



ECONOMIC, ENVIRONMENTAL, AND SOCIAL PERFORMANCE AND IMPACTS



Waupaca Foundry, Inc.

2015 Sustainability Report



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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

Welcome to Waupaca Foundry's second annual sustainability report. We hope you find this to be a valuable resource in understanding our strategic initiatives to address the environmental, social, and economic challenges of our organization. While foundries fulfill a societal benefit as one of the original recyclers, we recognize that in providing that service our operations pose a wealth of opportunities. Opportunities to understand our social impact, discover and implement continuous improvements, and to be recognized as a leader in our industry.

As noted in our fiscal year 2014 inaugural report, we recognize that our business is material and energy intensive, and that we have a primary responsibility to ensure a safe workplace for our employees/visitors and to be a good neighbor within the communities in which we operate. To that end, we have worked to provide the following information describing our sustainability goals and our success in achieving the objectives and targets to make those goals a reality. I am pleased to report that fiscal year 2015 was a year of many successes including the beneficial reuse of foundry byproducts, energy use reduction and collaboration with our local stakeholders to be a positive force for the communities we all call home.

2015 was an exciting year for other reasons. In 2014 it had been announced that Waupaca Foundry had been acquired by Hitachi Metals, Ltd. (HML). While on paper it appeared to be an excellent union of two innovative companies possessing complementary strengths and a shared business mindset, through 2015 it became increasingly clear that these organizations were a perfect match to support growth and customer demand. So much so that as of April 2016, Hitachi Metals Automotive Components USA, LLC (HMAC), merged with and now operates as Waupaca Foundry. The merger also adds two machine and assembly operations and allows us to be more flexible in meeting the evolving demands of our customers. This supports our increased overall operational capacity and positioning for long-term, sustainable growth.

With the union of HML and Waupaca Foundry we are further challenged to not only reduce our environmental footprint but to think differently and use less of the materials used to make our iron castings. Investments launching in 2016 will include initiatives that support this focus. Examples such as sand reclamation at our Tell City facility and yield gating process improvements developed in Waupaca will have immediate impacts in supporting this initiative.

The year also ranked amongst Waupaca Foundry's most successful years, with continued strong demand from the automotive and industrial markets. During this time we were proud to be recognized by our customers in the areas of quality, delivery, service and environmental performance.

Thank you for your interest in Waupaca Foundry's sustainability program. We always appreciate feedback on our sustainable business practices, performance to date and the content of this report.



**Mike Nikolai**  
President,  
COO and CEO



# Who We Are



2015 SALES  
**\$1.62**  
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 2,587,777 tons of metal in FY2015. Our castings are produced using our custom built vertical green sand molding machines and created by a workforce of over 4,000 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 FY2015 iron melting capacity of more than 9,500 tons daily across six 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 and 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.



## The Modern Foundry

“Foundry jobs have changed dramatically in 60 years. Today, we offer career opportunities in robotics, engineering, metallurgy, information technology, administration and so many other fields needed to support production of iron castings.” Joey Leonard, Executive Vice President of Human Resources



## 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.



## Expanding the Business

In August 2014, Waupaca Foundry was purchased by Hitachi Metals Ltd., a producer of specialty steel and automotive parts. April 2016 marked the completion of the merger with Hitachi Metals Automotive Components USA, LLC (HMAC), which brought three additional facilities into our business, allowing us to increase revenue and profitability while maintaining diversity across markets and sectors. The new facilities are not included within the scope of this annual report, but will be included in our future reporting.

### Lawrenceville, PA

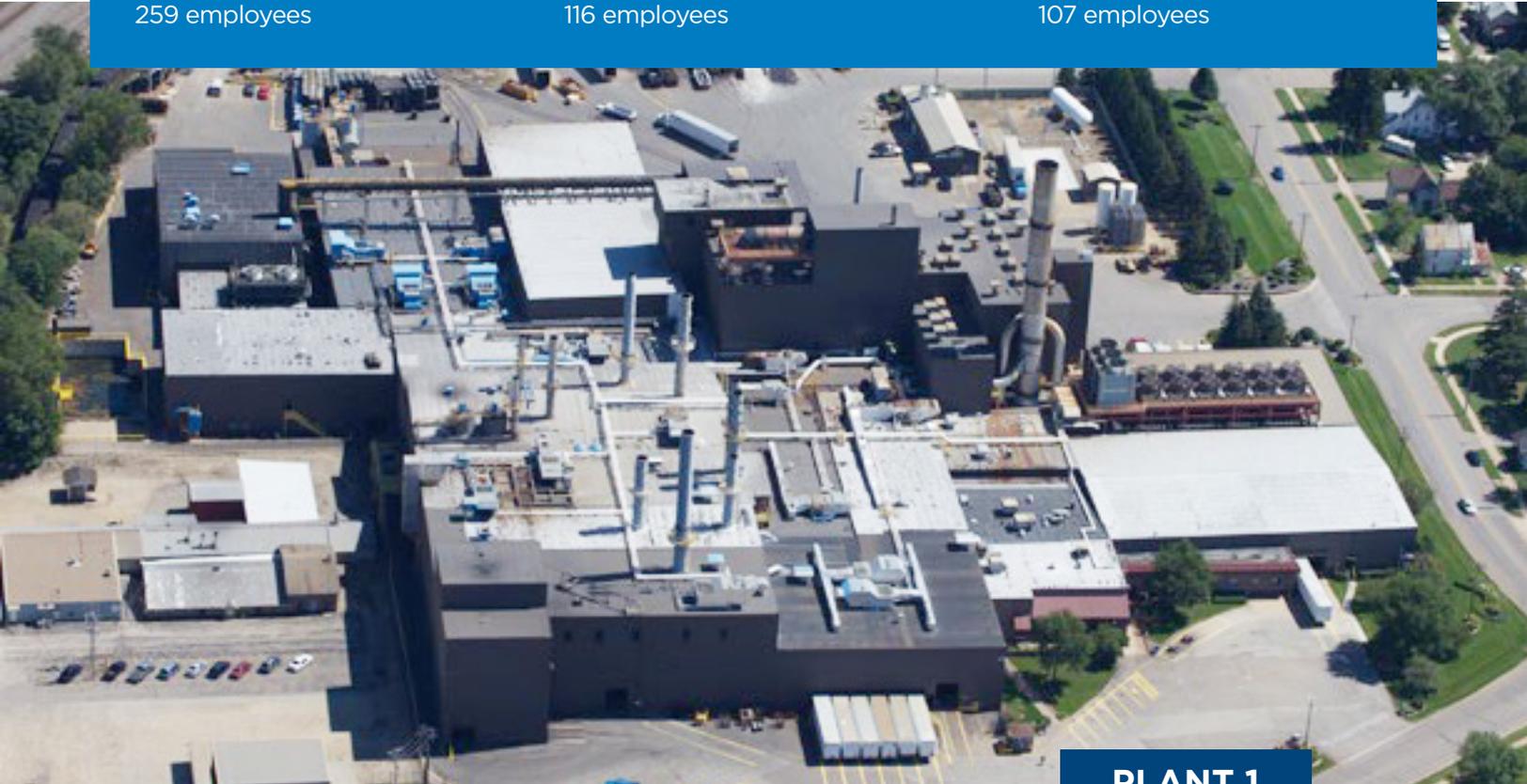
Ductile iron  
259 employees

### Effingham, IL

Machining and Assembly  
116 employees

### Wellsboro, PA

Machining and Assembly  
107 employees



## PLANT 1

**WAUPACA, WI**  
575 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

### WAUPACA, WI

882 Employees

**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



## PLANT 4

### MARINETTE, WI

750 Employees

**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



## PLANT 5

### TELL CITY, IN

931 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

547 Employees

**Iron Type:** Gray iron and ductile iron

**Melt capacity:** 80 tons per hour

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

**Products manufactured:** Brake rotors, brake anchors, brake calipers, brake drums, and differential cases

## OUR PROCESS AND TECHNOLOGY

Our process begins with a mix 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 five 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 Executive Vice President of Human Resources, who serves as the executive sponsor of the Sustainability Committee along with the CEO.



*Sustainability is central to ductile iron and gray iron casting operations. Being environmentally responsible is not only the right thing to do, it's the best thing to do for our employees and our customers. Pollution control and recycling ensures a healthy environment for our team members; a sustainable manufacturing process controls cost for our customers.*

*Mike Nikolai  
President, COO and CEO*



## 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

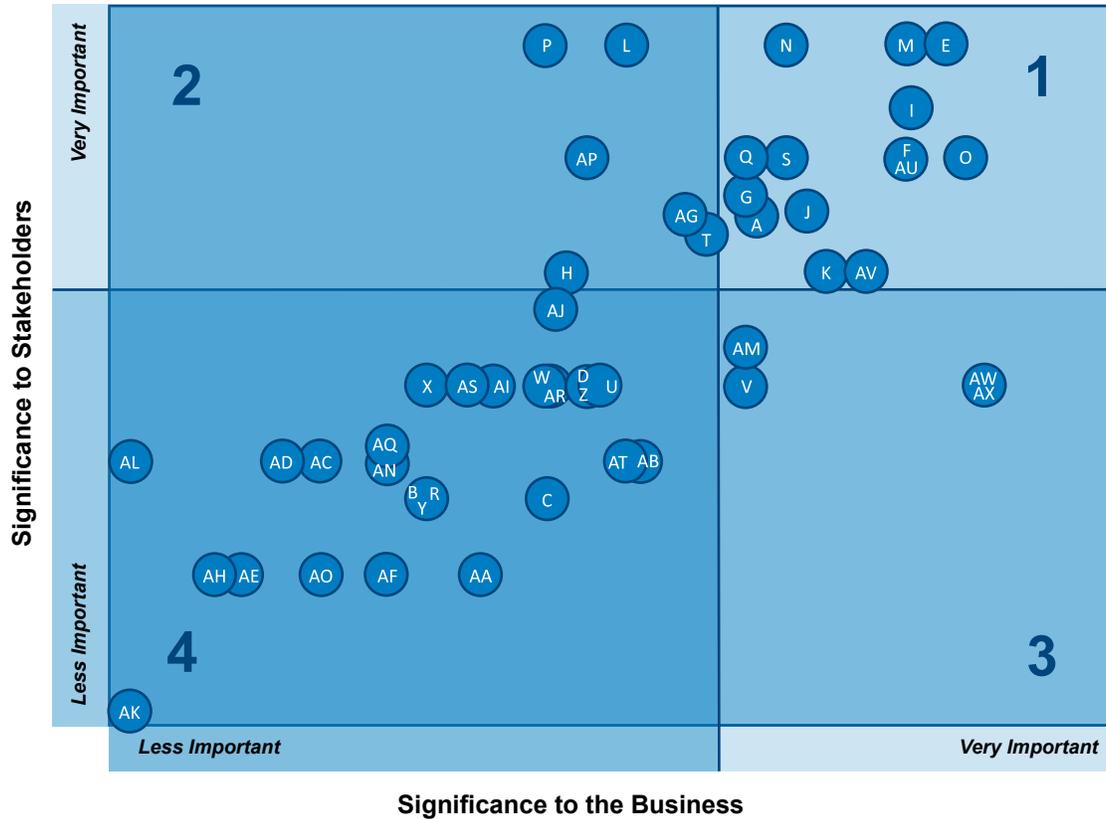
The team then used this ranking to evaluate appropriate targets for disclosure and performance improvements. In setting objectives and targets, the team reviewed the availability and quality of current data to assess the ability to improve disclosure, as well as the complexity of the effort required 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](http://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 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"> <li>• Open door policy</li> <li>• Employee engagement surveys</li> <li>• Key group and lead group meetings</li> <li>• Biannual planning meeting</li> <li>• Company newsletter and newspaper (Foundry News)</li> <li>• E portal</li> <li>• Employee wellness program</li> <li>• Kaizen program</li> <li>• Behavior-based safety, including safety suggestion and near-miss reporting</li> </ul>
Employees' Families and Dependents, and Retirees	<ul style="list-style-type: none"> <li>• Company functions (picnics, parade, etc.)</li> <li>• Company newsletter and newspaper (Foundry News)</li> <li>• Summer help program</li> <li>• Hiring back retirees as consultants</li> </ul>
Prospective Employees	<ul style="list-style-type: none"> <li>• Job fairs</li> <li>• College industry conference (Foundry Educational Foundation)</li> <li>• Plant tours and visits from educational institutions</li> <li>• Foundry-in-a-Box simulation</li> <li>• Mini cupola demonstrations on site or at universities and technical colleges</li> <li>• Scholarships and local college investment</li> </ul>
Customers	<ul style="list-style-type: none"> <li>• Blog and e-newsletter (PartingLINE)</li> <li>• Voice-of-the-Customer surveys</li> <li>• Foundry 101</li> <li>• In-house visits</li> <li>• Value analysis/Value engineering and other collaborations</li> <li>• Trade show participation</li> <li>• Code of conduct and compliance policies published</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>• Code of conduct and compliance policies published</li> <li>• Supplier assessments</li> </ul>

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 2015 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 2016.)  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 2016.)
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).
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 2017.)

## 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 90 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.</p>
Advanced Materials	Develop and promote high strength materials to facilitate light weight casting designs.	<p>Support university Advanced Materials Enterprise (AME)* initiatives to facilitate the development of a fatigue live and physical property database representing three grades of high-strength ductile iron in fiscal 2015.</p> <p>*As an additional benefit, database development by AME programs are promoted to foster the development of educated casting design engineers and future industry talent.</p> <p>Support the Hitachi Metals Soken Laboratory for advanced material and casting process development through intellectual property and human resource exchange.</p>

\*\*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 98 percent of the leaders by December 31, 2015.
- A partial completion of the feasibility study to determine melt system modification strategies to reduce the coke-to-melt usage ratio.

# 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 three quarters 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. Midwest and South, 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



**Left to Right:** Daniel Tonge, Kris Pfeahler and Linamar's Director of Purchasing, Caryn Bell.

## SUPPLIER RECOGNITION AWARD

Waupaca Foundry was recognized by Linamar Corporation as the **TOP SUPPLIER** in the castings commodity category for achieving **excellence in the areas of quality, delivery, service, and support.**

According to Linamar, quality suppliers are essential to their success. "We want to recognize our key strategic suppliers that help us move forward in our industry," said Caryn Bell, director of purchasing for aluminum and iron castings at Linamar. "Waupaca Foundry is a great partner for us and has helped ensure our parts are manufacturable by being aggressive on value analysis and value engineering, which resulted in cost savings."

## 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 supports AME initiatives at universities throughout the United States. Activities not only foster advanced material and process advancement, but serve as hands-on educational opportunities for new engineering students wanting to pursue a career in the metalcasting industry.

This program gives participants a solid idea of what it takes to make a high-quality casting. It is aimed at casting buyers, purchasing departments, and design engineers that want to increase their knowledge or get a better look at what makes a quality casting. These one-day seminars and online resources cover foundry terms, techniques, and technology used in the casting process, such as the vertical green sand mold process, solidification modeling, and melting and metallurgy. As a result, attendees will be armed with the knowledge to make more informed buying decisions and incorporate what they have learned into future designs, as well as answer any questions their customers, supervisors, and coworkers might have about metallurgy, foundry processes, and the production of iron castings.

## DEVELOPMENT OF ADVANCED MATERIALS

Waupaca Foundry is using technology to advance, investigate, and develop alternate and/or revised materials for lightweighting initiatives. By supporting university-based Advanced Materials Enterprise (AME) initiatives and internal laboratories, Waupaca Foundry works to facilitate the development of material databases containing physical and mechanical properties for grades of high-strength gray and ductile iron. We strive to advance the technology of higher performance and lighter weight components using modern computer-aided engineering and other state-of-the-art metalcasting process improvements.

We work with our customers to design lighter weight parts through other means besides material substitution. Using tooling engineering, metallurgical expertise, and computer design to collaborate with customers, new designs are developed to reduce mass of both the final casting and machined stock. This allows better efficiency performance of the final destination product and lowers machining cycle time, further reducing environmental burden and total manufacturing costs for our customer.

## 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.



## RESPONSIBLE PROCUREMENT *(Continued)*

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 2015. Waupaca Foundry was not subject to the U.S. Security and Exchange Commission's Dodd-Frank Wall Street Reform and Consumer Protection Act in 2015. 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.

In 2015, Waupaca Foundry was one of several primary funders of the Perry Childcare, the newest fully licensed daycare in the Tell City, Indiana area. The center operates as a non-profit organization and is run by ten volunteer community members appointed to the board of directors, one of which is a representative of Waupaca Foundry.

The center will offer a variety of services for working families, something needed in a region where major employers operate 24 hours. Waupaca Foundry Plant Manager, Bruce Tesch spoke with other business and community leaders and agreed the need was so acute, he serves as president of the daycare's board of directors.



“

*Waupaca Foundry has changed Perry County for the better in many ways over the past 20 years. As a community we are fortunate for their generosity, but equally important is Waupaca's attitude of common sense solutions and ways to solve local challenges.*

*Mary Roberson  
Superintendent for  
Perry Central Community School*

”

## INVESTING IN OUR COMMUNITIES *(Continued)*

Residents of Perry County, Indiana, have a new helipad for use by emergency services when Waupaca Foundry unveiled the site in September 2015. The helipad is located at the south side of the foundry's property and provides access for the west side of the county. Waupaca Foundry owns the helipad and assumed all construction costs, but it will be used by Perry County emergency services to rapidly transport critically ill and injured residents to nearby hospitals. The helipad was part of a larger project to expand the Waupaca Foundry parking lot, which required more than 115,000 tons of reclaimed foundry sand.



We also look for opportunities to give back to the local communities in other ways, including donating spent foundry sand and slag that can be used as a low-cost building material. Such foundry materials are used for road construction, agricultural uses such as animal bedding, landfill cover, or even in concrete products and asphalt. Reused foundry sand contains up to 15 percent clay. When compacted, it can be used in landfill construction to prevent environmental contamination and waste runoff, ensuring our soil, groundwater, and surface water are protected.

*Sixty foundry employees are members of the gray and ductile iron foundry's emergency response team as well as emergency response teams in nearby communities. For years emergency flights throughout the region have used our property when there was public need due to an accident or illness, so we felt constructing a certified helipad was in the best interest of the community.*

*Bruce Tesch  
Plant Manager, Waupaca Foundry*

# 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. Additionally, we are currently pursuing certification to ISO 50001, the energy management system standard, at Plant 1, with the intent to expand across the organization in the future.

### 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 16 percent from 2009-2015.

**State government:** Waupaca Foundry has been admitted to Wisconsin's Green Tier program. Eligibility requirements for the Green Tier program include: a good environmental record, a willingness to exceed regulatory requirements, an environmental management system, and ideas for improving performance that will benefit both business and the environment.

**Customers:** Waupaca Foundry received the Kawasaki environmental award for implementing significant achievements in voluntary energy reduction.

**Industry awards:** In 2015, Waupaca Foundry received the American Council of Engineering Companies (ACEC) "Best of State" Engineering Excellence Award in the State of Wisconsin as well as a National ACEC Engineering Excellence Recognition Award for a project that promotes the reuse of foundry by-products to enhance the sustainability of the company's Waupaca area landfill.

## MATERIAL USAGE AND PRODUCTION MATERIAL EFFICIENCY

In 2015, more than 2,587,000 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.

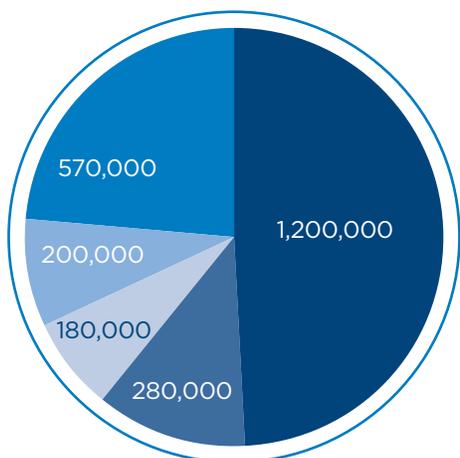
One of our goals for 2015 was to conduct a feasibility study to identify and evaluate melt system modification strategies to reduce the coke-to-melt usage ratio, saving us money spent on raw materials while also reducing our energy consumption and associated greenhouse gas emissions. We continually look 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, with the work completed by March 2017.



### KEY INPUT MATERIALS USED IN 2015

**TOTAL TONS USED**  
Rounded Value



#### MATERIAL

- Recycled Metals
- Metals
- Melt Additives
- Coke
- Molding Materials



## ENERGY USE

Our primary impact to climate change 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 2015, a cumulative energy intensity improvement of 16.3 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.

In 2015 we hired a dedicated energy manager for the sole purpose of overseeing projects related to our energy program. Consistent with our energy policy, 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.

## 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 \$200,000 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 2016, 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 2015, we used 815,000 megawatts (MW) of electricity. Our combined energy consumption from coke, natural gas, and electricity was over 14,870,229 million British thermal units (mmBtu).



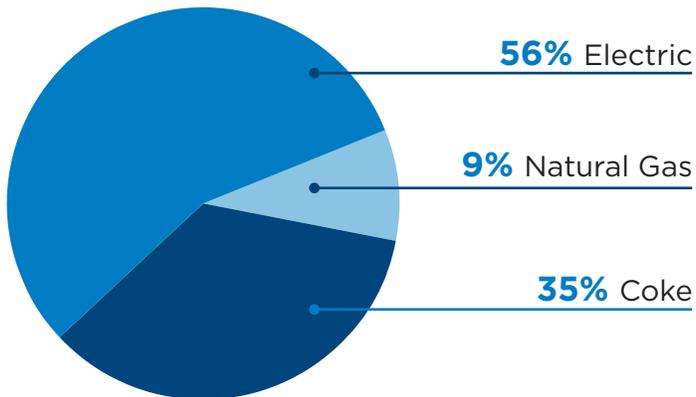
*Committing to sustainability helps us mitigate the rising cost of energy and that helps us maintain product costs that keep our customers happy. But that's not the main reason for what we do. We do it because it's absolutely the right thing to do—for our employees, our customers, our communities, and our planet.*



*Mike Hoecker  
Energy Manager, Waupaca Foundry*

## ENERGY USE *(Continued)*

### ENERGY CONSUMPTION BY TYPE, FY15



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 10.28 mmBtu/ton of product shipped for 2015.



## Examples of Energy Efficiency Successes

In 2015 the facility in Etowah, Tenn., replaced 1,016 metal halide and T12 light fixtures with brighter, and more energy-efficient LED lights. The new lights are projected to yield an annual energy savings of more than 4.6 million kilowatt hours, or \$232,385 in savings annually. “This is a win for our employees who get a better work environment; a win for the environment by reducing carbon dioxide emissions by nearly 3,000 ton a year and a win for Waupaca by saving on our electric bill,” said Sam Greene, general manager for the Etowah foundry.

The Marinette, WI, facility executed a similar lighting project that resulted in a savings of over 3.5 million KW-Hrs and \$194,000 annually. In an additional effort, a cooling tower supporting the facility melt furnaces was retrofit with six variable frequency drives to better control cooling water flow and fan speed. The project yielded an electric use reduction of 670,000 KW-Hrs and \$37,000 annually. Additional benefits realized included improved equipment reliability due to refined temperature control and a reduction in significant water temperature swings in the system (which aids in the prevention of water leaks resulting from the expansion of pipe fittings within the system).



## 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 2015, our total GHG emissions were 1,236,000 tons of carbon dioxide (CO<sub>2</sub>). The Total CO<sub>2</sub> 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.

In 2015 we also reported these Scope 1 and Scope 2 emissions, as well as our climate change risks/opportunities and management strategies to CDP (formerly the Carbon Disclosure Project), the largest database of primary corporate climate change information in the world.



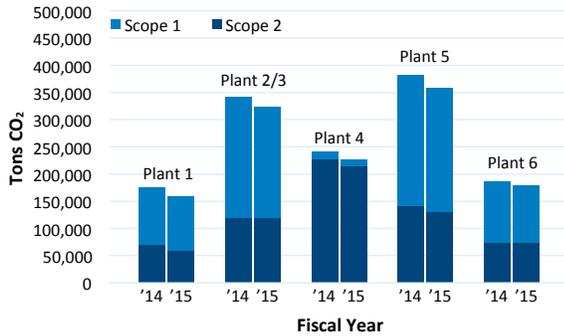
## A Long-Term Commitment...

The company began retrofitting plants with 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.



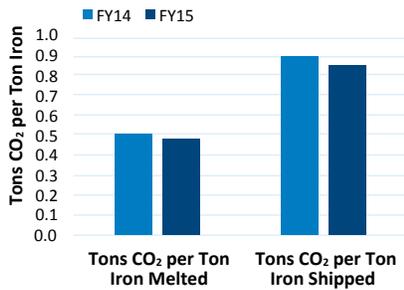
## EMISSIONS *(Continued)*

### TOTAL CO<sub>2</sub> EMISSIONS

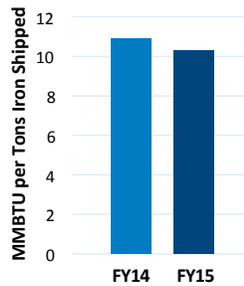


In addition to our absolute GHG emissions, we also normalize our GHG emissions based on tons of iron melted and tons of product shipped, similar to the way we track our energy consumption. The graph shown below includes normalized values for our consolidated GHG emissions as well as total energy use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

### NORMALIZED CO<sub>2</sub> 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.



## Lightweighting Or Right Weighting?

In the past 30 years, the domestic auto industry has been determined to achieve government and consumer-driven fuel economy improvements. This has resulted in a great deal of material conversions from iron and steel to lightweight materials such as aluminum and other metals. Weight reduction has gotten so popular, in fact, it has recently become known as “lightweighting.”

From an engineering perspective, the tactic of “lightweighting” seems limiting. If the auto industry goal is to improve fuel economy while optimizing costs and consumer prices, it seems that a well-driven business and engineering approach is most desirable. At Waupaca Foundry, we think of this as “right weighting.”



We have also worked with our customers to design lighter weight parts through other means besides material substitution. In one example, we were able to use tooling engineering, metallurgical expertise, and computer modeling to manufacture an advanced ductile iron helical differential case for the successor to the world’s first commercially available four-wheel drive vehicle. Through collaboration with our customer, we developed a new design that reduced mass by 41 percent and machined stock by 60 percent while still using ductile iron in the casting. The iterative casting design also lowered machining cycle time, further reducing total manufacturing cost for our customer.

We know that iron material costs are less than lightweight material costs. We are eager to combine cost effectiveness with effective designs to help our customers save money without jeopardizing (and actually improving) functionality, quality, and safety. This combination of Waupaca’s expertise and the customers’ expertise and willingness to improve their product makes for successful partnerships.

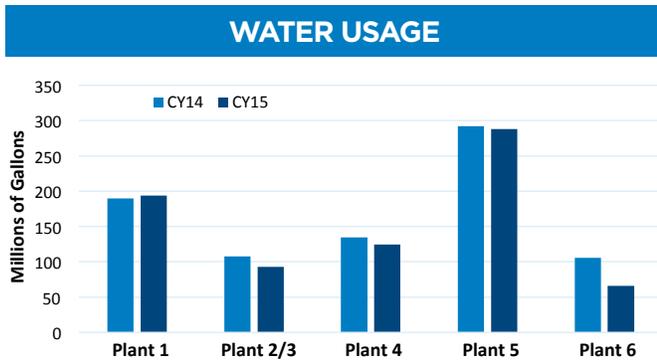


## TOTAL WATER USE

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 2015, the combined water usage for all Waupaca Foundry locations was 766 million gallons from municipal water supplies compared to 829 million gallons in 2014, representing an 8 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 2015, Waupaca Foundry generated a total of 784,800 tons of solid and hazardous waste. Of this, only 3.35 tons was hazardous and the remaining majority of 540,228 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 waste. 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 455,000 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 sub base 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.



Approximately 80 percent of foundry sand byproducts that can no longer be used in metalcasting are reused in local projects including road and general construction, agriculture and geotechnical fill. The firm has been recycling foundry sand and related materials for more than two decades.



## WASTE (Continued)

Slag generated by Waupaca Foundry is getting a second chance by helping out local utility companies. With physical properties similar to crushed stone, our slag by product is a natural choice for utilities who need such material as backfill or aggregate replacement for their public projects. It's an ideal alternative to traditional backfill, thanks to its versatile nature and swift drainage properties. Pipelines couched in foundry slag are secure, well drained and easily re-excavated if later pipeline repairs are ever required. Even better, the use of the slag aggregate reduces construction and material costs and makes use of an available resource without needing to mine native material elsewhere.



## SIGNIFICANT SPILLS

Waupaca Foundry uses a number of chemicals in its process and to keep its equipment operating at peak levels, including coremaking resins, hydraulic oil, lubricants, and anti-freeze. There were no significant spills in 2015 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. With the exception of the identification and immediate correction of a stack test failure at our Tell City, Ind. plant, FY2015 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 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

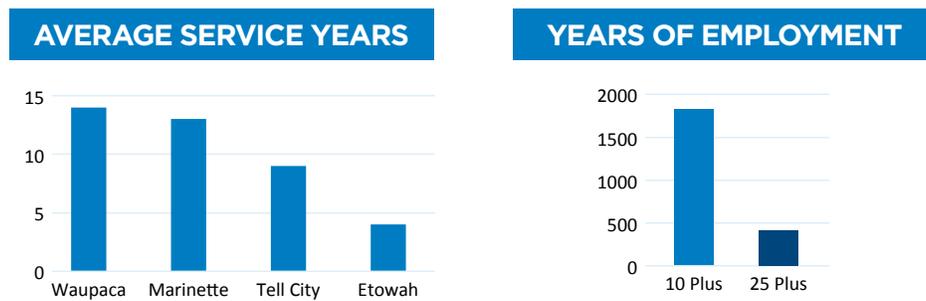


G4-LA11

## 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.



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.

## 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 2015, 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 2015, 158 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 2015, 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 - 85 percent of our workforce has received six sigma related training (lean, green belt, black belt, kaizen, 6S, etc.) and the program is on track to achieve our goal of 90 percent of the workforce by the end December 31, 2017.
- Provide leadership training to 100 percent of the employees in leadership positions\* - Through 2015, leadership training had been completed for 98 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 - 68 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 2015, Waupaca Foundry invested \$1.3 million in total training and employee development programs.



## 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 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 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 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.



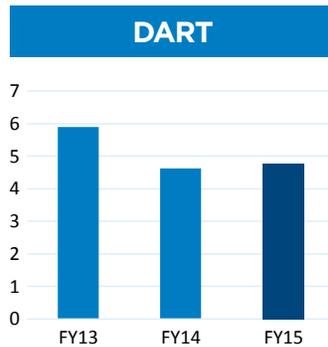
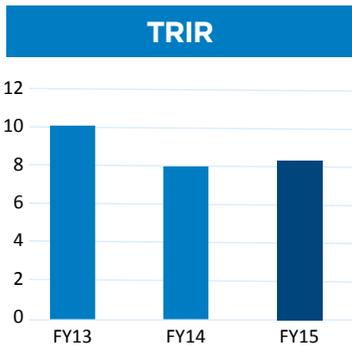
A large percentage of our injuries can be attributed to ergonomics. To address this, significant investments have been made in the automation of processes such as installing robots to automate repetitive tasks in grinding and core making workstations.

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 to closure. We also continue company-wide serious incident review, including “near-miss” situations to reduce the risk of potential serious incidents. We also evaluate the effectiveness of root cause analysis and corrective actions, and employee participation in the safety program. This is now part of our safety scorecard to ensure timely reporting, follow through on corrective actions and sharing with all locations.

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 8.36 for 2015, which represents a year-over-year increase of 4 percent. We have established a goal to reduce our TRIR to 2.0 or less by 2019.



## SAFETY METRICS



Our DART rate increased slightly in 2015 by 3 percent to 4.77. The 2019 goal for our DART rate is 1.0 or less.

We did not suffer any fatalities during 2015. In the same period, we also had zero incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of our products.

## 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.



“

*The wellness program, especially the Health Coaching, has made us a healthier workforce at Waupaca Foundry. It took a while to get started, but now I can see the results such as co-workers who have quit smoking, lost weight, and feeling better overall.*

*Waupaca Foundry employee,  
Waupaca, Wis.*

”

### PATRIOT AWARD

Waupaca Foundry received the Patriot Award in recognition of extraordinary support of employees serving in the Wisconsin National Guard. Supervisor Darrell Bartel was nominated for being highly supportive and respectful of his team member, Thomas Walecki, while he was on active duty. Both men work at the gray iron foundry located at 406 N. Division St., Waupaca. "It's an honor to receive this recognition, but this isn't about me," said Waupaca Foundry Core Room Foreman Darrell Bartel. "This is about the service men and women who make extraordinary sacrifices. I'm proud to give back and support our veterans however I can. And, I couldn't do this alone; it takes our entire team working together for a common goal, as well as the advocacy of Waupaca Foundry."

Walecki serves on E Company 132nd Brigade Support Battalion and served in the Iraq War from April 2009 through February 2010. Walecki has been working at Waupaca Foundry since 2014 and has been a member of the National Guard since October 2006. Nationwide, approximately 11 percent of the Foundry's 4,000 workers are veterans of the armed services.

The Patriot Award is supported by the Employer Support of the Guard and Reserve (ESGR), an office of the Department of Defense. The ESGR's mission is to encourage employment of members of the National Guard and Reserve who bring leadership to the civilian workforce.

"We are proud to employ veterans and team members who serve in the Army National Guard and Reserves," said Joey Leonard, executive vice president of human resources. "The commitment they exhibit in times of civil emergency and natural disaster, as well as in defense of our country directly translates to leadership on the job."



**Front row** (left to right): Kenneth Ostrowski, Josh Lindner, Angela Lang, Jessica Sroka, Nicole Logan, Daniel Ehrenberg, Darrell Bartel

**Middle row** (left to right): Cody Vroman, James Keilty Jr., Sabrina Loken, Jessica Allen, Greg Mills, Heather Schmidt, Kasandra Reyes, Tristan Klepps, Dennis Kipke

**Back row** (left to right): Matthew Humpa, Kenneth Huff, Eric Nicewander, Sarah Nicewander, Stuart Mills, Jodey Cady, Amanda Sadowski, Thomas Walecki Jr., Ted Kottke, Aaron Minton, Isaac Lepinski, Delaney Allen, Damon Simmons

## 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 2014 Sustainability Report and describes our activities during our 2015 fiscal year, covering the time period from April 1, 2015, through March 31, 2016. Fiscal year 2014 is reported as October 1, 2013, through September 30, 2014. 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](http://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 six of Waupaca Foundry's U.S.-based manufacturing facilities. April 2016 marked the completion of the merger with Hitachi Metals Automotive Components USA, LLC (HMAC), which brought three additional facilities into our business. These three facilities were excluded from this report, but will be incorporated into future reporting.

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
<b>STRATEGY AND ANALYSIS</b>		
G4-1	3	No
<b>ORGANIZATIONAL PROFILE</b>		
G4-3	4	No
G4-4	4	No
G4-5	6	No
G4-6	5	No
G4-7	5	No
G4-8	20	No
G4-9	4	No
G4-10	37	No
G4-11	37	No
G4-12	22	No
G4-13	23	No
G4-14	11	No
G4-15	11	No
G4-16	15	No
<b>IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES</b>		
G4-17	N/A*	No
G4-18	13	No
G4-19	14	No
G4-20	14	No
G4-21	44	No
G4-22	44	No
G4-23	44	No
<b>STAKEHOLDER ENGAGEMENT</b>		
G4-24	15	No
G4-25	15	No
G4-26	15	No
G4-27	15	No
<b>REPORT PROFILE</b>		
G4-28	44	No
G4-29	44	No
G4-30	44	No
G4-31	2, 44	No
G4-32	44	No
G4-33	44	No
<b>GOVERNANCE</b>		
G4-34	10	No
<b>ETHICS AND INTEGRITY</b>		
G4-56	11	No

\*Waupaca Foundry is a Hitachi Metals group company.

## SPECIFIC STANDARD DISCLOSURES

DMA and Indicators	Omissions	Page(s)	External Assurance
<b>ECONOMIC PERFORMANCE</b>			
G4-DMA*		19	No
G4-EC1		24	No
G4-EC8		19	No
<b>MATERIALS</b>			
G4-DMA*		27	No
G4-EN1		27	No
G4-EN2		27	No
<b>ENERGY</b>			
G4-DMA*		28	No
G4-EN3		29	No
G4-EN5		30	No
<b>WATER</b>			
G4-DMA*		35	No
G4-EN8		34	No
G4-EN9		34	No
<b>EMISSIONS</b>			
G4-DMA*		31	No
G4-EN15		31	No
G4-EN16		31	No
G4-EN18		32	No
<b>RESOURCE EFFICIENCY (EFFLUENTS AND WASTE)</b>			
G4-DMA*		35	No
G4-EN23		35	No
G4-EN24		36	No
G4-EN25		35	No
<b>COMPLIANCE</b>			
G4-DMA*		36	No
G4-EN29		36	No
<b>EMPLOYMENT</b>			
G4-DMA*		38	No
G4-LA2		41	No
<b>HEALTH AND SAFETY (OCCUPATIONAL AND CUSTOMER)</b>			
G4-DMA*		40	No
G4-LA6	Partial LA6 – Not reporting by gender or region.	40	No
<b>TRAINING AND EDUCATION</b>			
G4-DMA*		39	No
G4-LA9	Partial LA9 – Not reporting by gender or region.	39	No
G4-LA11	Partial LA1 – Not reporting by gender or region.	37, 39	No

\*Specified content begins on listed page number