

## Attachment 2

### Waupaca Foundry, Inc Environmental Sustainability

#### *Setting Goals for Sustainable Growth*

Metalcasters have long been recognized as some of the world's first recyclers. For centuries, foundries have been making new metal objects by re-melting old ones that have become unwanted scrap. While this is a good foundation for a claim that a well run foundry is an environmentally sustainable business, other opportunities exist to improve a foundry's environmental performance.

Waupaca Foundry, Inc. (WFI) has identified and implemented the following actions that serve as primary business goals to achieve sustainable growth between now and 2020:

#### Goals (2020):

- Reduce energy use by 25% over the next 10 years, using fiscal 2010 energy use as the baseline (mmbtu/ton of iron shipped).
- 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.
- 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% in 10 years (baseline 2010)(tons)
- Continue water use optimization efforts to facilitate a company-wide reduction in water use consumption by 80% in 10 years (baseline 2010)(gallons)

#### Reducing Waupaca's Dependence on Energy

As a representative of an energy intensive industry, Waupaca Foundry has pursued energy use reduction practices and projects to reduce their carbon footprint and maintain global competitiveness. Since 2004, significant energy use reduction activities have included heat recovery for building /hot water heating, energy efficient lighting retrofits, and the widespread use of premium high efficiency motors.

Waupaca Foundry was recognized as an energy use reduction leader as a recipient of Wisconsin's 2009 Governor's Award for Environmental Excellence at its Plant One facility in Waupaca, Wisconsin. The recognition was honored for a novel heat recovery system that recovers waste heat from the cupola melting of iron scrap and uses it for heating the facility through the cold Wisconsin winters. This project along with other past successes has resulted in a reduction of 223,000 mmbtu per year in energy savings. This equates to the removal of approximately 3,200 passenger vehicles from U.S. highways.

Continuing in this spirit, WFI was among the first companies in the U.S. to volunteer for the U.S. Department of Energy's *Save Energy Now Leader* (later renamed *Better Buildings, Better Plants*) Program. This program seeks a commitment to voluntarily reduce industrial energy intensity by 25% in 10 years. The DOE/Waupaca Foundry agreement continues these efforts with the development of energy use and energy intensity baselines, and the ongoing implementation of an energy management plan to meet the challenging goal.

#### Maintaining Leadership in Pollution Control

Above and beyond any minimum regulatory requirements, WFI's philosophy is to use state of the art pollution control equipment to eliminate potential air pollution, and to seek new ways to continually reduce our air emissions. The air pollution control systems we install at our facilities are considered as "best available" by the U.S. Environmental Protection Agency and the State of Wisconsin for all processes regardless of the original installation date. Nearly a decade before the implementation of the Federal "maximum achievable" control requirements for the iron and steel industry, WFI was proactively retrofitting process air pollution control equipment in advance of the newly defined state of the art.

Of equal importance, filter leak detection instrumentation has been broadly utilized by WFI facilities as an elective technology to achieve superior air pollution control results. Such technology allows WFI to surpass regulatory requirements and create a new industry benchmark.

This leadership philosophy represents a continuation of the ongoing effort by Waupaca Foundry to maintain modern facilities that can succeed, both environmentally and economically, in the increasingly competitive worldwide marketplace.

#### WFI Expands on Past Foundry Sand Recycling Success

WFI has recognized a tremendous opportunity in the potential to reuse spent foundry sands (and slag) for beneficial purposes. Our casting processes require large volumes of sand, which are continually used, reconditioned and reused in the foundry. Sand that can no longer be used in the foundry process can be beneficially reused in lieu of disposal via landfilling. With systems in place to screen metal chunks and debris out of the sand, foundry sand represents a clean, non-toxic product that can be used in a variety of applications and industries. Examples of such uses include geotechnical fill, road construction, agricultural use, cement manufacturing, concrete products and asphalt.

WFI has been recycling foundry sands for over two decades, and has worked in partnerships with state and local agencies (such as the Wisconsin Department of Transportation) to complete projects that would have required substantial quantities of native sand and gravel materials. Using foundry sands and slag for these projects is not just a better use for WFI's byproducts, but has the added benefit of preventing the need to mine native materials elsewhere for the same project. The benefits of foundry sands as a non-toxic resource has become increasingly promoted by state and federal government,

along with new research that demonstrates foundry sand's benefits as soil amendments, manufactured topsoils, and highway subbase fill (among many other uses).

WFI's past efforts have resulted in 70% of the byproducts generated from the foundry process now being incorporated into a multitude of local beneficial reuse projects. This is a significant achievement, and marks WFI's ongoing efforts to evolve our environmental management program and meet our environmental responsibilities.

Using these materials for a higher use is the right thing to do, and WFI will continue to work to reduce our dependency on landfilling as a final destination for otherwise beneficial spent foundry materials.

#### Eliminating the Need to Generate and Discharge Non-Contact Cooling Water

Historically, operating a successful foundry required water....a lot of water. Water had been consumed in several ways, including contaminated process water requiring treatment as a result of air pollution control activities, and non-contact cooling water used to cool running machinery. As a result of plant improvements implemented by WFI over the last decade, contaminated process water requiring wastewater treatment and discharge has been completely eliminated from WFI facilities.

Following that accomplishment, WFI initiated the investment and installation of closed loop cooling water systems to eliminate the remaining significant contributor to plant water usage in the form of "once through" non-contact cooling water. Completed systems have demonstrated overwhelming success, with plant cooling water demands being cut by 80% or more, and non-contact cooling water discharges reduced to near zero.

Building on this success, additional closed loop systems are currently being designed with the intention of forever removing Waupaca Foundry from the single use water discharge paradigm.

#### Reporting on our Progress

Waupaca Foundry is developing a format to report periodically on our continued success in meeting these goals.

#### **Media Information:**

Sara Timm (see address below)

#### **Corporate Office:**

Waupaca Foundry, Inc.  
1955 Brunner Drive  
Waupaca, WI 54981  
(715) 258-6611