effect on utility usage for gas and electricity.

Community Waste Collections



Brewer Science continues its partnership with the community by helping stakeholders properly dispose of waste and adopting the surrounding streets in our industrial park. By working with the City of Rolla, the Ozark Rivers Solid Waste Management District, the Missouri Department of Natural Resources, the Meramec Regional Planning Commission, and the Phelps County Commission, Brewer Science provides area residents with community collections that have enabled Phelps County to properly dispose of over 910,000 pounds of waste over the past 12 years. This partnership contracted disposal companies and provided volunteers who collected appliances, electronics, and tires from area residents which would have otherwise been disposed of in a landfill. Brewer Science continues to support these efforts.

Training

All personnel are required to be competent when they perform tasks that may impact HSSE issues in the workplace. Competence is defined in terms of appropriate education, training, and/or experience. Training requirements are based upon the specific task requirements of individual job descriptions and/or homogeneous exposure groups as defined in our Hazard Assessment Procedure. Training plans are updated and documented at least annually as part of the HSSE objectives planning process and are summarized in the Corporate Training Matrix. Human Resources maintains these records according to the Training Process.

Below are some of the required HSSE training courses:

- Hazard Communication Annual Refresher
- Hazardous Waste Annual Refresher
- Lockout/Tagout Authorization
- Chemical Hygiene Plan
- Workplace Violence Prevention
- Fire Extinguisher Training
- Flammable and Combustible Liquids Training
- Influencing Security-Compliant Behaviors
- Emergency Response
- Safety Review & Lab Chemical Hygiene Plan
- Hot Work Permits
- Respirator Training
- Electrical Safety
- Gas Cylinder Handling
- Compressed Gas
- Ergonomics
- Material Handling
- Elevated Work
- Globally Harmonized System
- HF/Piranha/Strong Acids

Awards and Recognition

Brewer Science has received numerous awards in recognition of its voluntary efforts and genuine concern for the environment.

LOCAL

- 2012 – Ozark Rivers Solid Waste Management District: Dedication to the environment in the Ozark Rivers Region
- 2012 – Award of Congratulations from SAFERolla for recognizing the importance of protecting the health of workers and our community. Awarded by the physicians and volunteers who make up the Smoke-Free Air for Everyone coalition.
- 2014 – Safety Council of the Ozarks, Les Reynolds Million Hour Award 2014

STATE

- 2011 – Missouri Association of Manufacturers 2011 Safety Excellence Award for Category V: 400,000 or more hours worked. Brewer Science's performance record exemplifies an outstanding safety program.
- 2013 – Terry Brewer named "One of the 50 Missourians You Should Know" by *Ingram's* magazine
- 2013 – Brewer Science named "Top Workplace" by the *St. Louis Post-Dispatch*
- 2014 – Safety Excellence Award from the Missouri Association of Manufacturers
- 2015 - Brewer Science named "Top Workplace" by the *St. Louis Post Dispatch*
- 2016 - Brewer Science honorable mention for "Top Workplace" by the *St. Louis Post Dispatch*
- 2016 - Made In Missouri "Sustainability Leadership Award" from the Missouri Association of Manufacturers

NATIONAL

- 2005 – National Recycling Coalition: Fred Schmitt Award for Outstanding Corporate Leadership
- 2006 – American Forest & Paper Association®: Business Leadership and Recycling Award
- 2010 – National Safety Council: Million Work Hours Award
- 2010 – National Safety Council: Significant Improvement Award
- 2010 – National Safety Council: Milestone Award
- 2010 – Southwest Area Manufacturers Association: Safety Excellence Award
- 2011 – Travelers Insurance Safety Award for working 1.5 million hours without a lost workday injury
- 2012 – Ozark Rivers Solid Waste Management District: Award in the business category for outstanding multiyear environmental support to the community
- 2011, 2012, 2013, 2014, 2015, 2016 – American Heart Association: Gold Fit Friendly Award
- 2014, 2015, 2016 - Minority Engineer magazine's list of Top 50 Employers in the United States





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