

SUMCO Phoenix Corporation

Environmental, Health and Safety 2010 Report



SUMCO

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LETTER FROM THE CEO

This report focuses on SUMCO Phoenix Corporation's Environmental, Health and Safety activities. In it, you will find our environmental policies, environmental performance, recent environmental challenges and goals. Our commitment to the environment can be summed up in two words: environmental stewardship. We understand that our operations have the opportunity to impact the environment in many different ways. We are committed to understanding those impacts and to providing the necessary resources and attention to minimize and prevent adverse consequences from our activities.

SUMCO Phoenix Corporation strives to continually provide a safe and healthy environment for its employees, contractors and the surrounding community. We demand safe work behavior, practices, design and systems.

The standard measurement for industrial safety performance is the OSHA Recordable Rate. In 2005, we renewed our focus on this very important business metric. We established goals for our plants to improve this metric and implemented a Safety Management System to provide a framework for that improvement.

Now, five years later, we are able to see the positive results of the Activity-Based Safety Management Systems we initiated throughout our manufacturing operations. By year-end 2010, our OSHA Recordable Incident Rate had dropped to 2.63, a 36% reduction from the December 2005 baseline.

SUMCO Phoenix Corporation also takes seriously its commitments to employee health and safety, and to the environment, and considers them a core value for how we do business. We are committed to having our facilities perform in a manner consistent with the principles of world-class safety management and responsible environmental stewardship. We have set high goals to ensure this core value is achieved, and are committed to do the following:

- ◆ Facilitate integrated safety management systems that include process validation and proactive activities that promote the prevention of accidents and the positive safe behavior of all employees
- ◆ Encourage employees to seek out healthy choices and lifestyles that improve their quality of life and health
- ◆ Conserve resources by continuously reviewing opportunities to reduce the use of energy, water and raw materials
- ◆ Prevent pollution
- ◆ Reduce waste
- ◆ Go beyond compliance with environmental legislation and regulation
- ◆ Educate our employees and inform the community about responsible environmental practices

In 2005, SUMCO Phoenix Corporation established five-year goals for three, very important environmental metrics - hazardous waste generation, water consumption and electricity consumption - that are in line with our environmental stewardship commitment. While we did not meet all of these very aggressive goals, I am happy to report that in 2010, we made significant impact in all of these areas, and we look forward to establishing new and challenging long-term goals in 2011 for the coming five years.

Kazumasa Shoji

**Chief Executive Officer and President
SUMCO Phoenix Corporation**

COMPANY PROFILE

SUMCO Phoenix Corporation manufactures electronic-grade silicon wafers for the semiconductor industry, as well as silicon wafers for photovoltaic applications. We are the second largest such manufacturer in the world. SUMCO Phoenix employs more than 600 people at three manufacturing facilities in the United States.

Our wafers are used by companies all over the world to make integrated circuits and semiconductor devices that power a myriad of electronic products, from computers to cell phones, digital watches to automobile engine systems and solar arrays.

With proprietary technologies pioneered in Japan and here in the U.S., SUMCO is able to meet and exceed customers' expectations, even as their need for sub-micron-level surface flatness and hyper-clean surfaces increases. SUMCO's mission is to be the world's No. 1 silicon wafer supplier by exceeding the expectations of our customers and stockholders, recognizing the value of our employees, and being good neighbors in our communities. To ensure that we produce the highest quality wafers possible with minimum environmental impact, we have invested time and energy to implement ISO 9001 and 14001 management systems at all of our facilities.

Guiding Principles

- ◆ We strive for excellence in every aspect of our business - products and services, client relationships, employee teamwork and corporate performance.
- ◆ We focus on continuous improvement. We are always looking for better ways to do things, and we rely on our employees to help identify improvements.
- ◆ We are committed to maintaining a healthy, safe and clean environment for our employees, and we have programs in place to assure this.
- ◆ We believe in good corporate citizenship. Globally, that means treating our customers with respect and operating with honesty and integrity. Locally, it also means protecting and enhancing the environment and communities in which we are based. We do this through responsible environmental management programs, volunteerism, and corporate and employee contributions to organizations that enrich our communities.

SUMCO Phoenix Corporation is committed to conducting business in a manner consistent with our Guiding Principles. We will operate our facilities in an environmentally responsible manner with continuous improvement in our processes, EHS Management Systems and pollution-prevention efforts.

To achieve this, we will:

- ◆ Meet or exceed all applicable environmental, health and safety regulatory requirements, as well as best-practice standards to which we subscribe.
- ◆ Establish sound EHS objectives and targets for continual improvement in our efforts to maintain a safe work place and to practice environmental stewardship.
- ◆ Evaluate performance by monitoring results through effective management reviews and routine reports to all management levels.
- ◆ Report progress and key issues to senior management at the plant and corporate levels.

ENVIRONMENTAL HEALTH AND SAFETY POLICIES

SUMCO Phoenix Corporation's Safety and Environmental Policies appear below. We give them wide communication throughout our organization to serve as guiding principles for how we expect all our personnel to conduct business on our behalf.

Corporate Safety Policy

The management of SUMCO Phoenix Corporation is committed to minimizing risks to human health and the environment. We believe that nothing is so urgent that we cannot take time to do our work safely. In short, safety will not be compromised for any activity, task or mission. In the interest of a proactive approach to achieving world-class safety performance, each operational unit will establish systems and practices to meet the following Corporate Safety commitments:

- ◆ A Safety Management System based on careful identification of specific activities to be performed by each organizational level and an accountability to perform those activities with special emphasis on employee participation, recognition and safety
- ◆ Educating and training to institutionalize our Environmental, Health and Safety (EHS) values throughout the organization
- ◆ Setting and monitoring EHS objectives to minimize safety risks
- ◆ Raising EHS awareness of all employees and stressing personal accountability
- ◆ Complying with or exceeding all applicable EHS regulatory requirements
- ◆ Continual improvement of the Safety Management System

Environmental Policy

SUMCO Phoenix Corporation is committed to Environmental Excellence and to having its activities performed in a manner consistent with the principles of responsible environmental stewardship. Toward that end, SUMCO Phoenix Corporation will develop and maintain an Environmental Management System that accomplishes:

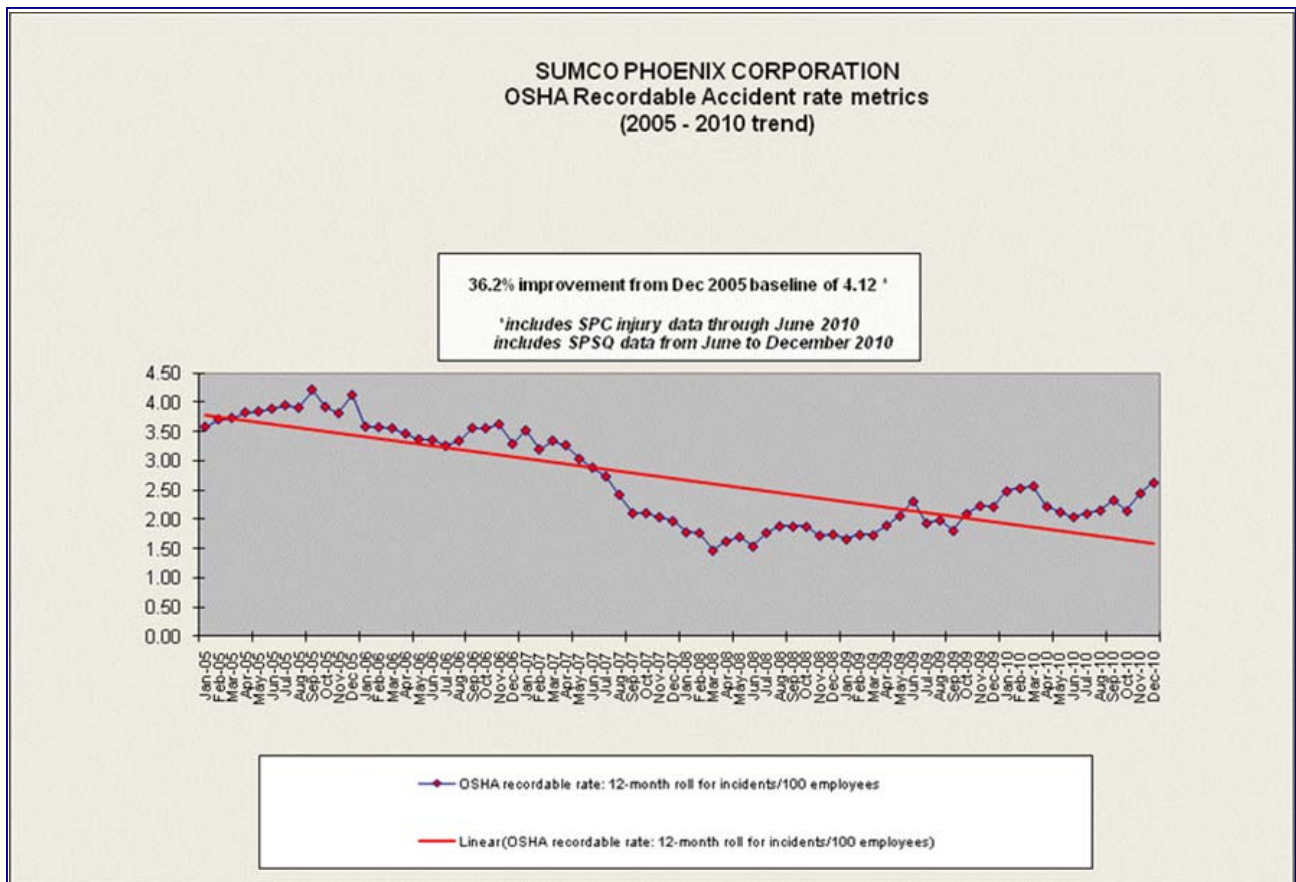
- ◆ Prevention of pollution, taking into account facility significant environmental aspects, technological options, business needs, and legal and other internal requirements
- ◆ Compliance with relevant environmental legislation and regulations, and with other requirements to which the facility subscribes
- ◆ Continual improvement by setting and reviewing environmental objectives and targets on a regular basis and by providing appropriate resources for effective function
- ◆ A review of opportunities for improvements in resource conservation in the form of energy water and raw materials reductions on an ongoing basis

With accomplishment of the above principles within an Environmental Management System, SUMCO Phoenix Corporation establishes and directs a commitment to environmental stewardship.

SAFETY ACTIVITIES

The common safety metric for industrial safety performance among U.S. companies is the Occupational Safety and Health Administration (OSHA) Recordable Incident Rate. This metric represents the number of annual OSHA Recordable incidents per 100 employees. This, however, is considered a lagging indicator to which we can only react after an accident has already occurred.

In 2006, we began to see the positive results of the Activity-Based Safety Management Systems that we initiated throughout our manufacturing operations the previous year. This work continued with the evolution and continual improvement of a Safety Management System which has accomplished a 36% improvement over the 2005 baseline. Activities that drive this lagging indicator down are proactive programs such as process-hazard analysis, improved incident and near-miss reporting and analysis, work-area behavior observation and coaching, and providing feedback of these leading indicators to the plants.



ENVIRONMENTAL STEWARDSHIP ACTIVITIES

SUMCO Phoenix Corporation has manufacturing operations in Phoenix, Arizona and Albuquerque, New Mexico. The combined semiconductor operations are registered at the corporate level through an independent auditor to the globally recognized environmental management system standard ISO 14001.

Each manufacturing plant has an Environmental Management System (EMS) Team consisting of senior management staff, the site Environmental Management Representative and other members appropriate to the needs of the specific plant. In addition, the Corporate EMS Team provides overall structure and policies to give direction to plant EMS activities.

One of the functions of the plant Environmental Management System Team is to drive environmental improvement objectives and targets. In 2010, the following environmental improvement activities were completed:

More responsible e-waste recycling

While SUMCO has been recycling computer and electronic waste for years, this project took the program to a more sustainable level by using only facilities that are in compliance with the Basel Convention for responsible recycling of electronic waste. This means that the recycling process avoids landfills, does not use foreign prison or child labor, and doesn't "dump" waste onto third world and developing countries. This project resulted in the recycling of more than 16,000 pounds of electronic waste in 2010, thereby keeping toxic materials out of landfills and recycling/remarketed equipment back into the consumer market that includes schools and charitable causes.

Alternative use for wire saw solids

This Phoenix project identified an alternative use for a large non-hazardous waste stream, wire saw solids. They can be used as an additive in coatings used in the cathodic protection of building components. This alternative use for SUMCO's wire saw solids resulted in a landfill avoidance of more than 35,000 pounds in 2010.

Recognition from local regulators

The SUMCO Albuquerque plant received a Gold Award from the city of Albuquerque's Water Utility Authority for complete and consistent compliance with its Industrial Wastewater Permit for the program year 2009 – 2010. The Albuquerque facility has received this award more than 10 times since the facility opened.

The SUMCO Phoenix plant also received recognition, its from the city of Phoenix Water Services Department Pollution Control Division, for 100% compliance with permit parameters for calendar year 2010. Like the Albuquerque facility, the Phoenix plant is also consistently awarded this recognition from year to year.

Environmental Stewardship/Natural Resource Use

Recycling and Reuse



SUMCO Phoenix Corporation's environmental stewardship commitment is demonstrated by vigorous recycling/reuse programs at each of the plants. Efficient use of the utilities and consumable materials that go into making silicon wafers is not only good business, it is a core principle of environmental stewardship. In 2010, SUMCO Phoenix Corporation facilities were able to recycle or reuse significant amounts of materials, thereby saving the environmental impact of their production from our suppliers.

In 2010, our recycling/reuse efforts kept more than 273 tons of materials in the cycle of productive use and out of landfills. SUMCO facilities supported the reclamation or internal reuse of the materials listed below.

<u>Material Reused/Recycled</u>	Tons (2010)
Cardboard	113
Plastic	50
Silicon Wafers	33
Silicon, Other	40
Fluorescent light tubes	0.2
Scrap Metal	8
Used Oil	2.8
Solvent	16
Computer equipment (E-waste)	8
Batteries	0.64
Metal drums	1.7
<u>Total Tons:</u>	273



Water

Albuquerque - Water Consumption

In a desert community such as Albuquerque, water use is an important issue. Any water that can be “consumed” more than once is water that does not have to be supplied from city resources. Water reuse at our Albuquerque facility includes two components:



A portion of the industrial wastewater that has been pH-adjusted at the plant is directed to a collection tank used by the city of Albuquerque to irrigate a local park. In 2010, the SUMCO Albuquerque facility provided 11.5 million gallons of irrigation water to the city. Since the program’s inception in mid-2001, 149 million gallons of irrigation water has been provided!

The plant also uses spent water from its internal production of high-quality, de-ionized water to irrigate the grounds of the Albuquerque plant. In 2010, the facility reused 3 million gallons of water in this manner.

Phoenix - Resource Conservation and Recycling

Like Albuquerque, Phoenix is also a desert community and shares the same philosophy regarding water conservation. Processes are continually being reviewed, fine-tuned and evaluated for water type, use and flow rate. This continual process improvement has yielded millions of gallons per month in water savings and reuse.

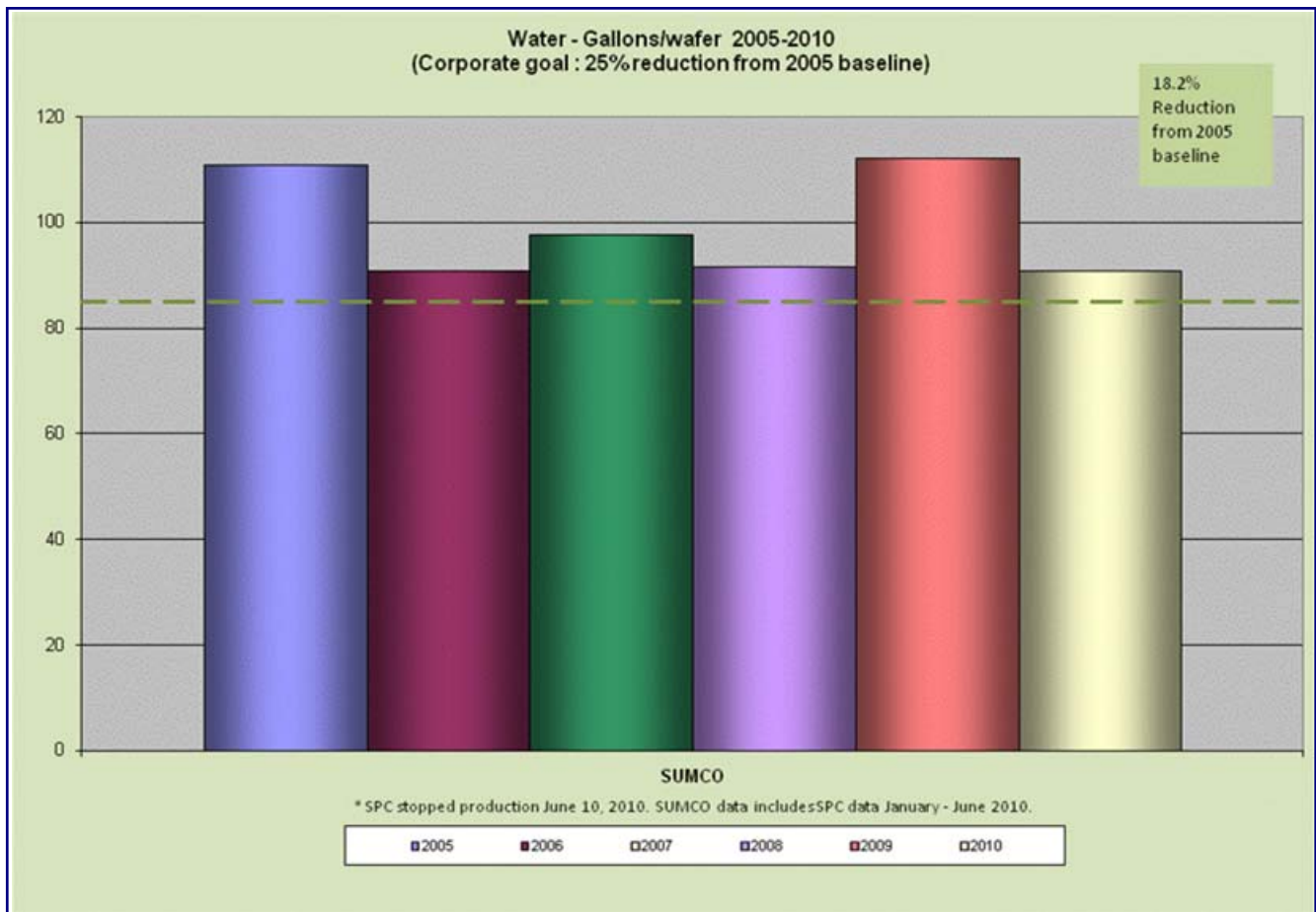


Raw material reuse and recycling is also a major focus at the Phoenix facility, where some chemicals are used in as many as four processes before they are sent off-site to be recycled. This type of reuse and recycling of process materials saves hundreds of thousands of pounds of waste material that would have gone to area landfills or to the local sewer system.



Even though SUMCO Phoenix Corporation's manufacturing facilities use significantly less than a typical semiconductor fab, we continue to advocate programs to reduce water usage. Water is continuously used and reused in our processes, recycled and then used again in another process. This continuous effort saves millions of gallons per year of water for the communities and cities in which are facilities are located.

SUMCO missed its aggressive, five-year, voluntary goal of a 25% reduction in water use per 1,000 wafers produced, but finished the period at the end of 2010 just 6.8% off the target for an 18.2 % reduction since 2005. This is a tremendous accomplishment and one that SUMCO will continue to try to improve upon in the years ahead.



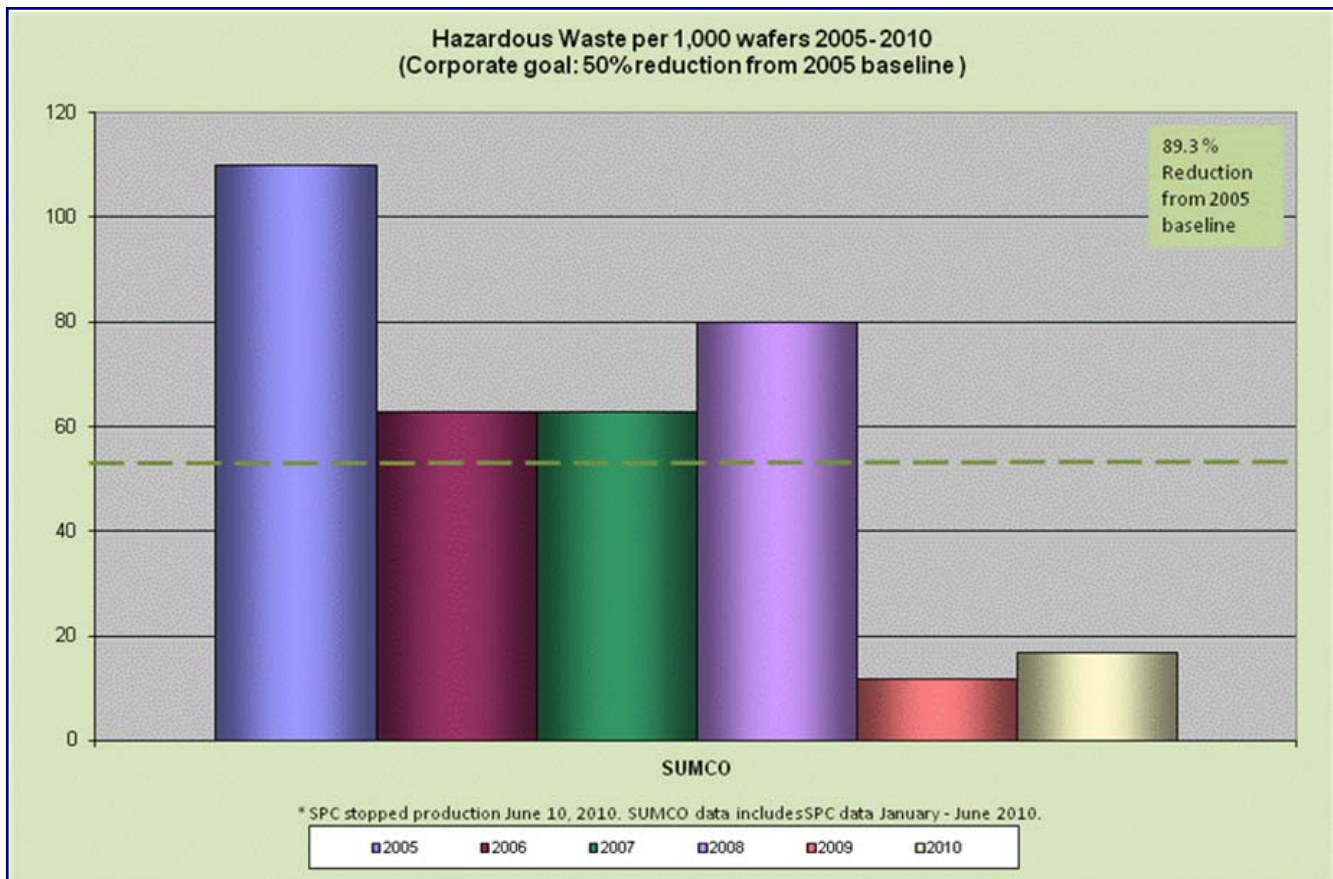
Hazardous Waste

The U.S. Environmental Protection Agency defines hazardous waste, and regulates how businesses handle and manage their wastes to safeguard the public and the environment under the Resource Conservation Recovery Act (RCRA).



SUMCO manages its waste very conservatively and with the same attention as we give the manufacturing of our products. SUMCO has an excellent compliance history and takes its responsibility very seriously. The EHS group at SUMCO continually reviews upcoming legislation and is engaged with its regulators to ensure compliance with these complicated and exacting rules.

At the end of 2010, SUMCO achieved an incredible 89.3% reduction in hazardous waste per 1,000 wafers. While some of this is attributed to the closure of our Cincinnati, Ohio plant in June 2010, the figure is no less impressive, and is a further testament to SUMCO's commitment to environmental stewardship.



Energy

SUMCO recognizes that the electrical energy we consume causes utility companies to release greenhouse gasses as they burn fossil fuels to generate the power necessary to meet the world's ever-increasing demands.

Part of this demand includes the semiconductor industry's requirements for increased thickness on epitaxial-coated wafers purchased from SUMCO, as well as the growing demand for solar wafers, which we also produce.



SUMCO works to conserve electricity by fine-tuning the efficiency of our equipment and processes to use the absolute minimum amount of electricity required. Projects such as retrofitting the lighting at our Albuquerque facility and converting a 49mm BTU/hr. boiler in Phoenix into a "smart boiler" have saved the equivalent of electricity to run many homes.

At year-end 2010, SUMCO reduced its electrical use on a per wafer basis by 9.6%. While we did not meet our goal of 25%, SUMCO is proud of this significant reduction and will continue to look for ways to reduce our energy consumption.

