

2017

Waupaca Foundry, Inc. Sustainability Report



Economic, environmental, and social performance and impacts

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CLICK TO LINK
 The **numbers** found in the blue boxes shown throughout this report identify the standard disclosures and indicators associated with the GRI Aspects that we have determined to be material to our business. A list of these disclosures and indicators can also be found in the GRI Content Index found at the end of this report.



President, COO and CEO Statement

Thank you for visiting Waupaca Foundry's Sustainability Report for the 2017 fiscal year. In preparing this and prior year reports, we've worked hard to develop a useful introduction to Waupaca Foundry, Inc. operations as well as provide information that allows the reader to assess our organization's aspects and impacts, risks and opportunities, and the successes achieved to improve our sustainability performance.

While Waupaca Foundry has a great story to tell as a proud member of the recycling-oriented metalcasting industry, we have recognized that an improved level of performance can only be achieved when sustainability is integrated into all aspects of our operations. This integration and continual improvement is an ongoing process and certainly not complete. However, it is exciting to reflect on each prior year and see the differences that these efforts made. Many thanks to our customers and other stakeholders who recognize and appreciate our efforts in the areas of safety, quality, delivery, service, and environmental performance. A special thanks goes to our team who brings these successes to life, and the State of Wisconsin's Focus on Energy Program who recognized Waupaca Foundry in 2017 with the Energy Efficiency Excellence Award for outstanding commitment to energy efficiency practices.

This year's notable successes include: From 2009 to 2017, Waupaca Foundry reduced its cumulative energy intensity by 19.5%. Landfilled waste was significantly reduced, with landfill avoidance being achieved for 74.5% of all byproducts/wastes via beneficial reuse and our other recycling programs, and from 2016 to 2017 alone, Waupaca accomplished a 15% year-over-year reduction in water use. Waupaca Foundry was also honored with Ford's Q1 Preferred Quality Status Certification and two distinctions by the American Foundry Society (the Plant Engineering Award and Best-in-Class Casting Award). Please explore the following pages of this report to get more details on these recognitions and other improvements.

Our ongoing partnership with Hitachi Metals, Ltd. along with their support continues to catalyze our efforts. With them, we are working hard to achieve our key strategic initiatives for global growth, and 2017 marked the transformation of Waupaca Foundry, Etowah to an all-ductile iron casting facility to meet customer demand. Additionally, Waupaca Foundry continues to develop partnerships and implement strategies to provide machining and other value-added services to meet the evolving needs of our customers and streamline their supply chain.

We appreciate your interest in Waupaca Foundry, Inc.'s sustainability program. We will continue to set objectives and targets for key sustainability initiatives for continual improvement. We value your feedback, so please contact us (via our website if you wish) with any questions or comments on our sustainable business practices, performance to date, or the content of this report.



Mike Nikolai
President,
COO and CEO



About Us



2017 SALES
\$1.82
Billion

WHO WE ARE

Waupaca Foundry, a Hitachi Metals group company, is the largest producer of gray, ductile, austempered ductile, and compacted graphite iron in the world, melting 2,624,378 tons of melt in FY2017. Our castings are produced using our custom-built vertical green sand molding machines and created by a workforce of over 4,400 people that puts generations of expertise to work for our customers every day.

We provide a singular blend of stability and innovation, expertise and collaboration, and the realization that we hold ourselves to higher standards because customers and employees depend on us. We pride ourselves on our technical expertise and process control, providing castings for our customers that only we can produce, as a result of our extensive experience and consistent approach to the application of technology throughout our value chain.



HISTORICAL MILESTONES

In October 2015 we celebrated our 60th year in business. Throughout its 60-year history, Waupaca Foundry has maintained a reputation of innovation and producing top-quality iron castings. A few years after the foundry started business, it had a capacity of melting 30 tons of iron daily. Yielding a FY2017 iron melting capacity of more than 10,000 tons daily across seven plants in the United States, Waupaca Foundry melts the equivalent weight of the U.S. Capitol Dome in Washington, D.C. (comprised of 4,100 tons of cast iron) every 10 hours of operation!

1871: John Rosche started the Pioneer Foundry on the banks of the Waupaca River, just east of Main Street in the city of Waupaca, Wisconsin.

1955: Assets of Pioneer Foundry were acquired and Waupaca Foundry, Inc. was established.

1957: Waupaca Foundry cast truck brake drums, heavy truck axle parts, water- and air-cooled industrial equipment parts, wood and metal working equipment castings, electric motor housings, and parts for electric door openers. A 4-ton cupola with a 45-foot stack was constructed, operations were transferred to a new plant (today known as Plant 1), and the melting capacity increased to 30 tons per day.

1969: An addition to the industrial park plant of Waupaca Foundry doubled iron casting production capacity at the plant and created what is known today as Plant 2/3.

1973: Plant 4 was constructed in Marinette, Wisconsin.

1996: Plant 5 was built in Tell City, Indiana.

1999: The world's largest vertical sand molding machine at Plant 5 was installed. The machine was designed and built by Waupaca Foundry and made it the largest non-captive iron foundry in the world.

2000: Construction began on Plant 6, located in Etowah, Tennessee.

2012: KPS Capital Partners acquired Waupaca Foundry, formerly known as ThyssenKrupp Waupaca. Upon closing, the company was renamed Waupaca Foundry, Inc.

2014: Hitachi Metals, Ltd. signs an agreement to purchase Waupaca Foundry from KPS Capital Partners, Waupaca Foundry is acquired by Hitachi Metals, Ltd., and joins its High-Grade Functional Components Company.

2015: \$27 million invested to expand three plants in Waupaca, Wisconsin.

2016: Hitachi Metals Automotive Components USA merges with, and operates as, Waupaca Foundry.



OUR LOCATIONS

Waupaca Foundry employs a staff of more than 200 at its headquarters in Waupaca, Wisconsin. Our plants employ locally and deliver globally, serving a range of market sectors worldwide.



PLANT 1

WAUPACA, WI
547 Employees

Iron Type: Gray iron
Melt capacity: 90 tons per hour
Markets served: Agriculture, construction, commercial vehicle, material handling, hydraulics, power tool, and power transmission
Products manufactured: Hydraulic housings, flywheels, weights, covers, brackets, turbo bearing housings, clutch housings, pulleys, and brake rotors



PLANT 2/3

Iron Type: Gray iron
Melt capacity: 120 tons per hour
Markets served: Light vehicle, agriculture, commercial vehicle, construction, material handling, heating, power tools, power transmission, and infrastructure
Products manufactured: Electric motor housings, boiler sections, transmission housings, brake rotors, flywheels, and bedplates

WAUPACA, WI
844 Employees



PLANT 4

Iron Type: Ductile iron
Melt capacity: 75 tons per hour
Markets served: Light vehicle, material handling, power transmission, agriculture, hydraulics, and commercial vehicle
Products manufactured: Brake calipers, brake anchors, differential cases, bearing caps, slack adjusters, spring hangers, and steering housings

MARINETTE, WI
756 Employees



PLANT 5

TELL CITY, IN
884 Employees

Iron Type: Gray iron, ductile iron, and compacted graphite

Melt capacity: 160 tons per hour

Markets served: Light vehicle, commercial vehicle, agriculture, and construction

Products manufactured: Brake rotors and drums, brake calipers, crankshafts, differential carriers, differential cases, and flywheel housings



PLANT 6

ETOWAH, TN
514 Employees

Iron Type: Ductile iron

Melt capacity: 80 tons per hour

Markets served: Light vehicle, material handling, agriculture, construction, hydraulics, and commercial vehicle

Products manufactured: Brake calipers & anchors, differential cases, knuckles, control arms, and damper hubs



PLANT 7

LAWRENCEVILLE, PA

261 Employees

Iron Type: Ductile iron
Melt capacity: 20 tons per hour
Markets served: Light vehicle and commercial vehicle
Products manufactured: Suspension components, exhaust manifolds, and brackets for original equipment automotive manufacturers



PLANT 7

EFFINGHAM, IL

211 Employees

Type of facility: Machining and assembly
Markets served: Light vehicle and commercial vehicle
Products manufactured: Suspension components, exhaust manifolds, and brackets for original equipment automotive manufacturers

OUR PROCESS AND TECHNOLOGY

Our process begins with a blend of raw materials composed of a customized mix of metals, select alloys, and recycled scrap iron. The mixture varies based upon the needs of our customers and the type of casting that is produced. The metal mixture is melted in large furnaces at temperatures ranging from 2,600 to 2,800 degrees Fahrenheit. The molten iron is then poured into molds made out of sand. Cores, which are molded sand inserts, are used to create the interior surfaces of the casting. We use a variety of core making processes that give us flexibility in the complexity, size, weight, and dimensional control of our castings. As the castings travel down the molding line, the temperature gradually decreases and the castings enter a shakeout process to remove sand from the castings. Over 75 percent of the sand is reclaimed and recycled for reuse. The castings are then cleaned to remove residual sand and other molding media from the casting surface. The final step is to grind off any excess material left from the molding process and inspect in order to meet our customers' specifications.

We design and build our own casting equipment that helps prevent downtime and offers efficiency and customization to meet our customers' requirements. In some casting applications, we even help reduce the need for multiple cast, fabricated or welded parts, thereby simplifying assemblies for our customers, as well as reducing their inventory costs. We apply cutting edge technology to reduce total overall manufacturing costs through innovative casting and core passage designs, waste reduction, and mass reduction of our products. The techniques used in our process allow us to design, engineer, and manufacture "World-Class" equipment and processes. Not only is our process cost competitive, it also improves casting consistency and quality.

WAUPACA FOUNDRY MISSION

Waupaca Foundry produces iron castings, focusing on transportation, construction, agriculture, and industrial markets worldwide.

We embrace lean manufacturing techniques in all our facilities, and manage other value-added services for our customers. Our customers' expectations are met through innovative technology, continuous improvement culture, and the efforts of our dedicated, motivated, highly trained work force.

We maintain strong social and environmental commitments to our employees and communities, including: improvements sustained through GREEN initiatives, a well-maintained and safe environment, and the encouragement of employees' personal growth through advancement and continuing education.

GOVERNANCE STRUCTURE

Our corporate governance framework ensures accountability, fairness, and transparency in our relationship with our stakeholders. Our sustainability program is overseen by a cross-functional Sustainability Committee, made up of representatives from all areas of our business.

Waupaca Foundry's Board of Directors currently consists of four directors who have four meetings throughout the year and report regularly to indirect parent company Hitachi Metals, Ltd. The Board oversees several committees, including the Sustainability Committee, and our sustainability strategy and report are regularly reviewed by the Board. Primary leadership for sustainability implementation resides with the Environmental Coordinator who reports to the Vice President of Operations, who serves as the executive sponsor of the Sustainability Committee along with the CEO.



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Waupaca Foundry has the responsibility and commitment to keep improving our energy efficiency and implement the changes needed to make Waupaca a worldwide sustainability reference.

*Marco Gonzalez
energy manager
for Waupaca Foundry*

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ETHICS AND INTEGRITY

Our Code of Conduct and compliance policies embody our commitment to ethics and integrity in business and guide us toward meeting the challenges of a global market while adhering to our principles of social responsibility.

Waupaca Foundry is committed to respecting the fundamental rights laid down in the United Nations Universal Declaration of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. Consistent with Principle 15 of The Rio Declaration on Environment and Development, Waupaca Foundry also supports the use of the precautionary principle in its approach to risk management in its strategic planning and policy implementation.

Our Code of Conduct emphasizes our commitment to the goals of sustainable development, aside from the company's economic performance, and also includes social benefits, resource consumption, jobs, and advanced training. The Executive Board and Managing Board of Waupaca Foundry are responsible for the principles outlined in our code of conduct, including:

- Equal Opportunity
- Working Time and Vacation
- Remuneration
- Health, Safety, and Working Conditions
- Promotion of Vocational Training
- Right to Associate
- Forced and Child Labor

We are committed to ensuring that these principles are made known to customers and suppliers, and we encourage our customers and suppliers to consider corresponding principles in their own corporate policies. Waupaca Foundry's code of conduct is available upon request.



CODE OF CONDUCT

Violations are to be reported to Waupaca Foundry's legal department without delay. All reported potential violations are reviewed and investigated by the legal department. The Board of Directors is informed after an initial investigation is completed.

Our Commitment to Sustainability



SUSTAINABILITY

Sustainability has always been part of who we are. Foundries have long served as society's recyclers, and our industry provides value to society by diverting materials such as old iron castings and scrap steel from landfills, and instead using them as input materials in the melting process to create new products. Recycling old castings offers the net least environmental impact to remake another casting and reuse what is no longer being used for its original purpose. The use of steel scrap in charge mixes as an additional material helps to achieve the same goal. This recycling trend is not exclusive to iron foundries, but includes aluminum, copper, lead, and other metal foundry operations.

Along with the valuable benefits resulting from foundries' role as recyclers of scrap metals come a number of impacts associated with foundry processes. Regardless of the source of our input materials, melting metal requires large quantities of energy. Water is needed to cool production equipment used in the foundry environment. Foundry operations also have the potential to generate large amounts of dust that can impact the atmosphere. Waste generated by foundries includes large volumes of foundry sand from the molding and casting process. Just as we do with our products, Waupaca Foundry's approach is to apply science and our technological expertise to address these impacts, as described in the following sections of this report.

To focus these and other sustainability efforts under a cohesive, structured initiative, we formed a Sustainability Committee in 2014. The Sustainability Committee works through a formal process to identify the issues that are material to our business, identify our key stakeholders, and develop objectives and targets that support our overall sustainability vision.

The five basic principles in the Hitachi Metals Company Code of Conduct provide the foundation of our sustainability strategy:

1. Enhancing Awareness of Social Responsibility and Corporate Ethics
2. Pursuing Mutual Growth with Our Business Partners
3. Promoting Truthful Communication with Society
4. Thinking about Our Next Generation – An Environmentally Friendly Solution
5. Fostering the Welfare of Employees and Society

MATERIALITY ASSESSMENT

The Sustainability Committee conducted a materiality assessment to formally define the issues important to us and our stakeholders. We rated each of the aspects using the six evaluation criterion below and ranked the aspects by average weighted materiality score:

- Financial Implications
- Legal/Regulatory/Policy Implications
- Established Industry Norms
- Relevance to Stakeholders
- Opportunity for Innovation
- Forward-Looking Adjustment for Future Risk/Opportunity

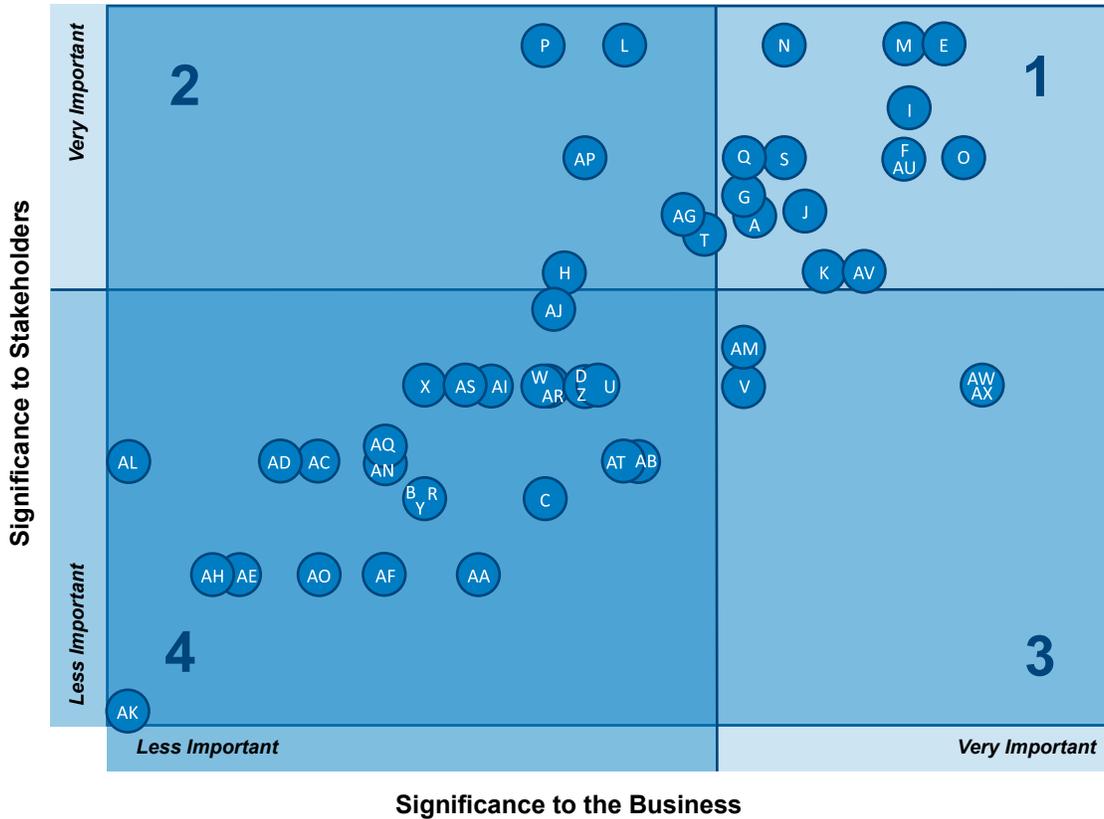
The team then used this ranking to evaluate appropriate targets for disclosure and performance improvements. In setting objectives and targets, the team reviewed the availability and quality of current data to assess the ability to improve disclosure, as well as the complexity of the effort required to improve performance. Evaluation criteria for the material aspects were aligned with the Sustainability Accounting Standards Board's (SASB) materiality assessment criteria (www.sasb.org) and results of the materiality assessment align with our internal Enterprise Risk Assessment outcomes. Our assessment process provides a means to periodically evaluate our focus areas and allows us to concentrate on those areas of greatest concern to our stakeholders and with greatest impact on our business. All material aspects apply to all of our business units to some degree.



WHAT IS A MATERIALITY ASSESSMENT?

A materiality assessment is an exercise designed to gather insight on the relative importance of specific economic, environmental, social, and governance issues within the organization's boundary for a given time period. An organization should report sustainability issues that cause the most impact within these areas, as well as those considered most important by its internal and external stakeholders. The materiality assessment is the process of determining these material issues and their impact on internal and external stakeholders.

Materiality Assessment



Material ASPECTs (GRI G4)

A Economic Performance	AA Freedom of Association and Collective Bargaining
B Market Presence	AB Child Labor
C Indirect Economic Impacts	AC Forced and Compulsory Labor
D Procurement Practices	AD Security Practices
E Materials	AE Indigenous Rights
F Energy	AF Assessment (Human Rights Review and/or Impact Assessment)
G Water	AG Supplier Human Rights Assessment
H Biodiversity	AH Human Rights Grievances and Resolution
I Emissions	AI Local Communities
J Effluents and Waste	AJ Anti-Corruption
K Products and Services (Environmental)	AK Public Policy (Political Involvement)
L Compliance (Environmental)	AL Anti-Competitive Behavior
M Transport	AM Compliance (Social)
N Overall (Environmental)	AN Supplier Assessment for Impacts on Society
O Supplier Environmental Assessment	AO Grievance Mechanisms for Impacts on Society
P Environmental Grievance Mechanisms	AP Customer Health and Safety
Q Employment	AQ Product and Service Labeling
R Labor/Management Relations	AR Marketing Communications
S Occupational Health and Safety	AS Customer Privacy
T Training and Education	AT Compliance (Products and Services)
U Diversity and Equal Opportunity	AU Quality
V Equal Remuneration for Men and Women	AV Logistics
W Supplier Assessment for Labor Practices	AW Research and Development
X Labor Practices Grievance Mechanisms	AX Future Technology Development
Y Investment	
Z Non-discrimination	

MATERIALITY ASSESSMENT *(Continued)*

Based on our materiality assessment, we identified the following material aspects for our business, which form the basis for our report content and performance metrics:

Environmental

- Materials
- Energy
- Emissions
- Effluents and Waste
- Supplier Environmental Assessments
- Water
- Overall (Environmental)
- Transport/Logistics
- Products and Services (Environmental)

Social

- Employment
- Occupation Health and Safety
- Training and Education
- Legal Compliance
- Marketing

Economic

- Economic Performance
- Indirect Economic Impacts
- Procurement Practices
- Quality

STAKEHOLDER ENGAGEMENT

The Sustainability Committee also worked through a systematic process to identify and prioritize stakeholders, and evaluate the significance of aspects against criteria that supported the business mission and objectives.

Evaluation Criteria for mapping and assessing stakeholder prioritization were:

- Influence and Decision-Making Power
- Credibility
- Willingness to Engage
- Proximity and Duration of Relationships
- Contribution Value

Our stakeholder evaluation included benchmarking of key customers and competitors to better understand issues of importance and industry norms. Our participation in industry trade groups such as the American Foundry Society (AFS), Foundry Educational Foundation (FEF), and Wisconsin Manufacturers & Commerce (WMC) also informed our process and allows us to promote the discussion and advancement of environmental topics including energy use and carbon-related emissions. For example, Waupaca Foundry staff participate in Solid Waste Water and Air Quality technical committees through AFS that develop and share best practices amongst AFS members for managing solid waste and protecting air and water quality. We are also involved in AFS's efforts to explore ideas on how foundries can operate in a more sustainable manner in the future.

We recognize additional opportunities in the area of stakeholder engagement and will continue our efforts to better understand and incorporate our stakeholders' views into our sustainability initiatives and reporting.



STAKEHOLDER ENGAGEMENT *(Continued)*

The Sustainability Committee identified opportunities with employees and their families, customers, and our suppliers as primary areas of focus, and we continue our engagement strategies to solicit views from these stakeholder groups, as shown in the following table:

STAKEHOLDER GROUPS	ENGAGEMENT STRATEGIES
Current Employees	<ul style="list-style-type: none"> • Open door policy • Employee engagement surveys • Key group and lead group meetings • Biannual planning meeting • Company newsletter and newspaper (Foundry News) • E portal • Employee wellness program • Kaizen program • Behavior-based safety, including safety suggestion and near-miss reporting • Waupaca Way production management system
Employees' Families and Dependents, and Retirees	<ul style="list-style-type: none"> • Company functions (picnics, parade, etc.) • Company newsletter and newspaper (Foundry News) • Summer help and internship programs • Hiring back retirees as consultants
Prospective Employees	<ul style="list-style-type: none"> • Job fairs • College industry conference (Foundry Educational Foundation) • Plant tours and visits from educational institutions • Foundry-in-a-Box simulation • Mini cupola demonstrations on site or at universities and technical colleges • Scholarships and local college investment • waupacafoundry.com
Customers	<ul style="list-style-type: none"> • Blog and e-newsletter (PartingLINE) • Voice-of-the-Customer surveys • Foundry 101 • In-house visits • Value analysis/Value engineering and other collaborations • Trade show participation • Code of conduct and compliance policies published • waupacafoundry.com
Suppliers	<ul style="list-style-type: none"> • Code of conduct and compliance policies published • Supplier assessments • waupacafoundry.com

Using our materiality assessment and our stakeholder mapping results, our committee established comprehensive performance improvement objectives and targets for our company. Our management approach and performance indicators for 2017 are outlined in the following sections of this report.

STAKEHOLDER ENGAGEMENT *(Continued)*

MATERIAL ASPECT (GRI G4)	OBJECTIVES	TARGETS (Fiscal 2014 Baseline Year Unless Otherwise Noted)
Indirect Economic Impacts	To be a positive economic impact on the communities in which we operate.	Provide and support educational opportunities to local citizens including direct funding to schools, internships, student employment opportunities, and scholarships. Provide competitive compensation, which supports the employees' families and in turn other community businesses (as compared to available external compensation reports).
Materials	Develop and promote the reduction in the use of (formerly) non-recyclable raw materials.	Completion of a feasibility study in fiscal 2015 to determine the reduction opportunities for new clay and sand via reclamation system technologies. (Complete—pursue identified opportunities development through 2018.) Completion of a feasibility study in fiscal 2015 to determine melt system modification strategies to reduce the coke-to-melt usage ratio. (Partially Complete—pursue identification of additional opportunities through 2018.)
Energy	Facilitate energy use reductions in Waupaca Foundry Operations.	Reduce energy use by 25 percent over the next 10 years, using fiscal 2009 energy use as the baseline (mmBtu/ton of iron shipped).
Emissions	Promote alternative processes and maintain state-of-the-art pollution control technologies.	Maintain air pollution control systems considered as “best available” by the U.S. Environmental Protection Agency and associated state regulatory agencies for all processes regardless of the original installation date.
Effluents and Waste	Reduce spent foundry sand generation while promoting offsite reuse/recycling opportunities of remaining spent foundry materials to achieve zero landfill disposal.	Reduce spent foundry sand generation by 30 percent in 10 years (baseline 2010) (tons). Investigate the feasibility of developing alternative uses for remaining foundry byproducts by Calendar 2020.
Water	Facilitate water use reductions in Waupaca Foundry Operations.	Reduce water use consumption by 80 percent in 10 years (baseline 2010) (gallons/ton of melt).
Environmental Compliance	Identify and maintain compliance to legal and other requirements to which the organization subscribes and that are applicable to the environmental aspects of its activities, products, and services.	Maintain the organizational commitment to ongoing compliance with no receipt of violations, fines, or sanctions.
Supplier Environmental Assessment	Ensure environmental compliance and promote environmental stewardship and sustainability throughout the supply chain.	Rank and initiate the assessment of the top 25 significant suppliers (representing 70 percent total spend) in Fiscal 2015. (Complete—Develop strategies to communicate identified potential improvements for top suppliers through 2018.)

STAKEHOLDER ENGAGEMENT *(Continued)*

MATERIAL ASPECT (GRI G4)	OBJECTIVES	TARGETS (Fiscal 2014 Baseline Year Unless Otherwise Noted)
Occupational H&S	Prevent health and safety incidents for employees, contractors, and visitors.	<p>Achieve a consolidated Total Recordable Injury Rate (TRIR) of 2.0 or less in fiscal 2019.</p> <p>Achieve a consolidated Days Away, Restricted or Transferred (DART) rate of 1.0 or less in fiscal 2019.</p>
Training and Education	Create and support career development opportunities for employees' personal growth.	<p>Maintain 100 percent tuition reimbursement for Waupaca Foundry employees' continuing education (within company guidelines).</p> <p>Maintain 100 percent of Waupaca Foundry employees receiving career training each year (training required to perform their specific job requirements and/or developmental training for future growth).</p> <p>Achieve Six Sigma or related training for 100 percent of the workforce by December 31, 2017 (Kaizen/Green Belt/Black Belt/6S/Lean).</p> <p>Achieve and maintain leadership training to 100 percent of the employees in leadership positions.**</p> <p>Foster and maintain a 50 percent or greater total promotion rate for management level positions from internal employees. Fiscal 2017 ended with a 76% result.</p>
Advanced Materials	Develop and promote high strength materials to facilitate light weight casting designs.	Support the Hitachi Metals Soken Laboratory for advanced material and casting process development through intellectual property and human resource exchange.

**For leaders with greater than six months of service.

We successfully advanced all of our targets, with the following exceptions:

- Leadership training was provided to 71 percent of the leaders by March 31, 2018.
- Feasibility study to determine melt system modification strategies to reduce the coke-to-melt usage ratio was partially completed.

Operational Excellence



ECONOMIC PERFORMANCE

Waupaca Foundry aims to be a positive economic impact on the communities in which we operate. We do this by providing and supporting educational opportunities to local citizens through direct funding of schools, internships, student employment opportunities, scholarships, and other means.

As substantial employers in the communities in which we operate, we provide competitive compensation, which supports the families of employees as well as local community businesses. For example, a 2013 economic impact study by the University of Wisconsin Extension reported that \$82.5 million in direct labor income was generated to Waupaca County, Wisconsin, where three of our foundries are located. In addition to direct labor, Waupaca Foundry also purchased more than \$250 million in goods and services from local businesses. Combined with indirect employee wages and non-wage expenditures, Waupaca Foundry accounts for 10.4 percent of the total income of Waupaca County.



PRODUCTS AND MARKETS SERVED

Waupaca Foundry produces iron castings for the transportation, construction, agriculture, and industrial markets. We are highly diversified, producing 5,000 part numbers from 350 product categories. Our products include brake rotors and drums, brake calipers and anchors, differential cases and carriers, crankshafts, various housings, hubs, flywheels, boiler sections, and covers to name a few. Nearly 75% of all North American sourced brake rotors are made by Waupaca Foundry. And, a single tractor can have more than 75 iron castings made by Waupaca Foundry.

Located in the U.S., our foundries serve the following markets:

- Agriculture
- Construction
- Infrastructure
- Commercial Vehicle
- Light Truck and Passenger Car
- Material Handling
- Hydraulics
- Power Tools
- Power Transmission
- Heating, Ventilation, and AC Equipment



WAUPACA FOUNDRY EARNS FORD Q1 CERTIFICATION; FORD'S PREFERRED QUALITY STATUS

Tell City Foundry Recognized For Outstanding Gray Iron And Ductile Iron Castings

Waupaca Foundry has earned Q1 Certification from Ford Motor Company. The achievement confirms Waupaca Foundry—Tell City consistently delivers high- quality products on time to Ford customers and Q1 certification is a milestone in the pursuit of quality. Foundry leaders accepted the recognition during formal flag-raising ceremonies held in 2017 at its iron casting foundry in Tell City, Indiana.

Waupaca Foundry supplies both gray iron and ductile iron castings to Ford Motor Company used in braking, suspension, driveline and powertrains. The Foundry has been a Ford supplier for 20 years.

“Ford is a long-standing, valued customer,” said John Wiesbrock, Waupaca Foundry executive vice president of sales, marketing and supply chain management. “Our team is committed to continually earning Ford’s business by delivering best-in-class performance.”

Waupaca Foundry uses a production management system called “Waupaca Way,” which engages all employees in continual improvement of casting quality, production efficiency, customer service, and on-time delivery.

“Each of our team members helped us earn this important recognition,” said Kenley Hansen, Waupaca Foundry plant manager. “To us, the ‘Waupaca Way’ is supporting one another on the manufacturing floor to make us the safest and most efficient plant we can be. The expected outcomes are improved performance and customer satisfaction.”

Suppliers who achieve Ford Q1 Certification pass a rigorous process review. Each manufacturing site is individually assessed and must meet performance targets established by Ford. In addition to achieving certifications, such as ISO 9001, ISO/TS 16949 and ISO 14001, suppliers must also meet ongoing performance targets and maintain a robust continuous improvement program.



COMMITMENT TO QUALITY

We believe our customers deserve the best quality, on time, at a competitive price. Many of the products we make, such as brake components, are safety critical and demand high quality. We understand and meet or exceed the strict standards and requirements of our customers, stakeholders, and government agencies, and accountability lies with all members of the organization through understanding their roles in supporting quality and customer satisfaction. We maintain company-wide certifications to the ISO 9001 and ISO/TS 16949 international quality standards, and our manufacturing and inspection processes ensure customers have the highest quality castings in the industry.

We pride ourselves on the way we apply science to our product design and manufacturing processes. From our top leaders to our manufacturing teams, metallurgists are involved in controlling process consistency and continuously improving our technology. We have developed proprietary processes and customized equipment to monitor iron temperature, additives, and casting materials down to a hyper-detailed level, which ensures that our products are consistently durable and reliable.

Other examples of our technology, including digital imaging, robotic core production, and automated iron pouring, allow us to increase efficiency while maintaining quality and reducing production costs.

In conjunction with these efforts, our research and development team is tasked with developing and promoting high-strength materials to facilitate lightweight casting designs and other uses of advanced materials. The initial stage of research and development for all new product materials includes consideration for performance, product safety, and regulatory aspects of our products.

We create educated, informed buyers via our customized training events and technical road shows. Through our unique Foundry 101 industry initiative, we share how Waupaca Foundry improves total casting manufacturing cost with our custom-built equipment along with casting design and engineering support.



WAUPACA FOUNDRY RECEIVES AWARDS FOR CASTING, ENGINEERING

Waupaca Foundry received two distinctions from the American Foundry Society at the 121st Metalcasting Congress - the Divisional Plant Engineering Award for core room expansion improvements at both gray iron foundries located in Waupaca, Wis.

Additionally, Waupaca Foundry earned Best in Class for a ductile iron suspension casting converted from aluminum that achieved one of the Detroit Big Three's lightweighting objectives for a major automotive platform.

In addition, retired CEO Gary M. Gigante received the Peter L. Simpson Gold Medal for long-term contributions to the sustainability of the metalcasting industry through environmental stewardship, technological advances, and the development of people in the industry. Director of Research and Process Development Gregory Miskinis received the Award of Scientific Merit for major contributions to the metalcasting industry through industrial research, mentoring newcomers to the industry, and service to the Northeastern Wisconsin Chapter of AFS.

“

Waupaca Foundry has long-standing, valued customer relationships. Our team is committed to continually earning business by delivering best-in-class performance.

*John Wiesbrock
Executive Vice
President*

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WAUPACA FOUNDRY GAINS BOILER RECERTIFICATION

Cast iron boiler sections produced at Waupaca-based foundry



Waupaca Foundry completed its annual audit and was recertified according to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code standards. These standards establish safety rules for the design, fabrication, and inspection of boilers and pressure vessels that are fired by oil, gas, electricity, coal, or other solid or liquid fuels. Standards cover material used for boiler fabrication, definitions relating to boiler design and welding, and a range of quality control systems.



Waupaca Foundry is the only commercial, non-captive foundry carrying the certification. For more than 35 years, the Waupaca-based foundry produces cast iron boiler sections for boiler heating system manufacturers. The gray iron foundry originally earned certification in August of 1992 and was recommended by ASME for renewal in June of 2017.



Waupaca Foundry's capability to cast gray iron boilers provided critical relief following Hurricane Sandy's 2012 destruction of more than 300,000 homes. Boiler manufacturers rushed to produce boilers for a rapid rebuilding surge. In the three months following the October hurricane, Waupaca Foundry cast and shipped thousands of gray iron boiler sections to aid in the rebuilding and heating of residential and commercial properties before the harsh East Coast winter months.

RESPONSIBLE PROCUREMENT

Waupaca Foundry's procurement strategy seeks to purchase products and services with high quality and competitive costs through better purchasing processes, and, dealing with all of our suppliers with trust, respect, ethics, honesty, and integrity. Waupaca Foundry values the long-term relationships we have established with our strategic suppliers, many of which go back 30 years or more.

Our supply chain for raw materials is global and diverse. Waupaca's supply chain management organization structure includes procurement, order fulfillment, and new product delivery processes and teams. The role of the procurement teams is to centrally manage all sourcing and buying decisions to leverage costs across the organization while also ensuring that these decisions adhere to established controls and procedures. Logistics, supplier development, and supplier quality are also the responsibility of the procurement teams.

Purchased cost-reduction processes are also led by the supply chain management team, including implementing alternative melt materials, supplier-consigned inventories, just-in-time deliveries, and strategic-sourcing initiatives.

We also seek to mitigate risks through the utilization of multiple methods for tracking incoming materials with longer lead and logistic times by product. Several logistical solutions are used for incoming materials, including trucking, rail, and water vessel transport. Critical components routinely ship via two transportation methods in order to reduce risk. For example, foundry coke and sand are delivered by both truck and rail on a weekly basis in order to ensure an uninterrupted flow of key materials. Where feasible, we have also established alternate supply sources on a local and regional basis that can be used as potential contingency sources if needed.

In addition to managing risks associated with our supply chain, a primary objective is to ensure environmental compliance and promote environmental stewardship and social responsibility throughout the supply chain. In support of these efforts, the completion of our 2015 goal to rank and screen our top suppliers has resulted in the identification of potential areas for sustainability recognition and improvement. Strategies to communicate these findings with this group are being developed (who represents 70 percent of our total annual spend).

No material changes in the supply chain structure or supplier relationships has occurred in 2017. Waupaca Foundry was not subject to the U.S. Security and Exchange Commission's Dodd-Frank Wall Street Reform and Consumer Protection Act in 2016. This act regulates the use of conflict minerals, which are mined in conditions of armed conflict and human rights abuses, notably in the eastern provinces of the Democratic Republic of the Congo. Due to the importance of this issue to both Waupaca Foundry and our customers, we pursue the following regarding conflict minerals:



Conflict Minerals Policy Statement

Waupaca Foundry, Inc. is committed to sourcing raw materials and components from companies that share our values with regard to human rights, ethics, and environmental responsibility. We expect all of our suppliers to abide by the requirements of our code of conduct, which prohibits human rights abuses and unethical practices. We also require all suppliers to comply with all applicable legal standards and requirements.

On August 22, 2012, the U.S. Securities and Exchange Commission (“SEC”) issued the final conflict minerals rule under section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Conflict Minerals Rule”). The Conflict Minerals Rule requires publicly traded companies to report annually the presence of conflict minerals (tin, tungsten, tantalum, and gold, or “3TG”) originating in the Democratic Republic of the Congo and adjoining countries (“Covered Countries”).

Waupaca Foundry supports the goal of ending violence, human rights violations, and environmental devastation in the Covered Countries. We are committed to complying with any requirements applicable to our Company under the Conflict Minerals Rule.

Waupaca Foundry will assist our customers in implementing their conflict minerals programs. We strive to work cooperatively with our customers and supply chain partners in implementing conflict minerals compliance programs.

Waupaca Foundry requires our suppliers to provide us with complete conflict minerals declarations. We may reconsider our willingness to partner with suppliers that fail to comply with this policy.



INVESTING IN OUR COMMUNITIES

We continue to support the communities in which we do business in a variety of ways, including:

- Donating equipment to schools and universities.
- Supporting volunteer fire, rescue, and EMS departments in a variety of communities.
- Participating in leadership roles in a variety of business, civic, and environmental organizations.
- Sponsoring charities, non-profit organizations, events, and fundraisers.



Waupaca Foundry Heads Back To High School

Team members from Tell City went back to high school as volunteers for Junior Achievement (JA), a program established to better prepare, and inspire, students in kindergarten through senior year of high school, for their futures in the workforce.

Gary Greubel, human resources manager; Alyssa Wiesbrock, human resources generalist; and Ross Hendershot, engineering manager, taught courses in personal finance, career success and, entrepreneurship at Tell City Junior-Senior and Perry Central Junior-Senior High School. In Tell City, Junior Achievement programs and classes are customized by grade and school but only taught by volunteers.

Additionally, Waupaca Foundry sponsored both schools by providing \$5,000 through JA to help enhance the soft skills necessary for students to be successful after graduation.

Greubel has been a member of Junior Achievement's board of directors for two years and said Waupaca Foundry's decision to support the program is in the best interest the community.

"We're stewards of our business and our community. Junior Achievement is getting our young people ready for the working world, and allowing us to be involved in the process is a great way to expose teens to careers in the foundry," Greubel said.

Waupaca Foundry takes pride in supporting educational programs in the communities where it operates. The vision is to invest in today's students to help build a quality workforce for the future.



INVESTING IN OUR COMMUNITIES *(Continued)*

Waupaca Foundry's Newest, and Youngest, Suppliers

In Tell City, Indiana, Waupaca Foundry's newest suppliers are a little younger than usual. Who are they? Commodore Manufacturing, a work-based learning program at Perry Central High School for students interested in advanced manufacturing and technology careers.

Waupaca Foundry, with Jasper Engines, helped launch the program in 2016 after the school approached Waupaca about the possibility of a partnership. Students and teachers invested in the program toured the Tell City plant and held meetings with Waupaca Foundry team members, including those working in the melt department to discuss what tools students could produce. Students then worked specifically with the melt team to determine the best manufacturing practices to ensure tools met Waupaca Foundry standards.

Commodore Manufacturing then began production at the beginning of the 2017-2018 school year.

The Commodore Manufacturing team now produces slag rakes, used in the slagging process, and plungers, used for maintaining tilt pour spouts, for Waupaca Foundry. These basic weldments are a fundamental educational opportunity for these young entrepreneurs to help expand their craft while also working with a local company.

The students look forward to continue developing their knowledge about manufacturing and growing their business, according to Jody French, Perry Central High School's principal.

"Perry Central is so fortunate to have an industry partner that invests in the future of our students. This partnership has allowed our students to develop strong relationships at Waupaca Foundry, which has had such a positive impact on our students. We could not have such an engaging and successful program without Waupaca Foundry and their leaders," French said.

The progressive program also allows Waupaca Foundry to help bridge the growing technical skills gaps many employers, employees, and those seeking jobs are facing.

"This gives us the opportunity to educate and work with young talent in our local schools. When I was in school, I was unaware of what melting was or the opportunities that existed in manufacturing," Phillip Dawson, melt manager, said. "These students are learning essential technical skills that are necessary to the operations of many manufacturing facilities in our area, and I'm proud of it."



Environmental Stewardship



ENVIRONMENTAL STEWARDSHIP

At Waupaca Foundry, everyone is responsible for Environmental, Health, and Safety (EHS). Continual improvement in EHS performance is integral to our culture. All of our plants are certified to OHSAS 18001 and ISO 14001, and we use these management systems' frameworks to support achievement of our sustainability goals. See our Occupational Health and Safety section for more information on how we are managing those issues at our facilities. Waupaca Foundry - Plant 1 in Waupaca, Wis. earned ISO 50001 energy management certification in the fall of 2016, making it the first United States metalcaster to receive the accreditation...and only the second company in Wisconsin!

Waupaca Foundry's environmental leadership has been recognized by:

The Federal government: Under the U.S. Department of Energy's Better Buildings, Better Plants Program, the company voluntarily agreed to reduce energy usage by 25 percent over 10 years and has reduced energy intensity at all six of its plants by more than 23.5 percent from 2009-2017.

State government: Waupaca Foundry has received a 2017 Excellence in Energy Efficiency Award from Wisconsin's Focus on Energy program. This commitment to energy efficiency placed it among 15 elite recipients that received the Excellence in Energy Efficiency Award from Focus on Energy and Wisconsin Public Service Commission.

Customers: Waupaca Foundry received Kawasaki's Environmental Stewardship Award for implementing significant achievements in voluntary energy reduction, the company's fourth award from the engine maker since 2011. Kawasaki recognized both the Waupaca, Wis.-based gray iron foundry and the Marinette, Wis.-based ductile iron foundry with the award. Waupaca Foundry previously won Kawasaki's Environmental Stewardship Award in 2013.

MATERIAL USAGE AND PRODUCTION MATERIAL EFFICIENCY

In 2017, more than 2,624,378 tons of material were melted. Approximately 75 percent of the materials used in our melt process come from recycled materials. Along with the metal raw material, Waupaca Foundry also used approximately 200,000 tons of coke in the melt process. Derived from coal, coke is a carbonaceous material that provides energy and a carbon addition source used to melt metal and create cast iron.

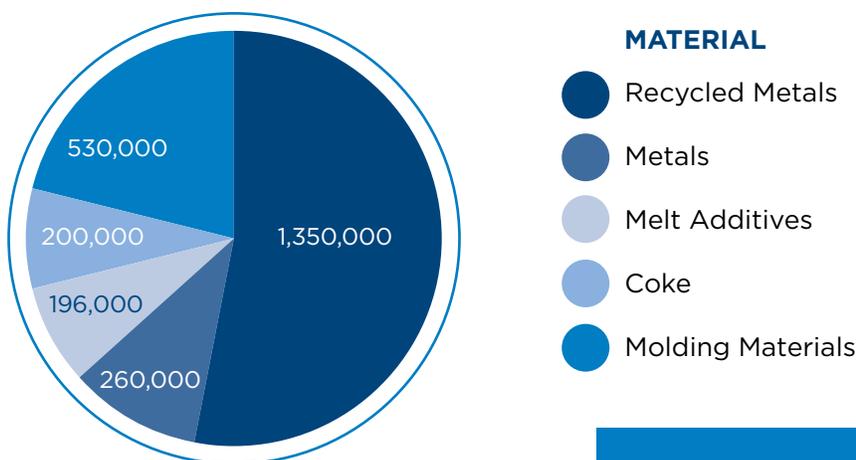
One of our goals for 2017 was to continue a feasibility study to identify and evaluate melt system modification strategies to reduce the coke-to-melt usage ratio, saving us money spent on raw materials while also reducing our energy consumption and associated greenhouse gas emissions. We continually look for opportunities to incorporate alternative recycled materials into our process, such as using shredded steel, direct reduced iron fines, and oil filters. This includes identifying recycled materials that were previously not able to be recycled. Use of the new alternatives will keep these materials out of landfills while also providing us with new raw material sources.

The sand used to make the cores and molds in casting metal parts is another significant material used in our process. We look to reclaim and reuse the sand to the extent possible, and we estimate that each grain of sand is used approximately 50 times before it is no longer able to be used to create quality castings. A feasibility study was conducted in 2015 at the Waupaca, Wis. and Tell City, Ind. foundries to determine reduction opportunities for new clay and sand reclamation system technologies. By using less sand in our process, we can reduce the amount of sand that must be landfilled. Lab scale tests were conducted on target foundry by-products to prove initial capability of the proposed technology to separate clay from waste system sands and dust collection points using a high-pressure, water-attrition scrubbing method. The recovery process will discharge no new waste material. Moving forward, pilot tests will be conducted to confirm the proposed technology will actually work in practice. Recovered materials will be characterized and performance tested using the foundry test facility at the University of Northern Iowa. This work was completed in July 2017 with study data currently being reviewed.



KEY INPUT MATERIALS USED IN 2017

TOTAL TONS USED
Rounded Value



ENERGY USE

Our primary impact to the environment is as an energy-using entity. It takes a large amount of energy to melt metals and run our operations, including natural gas, electricity, and coke, and we are committed to managing our energy use efficiently. Energy savings have a direct effect on our bottom line, and we have set a target of reducing energy intensity (measured in mmBtu/ton of product shipped) by 25 percent by 2020. From the program baseline year of 2009 to 2017, a cumulative energy intensity improvement of 23.5 percent has been realized.

This improvement stems from a number of energy-use-reduction strategies. Recent project examples include lighting replacements, compressed air distribution and air treatment upgrades, compressed air adaptive control systems, cooling tower variable frequency speed (VFD) controls (fans and pumps), energy monitoring system / sub-metering, and engineered compressed air nozzles.

We continue to strategically and systematically reduce our energy footprint through a number of targeted initiatives:

- As one of the first 32 charter companies in the U.S., we participate in the Better Plants program, a U.S. Department of Energy initiative designed to foster energy efficiency and long-term sustainability.
- We have launched a pilot initiative at our jobbing foundry in Waupaca, Wis., to implement ISO 50001, the Energy Management System standard. ISO 50001 specifies requirements for establishing, implementing, maintaining and improving an energy management system, and enable an organization to follow a systematic approach in achieving continual improvement of energy performance. Moving forward we intend to implement ISO 50001 across the organization. ISO 50001 certification was achieved at the pilot facility in October 2016.

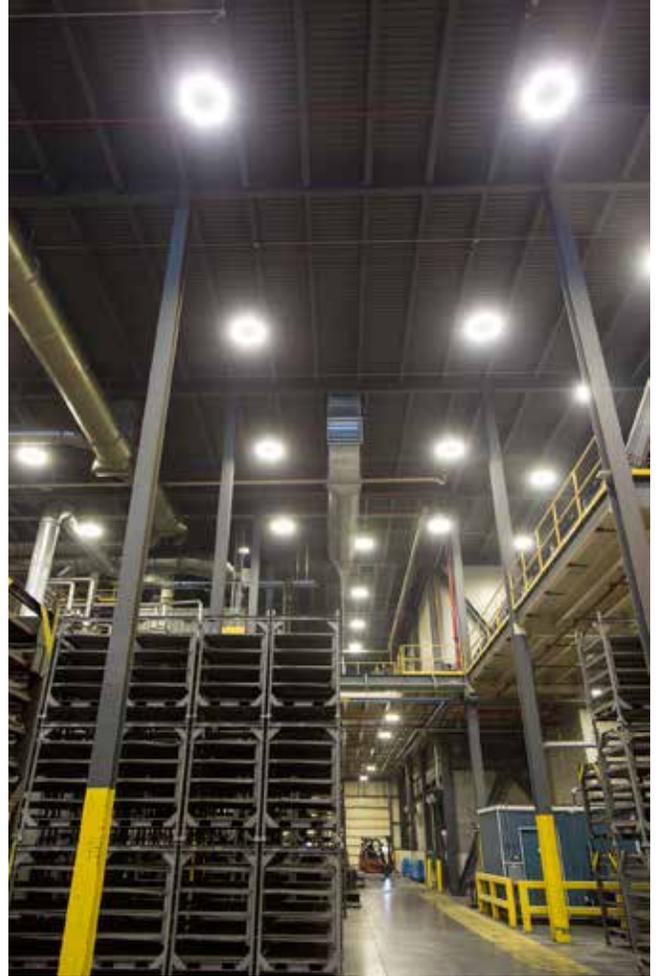
Energy Policy

- R - Review established energy management objectives and targets.**
- E - Ensure the availability of information and resources to achieve those objectives and targets.**
- D - Drive for continuous improvement in the efficient use of energy.**
- U - Use energy efficiency as a key component of new equipment, major renovation, and new design.**
- C - Commit to energy management excellence through compliance with applicable legal and other requirements.**
- E - Educate employees on their energy management responsibilities.**



ENERGY USE *(Continued)*

- We have invested \$27 million in the expansion of the two plants in Waupaca, Wis. Part of this expansion includes energy-efficient LED lighting and a heat recovery system that will warm the buildings by recovering heat from the compressors that circulate air throughout the facility. Heat recovery systems at Plants 2/3 in Waupaca have earned a, energy rebate from Wisconsin's Focus on Energy. The plants use heat from the cupola iron-melting process to provide space heating requirements in the plant and hot water heat.
- We have publicly endorsed the U.S. Department of Energy's *Accelerate Energy Productivity 2030* goal to double U.S. energy productivity by 2030 (e.g., increasing the economic value created per unit of energy used). As part of this endorsement, Waupaca Foundry commits to:
 - Improve energy productivity within our organization, state or community;
 - Share solutions, success stories, and progress;
 - Encourage other organizations to endorse the Energy 2030 goal; and,
 - Participate in Energy 2030 education and outreach activities.



Moving forward in fiscal year 2018, additional focus will be on compressed air use, through additional adaptive compressor controls, as well as process improvements to the cupola operations to improve energy efficiency in our melting processes.

In 2017, we used 895,000 megawatts (MW) of electricity. Our combined energy consumption from coke, natural gas, and electricity was over 15,678,669 million British thermal units (mmBtu).



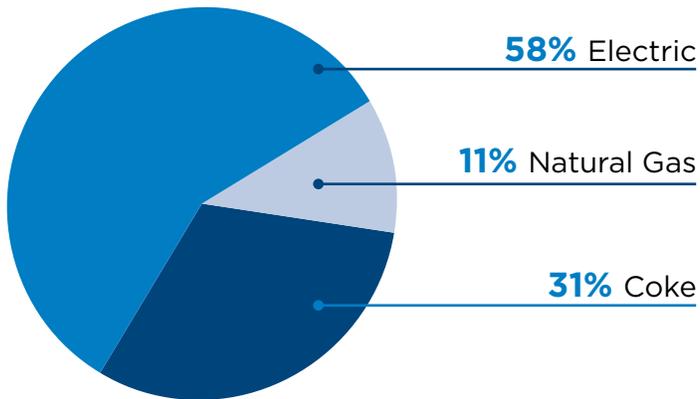
By implementing and maintaining ISO 50001 certification, Waupaca Foundry is demonstrating its commitment to improving its energy performance, staying globally competitive, and maintaining jobs in Wisconsin.



*Lon Roberts
Wisconsin Public Service Commissioner*

ENERGY USE *(Continued)*

ENERGY CONSUMPTION BY TYPE, FY17



With the addition of Lawrenceville (formerly Hitachi Metals Automotive Components) and its electric melt, Waupaca Foundry has experienced a slightly increased dependence on electrical consumption after fiscal year 2016. We also track our energy consumption per ton of product shipped so we can capture gains in energy efficiency that may occur even as our overall energy increases due to higher production rates. Our consolidated energy intensity was 10.13 mmBtu/ton of product shipped for Waupaca Foundry facilities, and 23.1 mmBtu of product shipped for the Waupaca Foundry-Lawrenceville facility in 2017.



ENERGY MONITORING SYSTEM

To facilitate continual improvement in energy performance, Waupaca Foundry Plant 1 in Waupaca, Wis. implemented an energy monitoring system that allows real-time data collection and analysis from the plant's systems for the purpose of monitoring energy performance and costs related to utility supply, production processes, and energy efficiency down to a departmental level.

Initiated in 2016 and with significant advancements in 2017, a wide sub-metering network and IT infrastructure was implemented to support the energy monitoring system to provide energy dashboards, energy reporting, internal billing, and energy data analysis to support operational and engineering troubleshooting. The investment associated with Phase 1 of the project represented \$175,000, with benefits projected to represent a reduction of 2.5% - 5% on electricity and natural gas expenses, with a project payback less than two years.

The implementation of this system complements the achievements made with the ISO 50001 certification and places Waupaca Foundry as the energy management leader in the U.S. foundry sector.



EMISSIONS

Air Emissions

Foundry processes generate dust, sand, and other particles resulting from the molding of our customers' castings that, if improperly handled, could impact the atmosphere. Air filtration systems and advanced baghouse technology are used to achieve superior air pollution control results at our facilities. The air pollution controls we have put in place are considered as "best available" by the U.S. Environmental Protection Agency (USEPA) and associated state regulatory agencies regardless of applicable regulations, which are driven by the installation date of the control equipment. A key component to this technology is the use of advanced bag leak detection probes installed within the emission control systems at each plant. In most cases, this technology is not mandated by a regulatory agency but utilized as an elective continuous improvement. Because even small holes can affect the performance of baghouse filters, these probes are used to monitor the integrity of the baghouses and performance of the filtration system.

GHG Emissions

GHG emissions are divided into three categories:

- Scope 1 emissions are emissions that result directly from an organization's operations, such as burning fossil fuels.
- Scope 2 emissions are indirect emissions from a utility provider resulting from energy used by the organization, such as electricity, steam, or chilled water.
- Scope 3 emissions are the result of other sources, indirectly related to an organization.

Currently we track only our Scope 1 and Scope 2 emissions. Scope 1 emissions include the use of coke in the melting process and the combustion of natural gas at our facilities. Fuels used in relatively small quantities representing less than 1 percent of total energy consumption, such as gasoline, light oil, and LPG are not included in these calculations. Scope 2 emissions are the result of purchased energy utilized at our plants. In 2017, our total GHG emissions were 1,266,352 tons of carbon dioxide (CO₂). The Total CO₂ Emissions graph shows the breakdown of our Scope 1 and Scope 2 emissions by facility. The majority of our Scope 1 emissions come from the use of coke, a high-carbon content material, in our melt process.

Emissions, as well as our climate change risks/opportunities and management strategies, are reported to CDP (formerly the Carbon Disclosure Project), the largest database of primary corporate climate change information in the world.

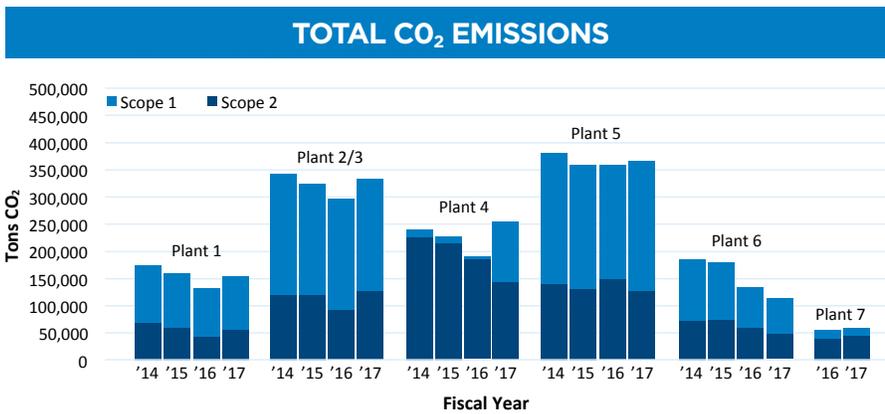


A Long-Term Commitment...

The company began retrofitting plants with elective sophisticated air pollution controls beginning in 1999. Both air emission controls and leak detection technology have surpassed regulatory requirements and created new industry benchmarks in pollution control.



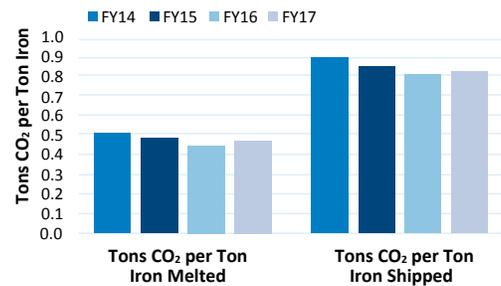
EMISSIONS (Continued)



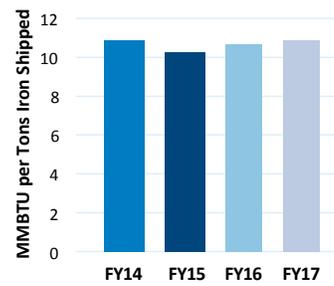
In addition to our absolute GHG emissions, we also normalize our GHG emissions based on tons of iron melted and tons of product shipped, similar to the way we track our energy consumption. The graph shown below includes normalized values for our consolidated GHG emissions as well as total energy use per ton of iron shipped.



NORMALIZED CO₂ EMISSIONS (SCOPE 1 & 2)



NORMALIZED TOTAL ENERGY USE



Although we do not currently track the GHG emissions related to the transportation of products, we recognize that transportation is a significant issue for us due to the size and weight of our products. As our customers look to support greater fuel efficiency in their products, there will be more demand for lightweighting iron castings, reducing associated transportation impacts.

Improving the Life Cycle of Emissions

In the process of redesigning a one-part bumper into two, lighter weight parts, Waupaca Foundry helped a global leader in commercial turf drive out costs and reduce emissions in the field and in transport.

Situation

- The original bumper casting was designed with a thin section in the center that cracked when/if backed into substantial objects. Customers had to remove a broken and costly 67-pound bumper, then order and wait for a replacement part. Repair and replacement compounded transport emissions.
- The one-piece assembly required shipment to a third-party machine shop to drill and tap holes required to mount the bumper to the mower. Again, generating greater transport emissions.

Solution

Waupaca Foundry proposed breaking the one-part casting into two lighter weight, yet better functioning parts. Additionally, the mounting holes in the 2-piece bumper were redesigned and are now cast without the use of cores, eliminating the need for machining and the additional transport required.

The new, two-piece bumper is safer and more ergonomic for assembly and replacement, and more robust in performance, generating fewer emissions all around.

- New, two-part bumper decreased weight 3%, from 67 pounds to two 32-pound parts.
- OEM now ships more products in a container, reducing transportation costs and emissions.
- Eliminated weak point in the center of the one-piece bumper design to improve durability, reduce warranty claims, and reduce the accompanying emissions that subsequent repair and replacement required.



BEFORE: One-part bumper



AFTER: Two-part bumper



BEFORE: One-part bumper



AFTER: Two-part bumper

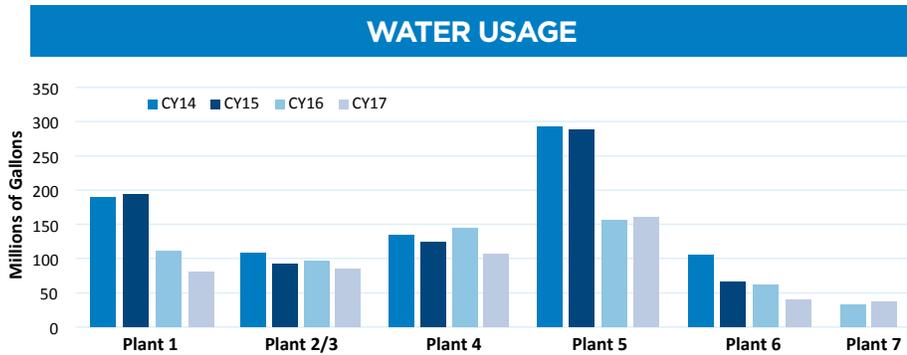


TOTAL WATER USE

Historically our foundries consumed large quantities of water, including non-contact cooling water used to cool running machinery and the exterior of the cupolas used in our melt process. By 2020, water consumption will be aggressively reduced 80 percent from 2010 values. Waupaca Foundry has already made significant progress towards this goal by installing closed-loop water cooling systems. Several of our plants have installed such systems for machine cooling.

Prior to these initiatives, cooling water flowed through machines just once prior to discharge. With the new closed-loop systems, non-contact cooling water is recycled to improve efficiencies and reduce water consumption. For example, implementation of this technology has resulted in a 30- to 95-percent reduction in cooling water use at our Marinette ductile iron foundry, with water demands varying on a seasonal basis. The recent Plant 1 expansion project in Waupaca included six new warmbox machines on a closed-loop cooling water system that will save an estimated 50,000 gallons of water per day, or approximately 15 million gallons annually.

In FY2017, the combined water usage for all Waupaca Foundry locations was 506 million gallons from municipal water supplies compared to 593 million gallons in 2016, representing a 15 percent year-over-year reduction.



IMPACTED WATER BODIES

As a result of plant improvements we implemented over the last decade, contaminated process water requiring wastewater treatment and discharge has been completely eliminated from our facilities. None of Waupaca Foundry's plants withdraw water from, or negatively impact, waters that are protected or considered to be of high biodiversity value.



CLOSED LOOP

Closed-loop cooling water systems have the potential to reduce plant water cooling demands by 80 percent or more. In some cases, non-contact cooling water discharges are reduced to near zero and daily water use is drastically reduced.



WASTE

In 2017, Waupaca Foundry generated a total of 750,387 tons of solid waste. Of this, only 4.2 tons was hazardous and the remaining majority of 559,156 tons was recycled in lieu of disposal. We minimize the generation of hazardous waste through initiatives such as product substitution and effective work practices. Significant sources of non-hazardous waste included sand dust from our baghouses, melt dust, slag, spent foundry sand, cores, and refractory.

One of Waupaca Foundry's highest volume byproducts is spent foundry sand used to make molds for the casting process. Although the sand is recaptured and recycled to the extent possible, there comes a point when it can no longer be used for creating quality castings and it becomes a spent material. Successful initiatives have been developed that continue to reduce the use of foundry sand while concurrently looking for ways to keep foundry sand out of landfills by finding beneficial uses for the sand that can also aid the local communities. The majority of the sand that can no longer be used in the casting process does not end up in a landfill—approximately 80 percent, or 465,000 tons, of sand is recycled annually. This reclaimed sand finds new life in applications in construction, agricultural use, and geotechnical fill.

Waupaca Foundry has been working with state and local agencies, including the Wisconsin Department of Transportation, to use foundry sand as a highway subbase fill, geotechnical fill, and other general construction uses. Not only does this keep the sand out of landfills, but it also reduces the need for mining native materials from other places to be used as the source for these applications. Our goal is to reduce the generation of spent foundry sand 30 percent by 2020. This material also gives us an opportunity to partner with our local communities on projects, and additional beneficial reuse efforts are discussed in our community section.



Foundry Sand a Big Help to Farmers

Noll Farms is a dairy owned and operated by Allen Noll in Pound, Wis. Waupaca Foundry's ductile iron foundry in Marinette, Wis., was able to supply enough fill material for Noll Farms to build an elevated manure storage pit and a barn expansion project that met the environmental and business needs of the dairy farm. Using spent foundry sand, Noll Farms was able to build a sloped, above-ground pit to hold 6.5 million gallons of manure, as well as reduce cost by 50% compared to a traditional above-ground solution. If he had to build a pit using the traditional materials and methods, Noll says, "I wouldn't have been able to do it. I really didn't have any other cost-effective options."



WASTE (Continued)

SIGNIFICANT SPILLS

Waupaca Foundry uses a number of chemicals in its process to keep its equipment operating at peak levels, including coremaking resins, hydraulic oil, lubricants, and anti-freeze. There were no significant spills in 2017 at any of our operations.



ENVIRONMENTAL COMPLIANCE

Waupaca Foundry is committed to identifying and maintaining compliance to legal and other requirements to which our organization subscribes and that are applicable to the environmental aspects of our activities, products, and services. Our commitment is reflected in our EHS Policy and incorporated into our sustainability targets and objectives. FY2017 resulted in no significant fines or sanctions associated with environmental noncompliance events.

WAUPACA FOUNDRY ENVIRONMENTAL, HEALTH, AND SAFETY POLICY—

CAST

C - Commitment to environmental, health, and safety (EHS) excellence through compliance with EHS regulations and other requirements.

A - Always strive for continuous improvement and prevention of accidents, injuries, and pollution.

S - Set and review EHS objectives and targets.

T - Train employees on their EHS responsibilities.

A World-Class Workforce



A TENURED WORKFORCE

Waupaca Foundry has a history of encouraging people to reach their greatest potential. This has the dual benefit of providing us with the skilled workforce that allows us to produce innovative, best-in-class products while simultaneously improving our sustainability program through the same type of innovation. We're proud that Waupaca Foundry has been an employer of choice and we believe in taking care of our employees and offering opportunities for personal development. The result: customers have the most qualified production team in the industry. From operations to administration, we are dedicated to creating advancement opportunity for our employees throughout the company. Many of our team members have started in general foundry positions and have progressed into a variety of careers over the years. In fact, president, COO and CEO, Mike Nikolai started with Waupaca Foundry in 1993 as a metallurgist at the company's gray iron foundries in Waupaca, Wis. He held progressively responsible positions, including production manager, assistant plant manager in Tell City, Ind., plant manager in Etowah, Tenn., and vice president of operations. He was appointed president and COO on April 1, 2015.



G4-10



G4-11



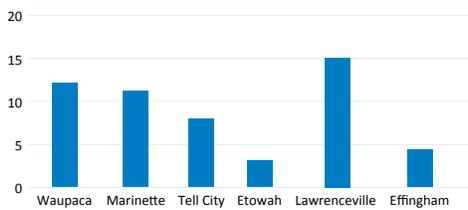
G4-LA11

A TENURED WORKFORCE *(Continued)*

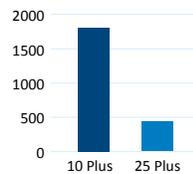
The opportunity for career growth and personal development is a significant reason why more than half of Waupaca Foundry's employees have been with the company greater than 10 years. Much of the organization's success can be attributed to the experienced workforce and the direct employee/management relationship that is clearly recognized at the manufacturing facilities.

The following graphs show the average length of employee service time by location and the number of employees that have been employed by Waupaca Foundry for more than ten years, as well as those who have worked for us for 25 years or more.

AVERAGE SERVICE YEARS



YEARS OF EMPLOYMENT



Waupaca Foundry's code of conduct recognizes the right to collective bargaining (as similarly recognized by national regulations). However, employees have chosen to maintain a union-free environment with the exception of the unionized Lawrenceville foundry that merged with Waupaca Foundry in April 2016.

SKILLS DEVELOPMENT

In addition to careers in metallurgy and foundry technology, we also have support positions in IT, sales, purchasing, human resources, accounting and finance, and administration. Our company is dedicated to helping our employees cultivate career paths that give them professional satisfaction while also developing the workforce that we need. One hundred percent of our employees receive performance reviews annually, and during this process we work with our employees to lay out a career development path for them. Some common opportunities are:

- Specialized operational positions
- Leadership positions
- Support and administrative positions

We have developed a customized internal training program intended to teach entry-level employees more specific foundry knowledge and processes. Experts from specific areas provide thorough instruction on casting iron the Waupaca way.

We advanced a number of training program goals that we set for 2017, including:

- Provide 100 percent tuition reimbursement for employees' continuing education (following company guidelines) – Waupaca Foundry continued to provide tuition reimbursement for 100 percent of our employees. In 2017, 180 employees participated in the reimbursement program.
- Provide annual career training for 100 percent of our employees, with training related to specific job requirements as well as developmental training for future career growth - Through 2017, we provided career training / job specific training to 100 percent of our employees.
- Achieve Six Sigma or related training for 90 percent of our workforce by the end of calendar year 2017 – 100 percent of our workforce has received Six Sigma related training (lean, green belt, black belt, kaizen, 6S, etc.) and the program achieved the goal prior to the targeted completion date.
- Provide leadership training to 100 percent of the employees in leadership positions* – Through 2017, leadership training had been completed for 71 percent of our applicable employees. (*For leaders with greater than six months of service.)
- Foster and maintain a 50 percent or greater total promotion rate for management level positions from internal employees - 76 percent of our management level positions are filled with internal employees that have been promoted from within Waupaca Foundry.

Waupaca Foundry has a history of offering opportunities for personal development to take our employees to their greatest potential. We are dedicated to career pathing through training and development programs that develop each individual. In 2017, Waupaca Foundry invested \$1,438,553 million in total training and employee development programs.



Waupaca Foundry employees who earned GEM degrees from FVTC were (from left) Patrick Marten, Scott Bailey, James Johnson, Gregory Bleskey, Matthew Keil, Brian Vogt, and Nathan Abrahamson. Not pictured: Michael Slaby and Jim Darling.

SKILLS DEVELOPMENT *(Continued)*

Foundry Workers Earn Degrees While Working Full-time

Waupaca Foundry and Fox Valley Technical College (FVTC) have a long-standing partnership that culminated in the creation of three educational opportunities that aim to provide opportunities for career growth while also narrowing the industry skills gap:

1. An associate degree in Quality Engineering Technology (QET);
2. A 2-year degree in mechanical maintenance;
3. A certificate in electrical maintenance.

Unlike other workplace training programs – which provides employees with certificates of completion to recognize their new skills – these programs offer a pathway to earning a degree while working full-time. Participating students are full-time employees and tuition is reimbursed through Waupaca Foundry's tuition reimbursement program. Team members work full-time while also attending classes to earn their degrees at FVTC.

The mechanical maintenance program focuses on hydraulics, pneumatics, mechanical machine concepts, drawings and print reading. The electrical maintenance program includes hands-on labs covering the fundamentals of electrical safety, DC and AC circuits, electrical power distribution, and electrical control cabinet wiring. With the QET program, team members learn continuous improvement processes as well as traditional quality and inspection duties with an overall focus on engineering.

"We are now more confident than when we started our journey," Beccah Novak said. Novak originally started in the mill room and is now an electrical maintenance employee. "I always wanted to go back to school, but life got busy," Novak said. "I'm so thankful for Waupaca's investment in this rewarding program, and I'm happy to gain a career, not just a job."

Through 2017, 80 Wisconsin-based employees enrolled or had completed one of the QET, mechanical or electrical maintenance programs.



*Present at the Department of Workforce Development event are:
(L-R) Mike Hemmila, Todd Pagel, Jasen Stanke, Daniel Tews, Dave Swiatnicki, Nate Glodowski, Lt Gov. Rebecca Kleefisch, Anthony Behn, Aarich Curtis, Ron Womeldorf, Timothy Kropidlowski, Chris Matheny, FVTC Chief Academic Officer, Mitch Andre, Ray Allen, Secretary Wisconsin Department of Workforce Development*

OCCUPATIONAL HEALTH AND SAFETY

Providing a preventive health policy and promoting continual improvement of safety in the workplace are fundamental responsibilities of management. Our safety management system relies on risk identification and mitigation, supervisor accountability, employee safety teams, workplace hazard assessments, equipment maintenance, and ongoing training to create a safe workplace for our employees and visitors.

Waupaca Foundry is committed to all persons working under its control, including its contractors, having a high level of safety awareness. We achieve this through a variety of mechanisms, including monthly safety talks for our employees, review of work instructions and training specific to those instructions (i.e., lock out/tag out, fall protection, and hot zone work), bulletin boards, company newsletters, signage, and near-miss reporting. We also recognize the importance in active employee engagement in the safety program. Employees participate in reporting safety suggestions and near misses, our behavior-based safety (BBS) program, Safety Kaizen events, and in several safety committees that include electrical safety, incident review, mobile crane safety, ergonomics, noise reduction, and emergency response.



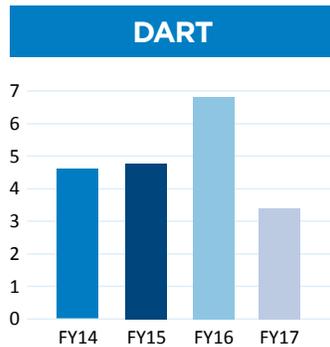
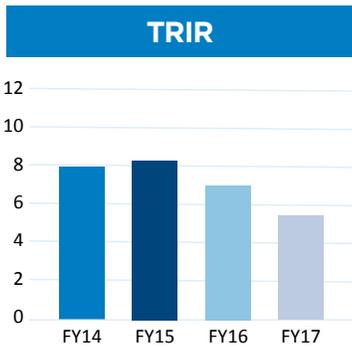
A large percentage of our injuries can be attributed to ergonomics. To address this, significant investments have been made in the automation of processes, such as installing robots to automate repetitive tasks in grinding and core making workstations.

At Waupaca, we know that leading metrics are critical to monitor for improved safety performance. We have updated our suggestion/near-miss reporting database into a combined form to encourage continued reporting, and better track the information and solutions to closure. We also continue company-wide serious incident review, including “near-miss” situations to reduce the risk of potential serious incidents. Safety scorecard metrics now include goals for risk identification and reduction; focusing on areas where incidents occur most often.

We also track two lagging indicator metrics to evaluate our safety performance: total recordable incident rate (TRIR, representing OSHA reportable incidents), and the Days Away, Restricted, Transferred (DART) rate, which describes the number of OSHA recordable injuries and illnesses resulting in days away from work, restricted work activity, and/or job transfer experienced during the year. Both TRIR and DART are calculated based on a rate for 100 full-time employees. Our TRIR was 5.43 for 2017, which represents a year-over-year decrease of 24 percent. We have established a goal to reduce our TRIR to 2.0 or less by 2019.



SAFETY METRICS



The 2019 goal for our DART rate is 1.0 or less.

We did not suffer any fatalities during 2017. Waupaca Foundry works cooperatively with OSHA on risk-reduction initiatives for our industry.

EMPLOYEE WELLNESS AND SUPPORT

In support of our commitment to improving the health of our employees, spouses, and retirees, we continue to offer a progressive health and wellness program called Health Awareness Together (H.A.T.). Over the years, this program has dramatically contributed to the overall health and well-being of the team. The program has helped to reduce modifiable health risks while fostering positive cultural changes. Employees who elect to participate are not only rewarded with a higher quality and healthier lifestyle, but we offer financial incentives for participation as well.

We also offer an employee assistance program to support our employees and provide them assistance with personal concerns and the challenges of balancing work and personal life. The program is open to employees and their dependents, spouses or significant others, and others permanently residing in an employee's household whether they are related or not.



Making healthy lifestyle changes has allowed me to be more active with my family and in my community. I've also noticed that making healthy choices doesn't just improve your physical health but also does a lot for your mental health. I feel more positive and cheerful.

*Waupaca Foundry employee,
Waupaca, Wis.*

EMPLOYEE WELLNESS AND SUPPORT *(Continued)*

PATRIOT AWARD

Two Marinette leaders earned recognition in 2017 for extraordinary support of employees serving in our Army Reserves. Kyle Myszka, a metallurgist in the Marinette foundry, nominated his supervisor Joe Keske and Human Resources Manager Phil Eatherton for being supportive while he served in Army Reserves officer candidate school.

Myszka graduated with a master's degree in material science from Michigan Technological University and began employment with Waupaca Foundry in June of 2015. He worked with plant leaders to plan a path for military service and entered officer candidate school in August of 2016. It is Waupaca Foundry's policy to hold all jobs open for employees engaged in active military service. Approximately 11 percent of the Foundry's 4,400 workers nationwide are veterans of the armed services.

The Patriot Award is only presented to employers who not only hire Guard and Reserve members, but also demonstrate superior support to military employees and their families. This is the second time employees at Waupaca Foundry have been honored with the award.



Kyle Myszka, a metallurgist at the Marinette ductile iron foundry, shown with supervisor Joe Keske (far left) and Plant Manager Dan Korpi (right) and Human Resources Manager Phil Eatherton (far right).

“

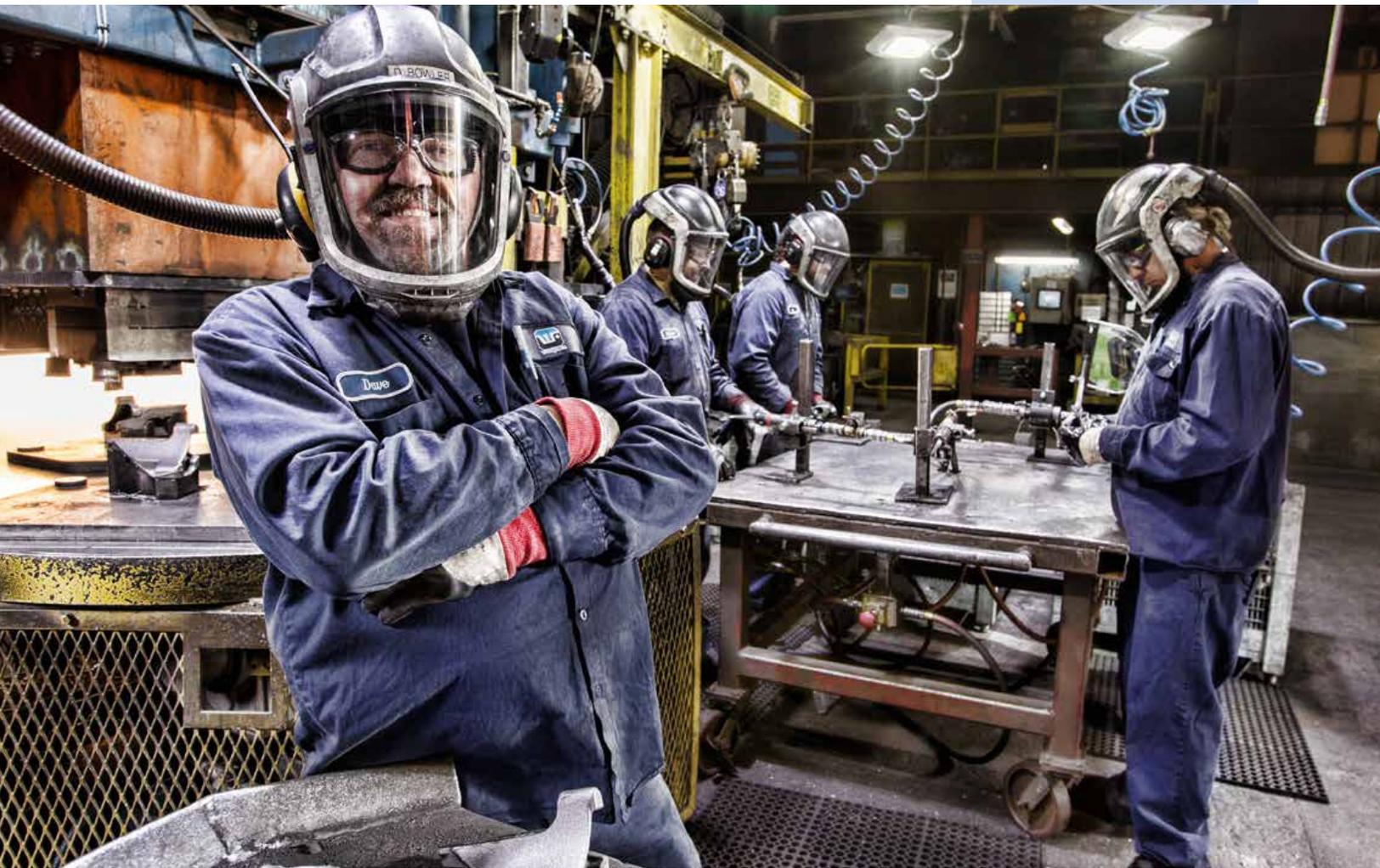
We are proud and honored that Kyle is working with us and that he selected military service as a path in his life. As a veteran myself, I know the sacrifices families make, and worrying about losing a job should not be one of them.

”

*Phil Eatherton
Human Resources Manager*

I AM WAUPACA

Together, all of our employee initiatives help us to develop and maintain a committed workforce that is as solid as the castings we create. Working together as a team with a shared vision allows each of our employees to say with pride, "I am Waupaca." "We promote very heavily from within," according to Executive Vice President of Human Resources, Joey Leonard. "There are plenty of high school graduates who come here and decide they want to grow with us. We offer 100 percent tuition reimbursement. Waupaca Foundry recognizes talent even if they haven't been formally educated. While our growth is significant, what's more impressive is the contribution of our employees who consistently drive value to our customers every day," said Leonard. "We're fortunate to have employees who have not only a strong work ethic, but a real passion for making the highest quality iron castings in the industry."



Report Parameters and GRI Index

REPORT PARAMETERS

This report updates our 2016 Sustainability Report and describes our activities during our 2017 fiscal year, covering the time period from April 1, 2017, through March 31, 2018. We intend to report on an annual basis, with our fiscal year calendar.

The evaluation of topics to report to stakeholders in this Sustainability Report is focused on material aspects that align with the company's business objectives and our stakeholder needs and interests. We are reporting in accordance with the Core requirements of the Global Reporting Initiative (GRI) G4 reporting framework (www.globalreporting.org). See also our GRI Content Index.

We have chosen not to externally assure this report, but may elect to do so in future years. This report covers all of Waupaca Foundry's U.S.-based manufacturing facilities.

Restatements of information and significant changes from the previous reporting period are addressed within the individual sections of this report.

We encourage [comments and feedback](#) on our report.



TRC Environmental Corporation (TRC) was retained to assist WFI with the development of this sustainability report to ensure consistency with the Global Reporting Initiative (GRI) Core requirements. TRC served as a consultant to the Sustainability Leadership Team, facilitating the assessment of materiality, analysis of sustainability metrics, and review of existing WFI targets and objectives.



GRI CONTENT INDEX

General Standard Disclosures	Page(s)	External Assurance
STRATEGY AND ANALYSIS		
G4-1	3	No
ORGANIZATIONAL PROFILE		
G4-3	4	No
G4-4	4	No
G4-5	6	No
G4-6	5	No
G4-7	5	No
G4-8	21	No
G4-9	4	No
G4-10	40	No
G4-11	40	No
G4-12	25	No
G4-13	25	No
G4-14	12	No
G4-15	12	No
G4-16	16	No
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES		
G4-17	N/A*	No
G4-18	14	No
G4-19	15	No
G4-20	15	No
G4-21	48	No
G4-22	48	No
G4-23	48	No
STAKEHOLDER ENGAGEMENT		
G4-24	16	No
G4-25	16	No
G4-26	16	No
G4-27	16	No
REPORT PROFILE		
G4-28	48	No
G4-29	48	No
G4-30	48	No
G4-31	2, 48	No
G4-32	48	No
G4-33	48	No
GOVERNANCE		
G4-34	11	No
ETHICS AND INTEGRITY		
G4-56	12	No

*Waupaca Foundry is a Hitachi Metals group company.

SPECIFIC STANDARD DISCLOSURES

DMA and Indicators	Omissions	Page(s)	External Assurance
ECONOMIC PERFORMANCE			
G4-DMA*		21	No
G4-EC1		27	No
G4-EC8		20	No
MATERIALS			
G4-DMA*		32	No
G4-EN1		30	No
G4-EN2		30	No
ENERGY			
G4-DMA*		33	No
G4-EN3		32	No
G4-EN5		33	No
WATER			
G4-DMA*		39	No
G4-EN8		37	No
G4-EN9		37	No
EMISSIONS			
G4-DMA*		36	No
G4-EN15		34	No
G4-EN16		34	No
G4-EN18		35	No
RESOURCE EFFICIENCY (EFFLUENTS AND WASTE)			
G4-DMA*		40	No
G4-EN23		38	No
G4-EN24		39	No
G4-EN25		38	No
COMPLIANCE			
G4-DMA*		41	No
G4-EN29		39	No
EMPLOYMENT			
G4-DMA*		42	No
G4-LA2		45	No
HEALTH AND SAFETY (OCCUPATIONAL AND CUSTOMER)			
G4-DMA*		46	No
G4-LA6	Partial LA6 – Not reporting by gender or region.	44	No
TRAINING AND EDUCATION			
G4-DMA*		44	No
G4-LA9	Partial LA9 – Not reporting by gender or region.	42	No
G4-LA11	Partial LA1 – Not reporting by gender or region.	40, 42	No

*Specified content begins on listed page number