

Innovation

NEW TECHNOLOGY: REVERSE OSMOSIS FILTRATION



Wheelabrator Broward's Chris Bird, the water lab technician, points out the new water filtration system that allows the plant to use filtered wastewater in boilers.

Broward plant conserves fresh water supply

For years, Wheelabrator North Broward has brought in wastewater from the county's North Regional Wastewater Treatment Plant to be reused for purposes such as cooling or landscaping. But in efforts to evolve and meet the company's transformation goals, the plant has taken on a more innovative and sustainable approach to increasing the use of reclaimed tertiary water, ordinarily discharged to local waterways.

Thanks to a reverse osmosis water filtration system, the Wheelabrator North Broward is now able to use that same wastewater in its boilers, where the combustion of trash and recovery of energy in the form of high-pressure steam takes place. Reverse osmosis technology, which is used by most leading water bottling plants, applies hydraulic pressure to counteract natural osmotic pressure and drive out pure water.

"It allows us to take all of the minerals and impurities out," said Chris Bird, the plant's water lab technician. "We're basically taking sewer water and transforming it into something pure to feed our boilers. You have to get past the stigma of where it came from, but it's clean enough to drink. It's amazing."

The process is allowing the plant to rely on tertiary water for all of its water process needs, and it is no longer drawing millions of gallons of water from the Biscayne Aquifer, which supplies Miami-Dade, Monroe and Broward counties with their primary source of fresh water.

The plant unveiled the new filtration system in late 2010. In the first year of operation, the system reduced city water use by 47 million gallons – an 88-percent reduction over historical use.

"The system performance has met all expectations," said Plant Manager Jim Epsilantis. "It's a win-win because almost 50 million gallons of tertiary water can be put to good use and the fresh water that we were using is available for residential and community use."

"It was one of our green initiatives, and hopefully it will prolong the life of the aquifer," said Bird, who was drawn to the position at Wheelabrator specifically because of the filtration plans. "The technology that exists and the fact that we're able to do this is incredible."

In the News



Millbury students celebrate a successful Symposium experience at the Miami Seaquarium.

Symposium students celebrate environment

At the 18th annual Wheelabrator Symposium for Environment and Education, students from Green Street Academy in Baltimore opened their presentation with a warning: "Side effects might include uncontrollable urges to make a difference."

And that was exactly the type of effect each of the event's 13 presentations produced.

Through the Symposium, middle-school students representing New England, the mid-Atlantic and Florida commit to a six-month learning project, identifying an environmental challenge in their community and developing a long-term solution. Under the guidance of educators and Wheelabrator employees, students apply lessons learned in the classroom to real-life situations.

"This is the generation that's going to inherit our environmental legacy," said Bill Roberts, vice president of operations at Wheelabrator. "Every year that we sponsor this event feels like a little more we're preparing them to leave the world better than they found it."

"The Symposium is a true example of community learning. It's one of the greatest opportunities I've witnessed in the 25 years I've been teaching," said JoAnn Cantlupe, a teacher at Sawgrass Springs Middle School in Coral Springs, Fla.

Tackling issues such as recycling, sustainable

gardening and protecting endangered wildlife, 13 teams traveled to Sunrise, Fla. on April 30-May 3 to present their projects and solutions to a panel of educators, government officials and local community volunteers.

"I'm just blown away by the work these students do," said panelist Nina Randall, executive director of Partners In Education in Broward County, Fla. "Every year, I leave with at least one thing that I will change in my personal behavior because of their research."

Participating schools each received \$500 in startup funds and a \$1,000 donation from Wheelabrator at the conclusion of the event. In addition, students can later qualify to earn a four-year scholarship through Wheelabrator's partnership with Fisk University in Nashville, Tenn.

The symposium wrapped up with a visit to the Miami Seaquarium and an awards dinner, featuring speaker Fabien Cousteau, third generation ocean explorer and founder of Plant a Fish™.

"It is the job of each of us to pass to the next generation a passion for studying the environment and provide support to them to make a difference to improve the planet," said Cousteau. "I commend Wheelabrator for providing the opportunity to these students to conduct these research projects. If we don't encourage our kids to be better stewards than we are, what will they inherit?"



A publication of Wheelabrator Technologies Inc.
4 Liberty Lane West • Hampton, NH 03842
603-929-3000 • www.wheelabratortechnologies.com



Inside Wheelabrator



A PUBLICATION FOR WHEELABRATOR EMPLOYEES

Vol. 2, No. 1

Fall 2012

Operational Excellence

SPOTLIGHT ON: CHINA



An employee works in the control room at the Weihai plant in China.

Wheelabrator expansion in Asia continues

It has been two years since the formation of Wheelabrator and Shanghai Chengtou Holdings' (SCH) joint venture, Shanghai Environment Group (SEG). Since entering the world's fastest growing waste-to-energy market, SEG has been awarded operations and maintenance contract in Shanghai for what will be China's largest operating waste-to-energy plant when it begins operations in early 2013; has started or continued construction on five waste-to-energy plants located primarily on China's eastern coastline; and has transitioned one plant from construction to operations.

To prepare for this growth, SEG is developing a formal training program that will draw heavily on Wheelabrator's expertise. To kick off the program, SEG will send key employees to the U.S. this year for training in the areas of operations and environmental health and safety. Wheelabrator will also support the growth of the SEG business by providing technical assistance in China as SEG brings new facilities online.

Plants in Chengdu and Jiangqiao are processing a total of 2,700 tons of waste per day. The SEG

Weihai waste-to-energy plant—a 700-ton-per-day (TPD) facility located northeast of Shanghai in the province of Shandong—came online in February.

Plants that are under construction include:

- ◆ Qingdao—the 1,500-TPD facility is in the final stages of construction and is expected to enter commercial operations by the end of 2012.
- ◆ Jinshan—the 800-TPD facility is midway through construction and is expected to enter commercial operation in early 2013.
- ◆ Laogang—the 3,000-TPD facility is under construction and is expected to enter commercial operation by the end of 2013.
- ◆ Zhangzhou—the 1,050-TPD facility is midway through construction and is expected to enter commercial operations in 2014.

On Dec. 31, 2011, SEG was selected as the winning bidder to build a 2000-TPD waste-to-energy plant in Nanjing, the capital of Jiangsu Province, located approximately 150 miles northwest of Shanghai. The plant is expected to enter commercial operation in March 2014.

Combined, the facilities will process more than 11,750 TPD and generate more than 210 MW.

Leadership

PLANT POWER: NEW MANAGERS TAKE OVER



Eric Lucier, left, was named plant manager of Wheelabrator Saugus, while Glenn Lockhart has taken over at Wheelabrator Bridgeport.

New plant managers take the reins

Wheelabrator’s two newest plant managers have similar backgrounds, somewhat different experiences and equally impressive qualifications.

At Wheelabrator Saugus, Eric Lucier was named plant manager in early April. An engineer by trade, Lucier brings an extensive background in power production to his new role.

Lucier came to Wheelabrator after working the last 12½ years in Rhode Island and Central Massachusetts at combined cycle power plants. “The obvious similarities are the power-generation aspect of the business, the selling of electricity and the boiler and turbine process,” Lucier said.

A native of Milford, Mass., Lucier graduated from Massachusetts Maritime Academy in 1996 with a degree in marine engineering. Immediately after graduation, he started his career as a U.S. Coast Guard licensed Merchant Marine officer, working as an engineer on cargo ships sailing on the Great Lakes.

Lucier, who earned a master’s degree in facilities management from Massachusetts Maritime Academy in 2008, learned of the opening at the Saugus plant from Wheelabrator Millbury Plant Manager Peter DiCecco, an old friend and fellow Massachusetts Maritime graduate with whom he had worked at International Power.

Lucier lives in Mendon, Mass. with his wife, Kelly, and their 17-month-old son, Matthew. They are expecting another child this year.

Glenn Lockhart, who was named plant manager at Wheelabrator Bridgeport in January, has been working at the plant since 1991, when he was hired as a plant operator. He had served as operations manager since 2002.

Lockhart holds a marine engineering degree from the Calhoun M.E.B.A. Engineering School in Maryland. Prior to coming to Wheelabrator, he worked as a chief engineer on a deep-sea ship and ocean-going tugs for four years.

“I had chances to advance within the company, but my wife and I like it here and we were committed to staying here. I feel very fortunate to have been given this opportunity,” Lockhart said of the plant manager’s position, which opened when Vin Langone was promoted to regional manager of the New York/Connecticut region.

Lockhart said he takes pride in the fact that several members of Wheelabrator’s leadership team in China, including Chris Carey, Jim Carmichael and Mark Santella, are alumni of the Bridgeport plant.

A native of Trumbull, Conn., Lockhart and his wife, Karen, live in nearby Woodbridge with their daughter and two sons.

Safety

NEW TALENT: FOUR NEW EHS OFFICERS



From left, Broward’s Daniel Foerst, Millbury’s Donald Rudge and Brian Bebyn, and Baltimore’s Dustin Schoffler are all committed to health and safety in Wheelabrator plants.

Environmental health, safety a priority

Wheelabrator places the highest value on our commitment to health and safety of our employees and the environment. The company has been fortunate in the last several months to add some outstanding professionals in this area.

Daniel Foerst is the occupational health and safety (OHS) manager for the North and South Broward plants. Foerst has nearly two decades of experience in the field after earning a degree in occupational safety and environmental health from Millersville University in Pennsylvania.

Foerst played professional baseball in Puerto Rico for a short time before embarking on a 10-year career with OSHA, mainly as a compliance officer. He joined Wheelabrator last November.

“I’ve never seen a company that puts safety in the forefront to the extent that Wheelabrator does,” said Foerst.

At Wheelabrator Millbury, Environmental Manager Donald Rudge is responsible for monitoring the plant’s compliance with all the applicable environmental permits and regulations, while OHS Manager Brian Bebyn is focusing on health and safety elements at the Millbury and North Andover plants.

Prior to joining Wheelabrator in June 2011, Rudge worked for more than 20 years as maintenance and environmental manager and environmental health and safety manager for two companies in central Massachusetts. He is excited to be utilizing his skills at Wheelabrator.

“Wheelabrator absolutely puts a strong focus on the environment,” said Rudge.

Bebyn, who was also hired last June, previously worked in Lawrence, Mass., for a company that serviced boilers at Wheelabrator plants.

A native of Torrington, Conn., Bebyn studied occupational safety and health at Keene State.

At Wheelabrator, Bebyn is dedicated to promoting a positive safety culture and helping to protect the welfare of every employee. He is committed to maintaining the plant’s Voluntary Protection Program (VPP) Star Worksite status.

“It’s pretty clear how much of a focus Wheelabrator puts on safety. Management makes it clear that nothing is more important,” said Bebyn.

Wheelabrator Baltimore OHS Manager Dustin Schoffler has more experience than his age would suggest. Schoffler, 27, came to Wheelabrator last spring having already worked in the field for three years, after receiving his bachelor’s degree in safety science from Indiana University of Pennsylvania in 2008.

Schoffler joined Wheelabrator Baltimore in 2011. “We want employees to feel 100-percent safe when they come to work,” he said.

Community Relations

VOLUNTEERING: THREE EMPLOYEE INITIATIVES



Wheelabrator employees can take part in three of WM’s Community Partners initiatives: GreenWorks, Paid Time On, and Volunteer of the Year.

Volunteering benefits company, community

Wheelabrator is committed to being a positive force in the communities in which we operate. The company actively participates and contributes to local activities and programs, and we encourage our employees to do the same.

It has been a long-held belief that when employees participate in activities that benefit the local community, they help us foster productive relationships and, just as importantly, they make a positive impact where they live and work.

Our parent company, Waste Management, also places a high priority on employee volunteerism. WM’s Community Partners Volunteer Program—open to all Wheelabrator personnel—includes three initiatives to support employees’ volunteer efforts:

- ◆ the GreenWorks program, which will provide a \$250 donation to the organization when an employee volunteers at least 40 hours outside of work hours;
- ◆ a Paid Time-On policy, which allows employees to take off up to eight hours each year—with pay—to volunteer at an eligible 501(c)(3) organization; and
- ◆ a Volunteer of the Year program that recognizes outstanding volunteer service and provides an additional donation to the organization.

To make it easy for employees to participate, WM has a dedicated Web site—<https://volunteer.truist.com/wmvolunteers>—where employees can apply for GreenWorks credit and keep a log of their volunteer activity. To log into the site, your username is your employee ID with “wm” in front (i.e. wm000000) and your password is your hire date in yyyyymmdd format (i.e., 20081024).

In order to participate in the Paid Time-On program, employees must get prior approval from their supervisor and schedule the time at least 14 days in advance.

Wheelabrator Senior Manager of Maintenance Art Posey utilized the Paid Time On program to support his work with Habitat for Humanity, an organization that builds houses for low-income people around the world. Posey and his wife, Jayne, who live in Hampton, N.H., have helped build homes in the northern part of the state.

“It’s a great concept,” Posey said of the WM Community Partners Volunteer Program. “I always like it when the company supports the charitable efforts of employees.”

Posey and his wife have also volunteered with Boy Scouts and Girls Scouts, and the Pease Greeters at Portsmouth International Airport, a former Air Force base that is now home to the New Hampshire Air National Guard.