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Mergers and acquisitions expected to continue in paper industry

by Brian R. Hook

Expect more mergers and acquisitions in the containerboard and paper recycling industry. Most paper industry experts agree that the \$6 billion purchase of Weyerhaeuser Co.'s packaging assets by International Paper is unlikely to be the last major deal.

International Paper, headquartered in Memphis, Tennessee, which expects to close the deal to buy the assets from Weyerhaeuser in the third quarter, is facing higher raw material and energy costs, along with the rest of the paper industry.

The entire industry is working to reduce capacity to cut costs, said Tom Runiewicz, an economist in Philadelphia with forecasting firm Global Insight, Inc.

The paper industry has no control of the price of raw materials. There is no control of the price of energy. Even with paper pulp, there is no control of the price of chemicals needed in the process. There is also only limited control of labor costs.

"But they do have control of their capacity and their overhead," Runiewicz said.

Cutting costs, therefore, is the best way to boost the bottom line. The paper industry is feverishly working to become more efficient by consolidating and closing mills, giving the industry pricing power and increasing capacity uti-

"The big run up in prices that we have seen over the past couple of years is not due to big increases in demand. It is due to reduction in capacity and operating rates,

Continued on Page 4



The demand for paper is pushing the industry to focus on supply issues, such as capacity reduction. At the same time, Rock-Tenn Company sees an increased demand for recycled paper.

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United States and Mexico agree to clean up 3.5 million waste tires along the border

Federal and state agencies from the United States and Mexico met in San Diego at the International Tire Conference where California and Baja California signed the Tire Initiative Collaborative Effort to develop a market for waste tires and reduce tire piles along the

The Tire Initiative is a joint effort by the United States EPA and the Mexican Ministry of Environment and Natural Resources. Both have been working to have all 10 border states sign the Tire Initiative.

The Tire Initiative outlines principles and actions to establish a sustainable scrap tire management program, the cleanup and prevention of new tire piles, and the education of stakeholders.

California and Baja California are leading the way among the ten states to sign the Tire Initiative. Among those who signed include the Lic. Socrates Bastida Hernandez, secretary of Environmental Protection of Baja California State Government and Ricardo Martinez, assistant secretary for Border

Affairs for the California Environmental Protection Agency. Eight other border states will sign the agreement at a later date including Sonora, Chihuahua, Coahuila, Nuevo Leon, Tamaulipas, Arizona, New Mexico and Texas.

Additionally, the United States Rubber Manufacturers Association signed a similar letter of understanding.

Although some border states have created scrap tire management programs, there are millions of tires along the border, creating several health and environmental problems.

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Coca-Cola and National Recycling Coalition support recycling with bin grants

The National Recycling Coalition and The Coca-Cola Company announced the recipients of their Spring 2008 Recycling Bin Grant program. Chosen from 1,100 applications submitted, the 75 grant recipients represent a cross section of community groups, local governments, colleges and non profit organizations across the country. Grant recipients receive recycling bins from a preset list of options.

Grants were awarded to applicants from 40 states and the District of Columbia, including 23 colleges and universities, 21 municipalities and other local government entities, 5 K-12 schools, 10 non profit organizations and additional community groups and Native American tribes. Recipients were chosen by NRC based on a number of criteria, including where bins are likely to have the most impact on recovering beverage containers from the waste stream, ability of recipients to sustain their program in

the future, and intention to support collection programs with recycling education and promotion. The Bin Grant is sponsored by The Coca-Cola Company and is designed to promote and support community recycling in the United States.

"The Bin Grant program is designed to help communities and organizations jump-start or expand their recycling programs and to further promote recycling of used bottles and cans," said Scott Vitters, director of sustainable packaging, The Coca-Cola Company. "By making more recycling bins available, we hope to encourage people to make recycling a habit in their daily lives."

A full list of the Spring 2008 bin grant recipients can be viewed at www.bingrant.org.

The Fall 2008 grant application period will begin on September 22 and extend through October 24.

Some people make things happen, some people watch things happen and some people say, "What happened?" — Which type are you?

Trinity Washington University takes top honors in recycling

7.7 million pounds of waste not landfilled

In Washington, D.C., Trinity Washington University took top honors for recycling 24,761 pounds of material during the contest known as RecycleMania.

The United States Environmental Protection Agency's (EPA) mid-Atlantic regional office promotes RecycleMania as a way to encourage colleges and universities to reduce their waste. The competition pits colleges against each other to see which ones can collect the most recyclables in 10 weeks. The winning school in each state receives a congratulatory letter and certificate from EPA along with bragging rights.

"RecycleMania has been successful in reinvigorating college campuses to minimize their waste and take other steps to help the environment," said Donald S. Welsh, EPA's mid-Atlantic regional administrator. "Participation in our region nearly doubled this past year compared to previous years, showing that college students want to be environmentally responsible."

The combined efforts of students at the Trinity Washington University and the other mid-Atlantic schools equates to an environmental benefit of eliminating carbon emissions from 2,140 vehicles.

More than 400 schools across North America participated in the 2008 challenge, resulting in a total of 58.6 million pounds of material recycled.

RecyleMania is affiliated with EPA's WasteWise program, a free partnership helping U.S. organizations eliminate or reduce costly municipal solid waste, benefitting both the bottom line and the environment. Since collaborating with WasteWise in 2004, RecycleMania's enrollment has grown steadily each year.

In selecting the winning schools, results were measured as the number of pounds recycled per full time enrolled student. This year's winners by state contributed the following amounts to the 7.7 million pounds of recycled material from the mid-Atlantic region: Trinity Washington University, 24,761 pounds; Loyola College, 118,120 pounds; University of Delaware, 433,881 pounds; Dickinson College, 100,910 pounds; Virginia Military Institute, 70,948 pounds; and University of Charleston, 8,800 pounds.



City of Chicago shifts to new recycling program

change to a new Blue Cart recycling program with the entire city to be on line by 2011

Chicago's move towards the Blue Cart Program began in April of 2005 with a field test of 700 homes on the far Southwest side.

According to Michael Picardi, Commissioner of Streets and Sanitation, beginning in June, 2008, the Blue Cart Program will be expanded to include an additional 92,000 households which will double the number of participating households by the end of 2008.

The Blue Cart Recycling Program has been supported by the State of Illinois which pledged \$8 million in 2006 to acquire new blue carts.

Given the fact that the Blue Cart method of recycling is more expensive than the method previously used by the City, the State of Illinois's grant helped

The city of Chicago announced a move the program forward. Chicago Streets and Sanitation has been adjusting operations to cut costs and deliver recycling and waste collection services more efficiently in the Blue Cart areas. The city will discontinue paying for the processing fee for recyclables at sorting centers and as a result will be able to accelerate the expansion of the Blue Cart Program.

> The Chicago Recycling Coalition (CRC) applauded the announcement by the City of Chicago that the Blue Bag Recycling Program is coming to an end this summer and that by 2011, it will be fully replaced citywide by the sourceseparated Blue Cart Recycling Program.

> During the transition to the new method, Chicago will double its existing network of 16 regional recycling drop off centers citywide. The additional recycling drop sites will be located at City facilities and district park sites.

San Francisco operates more recycling than garbage trucks

San Francisco's garbage and recycling collection companies operate more recycling than garbage trucks. The combined fleet of Sunset Scavenger and Golden Gate Disposal & Recycling includes 321 collection trucks, 174 recycling and 147 garbage. All vehicles run on alternative fuel.

As the two companies replace older vehicles, recycling trucks will outnumber garbage trucks 2 to 1.

"Where others see garbage we see recycling," said Crosetti, a collector with 27 years experience.

The standard (black) garbage cart in San Francisco holds 32 gallons. The new standard for (blue) recycling carts is 64 gallons. Bigger recycling carts provide more opportunities for residents and businesses to recycle.

More people are using (green) compost carts to participate in the food scrap compost collection program. At most houses in San Francisco, residents now place food scraps in their green cart.

SF Recycling & Disposal, Inc., which operates two large recycling facilities in San Francisco, is adding 24 sorters to ensure more materials get recycled.

The new jobs will be split between Recycle Central, which sorts bottles, cans, and paper, and the integrated Material Recover Facility (iMRF) a

plant that recycles construction debris including wood, metal, and sheetrock.

San Francisco's curbside recycling program has been expanded to accept all "rigid" plastics, including all plastic tubs and lids, yogurt and clamshell containers (clean, without food or liquids), cups, buckets, plant containers, and other nonfilm plastics.

As long as an item is made only of rigid plastic - not a plastic bag, other film plastic or Styrofoam - it can go into in the (blue) recycling cart.

Even plastic toys will be accepted as long as they have no metal parts, batteries, circuit boards or wiring.

Colorful advertisements on trucks, city buses, and bus shelters encouraging residents and businesses to recycle and compost are popping up all over San Francisco.

One ad features large glass bottles and reads "Recycle: Be a glass act!" Another shows large red raspberries above the words "Composting: A berry good idea!"

A campaign reminding people that even large appliances and office equipment can be recycled shows an old console TV and reads "The Smithsonian already has one / RecycleMyJunk.com

The ads are efforts to boost recycling and send less waste to landfill disposal.

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Paper industry

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providing pricing power by consolidating and reducing overhead," Runiewicz

The top three North American containerboard makers controlled 27 percent of the market and the top six had 50 percent in the mid-1990's, according to research by Longbow Securities LLC, a boutique investment firm in Independence, Ohio.

Following International Paper's acquisition of Weyerhaeuser's assets, the top two companies will control almost 50 percent of the North American market. The top five players will account for roughly 75 percent. The remaining 25 percent of the market will be split between smaller companies, each accounting for less than a 3 percent

As the bigger players get more of the market, it is harder for the smaller players to compete, Runiewicz said. "They are going to find it harder to compete on an efficiency basis. That is important when raw material price increases are being pushed on them."

The current turmoil in the financial markets might make it harder for some deals in the paper industry. Runiewicz said acquisitions financed through debt might face problems, leaving deals for companies able to issue stock or use existing cash.

"If the companies have a good cash position then they may be all right. But if there is a fair amount of debt, then it is going to be tough. If you have a decent amount of cash flow, you are in a much better position to acquire or purchase somebody," he said.

International Paper plans to finance its transaction through debt and other

financing commitments. International Paper expects profit improvements of about \$400 million annually and expects to achieve at least 40 percent of the improvement within 12 months of completing the deal. The remainder will be realized after three years.

Integrating Weyerhaeuser's packaging assets into International Paper's business fits into the company's strategy to improve earnings and cash flow by strengthening existing businesses, chairman and chief executive officer John Faraci said.

"The bigger issue is the recovery period for 2009." —Runiewicz

"We expect the combined packaging business will generate stronger cash flow and higher EBITDA (earnings before interest, taxes, depreciation and amortization) margins than either stand alone business," Faraci told investors in March.

Norcross, Georgia-based Rock-Tenn Co. completed its acquisition of Southern Container Corp. in March, making the company the eighth largest containerboard manufacturer in North America. John Stakel, vice president and treasurer, said the company tapped both bank lending and high-yield markets for \$1.4 billion in financing.

"This financing was a testament to our strong operating results, cash flow and track record, and the tremendous quality of the assets that we bought," Stakel said.

Some smaller companies that are not as well capitalized within the paper industry as Rock-Tenn, might find acquisitions more difficult, Stakel said. "The current credit market turmoil is

DEPENDABLE QUALITY

impacting the ability of some companies to make acquisitions. Smaller companies may find it harder to tap into the broad sources of capital that are needed."

Higher input costs are also having an impact, Stakel said. He said that increases in commodity prices have been well publicized. "There is typically a timing lag between increasing costs and your ability to pass through these cost increases," he said.

Rock-Tenn is also seeing increased demand for recycled paper, Stakel said. Approximately 80 percent of the company's paper content is from recycled paper.

Runiewicz, the economist with Global Insight, said that he expects demand for products from the paper industry to increase in the future, but not during this year.

"Overall we are looking for declines in demand for paperboard containers this year. That is a product of the overall recession that we are facing for 2008," he said.

"The bigger issue is the recovery period for 2009." Runiewicz said that he is not looking for a big recovery in 2009. "It may feel very slow and very sluggish," he said.

The decline in demand is pushing the paper industry to focus on supply issues, such as reducing capacity. "As long as the supply side is maintained with these declines in demand, you see some flattening in prices, preventing prices from dropping," he said.

The decline in the dollar has helped the paper industry as well. Runiewicz said the lower dollar has prevented increases in imports. "The lack of import penetration from foreign producers has helped out the United States paper industry quite a bit," he said.





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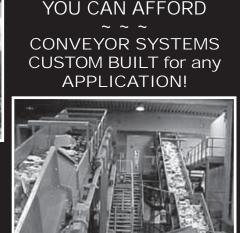
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to Pennsylvania businesses

Pennsylvania Department of Environmental Protection (EPA) Secretary Kathleen A. McGinty announced that businesses and nonprofit organizations can now apply for a portion of \$400,000 in grants to help increase the use of composted materials in finished products and reduce the amount of organic waste disposed in landfills.

'Organic waste such as food, grass clippings, leaves and brush account for more than one-third of all the trash entering Pennsylvania's landfills. These grants provide incentives for businesses to find value in these organic materials and turn what was once waste into a useable product," said McGinty.

McGinty added that diverting organic materials from the waste stream conserves landfill space and saves disposal costs paid by local governments and businesses.

The Composting Infrastructure Development Grant Program aims to increase the volume of organic materials

being diverted from landfills and helps businesses increase the use of organic materials in finished products. Applications will be accepted until July 18 and are available at www.depweb.state.pa.us, keyword: Compost.

The grant program awards for-profit businesses and nonprofit organizations up to \$100,000 for projects that incorporate recovered organic materials into products or increase the amount of organic material processed at composting facilities.

Additional consideration will be given to applications that are developed in consultation with the Pennsylvania Recycling Markets Center. Additional information is available at www.parmc.org.

The program is open to start-up operations, as well as existing compost facilities. Applications will not be accepted from previous grant recipients, although this restriction will be re-evaluated in subsequent grant rounds.

Composted materials grants offered | EPA Region 5 chief resigns after dispute with leaders over Dow Chemical Co.

The head of the United States Environmental Protection Agency's (EPA) Midwest office (Region 5) in Chicago has resigned in a dispute with agency leadership over enforcement actions involving Dow Chemical Co.

Dow acknowledges it discharged dioxin, a highly toxic cancer-causing chemical, into the water and air from its Midland plant for years, though it says it stopped decades ago.

Mary Gade, whose departure is the latest in a series of public conflicts between the EPA's chief, Stephen Johnson, and his subordinates, comes at a time when Johnson is under criticism from congressional Democrats for some of his decisions.

In an interview with The Wall Street Journal, Gade, a former corporate attorney who advised the Bush presidential campaign in 2000 on environmental matters and who was appointed to her post less than two years ago, said she was forced to resign.

Gade linked the agency's action to her office's efforts to press Dow Chemical to clean up a Michigan river system that is near a Dow chemical-manufacturing plant. The river is contaminated as a result of past waste-disposal practices, emissions and incineration at the Dow plant. The contaminated region stretches from the plant down to the Saginaw River, its floodplains and Saginaw Bay.

Michigan Environmental Council President Lana Pollack released a statement expressing dissatisfaction with the way the situation ended. She stated that Gade is 'a woman of unquestioned credentials and integrity who was doing her job enforcing our environmental laws'.

Horse racing fans recycle at **Churchill Downs**

Visitors to Churchill Downs for the Kentucky Derby on Oaks and Derby days recycled aluminum cans and plastic bottles in the infield or the satellite parking at Papa John's Cardinal Stadium. Large recycling containers were marked with "Go Green Louisville -- Get in the Loop" logos.

Last year, visitors to Churchill Downs for the Kentucky Derby generated about 174 tons of trash. It is estimated that almost 50 percent of that tonnage is recyclable.

"This recycling initiative is a proven winner at Churchill Downs and other sports venues because it allows fans who are concerned about the environment to actively do something to help," said Rob Thoele, region manager for Anheuser-Busch Recycling.

Three local schools sent teams to Churchill Downs after the Derby to collect recyclables from the infield, paddock, parking lot and other areas near the track. Approximately 90 students and 30 instructors took part in the post-Derby collection. A portion of the proceeds from the recyclables collected by the students will go to the Permanently Disabled Jockeys Fund.

The Louisville Metro Solid Waste Management Department will collect the recyclables on a regular basis throughout the spring and fall meets. The materials will be transported to a recovery facility for processing.



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House passes legislation to ban illegal wood trade

The U.S. House of Representatives passed landmark legislation to address the global illegal logging crisis. The law makes the United States the first country in the world to prohibit the import, sale, or trade in illegally-harvested wood and wood products.

The law amends a long-standing wildlife trafficking statute, the Lacey Act, to include timber, wood products and other plants. It has been championed by Democratic Congressman Earl Blumenauer and Senator Ron Wyden, both of Oregon, and received strong bipartisan support in both Chambers of Congress. Reconciled language passed with the Farm Bill.

"After more than a year of work with an unprecedented coalition of industry, environmental and union groups, we passed legislation that will help bring an end to the egregious practice of illegal log-

ging," said Congressman Earl Blumenauer (D-OR). "Not only does illegal logging threaten some of the world's richest and most vulnerable forests, it leads to serious human rights violations. It also costs the United States forest products industry over \$1 billion every year, including \$130 -\$150 million to my home state of Oregon. This is a great achievement that will protect the environment, help honest businesses, and prevent rampant corruption both here and abroad."

The Environmental Investigation Agency (EIA), an environmental organization providing expertise to policy makers on illegal logging and associated international trade, estimates that 10% of annual wood product imports into the United States - worth some \$3.8 billion dollars are derived from illegally logged timber.

Online tools help small business go green

Business.gov launched a series of eco-friendly tools to help small businesses comply with environmental regulations, and use environmental problems as catalysts to develop innovative products and services. Business recycling, initiated

through take-back programs and featured as part of Business.gov's green release, is one of the many ways that small businesses can impact their bottom line as well as the environment.

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MIT creates improved material for fuel cells with lower cost

power output of one type of fuel cell by more than 50 percent through technology that could help these environmentallyfriendly energy storage devices find a much broader market, particularly in portable electronics.

The new material key to the work is also considerably less expensive than its conventional industrial counterpart, among other advantages.

"Our goal is to replace traditional fuel-cell membranes with these cost-effective, highly tunable and better-performing materials," said Paula T. Hammond, Bayer Professor of Chemical Engineering and leader of the research team. She noted that the new material also has potential for use in other electrochemical systems such as batteries.

The work was reported in a recent issue of Advanced Materials by Hammond, Avni A. Argun and J. Nathan Ashcraft. Argun is a postdoctoral associate in chemical engineering; Ashcraft is a graduate student in the same department.

Like a battery, a fuel cell has three principal parts: two electrodes (a cathode and anode) separated by an electrolyte. Chemical reactions at the electrodes produce an electronic current that can be made to flow through an appliance connected to the battery or fuel cell. The principal difference between the two? Fuel cells get energy from an external source of hydrogen fuel, while conventional batteries draw from a finite source in a contained system.

The MIT team focused on direct methanol fuel cells (DMFCs), in which the methanol is directly used as the fuel and reforming of alcohol down to hydrogen is not required. Such a fuel cell is attractive because the only waste products are water and carbon dioxide (the latter produced in small quantities). Also, because methanol is a liquid, it is easier to store and transport than hydrogen gas, and is safer (it won't

MIT engineers have improved the explode). Methanol also has a high energy density — a little goes a long way, making it especially interesting for portable devices

> The DMFCs currently on the market, however, have limitations. For example, the material currently used for the electrolyte sandwiched between the electrodes is expensive. Even more important is that the material, known as Nafion, is permeable to methanol, allowing some of the fuel to seep across the center of the fuel cell. Among other disadvantages, this wastes fuel and lowers the efficiency of the cell because the fuel isn't available for the reactions that generate electricity.

> Using a relatively new technique known as layer-by-layer assembly, the MIT researchers created an alternative to Nafion. "We were able to tune the structure of [our] film a few nanometers at a time," Hammond said, getting around some of the problems associated with other approaches. The result is a thin film that is two orders of magnitude less permeable to methanol but compares favorably to Nafion in proton conductivity.

> To test their creation, the engineers coated a Nafion membrane with the new film and incorporated the whole into a direct methanol fuel cell. The result was an increase in power output of more than 50

> The team is exploring if the new film could be used by itself, completely replacing Nafion. To that end, they have been generating thin films that stand alone, with a consistency much like plastic wrap.

> This work was supported by the DuPont-MIT Alliance through 2007. It is currently supported by the National Science Foundation.

> In addition, Hammond and his colleagues have begun exploring the new material's potential use in photovoltaics. That work is funded by the MIT Energy Initiative. For more information, please visit http://web.mit.edu/mitei.



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METALS

March steel imports up 1.2%

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the United States imported a total of 2,513,000 net tons (NT) of steel in March 2008, including 2,064,000 NT of finished steel (up 1 and 7 percent, respectively, vs. February final data). While total and finished steel imports through the first quarter of 2008 are both down 12 percent vs. the same period in 2007, total and finished steel imports are up 8 and 13 percent, respectively, compared to the previous quarter.

Key products with large increases in March compared to the month before include: plates cut lengths (up 81%), standard pipe (up 69%), oil country goods (up 47%), galvanized hot dipped sheets and strip (up 45%), mechanical tubing (up 35%), plates-in-coil (up 27%) and tin plate (up 24%).

For the first three months of 2008, products showing increases vs. the same period in 2007 were line pipe (up 43%), oil country goods (up 14%) and heavy structural shapes (up 9%).

U.S. IMPORTS OF FINISHED STEEL MILL PRODUCTS BY COUNTRY OF ORIGIN (Thousands of Net Tons)

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	Prelim Mar 2008	Feb 2008	Mar 2007	Mar vs. Feb 2008 % Change	2008 Total vs. 2007 Total % Change
China	239	236	380	1.2%	-35.0%
South Korea	159	151	198	5.2%	8.1%
Japan	138	88	121	56.1%	-5.5%
India	98	83	66	17.5%	44.2%
Germany	79	95	85	-16.9%	-3.6%
Taiwan	64	56	74	13.3%	-32.4%
Italy	53	47	18	11.8%	43.0%
Brazil	47	49	171	-3.5%	-49.2%
All Others	1,187	1,121	1,392	-5.9%	1.5%
Total	2,064	1,928	2,504	7.1%	-6.8%

Source: U.S. Dept. of Commerce, Bureau of the Census



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METALS

Sensible metal roofing gains homeowner interest

Environmental Agency reported that \$40 billion is spent annually in the United States to cool buildings. This accounts for one-sixth of all electricity generated in a year. These staggering statistics, coupled with the rising cost of heating and cooling homes, have homeowners looking for ways to save the earth and save money on energy costs.

Protection thermal emittance. The emittance of a material refers to its ability to release absorbed heat. A roof is 'cool' if its surface temperature is lower, and as a result, the cooling load in the building is reduced. Solar reflectance is the most important characteristic of a roof product in terms of yielding the highest energy savings during warmer months. The higher the solar



Homeowners can expect to save up to forty percent during hot summer months with the installation of a cool metal roof.

The metal roofing industry's products are environmentally friendly as most metal roofs contain more than 25 percent recycled content. This level of recycled content allows metal roofing to be included on listings of 'green' and recycled content products. In addition, metal roofing is 100 percent recyclable. Traditional roofing products, such as asphalt (if not recycled), contribute 13 billion pounds of waste to United States landfills annually. Many metal roofs can be installed over an existing roof, without tear-off and disposal.

A cool roof is often described as one that has a high solar reflectance and a high reflective value, the more efficient the product is in reflecting sunlight and heat away from the building and reducing roof temperature.

A study conducted by Oak Ridge National Laboratory found that the installation of highly reflective metal roofing coatings can save homeowners up to forty percent in summer cooling costs. Special pigments for metal roofing coatings have been developed and tested that increase the solar reflectivity of the metal roof. The vent technology creates an insulation barrier that aids heating during the winter

February steel shipments up 9.9 percent from last year

The American Iron and Steel Institute reported that for the month of February 2008, United States steel mills shipped 9,174,000 net tons, a 9.9 percent increase from the 8,350,000 net tons shipped in February 2007 and an 0.8 percent decrease from the 9,246,000 net tons shipped in the previous month.

A year-to-year comparison of yearto-date shipments shows the following changes within major market classifications: service centers and distributors, up 8.2 percent; automotive, up 3.1 percent; construction and contractors' products, up 4.5 percent; and oil and gas, up 5.3 percent.

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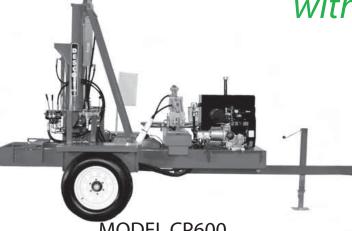
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Section A • Page 10 American Recycler, June 2008

METALS

Theft of infrastructure metals on the increase

ISRI encourages governments to secure metals

City, county, and state governments are warned to be on an increased lookout for a new wave of material thefts. The Institute of Scrap Recycling Industries, Inc. (ISRI), the national trade association for the scrap recycling industry announced that it is seeing an increase in the theft of ferrous (iron and steel) infrastructure metals, such as manhole covers and sewer/storm-water grates, joining a list of other metal materials that have been targets of thieves for some time.

"Government agencies, police, and the public should be on alert that the metal theft epidemic that we have been experiencing for the past two years has now apparently spread to ferrous materials," said Chuck Carr, ISRI's vice president of member services.

"The best place to stop a metal theft crime is to stop it before it occurs," Carr said. "Loss of infrastructure metals not only causes a significant financial burden to our communities, it can create serious safety problems for the public at large."

ISRI maintains a Theft Alert System that allows the association to notify scrap yards when material theft is reported to the association. This tool, available free to any law enforcement agency, is important to help recyclers identify stolen material.

"It is nearly impossible to tell the difference between stolen material and legitimate material that comes to a scrap yard unless you know to be on the lookout," said ISRI chair George Adams, president of S.A. Recycling in Anaheim, California. "Despite the recent rash of theft, stolen material makes up a very small percentage of the material that comes to scrap yards each day. ISRI developed its theft alert system to help police and recyclers identify both the material and the thief."

In the past two years, thieves have targeted a variety of nonferrous material — primarily copper, bronze, and aluminum. ISRI's theft alert system has received reports of stolen materials as diverse as cemetery urns, copper wiring from rural irrigation systems, and bleachers from ball fields. Recently, the system has begun to receive reports of other target materials. In addition to ferrous metal materials, the system has received reports about the theft of newsprint, cardboard, and plastic milk crates.

In addition to its theft alert system, ISRI provides a variety of other tools aimed at reducing material theft. The industry created recommended practices for reducing the risk of accepting stolen materials almost two years ago — long before the crime became a prominent problem. Those practices include establishing cooperative relationships with police and victims, training police on identifying possible stolen material, working with victims groups to help

reduce the risk of theft, improving record-keeping and taking identification of sellers to help police track thieves and the materials they steal. The association has also become a member of the National Crime Prevention Council.

"The scrap recycling industry recognizes that it is a stakeholder in reducing material theft," Adams said. "We are working hard to be a part of a solution to a community-wide problem."

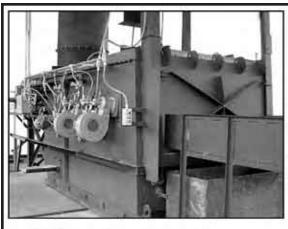
For more information on industry efforts to address material theft, visit www.isri.org/theft.



Commodity		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
#1 Bushelings	per gross ton	\$459.00	\$398.00	\$484.00	\$470.00	\$500.00
#1 Bundles	per gross ton	457.00	397.00	479.00	464.00	470.00
Plate and Structural	per gross ton	425.00	305.00	459.00	389.00	491.00
#1 & 2 Mixed Steel	per gross ton	445.00	290.00	443.00	435.00	466.00
Shredder Bundles (tin)	per gross ton	305.00	265.00	330.00	325.00	305.00
Crushed Auto Bodies	per gross ton	298.00	265.00	342.00	294.00	312.00
Steel Turnings	per pound	198.00	195.00	281.00	230.00	325.00
#1 Copper	per pound	3.39	3.35	3.43	3.72	3.60
#2 Copper	per pound	3.28	3.20	3.23	3.47	3.43
Aluminum Cans	per pound	1.00	.85	.92	.96	.95
Auto Radiators	per pound	2.05	2.05	2.03	2.05	2.15
Aluminum Core Radiators	per pound	.90	.79	.87	.85	.84
Heater Cores	per pound	1.40	1.28	1.90	1.82	1.60
Stainless Steel	per pound	1.18	1.12	1.23	1.25	1.31

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METALS

Steel import permit applications up 14%

Based on the Commerce Department's most recent Steel Import Monitoring and Analysis (SIMA) data, the American Iron and Steel Institute (AISI) reported that steel import permit applications for the month of April totaled 2,911,000 net tons (NT). This was a 14 percent increase from the 2,546,000 permit tons recorded in March 2008, and also a 16 percent increase from the March preliminary imports total of 2,513,000 NT. Import permit tonnage for finished steel in April was 2,217,000 NT, an increase of 7 percent from the preliminary imports of 2,064,000 NT in March. For the first four months of 2008 (including April SIMA and March preliminary), total steel imports were 10,574,000 NT, down 8 percent from the 11,504,000 NT imported in the first four months of last year. Total steel imports for 2008 would annualize at 31.7 million NT, or 5 percent below the 2007 12-month total.

For April 2008, the largest finished steel import permit applications for offshore countries were for Korea (190,000 NT), China (185,000 NT), Japan (172,000 NT), Turkey (163,000 NT) and Germany (146,000 NT). Finished steel import permit applications for China declined 23 percent in April compared to March preliminary imports. Product categories that increased in April vs. March preliminary include: Billets & slabs (up percent 55), wire rod (up 89 percent), reinforcing bar (up 57 percent) tin free steel (up 71 percent) and plates in coils (up 22 percent). Significant products that showed a year-todate increase vs. 2007 include: Oil country goods (up 18 percent), line pipe (up 26 percent) and structural shapes heavy (up 10 percent).

OmniSource to acquire Recycle South

Steel Dynamics, Inc. announced that OmniSource Corporation, a whollyowned subsidiary of Steel Dynamics, and Recycle South, LLC have executed definitive agreement whereby OmniSource will acquire the remaining equity interests in Recycle South, one of the largest regional scrap metal recycling companies in the nation.

Recycle South was formed in August 2007 by the merger of Carolinas Recycling Group and Atlantic Scrap and Processing. The company is headquartered in Spartanburg, South Carolina.

The agreement has been unanimously approved by the boards of directors of both companies. OmniSource, which already owns 25 percent of Recycle South, will acquire the remaining equity interests valued at approximately \$500 million.

Current Recycle South equity owners will receive 3,938,000 shares of

Steel Dynamics common stock, valued at approximately \$138 million and \$232 million in cash. The aggregate transaction value includes the assumption of certain liabilities, including net debt, which are expected to total approximately \$135 million at closing. Completion of the transaction is subject only to regulatory approval, and is expected to close before the end of the second quarter of 2008.

Nucor forms joint venture with Sidenor

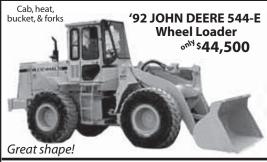
Nucor Corporation announced the signing of a Memorandum of Understanding with Sidenor S.A. to acquire a 34% share of a new joint venture which will be formed for the production and distribution of long steel products and plate in the Balkans, Turkey, Cyprus and North Africa. The contemplated joint venture will include all of the steelmaking and related activities of Sidenor, excluding the activities and assets of Corinth Pipe Works.

Final agreement to establish the joint venture company is dependent on completion of appropriate due diligence, approval of appropriate regulatory bodies and approval of the boards of directors of both companies.

Sidenor is the largest producer of steel in Greece with additional steelmaking, rolling and reinforcing mesh operations in Bulgaria and the Former Yugoslavian Republic of Macedonia (FYROM). The main steel plants are located in Thessaloniki and Almyros (Sovel) in Greece, in Pernik, Bulgaria (Stomana Industry) and in Dojran, FYROM (Dojran Steel).

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ARW METALS, INC.

Section A • Page 12 American Recycler, June 2008

METALS

Nucor may build \$2 billion facility in Louisiana

Nucor Corporation has applied for a permit to build an iron-making facility in St. James Parish, Louisiana. The new company would be called "Nucor Steel Louisiana."

Over the past two years, Nucor has evaluated multiple sites both in the United States and abroad. The competitiveness of Louisiana's proposed incentive package, including significant infrastructure improvements, and the State's ability to move quickly were very important in the analysis. After taking into account all of these factors, the only United States site still under consideration is a large site on the Mississippi River in St. James Parish, Louisiana. Sites outside of the United States are still under active consideration.

The project is not a certainty. Regardless of the ultimate site chosen for the project, permits have to be issued and Nucor's board must approve the selection of the site and the capital investment. If the project is ultimately built in the United States, it would be the first greenfield pig iron facility built here in more than 30 years.

Nucor has selected advanced heatrecovery coke technology to be used in this facility. Unlike conventional coke facilities, this coke plant would capture waste heat and use it to produce power, making the operation self-sufficient in power.

The proposed facility would capture waste energy from the blast furnaces to produce power over and above their

requirements. By the second phase of this project, the facility would be producing 500 MW of power, of which 250 MW would be supplied to the grid, completely offsetting the emissions that would have been released had a facility been constructed to generate this new source of power.

The facility will have slag granulation technology that produces a valuable by-product used by the cement industry, completely offsetting the emissions they would have created to manufacture the same product.

If the project is located in St. James Parish, Nucor would build a new high-capacity port on the river capable of handling ocean vessels, as well as barges of coal and pig iron. This project would create a lot of jobs and stimulate the economy. The project's first phase would require a \$2 billion investment and would directly create 2,000 jobs during peak construction. Five hundred permanent Nucor jobs would be created, earning an average annual salary of \$75,000, plus benefits; roughly twice the area's median household income.

If the second phase is built, Nucor would invest an additional \$1 billion for a second 3,000,000-ton blast furnace and increase permanent employment to 750.

It's estimated that St. James Parish would earn an additional \$3.3 million annually in sales tax receipts and new business sales in the Parish would rise by almost \$1.2 billion annually.

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ON TOPIC

WOA

by Irwin Rapoport

Paper recycling

The American Forest and Paper Association (AF&PA) held its 131st Annual Paper Week in New York City. Much of the focus of the conference revolved around paper recovery and recycling issues.

This was certainly the case for the press conference following the release of the 2007 paper recycling rate. The following questions were dealt with by AF&PA president and CEO Donna Harman and Patrick J. Moore, chairman and CEO, Smurfit-Stone Container Corporation, one of the world's largest paper recyclers.



—Patrick J. Moore

Where do you see room for growth in paper recovery?

Harman: The office paper category is an area where there is great room for improvement. That is why we are so pleased with the partnerships that we have with the EPA because that is an area where we can sustainably increase the amount of recovery.

We already have very high levels for OCC and old newsprint. While we think there is still more that can be recovered there, increased rates will probably come from waste paper in households and offices.

Moore: It's critically important that we focus going forward on these high quality fibers in the stream today – catalogs, magazines, first class mail and other packaging products from households.

On a recycling course, we must recognize that we need a deeper engagement in schools, communities and businesses in allowing for opportunities that exist in those high quality fiber streams.

Although with an over 70 percent recovery rate, we are pleased with what we accomplish every day, but there is always room for improvement.

Would consumers be willing to pay a premium to ensure that a dedicated fund can be established to create a paper and general recycling infrastructure?

Moore: From the Smurfit-Stone standpoint, we look at sustainability as a threelegged stool – the environmental side, the socially responsible side that comes with it and the economic side.

Historically, we have not seen consumers really willing, from an economic standpoint, to support products that have greater sustainability. In the future, it is going to be critical that we see people from a consumption standpoint making buying decisions based on what is right for the environment and for sustainability.

What role can the government play in helping to maximize the recycling rate?

Moore: I wouldn't encourage a subsidization of recycling activities today. We would generally be against subsidies overall, but we would certainly encourage education and trying to get people to understand the value they can create out of increased recycling.

Harman: When we look at the economic impact that we've had with recycling, this is a perfect example of economics and environment gaining popularity and starting to come in alignment with consumer interest focused around environmental sustainability.

This industry has really been able to help put the emphasis in place and provide market demand for the recovery of waste paper. It has been a tremendous economic success. The market place has been the driver of this and we really don't want to see the government do anything that would impede that market place success.

How would you describe the situation in regards to the use of recovered paper domestically and as an export item?

Moore: Certainly in our country, we enjoy a good fiber balance, not only from the standpoint of virgin fiber, but from recycled fiber as well. The North American industry has really been going through a lot of capacity rationalization over the last number of years, while the level of recycled fiber in the country has been improving.

Today, we look at this as a global industry. A lot of new capacity is coming on stream in many Asian countries, and China in particular.

China is a significant importer of recycled fiber today. It is a principal raw material base for that new capacity. That differential of what we recover and what we use here and what is typically sold into the trade market, is principally the growth that we've seen over the years in what is being sent to China.

If you look at the capacity expansion over the next couple of years, most of our expansion will come out of the Asian continent, particularly China.

Paper, recycling and sustainability

by Irwin Rapoport

Paper and cardboard production, recovery and recycling are multi-faceted processes involving many issues including recycling, energy consumption and green house gas emissions.

An enormous amount of paper is consumed daily in the United States, says Don Carli, senior research fellow with the Institute for Sustainable Communication (ISC), and how to best deal with it once it reaches the waste stream is still awaiting an optimum solution.

"Counties and cities know the difference between landfill diversion and recycling," he says. "What they are generally encouraged to do is to increase the diversion rate, not to increase the recycling rate.

"The system we have in the United States today is designed to make it easy for the consumer to feel good about recycling," he adds. "We allow consumers to equate putting something into a recycling bin with recycling. They don't think about closing the loop and incorporating into that thinking the fact that recycling actually means to divert it from landfills as a raw material feedstock for a manufacturing process to make a similar product. They don't know that and it has not been encouraged enough."

However, Carli does see signs of hope, particularly as Time Incorporated recently added New York City to its ReMix program - http://www.nrc-recycle.org/remix.aspx, a program started in Boston, that encourages consumers to recycle their magazines.

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"Its an important development, but are those magazines likely to be recycled eco-effectively? There is a vast difference between the energy used when waste paper is recovered, de-inked and recycled in an integrated mill within 400 miles of the recovery facility versus having it de-inked, dried and shipped as pulp to a papermaker that is 2,000 miles away, or when it is shipped to China to be 'down-cycled' into cardboard.

"These scenarios are all lumped together in current definition of recycling in consumer and business eyes," he adds, "but they have vastly different energy profiles, carbon footprints, and lifecycle and social impacts."

Carli notes that single-stream recycling collection has become the norm because it makes it easier for the consumer and the companies providing the recovery services.

"But it doesn't make it easier for the paper companies and the MRF that has recycling as their goal," he says. "If their goal is diversion and they can find a buyer from China to purchase their unsorted waste for more, they can make more money. Foreign buyers of waste paper are willing to pay more because they can get dead-head containers heading west for practically nothing and then put the material into some of the most sophisticated, advanced paper mills in the world with labor that is paid far less and provided with far fewer benefits that those in the United States.

"Shame on us for not making better use of our paper waste streams," he stresses. "That resource is being squan-

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dered and our paper making industry has thus far failed to respond."

However, Carli says that some measures are being taken by the domestic industry to utilize this resource.

"Pratt Industries has a paper mill in Staten Island that recovers waste paper for New York City and uses it to produce liner board," he says. "We have examples of businesses that take waste from the urban forest. In the Staten Island case, it is down-cycled, not truly recycled because they are not making premium writing grade paper with the paper that they recover. But it is not being shipped to China at considerable fossil fuel expense.

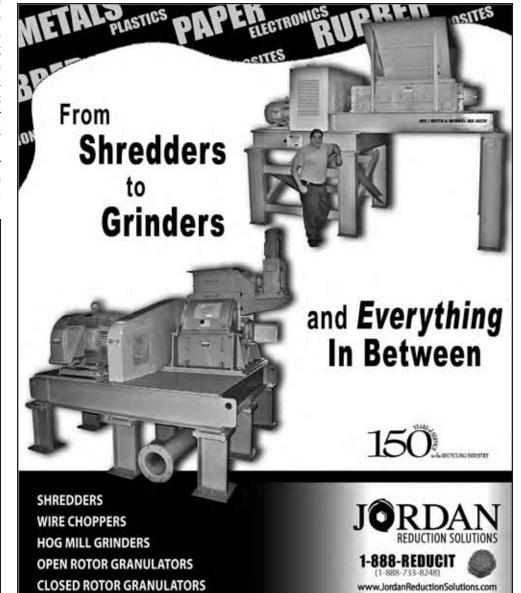
"All too often, we are not aware of the fact that replacing paper media with digital media is not without energy costs and environmental impacts," he adds. "There are times when it is a waste to print when you can see it on the screen, but even when you use digital media, it's important to consider that computers don't grow on trees and it requires a constant flow of electrons to view the pages. Most people are not aware of the



energy required to provide the infrastructure that allows them to enjoy digital media."

According to 2006 statistics from the United States Energy Information Administration, the paper making industry consumed approximately 75 billion kilowatt hours of electricity - the second most energy intense business in North America.

Continued on Page 14



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Section A • Page 14 American Recycler, June 2008

ARA SPEAKS by Ginny Whelan President, ARA Educational Foundation



Heavy metal rocks

No, this is not my musical preference. It is the uncharted waters never seen in my 30 years in the auto recycling business. Scrap metal prices have generally doubled from a year ago, quadrupled in the last five years, and are up 20% from last month. Surging global demand and the weak dollar have pushed the price and the export of steel scrap to record levels.

What does this mean to the auto recycler? To put it in simple terms – a ton. One of our end-product profit centers, scrap, has become a major income stream. It also has created volatile industry changes. End-of-life vehicles are in huge demand and competition is ferocious in the scrap commodity market.

Theft of scrap has reached epidemic proportions worldwide. Here in the United States large cities have formed special police task forces to prevent scrap theft and are requiring permits for pick up and disposal of scrap, including vehicles. Florida has passed legislation mandating the registration and fingerprinting of individuals selling scrap to recyclers.

Scrap metal recyclers have witnessed infectious consolidation in the industry. Metal mini mills have gone on a buying spree to secure scrap supplies. Scrap metal recyclers have opened their wallets to buy and develop major self-service auto recycling centers nationwide.

Nucor, the largest steel producer, reported first quarter earnings of \$409.8 million.

During the fourth quarter of 2007, Nucor acquired the David J. Joseph scrap company for \$1.4 billion.

Greenleaf Auto Recyclers, LLC, a 20-location auto recycling company, was purchased by Schnitzer Steel Industries in 2005. Schnitzer is also the parent company of Pick-N-Pull Auto Dismantlers.

Metal men are building second careers in the self-service auto recycling market. Pull-A-Part, LLC is a 20-location super store self-service model built by former metal recyclers.

Weigh-in takes on a different meaning in the competition for the end-of-life vehicles, driving powerful changes in the market. Many full service auto recyclers are expanding and opening self-service auto parts centers to increase vehicle inventory and claim a weigh-in share of the scrap market.

Nordstrom's Automotive, a long-term member of ARA, announced the opening of a self-service center last month. ARA member, Standard Auto Wreckers in Ontario, Canada, became an international auto recycling company with the opening of a self service auto parts center in New York last year. Over 50 ARA members have self-service parts centers.

These new challenges bring new opportunities and a need for more educational tools in the auto recyclers' tool box.

In an email to me last week, Paul D'Adamo from Bill's Auto Parts, Rhode Island, expressed how impressed he was with the ARA University (ARAU) and volunteered his "past life skills" as a corporate trainer for Microsoft. Paul uses his Microsoft Excel skills as a vital tool. Paul has a minimum of three Excel spreadsheets open each business day to manage vehicles and parts information. He inputs new information daily to provide accurate real time numbers for "educated" decisions on vehicle purchases for parts, cores and scrap sales.

This is a powerful business tool that can help all auto recyclers manage the changes in the scrap marketplace.

ARA University is working to provide training with Paul's help on the use of Excel for Business Analysis.

As the heavy metal scrap market rocks the auto recycling world, the professional auto recycler can increase profitability by utilizing the right business software tools.

Training is your most important tool in the toolbox of auto recycling. ARA University training will help you reach the right business decisions. For more information visit www.arauniversity.com.



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PAPER

Sustainability

Continued from Page 13

Carli says that waste paper is America's single largest export, particularly due to China's demand for the product.

"China does not have fiber sources and they are more than willing to pay for our fiber," he says. "The irony in North America is that we have not been building new paper mills (and) recovered deinking capacity is not keeping up with our demand. We say that we want more recycled content, but it hasn't resulted in support for industry investment in new infrastructure to provide that recycling capacity.

"In the past five years," he adds, "China has built more paper mills than we have in the past decade. We have not built anything in that period. Nine Dragons alone has built six mills in the past five years and they are the most sophisticated, highly automated state-of-the-art mills in the world.

"De-inking takes a lot of chemistry and the waste streams associated with it are problematic," he adds. "It is a lot simpler to recover paper and not have to bleach it. We need to improve the technology and help meet the growing demand by consumers for recycled content."

Carli is confident that the paper industry can create industrial ecologies and business practices that will allow for sustainable harvesting of timber and recycling.

"The challenge is always how to effect that transformation in a way that is not only orderly and economically viable, but also environmentally restorative and socially constructive," he says. "Unless we change the way in which the paper making, printing advertising, publishing and mailing industries source energy and materials, process and distribute primary and secondary products, and recover those products at the end of their useful lives as resources, we miss a major opportunity to address the fundamental challenges of climate change and sustainability before us."

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—Ray Kroc (1902-1984) Founder of McDonald's Corporation

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PAPER

EPA promotes increased paper recycling through partnership programs

The United States Environmental Protection Agency (EPA) is determined to work with the pulp and paper industry to maximize recovery and recycling in America, says Maria Vickers, deputy director of the EPA's Office of Solid Waste (OSW).

"Paper recovery plays a prominent role under the EPA's flagship program, the Resource Conservation Challenge (RCC), has underscored that," she says. "(It) provides renewed urgency to EPA's message of reducing, reusing and recycling valuable materials habitually discarded by American industry and the general public linking the importance of these activities to energy conservation and greenhouse gas reductions. I am sure that this is something that the public is becoming more and more educated about."

Several years ago the OSW collaborated with the American Forest and Paper Association (AF&PA) and other bodies to convene a national stakeholders meeting on paper recycling, which led to the identification of a number of issues and projects to increase overall paper recovery.

"We'd like to think that our work together over the years had a positive impact on paper recycling in this country," says Vickers.

The EPA is working on initiatives to help the AF&PA achieve its new 60 percent paper recovery goal for 2012.

One is the development of its paper recycling website.

"The website is intended to be a one-stop-shop for all things related to paper recycling," says Vickers. "We will have information for paper mills, teachers, students, recycling coordinators, building managers, environmental groups, public officials, and the general public. This website will be beta-tested by AF&PA and others over the next few weeks and should go on-line this summer."

Another program is the partnership that is bringing together Georgia Pacific, CB Richards Ellis, Inc. (CBRE) and Harmon Associates to promote recycling.

"CBRE is the world's largest commercial office management company (and) together with Georgia Pacific and Harmon," says Vickers, "CBRE is planning to implement new office recycling programs at 1,431 facilities in 43 states. Each facility will do a waste audit; develop and implement a recycling plan; carry out regular monthly education; and measure and report their progress.

"We anticipate great things from this partnership," she adds, "and we expect that the lessons we learn can be transferred to other building owners and operators throughout the country."

A third initiative has led to the development of the EPA's Office Carbon Footprint Calculator.

"This tool highlights the importance of paper recycling in an office setting and links recycling to greenhouse gas reductions," says Vickers. "The calculator is available on the EPA website. It's free and user friendly."

She adds that bringing in more partners to work with EPA and AF&PA is essential to increase recycling rates.

"At the national level, EPA promotes partnership programs under the Resource Conservation Challenge," says Vickers. "For example, the WasteWise Program, now in its thirteenth year, has attracted over 1500 partners across the country that are intent on reducing and recycling materials that would otherwise be waste. These partners - from small and large businesses, to communities, local and state governments, nonprofits and institutions of all kinds – have discovered that recycling is not only good for the environment, but it is also good for their bottom line."

Smurfit-Stone partners with Waste Services in Florida

Smurfit-Stone Container Corporation's recycling division has partnered with Waste Services, Inc., to operate Waste Services' materials recycling facility (MRF) at its Taft MRF and transfer station, near Orlando, Florida.

Since entering into a partnership March 1 and combining Smurfit-Stone's

volumes of fiber and recyclables with Waste Services' existing volumes, Smurfit-Stone has set production and efficiency records, increasing the recovery of recyclable materials at the Taft facility from 800 tons a month to approximately 3,200 tons a month.

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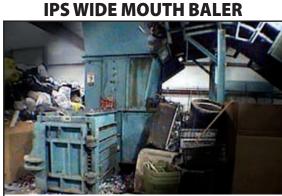


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EQUIPMENT FINANCING DONE

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Avis reduces printed paper use by 100 tons

Avis Rent A Car announced that it will discontinue the printing and distribution of scores of customer brochures and other collateral marketing materials. The effort is expected to reduce paper consumption by 100 tons per year, preserving about 1,500 trees annually, and reducing Avis' costs.

Avis has implemented several initiatives in addition to reducing its use of printed materials. Avis offers gas/electric hybrid vehicles including the Toyota Prius, the Nissan Altima and the Ford Escape. Approximately half of the Avis fleet is rated at 28 miles per gallon or better (highway), while approximately one fourth is rated at 32 miles per gallon (highway) or better.

Sixty-three percent of Avis vehicles are United States EPA Smartway® Certified; Smartway Certification, which is based on EPA analyses of vehicle fuel efficiency and tailpipe emissions, is designed to help consumers identify the cleanest, most fuel efficient vehicles available.

In addition to offering vehicles that minimize environmental impact from rental car use, Avis also has begun the process of creating a formal Environmental Management System in accordance with ISO 14001 international standards. This will result in a comprehensive plan to reduce impacts including water conservation, energy use, noise emission, use of natural resources, landfill contribution and other areas.

PLASTICS

Plastic bag recycling initiative promoted with new national symbol

The Progressive Bag Affiliates (PBA), a group of top plastic bag producers and recyclers and part of the American Chemistry Council (ACC), launched a major initiative to promote bag recycling throughout the nation. Several of the country's biggest bag manufacturers will begin printing a clear message on their bags to encourage customers to recycle bags at participating stores. The PBA also unveiled a new comprehensive at-store recycling toolkit designed to make it easy for stores to recycle plastic bags.

API Corporation, Hilex Poly Co. Inc., Inteplast and Superbag Corporation, bag manufacturers which together represent over 90% of the domestic plastic bag production, will all incorporate the new logo and message as a standard feature on their bags. These companies

will be offering the new logo for customers that participate in a bag recycling program. Consumers can expect to see the logo on bags throughout the country in the many areas where plastic bag recycling programs are available.

Plastic bag recycling is a growing trend in communities around the nation. Coast to coast, from the state of California to New York City, more stores are providing bag recycling than ever before and the impact has been substantial. An estimated 812,010,000 pounds of postconsumer film (including plastic bags) was recovered in 2006, representing a 24% increase from 652,477,000 pounds recovered in 2005. Bag manufacturers are helping to drive that trend by working in cooperation with community leaders, elected officials, retailers and environmental groups to illustrate the value of plastic bag recycling.

The new at-store recycling toolkit that has been developed by the ACC will also feature the new logo in a suite of tools make it easier



than ever for stores to begin plastic bag recycling. The toolkit offers bins and signage for store entrances and exits, checkout signage and pins to raise awareness, and municipal bins to be used at curbside. Ordering information for the toolkit will be available at www.plasticbagrecycling.org.

BASF announces bioplastics production expansion

BASF SE has announced plans for a significant expansion of its production plant for the biodegradable plastic Ecoflex® at the company's Ludwigshafen site in Germany. The move will raise Ecoflex production capacities from the current 14,000 by 60,000 metric tons per year. Production at the expanded plant will commence in the third quarter of 2010.

Ecoflex is a petrochemicals-based plastic which has the properties of con-

ventional polyethylene but is fully biodegradable in accordance with DIN EN 13432 requirements.

BASF also plans to increase production capacity of the compounding facility in Ludwigshafen where the newly developed product Ecovio® is manufactured. Ecovio, a derivative of Ecoflex, contains 45 percent by weight of the renewable raw material polylactic acid (PLA). The PLA content means Ecovio is not only biodegradable but also largely biobased. Polylactic acid is a material obtained from corn (maize).

The global market for biodegradable and biobased plastics is growing at more than 20 percent per year. "Ecoflex, our successful biodegradable polyester, and the innovation Ecovio are already giving us significant participation in this growing market. The new production capacities will substantially strengthen and consolidate our position," said Dr. Michael Stumpp, head of BASF's Specialty Polymers global business unit.

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Pepsi reduces use of plastic in some bottles

Pepsi introduced its lightest 500mL flavored non-carbonated beverage bottle after reducing the plastic content by 20%, which will eliminate approximately 20 million pounds of waste from the environment. The lighter bottles appeared on store shelves in May.

In addition to a 20% reduction in the plastic resin, there will be a 10% reduction in the label size and a 5% reduction in the shrink wrap film used to wrap the multipacks.

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ELECTRONICS

Goodwill Industries wants Congress to fix growing e-waste problem

Unwanted computers and other electronics present a costly problem for charities

Goodwill Industries is urging Congress to assist in the development of a recycling and reuse infrastructure for unwanted electronic products. In testimony before the House Committee on Science and Technology, Goodwill described the complicated challenges facing nonprofit organizations that accept donated televisions, computers and other electronic waste.

Goodwill is increasingly seen as a solution for what to do with old computers and other electronic products. A survey of local Goodwill agencies nationwide found that 23 million pounds of e-waste — the equivalent of roughly 821,000 computers — were donated to Goodwill alone in 2004. Nearly all Goodwill agencies receive computers and a growing number have established formal collection programs designed to reuse, recycle or responsibly dispose of them.

"There are costs, responsibilities, and liabilities associated with serving as a collector," says Jim Gibbons, president and CEO of Goodwill Industries International. "As much as 30 percent of electronics donated to Goodwill are unusable, and disposing of these products in an environmentally responsible way diverts significant resources from Goodwill's job training programs."

Local Goodwill agencies handle and process computer donations in a variety of ways. Whenever possible the equipment is refurbished and resold. Increasingly, however, nonprofit organizations like Goodwill are shouldering the burden of responsible disposal, which is often very costly.

"Product design changes could facilitate the re-use, disassembly, and recycling of products," says Gerardo Castro, director of contracts and environmental services at Goodwill Industries of Southern California, in testimony before the House Committee on Science and Technology. "Standardized chargers for cell phones are an example of design changes that would add minimal costs to the product while achieving substantial impact in the reuse area."

Goodwill Industries is calling on the federal government to:

•Assist in the development of a sustainable recycling/reuse infrastructure.

•Support incentives to manufacturers for product design changes.

•Use incentives such as tax credits for manufacturers who partner with social agencies, as well as recycling grants and other initiatives that could spur viable solutions and help stakeholders handle this problem.

ISRI testifies on electronics recycling

The Institute of Scrap Recycling Industries (ISRI) testified before the United States House Committee on Science and Technology on April 30.

The hearing, entitled "Electronic Waste: Can the Nation Manage Modern Refuse in the Digital Age?," was to examine the challenges of recycling household electronic equipment in the United States as the nation prepares to switch from analog to digital, which could send a number of older televisions into the recycling stream. Chairman Bart Gordon (TN) and members of the committee were interested in learning how research and technology could improve the sustainability of the existing recycling infrastructure.

Eric Harris, associate counsel/director of government and international affairs, testified on behalf of ISRI and reminded the committee that 'scrap is not waste' and 'recycling is not disposal'. He also pointed out that there is still a net-negative cost to responsibly recycle leaded glass from cathode ray tubes and to separate commingled scrap plastic resins into a high-grade specification. "Until the market for recyclable electronics becomes economically viable, ISRI's policy continues to support holding producers responsible for the collection, transportation and recycling of household electronic equipment that has a net-negative cost to recycle," Harris stated.

ISRI suggested that the Technology Committee should target research and development dollars to develop new, enduse markets and investment incentives to increase recycling yields which could inject investor confidence into the electronics recycling market.

Florida DEP plans for digital TV conversion waste

In preparation for the digital television transition in 2009, the Florida Department of Environmental Protection (DEP) has produced an interactive webbased map that enables citizens to find out where to recycle old televisions.

With the digital conversion just months away, DEP expects many unwanted analog televisions to be recycled as new digital televisions are purchased.

Some electronics recyclers estimate that as many as one in four households may discard at least one television as a result of the digital conversion. If that happens, Florida could see almost two million televisions recycled in the next few years.

As the result of a recent federal law, all television broadcast signals in the United States after February 17, 2009, must be in a digital format. Any television that uses

cable or satellite is already able to receive the new digital format signal (digitalready). Older televisions that use "rabbit ears" or a roof top antenna can only receive the old analog format signal and might not be able to view digital television programming. Owners of older units must either purchase a new television with a digital tuner or a digital-to-analog converter box that allows older television sets to receive the new digital format signal.

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ELECTRONICS

Virgin Islands to clean up handling of hazardous waste

In a settlement with the United States Environmental Protection Agency (EPA), the government of the United States Virgin Islands (VI) has agreed to bring itself into compliance with hazardous waste regulations and to set up facilities to which members of the public can bring their household hazardous waste. EPA had cited the Virgin Islands for improperly handling used lead-containing computers and spent mercury-containing fluorescent light bulbs at many different facilities throughout its three islands.

On April 13, 2005, EPA conducted inspections at two locations in the Virgin Islands and found a number of potential violations of the federal hazardous waste law, the Resource Conservation and Recovery Act (RCRA). After the inspections, EPA requested that the VI government provide a description and documentation of its practices at other Virgin Island facilities where different types of light bulbs and computer components were put into the trash. This information indicated widespread violations of hazardous waste

requirements. Prior to April 13, 2005, the VI government discarded its fluorescent and other light bulbs and computer waste with regular trash without determining whether these wastes were hazardous and without taking steps to minimize or prevent releases of hazardous constituents, such as mercury and lead.

The Virgin Islands was fined \$37,195 and agreed to spend at least an additional \$150,000 to develop a campaign to foster the public's awareness of proper household waste management and disposal practices. Under this Supplemental Environmental Project, the government will construct and operate several hazardous waste collection centers, purchase two collection trucks and four storage sheds to transport and store collected household hazardous waste, and advertise the new program to encourage people to use the centers. The government will operate and maintain the collection centers for at least two years and arrange for appropriate off-island disposal or treatment of the collected hazardous waste.

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A Closer Look

by Donna Currie

Green Girl/Green Mountain Recycling Bridget Johnson • 303-442-7535

Green Girl's catchphrase is "we make recycling easy" and when it comes to serving the customers in the mountainous areas of Boulder County, Colorado, that can be a big deal. While other recyclers might ask that the recyclables be placed at the end of the driveway, Green Girl trucks will go into the customer's garages, if requested. Bridget Johnson, owner of Green Girl explained that "in the mountains, the end of the driveway can be a mile [from the house]."

Green Girl was founded in 1998 as a way to provide convenient residential recycling in Johnson's own neighborhood. At the time, Johnson was living with three other single girls in a Boulder neighborhood. She said, "I was the only one responsible enough to do recycling." Johnson would load the recyclables into her car and haul them to a nearby recycling center.



—Bridget Johnson

But after the girls hosted a few gatherings and the pile of recyclables got bigger, Johnson looked around to find someone who would pick up the material. The prices were too expensive for her budget, so she came up with another plan. She started talking to neighbors to see if they'd be interested in doing more recycling if she did the hauling. "I knocked on doors for 100 days straight," she said.

From that effort, Green Girl got its start, and "By 1999, it was paying the bills." Johnson said. Most of Green Girl's customers are residential, with a few commercial customers. In 2004, that changed when Johnson bought Green Mountain Recycling, which had a mostly commercial customer base.

Johnson said that the company takes almost everything that is recyclable, including most forms of paper. "We partnered with Eco-Cycle eight years ago." Johnson said, and most of the paper goes there for processing.

"We track everything we take in, and everything we recycle," Johnson said. Part of that is for her own records, but Johnson also sends a letter out each year, to every customer, detailing what was picked up, and what that amount of recycling is equivalent to in terms of resources saved.

Besides residential customers, "we do a lot of print shops," Johnson said. Green Mountain also services several well-known customers; one office generates 3000 lbs. per month in office paper alone, a grocery chain produces 3-4 tons of cardboard a month, and a nearby hospital generates 1000 lbs. per month of paperboard. Johnson said that if you add up all the paper and recyclables picked up in a year, "it would fill a football field 5 feet deep."

While the commercial accounts are probably the most profitable, Johnson said, "The little houses are my favorites. You get to know the people." She said that she enjoys meeting the customers individually, and "I never want to grow too big to handle the growth. Everyone should get the best service. I really care about getting everything recycled."

"It's exciting," Johnson said of the business, but it has its ups and downs, particularly in the mountains. "Trucks break down all the time," she said. "Driveways can be a nightmare." And, like everyone else, "We're constantly battling the price of gas going up."

Johnson is no stranger to the trucks. She said that she still has the first Green Girl 1978 Ford 350 4x4 flatbed. "I love that truck," she said. A new addition is a 16-yard trash truck that Johnson is converting for hauling recycling and compost.

Johnson's husband, Matt, also knows all about those long mountain driveways. He's the one who usually drives the mountain routes, and he's in charge of safety, keeping track of DOT issues, and routing the other trucks. Including Matt, the company has three drivers, and two part-time employees who work on an as-needed basis.

Before getting into the recycling business, Johnson had worked at ski areas in international sales and for the ski patrol. Later, she moved to Boulder and went to school for business. "I always knew I'd own my own business," Johnson said, "but I didn't know what the business would be." Her father's advice was to do something she felt passionate about, but she didn't quite know what that passion would be until she started knocking on doors and talking to her neighbors about recycling.

Now, she knows that she found the right niche. "I'm always upbeat, probably because I like what I do," she said. "I feel good when I go to bed at night, knowing that I'm making a difference."

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AUTO

UPS expands green fleet with 200 electric hybrid vehicles

UPS has ordered 200 hybrid electric vehicles (HEVs) – the largest commercial order of such trucks by any company – in addition to another 300 Compressed Natural Gas (CNG) vehicles for its United States delivery fleet.

The purchase of the 500 additional vehicles means the UPS alternative fuel fleet will grow 30 percent from 1,718 to 2,218 low-carbon vehicles.

UPS's "green fleet" operates in the United States, Germany, France, Brazil,

Canada, Mexico and the United Kingdom and has traveled nearly 144 million miles since 2000. The fleet includes electric, hybrid electric, CNG, liquefied natural gas and propane-powered vehicles. The company also is continuing work with the Environmental Protection Agency on a hydraulic hybrid delivery vehicle.

The 200 hybrid electric vehicles will be deployed in 2009 and join 50 HEV delivery trucks already in operation. The 200 trucks are expected to save 176,000 gallons of fuel annually and reduce CO2 emissions by 1,786 metric tons each year.

The HEV's hybrid power system allows UPS to save on fuel and pollution-causing emissions. A battery pack, motor/generator and power control system are added, which allow electric power to be fed into the powertrain when conditions demand it, providing further savings.

The 300 CNG vehicles will be deployed later this year and join more

than 800 such vehicles already in use in the United States. CNG vehicles run on natural gas, a cost-effective, clean-burning and readily available fuel. These vehicles are expected to yield a 20 percent reduction in emissions over the cleanest diesel engines available today.

The CNG/HEV vehicle order follows the April 2008 deployment of 167 new CNG vehicles in Atlanta, Dallas, Los Angeles, Ontario, San Ramon, Fresno and Sacramento. In addition, UPS added 50 next-generation hybrid electric delivery trucks in Atlanta, Dallas, Houston and Phoenix in May 2007.

The chassis for the CNG and HEV trucks are being purchased from Freight-liner Custom Chassis Corporation, with Eaton Corporation supplying the hybrid power system for the HEVs. The truck bodies are identical externally to the signature-brown trucks that now comprise the UPS fleet with additional script markings that will identify them as CNG and HEV vehicles.

Salvaging Millions

by Ron Sturgeon
Autosalvageconsultant.com

How do your customers see you?

Part 1 of 2

How you present your image is important to the subliminal imprint on your customers' memories. Do you have a logo for your firm? How about a standard color theme? If not, it's time to think about your business image and its overall symbol in the public mind.

Say you have a floral shop. Over time, you've learned to identify your primary customers and you've found they really like red roses. Then your logo should be a red rose. Go a step further; paint your floral shop the color of red roses. Hire a muralist to paint the front or side of your building to look like a redrose garden.

Do you see what we're saying here? The consistency of your visual image becomes an imprint in the mind of your customer. You want that imprint to be elementary because simple images are easier to grasp and remember. A primary color, like red or yellow, files into human memory in such a way that it's easily recalled. Simple cues will call forth a graphic picture quite easily, and that's good for you and your business.

Your logo should be a reflection of your firm. Why are simple graphics used on highway signs? It's so that anyone can follow the directions regardless of their language. We all know to drive more cautiously when we see the warning sign indicating a deer crossing. We all know how a stop sign looks. These images are filed away in our subconscious memory to act as a simple, easily identified language. That's precisely what you want to achieve with a business logo, and precisely what you should achieve by implementing a company theme throughout all the visible areas that greet your customers coming and going.

It is part of an exercise called "branding". It's a business take-off on the western concept of branding a rancher's cattle and horses. In the Old West, it left no doubt about who owned what. It has given rise to our modern day use of logos to establish a simple-language image to help identify particular services or products with a particular business.

Start the process by simply asking yourself what makes your products or services better than those of any competitor, or what distinguishes your company.

Branding is making your product stand out from all the rest of the advertising noise we hear broadcast in a thousand ways every day or that we see plastered everywhere in print. If you're going to be seen, you've got to compete. If you're going to compete, you've got to stand out. The marketplace is noisy. To get business, you need to be not only noticed but remembered as well.

If you think what you're selling is a commodity and can't be branded, you're wrong. Milk is a commodity and look what Carnation has done with that. Bottled water is a commodity, but look what the entrepreneurs have done with that! Fuel is a commodity, but there are all kinds of brands promoting various attributes of additives. "Put a tiger in your tank," one advises. That's branding. You'll likely see a picture of a tiger on the building and recognize a color theme particular to that product. That's how the idea enters the public mind and why it stays there from one generation to the next.

Remember, only you can make BUSINESS GREAT!

This article was provided by autosalvageconsultant.com which was formed in 2001 by recyclers for recyclers, to help them improve their businesses.





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Preliminary injunction filed against New Hampshire auto salvage yard for violations

New Hampshire Attorney General Kelly A. Ayotte and Commissioner Thomas S. Burack of the New Hampshire Department of Environmental Services (DES), announced that the Sullivan County Superior Court approved a preliminary injunction order entered into by DES and James Bonia dba Tri-State Car Crushing, an automotive salvage vard located in Lempster, New Hampshire. The order addresses ongoing violations of the State's solid waste, hazardous waste, and groundwater protection statutes and regulations.

The State filed a lawsuit against Bonia on April 14, 2008 seeking preliminary and permanent injunction orders and civil penalties. In its petition, the State alleged that Bonia violated State laws by operating an unpermitted solid waste facility, improperly managed and stored hazardous wastes and regulated substances, failed to report and clean up spills of hazardous wastes and regulated

substances, failed to protect monitoring wells from being damaged or buried, and failed to perform groundwater monitoring as previously agreed.

The Preliminary Injunction Order requires Bonia to immediately cease accepting solid waste and dispose of all unpermitted solid waste currently on site; hire a consultant to prepare operations, liquids management, and spill response plans and certify that the plans comply with all state statutes and regulations; prepare a scope of work to determine the extent of soil, groundwater, and surface water contamination on the property; replace damaged or buried monitoring wells; conduct groundwater monitoring; and manage his automotive salvage yard in accordance with all state statutes, regulations, and the DES Motor Vehicle Salvage Yard Environmental Compliance Manual & Self-Audit Checklist.

U-Pull-&-Pay opens used auto parts store in Denver, Colorado

U-Pull-And-Pay, LLC (UPAP) celebrated the opening of its newest retail self-service used auto parts store on 66th Avenue in Denver.

The Denver UPAP store manager is Joe Pineda. Pineda has both full- and self-service auto parts experience and brings a wealth of knowledge and experience to the new store. The office manager is Cathy Murray, and Jessica Russell, car buyer, is the contact to sell salvage vehicles to UPAP.

U-Pull-&-Pay currently operates six other self-service used auto parts stores: Albuquerque, Aurora, Cincinnati, Colorado Springs, Orlando and West Palm Beach.

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Case 921B, big loader, good cond., grapple bucket (8	57) \$49,500	Trojan 2000C, ind. cou	ipler, bucket & long fork (835)	\$18,900
CAT 914-G '02, very nice (911)			lled tires, low hrs., prior gov. (926)	
JCB, 436BHT '98, 30,000 lbs. machine w/coupler, A	/C (924) \$49,500	New Holland LW80	'00, coupler, bucket, fork (919)	
Hundai 740-3 '00, nice condition! (912)	\$39,500	Volvo I 70 foam-filled t	ires, very nice condition (616)	
Komatsu WA450-2 '93 (910) Fiat Allis FR15 (874)	\$49,500			
(2)Fiat Allis FR-20B (865 & 847)	\$24,900	Fiat Allis 645R		\$18.900
(2)Fiat Allis FR-20B (865 & 84/) Fiat Allis 745-C (851)	\$29,500	Fiat Allie EP220 5 vd	huckat (015)	\$30 500
Ford A-64, forks & bucket (713)	\$20,900	Fiat Allis ED 140 (01)	2)	\$20,500
Ford A-64, forks & bucket (713)				

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INTERNATIONAL

Timken opens plants in Asia

the opening of two new manufacturing facilities in Asia, adding to its ability to serve aerospace and industrial markets.

The company will continue to ramp up production over the coming quarters at its industrial bearing manufacturing plant in Chennai, India, and its aerospace and precision products facility in Chengdu, China. Timken now operates a total of seven manufacturing plants in Asia.

Timken announced plans to build its industrial bearing plant in Chennai in October 2006. The facility is located in one of India's Special Economic Zones

The Timken Company announced and will manufacture medium-sized tapered roller bearings for industrial customers.

> Construction of Timken's aerospace and precision products facility in Chengdu also began in the fourth quarter of 2006. The facility will manufacture bearings and related products for global customers and China's rapidly growing commercial aviation industry. Timken, which established a presence in China in 1992, also has plants in Wuxi and Yantai and will soon begin construction of a new joint-venture facility in Xiangtan to manufacture ultra-large-bore bearings for China's wind energy market.

China's first wind energy project begun

GreenHunter Wind Energy, LLC announced its first wind energy development project outside of the United States, located south of Shanghai, China.

The project has the potential to generate up to 300 MW of power and will be developed in partnership with two other parties, Chem-Energy, Inc., a United States based developer and a Chinese based wind turbine manufacturer, Ming Yang Wind Power Technologies.

GreenHunter Wind Energy will manage and control approximately 70% of the ownership equity of this project.

Under an exclusive five-year contract with Chinese manufacturer MingYang, GreenHunter has secured orders for turbines capable of generating around 1,000 megawatts of electricity once installed.

MingYang is currently the only Chinese company permitted to export turbines to the United States.

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U.S. Patent No. 6.896.316 B1 U.S. Patent No. 6.902.226 B Section A • Page 24 American Recycler, June 2008

EQUIPIVIENT SPOTLIGHT

Paper shredders

by Mark Henricks

To most of us, paper is a symbol of frailty and impermanence. To manufacturers of paper shredders for recycling applications, however, the material provides both a sturdy foundation for their businesses as well as no small number of challenges.

Shredding first boomed more than 30 years ago after passage of the federal privacy act spurred interest in document destruction, then again when federal regulations regarding the privacy of healthcare and medical information were passed. Lately, concern about identity theft is driving document destruction.

At Allegheny Paper Shredders Corporation in Delmont, Pennsylvania, director of marketing Robert Wagner says the company's first strip-cut shredder was made with approximately 8 horsepower. After more than 40 years in business, their largest model now has 300 horsepower. Machines over 50 horsepower tend to be heavily customized with cutters made of metal with the right hardness, properly selected gear boxes and configu-



Ameri-Shred Corp.

rations designed to reduce space, improve productivity, or address other concerns.

One of the biggest market niches consists of contract service firms destroying documents for businesses. Whatever the source, the paper all winds up being recycled. "Nowadays, it's all baled and recycled," Wagner says. "There's such a good return on the paper that if you're doing any volume you're going to recoup your costs."

One trend in the industry is crosscut shredding for high volume document destruction. In this application, two strip cut shredders are installed. A preshredder breaks down bulk material to a particle size of two inches or so. Material then goes to a confidential shredder, which reduces particle size to 5/8 inch. The



Republic Machine, Inc.

machines are arranged perpendicularly so shredded paper is conveyed from the first shredder broadside into the second for crosscutting.

"The advantage of this is you can do high volume," Wagner says. "Typically stripcut shredders on our size equipment can go from 1 ton to 15 tons an hour. When you cross shred, you can get up to 25 tons an hour because you preshred it." Allegheny typically installs crosscut shredders of 125 horsepower on both machines, although 200 horsepower is also common.

At Industrial Paper Shredders, Inc. in Salem, Ohio, owner DeeDee Thomas says the company custom builds all its shredders to meet end user needs. "The shred size, voltage and the body of the shredder are engineered predicated on the material shredded and its use," Thomas says. "Because our shredders are custom built, we can make the body and knives from almost any metal."

Industrial's best-known line is the Combo shredder. It is available in four feed-throat sizes, from 16 inches to 60 inches. "The Combo shredder's shred size is variable, from 1/8 inch by 1/8 inch

HIGH CAPACITY SHREDDING • CROSS-SHREDDING SYSTEMS • SECURITY GRINDERS • PRODUCT DESTRUCTION

up to 2 inches x 1 inch and anywhere in between," Thomas says.

Industrial has found quite a wide variety of markets for its shredders. "Some people who use horse bedding have found that wood shavings and sawdust have become scarce due to the decline in housing and they have turned to cardboard bedding," Thomas says. "Our shredders can make horse bedding in 3/8 inch by 3/8 inch pieces for the muck rakes tines with a 3/8 inch width. It is easier to clean the stalls when the 3/8 inch pieces stay and the manure is raked away."

Industrial also makes shredders that produce mulch from cardboard by using a disintegrator screen on the shredder. "The product is fluffy cardboard and is also being used for horse bedding," Thomas says. Other applications include companies that use Industrial's shredders to crush cardboard cores to reuse in other paper products.



Granutech-Saturn Systems

"We have large insulation companies chopping waste that was once landfilled into 1 inch by 1 inch pieces and using the chopped pieces for insulated ceiling tiles," Thomas adds. "We also make shredders for high volume shredding for recycling or document destruction."

At Republic Machine, Inc. in Louisville, Kentucky, owner George Sotsky says the company was an early proponent of shredders equipped with solid, one-piece rotors with outboard pillow block bearings. Today its single-

Continued on Page 25

Manufacturer List

Allegheny Paper Shredders Evelyn Jefferson, 800-245-2497 www.alleghenyshredders.com

Ameri-Shred Corp. Steve Idalski, 800-634-8981 www.ameri-shred.com

Blower Application Company Ric Johnson, 800-959-0880 www.bloapco.com

Compac Systems LLC Mike Schutt, 616-786-9100 www.compacsystems.com

Corru-Shred, Inc. Norman Levine, 954-788-7711 www.corru-shred.com

Franklin Miller, Inc.
Sondra Somer, 973-535-9200
www.franklinmiller.com

Granutech-Saturn SystemsMike Hinsey, 877-582-7800
www.granutech.com

Hammel New York, LLC Gert Semler, 219-218-5369 www.hammelny.com

Industrial Paper Shredders
DeeDee Thomas, 888-637-4733
www.industrialshredders.com

Intimus Schleicher & Co. David Parkhill, 800-225-5644 www.intimus.com

Montgomery Industries Intl.Jeff Brockman, 904-355-5671
www.montgomeryindustries.com

Republic Machine, Inc. David Marsh, 877-637-6778 www.republicmachine.com

Shred Pax, Inc.

Tom Kaczmerek, 800-962-7888 www.shredpax.com

Shred-Tech

Sean Richter, 519-621-3560 www.shred-tech.com



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Paper shredders

Continued from Page 24

shaft rotary shredders are used in a broad array of applications including document destruction as well as wood, plastic and medical waste.

"We offer two completely different cutting systems," Sotsky says. "One is the common 'hawksbill' cutter in 40mm and 60mm sizes. The other is a totally unique Trapezoidal cutting system for carpet, film, and fiber." The designs are highly productive by virtue of eliminating problems with wrapping, he adds.

"The cutting systems are available in a variety of sizes and with corresponding horsepower options, all of which are offered in both the traditional frame style in our Eagle line, as well as our unique Split-A-Part design, which makes maintenance much easier reducing cleanout time when changing products," Sotsky says. "We think the future looks bright and has changed dramatically in the past 10 years."

The future of paper shredding appears promising. Although mobile shredding services are under pressure due to environmental concerns, contract shredders that pick up and shred paper for companies are growing. Companies such as Allegheny are investigating grinders for document destruction, an application that is opening the door to the printing industry's need to process trim and print waste. "It's definitely a booming business," says Wagner.

To be included in the spotlight, you must manufacture the equipment featured.

We require a company name, contact person, telephone number and, if applicable, a website address.

To be listed in the appropriate spotlight, please call 877-777-0737.

	UPCOMING TOPICS
07/08	Concrete Crushers
08/08	Conveyors (electronics)
09/08	Sorting Systems for Single Stream
10/08	Wheel Loaders
11/08	Wire Removal Systems (tires)
12/08	Can Flatteners/Blowers

American Recycler is not responsible for non-inclusion of manufacturers and their equipment. Manufacturers are to contact American Recycler to ensure their company is listed in the Equipment Spotlight.

INTERNATIONAL

facility planned for India

PEAT International, Inc., (PEAT) has commissioned its first plasma thermal destruction and recovery (PTDR-100) system located at the Gujarat Industrial Development Corporation near the Jayaben Modi Hospital in Ankleshwar, India.

The 60 kilogram-per-hour (130 lb/hr) PTDR-100 system, developed to treat biomedical waste and other industrial/universal waste streams, represents a permanent, fully self-contained platform for hospitals and industrial facilities.

PEAT's environmentally process utilizes plasma torches to convert waste into a synthetic gas, comprised mainly of carbon monoxide and hydrogen, which is a valuable source of alternative energy and can be used for electricity and/or hot water generation and other useful end-products. The PTDR-100 system comes equipped with a 100-kW plasma heating system.

Throughout February and March, PEAT successfully processed a combination of waste streams (individually and comingled), including biomedical wastes, dye intermediates, various pharmaceutical industry wastes, distillation bottoms and municipal wastes over a continuous period. This completes the commissioning validation tests and collects operational data that will be valuable assets for obtaining any and all future regulatory approvals.

The PTDR technology has received numerous approvals from various regulatory agencies throughout the world, including it being listed as an approved Alternative Medical Waste Treatment Technology by the California Department of Public Health and the Michigan Department of Environmental Quality.

Nucor forms joint venture with Duferco

Nucor Corporation has entered into an agreement to acquire 50% of Duferdofin-Nucor S.r.l., a new joint venture being created with Duferco S.A. for the production of beams in Italy and the distribution of beams in Europe and North Africa. The joint venture includes the Duferco Group's Italian long product production assets and associated distribution companies.

Nucor will pay euro 423.5 million (approximately US\$658 million) for its 50% equity stake in Duferdofin-Nucor.

The transaction is expected to close during the third quarter of 2008.

Waste treatment | UK waste company fined for dumping plastics in river

A UK waste company has been fined after illegally dumping waste on land at two sites in Devon. The case was brought by the UK Environment Agency.

In September 2005, agency officers visited a site at Cannington Mill in Devon and found wastes deposited in the floodplain of the River Dalch. Some of this waste included fines waste that contained small pieces of plastics, wood and foam mixed with soil. Samples were taken that indicated this waste should have been disposed of at a lined, household-type landfill.

Once this site was closed, the investigation revealed that the waste was then sent to another unsuitable site at Orchard Farm Landfill, Holmacott, North Devon. This landfill site is only able to accept inert wastes such as soil and stone. The origin of the waste from both sites was traced back to a waste transfer station operated by Oxy Limited.

The company, based in Barnstaple, Devon, holds a license for treating of

waste at the Hacche Lane Waste Transfer Station in South Molton. The site accepts mixed household, commercial and industrial wastes, generally from skips collected in the North Devon Area. Recyclable items such as large rocks, metal and wood are initially separated and the remaining 'light' waste is passed through a shredding and screening

The smallest pieces of waste that are left after this process are known as 'fines'. It is these fines that were sent to Cannington Mill and Orchard Farm inert landfill. Separate enforcement action has been taken against the operators of both of these sites.

When questioned, Oxy Limited said the 'fines' consisted of soil, sand and dirt from non-hazardous waste but there had been no analysis of the content.

Waste transfer notes showed 2,091 tons had been taken to Cannington Mill and 234 tons to Orchard Farm Landfill.



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Features include a sound-proof hopper designed for various loading options, caster mounting, a hardened cutting chamber with smasher blades and cutting wheels, a low RPM gear-driven motor, a tilt back hopper, and a drop down screen cradle.



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SB Series granulators are suitable for dry or wet operation and can also be used for secondary size reduction of pre-shredded plastics.

SOLESBEE'S INTRODUCES NEW

Solesbee's, a heavy-duty attachment manufacturer,

Solesbee¹s Skid Steer Rock Grapple is engineered

introduced the SERG-173 Skid Steer Rock Grapple.

This versatile attachment is available in three widths:

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Galeton's new ATA® glove is made from high performance fiber featuring properties never before achieved in a spun fiber – 2.5 times more cut resistant than Kevlar. Engineered for worker protection and comfort, the glove provides the dexterity and flexibility needed for detailed, hands-on applications.

The new ATA Glove is available in six variations: Nitrile coated palm and fingertips, split leather palm and fingertips, PalmCoated natural rubber, PVC dotted sides and knit with cotton liner.



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ROUTEWARE OFFERS NEW RFID SOLUTION FOR WASTE HAULERS

Routeware, a leader in the design and manufacture of hardware and software for the waste industry, is offering a fully-integrated radio frequency identification (RFID) verification solution designed to transform the way waste haulers collect and dispose of waste and recyclables in the United States.

The new solution takes advantage of Routeware's expertise and Texas Instruments' low frequency RFID products and systems engineering.

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PETERSON INTRODUCES NEW HORIZONTAL GRINDER

Peterson's 2710C grinder is powered by a Caterpillar C13 engine or an optional C15. With a feed opening of 60 3/4 x 32" combined with Peterson's high lift feed roll for an optional opening of up to 44" high, the 2710C can reduce a wide range of material.

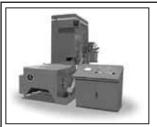
The 2710C features a large grate area and produces materials to exact specifications. The multiple grate system allows customized grate configurations to produce a variety of finished materials.



Spectronics Corporation 956 Brush Hollow Road Westbury, NY 11590 800-274-8888 www.spectroline.com

"HEAR" PROBLEMS BEFORE THEY **BECOME BREAKDOWNS**

Spectronics Corporation has introduced the Marksman™ ultrasonic diagnostic tool, a highly accurate instrument that converts and amplifies inaudible ultrasonic sound into audible "natural" sound. Now, service technicians can easily hear sounds that signify problems such as air brake leaks, gear and bearing wear, vacuum, EVAP system, exhaust, refrigerant and passenger compartment leaks, and address them before they become major headaches.



Kurt Manufacturing Chip Solutions Division 1325 Quincy Street Minneapolis, MN 55413 www.kurtchip.com

NEW KURT CHIPMUNK COMPACTOR INTRODUCED

The Kurt Chipmunk has a single auger feeding design which operates from a powerful compression plate that forms and compresses the wet chips into 3-1/2" by 1-1/4" continually extruded briquettes.

This patented compactor design compresses up to 98 percent of residue coolant so firm briquettes are produced which are dry to the touch. The recovered coolant collects in a separate reservoir at the base of the Chipmunk system, ready for filtration and reuse.



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www.adamsmagnetic.com



Adams Magnetic Products Co. introduces Pocket Magnets, a tool that identifies valuable ferrous materials such as iron and steel.

Available in 0.375, 0.5 and 0.75 inch diameters with a pulling force of two, five or seven lbs., Pocket Magnets are approximately 2.5 inches long.

Each comes in a standard silver color with an attached chain for hanging from a key ring, belt loop or hook.

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BUSINESS BRIEFS

Hirschmann consolidates businesses

■ Belden Inc., headquartered in St. Louis, Missouri, has consolidated its affiliated Belden Europe (Venlo, The Netherlands), HEW-Kabel (Wipperfürth, Germany), Hirschmann Automation and Control (Neckartenzlingen, Germany) and Lumberg Automation (Schalksmühle, Germany) companies into the newly formed business unit of Belden EMEA.

Its operational headquarters will be located in the greater area of Stuttgart, Germany. Dr. Wolfgang Babel, who already headed Hirschmann and Lumberg Automation, was named president of Belden EMEA.

Besides a broad portfolio of copper and fiberoptic cables as well as automation components, Belden EMEA will also provide solutions for the communications technology in automation. To this end, the business unit plans to further complement its activities with proprietary developments as well as through acquisition. Turnover, which totalled approximately EUR 550 million in 2007, is expected to be doubled within the next few years.

Events Calendar

August 3rd-7th

5th SETAC World Congress. Sydney Convention and Exhibition Centre, Australia. +61 2 9265 0700 • www.setac2008.com

September 7th-10th

2008 Global Waste Management Symposium. Copper Mountain Conference Center, Copper Mountain, Colorado. 203-358-4314 • www.wastesymposium.com

September 21st-24th

National Recycling Coalition's 27th Annual Expo. David Lawrence Convention Center, Pittsburgh, Pennsylvania.

202-789-1430 • www.nrc-recycle.org

October 20th-21st

75th Annual Meeting of the Aluminum Association. The Greenbrier, White Sulphur Springs, West Virginia.

703-358-2975 • www.aluminum.org

October 21st-25th

ARA 65th Annual Convention & Exposition. Hyatt Regency Crown Center, Kansas Citv. Missouri.

888-385-1005 • www.a-r-a.org

October 21st-23rd

Wastecon 2008. Tampa Bay Convention Center, Tampa, Florida. 800-467-9262 • www.wastecon.swana.org

IronPlanet promotes Mike Groves to senior VP

■ IronPlanet recently promoted Mike Groves to the position of senior vice president of North American sales. Groves will be responsible for IronPlanet's continued growth in the United States, Canada and Mexico. Groves has been with IronPlanet for five years.

Before joining IronPlanet, Groves worked for 11 years in the auction industry as vice president and general manager of Forke Brothers and division manager of Ritchie Brothers. Groves also held the position of regional used equipment manager for Nortrax Southeast.

Verenium appoints John Dee to board of directors

■ Verenium Corporation announced the appointment of John F. Dee to its board of directors. The Company also announced that Geoffrey Hazlewood, Ph.D., senior vice president of research, has resigned for personal reasons effective May 31, 2008 and will be returning to his native England. Dr. Hazlewood will remain as an exclusive consultant to the Company and will join its scientific advisory board.

Dee served as president, chief executive officer, and director of Hypnion, Inc., a privately-held neurosciences drug discovery company. Before Hypnion, Dee spent three years as a "turn-around" CEO, specializing in reviving under-performing biotechnology companies including Genta, Inc. Prior to his move into biotechnology, Dee spent several years as a senior management consultant at McKinsey & Co., Inc., an international management consulting firm, where he led teams of senior executives in the development and implementation of new strategic directives and performance improvements.

Dee currently sits on the board of directors for NeuroPhage, Inc., a neuroscience company that develops biomanufacturing workflow methods and technologies for biopharmaceutical companies.

Commercial Metals acquires supply company

■ Commercial Metals Company has completed the acquisition of substantially all the operating assets of Rebar Services and Supply Company (RSS) of Fort Worth, Texas.

Established in 1982, RSS is a rebar fabricator that serves the North Texas area and has approximately 30 employees. The acquired assets will operate under the new name of CMC Rebar as part of CMC's Americas Fabrication and Distribution segment.

Cherry appoints Joel Gutierrez as CFO

■ Joel Gutierrez has been named chief financial officer for Houston-based Cherry Companies, a construction and demolitions company. In his new role, Gutierrez oversees the financial operations of Cherry and handles all cash management for the company.

Gutierrez, who joined Cherry over four years ago, has more than 17 years of experience in accounting. He started out at Cherry as the assistant controller and then moved to the controller role.

Prior to Cherry, he served as the financial analyst and regional accountant at Philip Services Corporation, where he managed the financial statements for the Midwest region of the industrial services company.

Smurfit-Stone names new director of quality

■ Smurfit-Stone Container Corporation has named Julie Robinson director of quality for corporate accounts in the company's Corrugated Container divi-

Robinson will serve as a liaison between customers, corporate sales representatives and the company's box plants, ensuring that internal and external customer quality requirements are met.

Robinson, a 30-year veteran of the packaging industry, previously served as general manager of Smurfit-Stone's label plants in St. Charles, Illinois, and Greensboro, North Carolina. Those facilities were sold as part of Smurfit-Stone's Consumer Packaging division divestiture in 2006.

Doosan president retires after 30 years of service

■ Lawrence Silber, president of Doosan Infracore Portable Power, formerly Ingersoll Rand Utility Equipment, had announced his retirement effective June 1, 2008, after 30 years of distinguished service.

Silber began his career with Ingersoll Rand working as a sales trainee in the professional tools group.

He moved into marketing and business management for that business unit, holding various positions such as regional and national sales manager. In 1989, Silber was promoted to vice president, holding that title in many capacities of the business: sales and worldwide marketing, automotive aftermarket and sales distribution operations. In 2006, Silber was named president of Ingersoll Rand Utility Equipment.

Selection of a new president is underway.

Olympic Wire new distributor for IPS Balers

■ Olympic Wire and Equipment, Inc., a supplier of products and service to the waste and recycling industry, has reached an agreement with Georgiabased IPS Balers, Inc. to become an authorized dealer for the company's Conquest Series and Two-Ram Bale Tie Balers.

Olympic is now the authorized distributor of IPS equipment in California, Nevada and Arizona. The company also provides customers with regular maintenance and repair programs, making it the only IPS distributor to service these models in the western United States.

Austen joins Safety Vision as director of engineering

■ Safety Vision, a provider of mobile digital video solutions, has hired Russell Austen as director of engineering. In this new position, Austen will manage the company's in-house engineering department at its Houston, Texas headquarters campus, which features on-site research & development, testing, and quality control labs. In league with Safety Vision Chief Technology Officer Christopher Fritz, he will steer conceptualization and design of the company's evolving line of mobile digital video recorder (MDVR) systems and wireless data capture and management solutions.

Before joining Safety Vision, Austen held positions as system architect/design lead for Immersive Media, Inc./Freestone Systems, Inc. and Texas Instruments, Inc. in Dallas, Texas.

Patrick Harper joins MHF Packaging Solutions

■ MHF Logistical Solutions, Inc. announced that Patrick Harper has been named business development manager of the company's packaging division, MHF Packaging Solutions.

Before joining MHF Packaging Solutions, Harper worked as a sales executive with EMA, a St. Louis, Missouri-based company specializing in industrial and commercial waste management, beneficial reuse programs, and environmental remediation and abatement projects.

His environmental sales and marketing background also includes roles with Illini Environmental, Haz-Waste, Inc. and Tri-Rinse, Inc.

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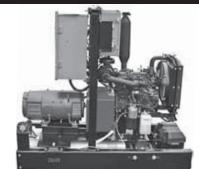
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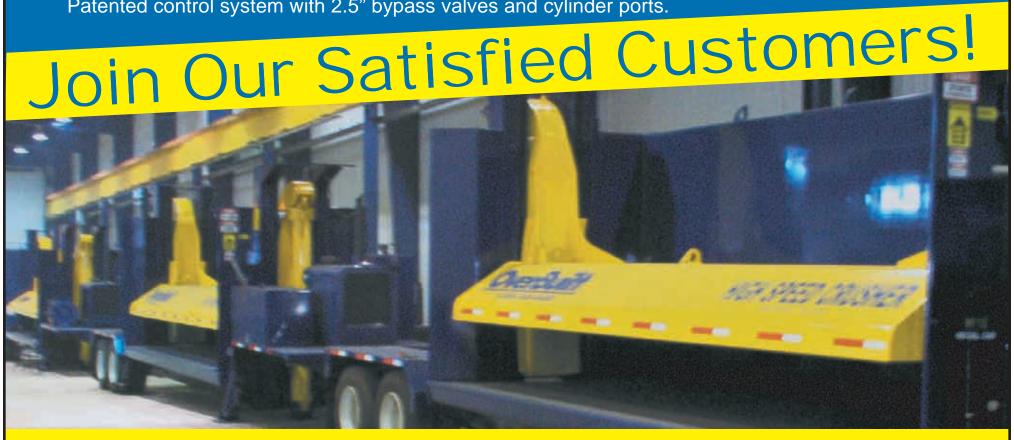


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uses methane from landfill

The Environmental Protection Agency (EPA) and Mars Snackfood flipped the switch on its first landfill gas project in Waco, Texas - a venture that will cut the company's energy costs and the release of greenhouse gases into the

The project will use methane gas that is piped in from the city landfill to power two furnaces that create steam for the plant's candy-making operations.

In addition to saving the company \$600,000 a year in energy costs, the project will also reduce more than 10,000 metric tons of carbon dioxide equivalent, which has the same environ-

mental impact of avoiding the emissions of 1,900 cars.



,900 cars. Chocolate made from landfill gas. joins a growing list of companies to complete waste-to-energy projects as part of EPA's Landfill Methane Outreach Program (LMOP). There are currently 21 operational projects in Texas and a total of 34 throughout the five-state area that makes up EPA Region 6.

To foster more development of waste-to-energy resources, EPA Region 6 has developed a pilot Waste-to-Energy (WTE) Strategic Geographic Planning tool that is designed to link waste producers with end users by identifying optimum locations for such projects. The region is currently working with the Department of Energy's National Renewable Energy Laboratory to expand the pilot to a national scale.

LMOP is a voluntary technical assistance and partnership program. Additional information is available at www.epa.gov/lmop.

Mars snack plant | Investments in clean technology thrive

by Brian R. Hook

What is often referred to as clean tech - technology aimed at developing alternative energy, reducing pollution or promoting conservation - continues to receive new investments despite the ongoing turmoil underway in the financial markets.

Venture capital investments in the sector have tripled during the last five years in the United States. \$766 million went into clean tech in 2002. Last year, the amount totaled \$2.85 billion, according to the National Venture Capital Association.

"The overall trend is absolutely up," said Mark Heesen, president of Arlington, Virginia-based trade group. "When you look at what we categorize as cleantech deals, there is no question that we have seen a major shift in emphasis toward this sector.'

The sector, which still only represents 7.5 percent of all venture capital investments, is somewhat hard to define. Heesen said some of the deals have an information technology component, while others have biotech components.

"We are not seeing investments like we are seeing in the IT sector or the life science sector. But I think that those



—Ira Ehrenpreis

numbers going increase," Heesen said.

"This is an area that seems ripe from a venture capital spective."

Favorable conditions include a huge potential market, an indus-

try in need of change, and the government and consumers looking to "go green," Heesen said.

"I think everyone is starting to come around to the idea that it is not the established players that are going to solve these problems. It is going to be young entrepreneurial companies nipping at the heels of the larger companies."

One of the venture capital firms investing in clean tech is Palo Alto, California-based Technology Partners, which manages \$700 million of investment capital.

"As one of the pioneering clean tech funds, Technology Partners has been putting half of its entire capital into clean tech for seven years - long before it was fashionable to do so," said Ira Ehrenpreis, a general partner of the firm. He said that he expects more venture capital to continue to flow into the clean tech sector in the in clean technology research investing. coming years.

"We're just at the beginning of a long-term, enduring trend to tackle some of the world's most fundamental energy and water problems," Ehrenpreis said.

Seattle-based Imperium Renewables, which was involved in the world's first commercial test flight using bio-jet fuel earlier this year, is one of the companies that Technology Partners has invested in. Another company is Accelergy Corp, based in Palo Alto. It is working to accelerate the discovery, development and commercialization of advanced materials utilized in the clean fuel and alternative resource application markets.



Some believe the United States lags other countries

"We have only begun to see the tip of the innovation iceberg," Ehrenpreis said.

Investment in clean tech businesses during the first quarter of this year was \$2.5 billion in North American and Europe combined, according to proprietary data collected by Venture Business Research Ltd., a research intelligence firm based in London.

The total was a slight increase on investment of \$2.3 billion in the fourth guarter of last year, but a rise of over 25 percent over the corresponding period in 2007.

Continued on Page 2



Section B • Page 2 American Recycler, June 2008

Standards for hazardous waste combustion revised

The United States Environmental Protection Agency issued the National Emission Standards for Hazardous Air Pollutants for new and existing hazardous waste combustors on October 12, 2005. The April 8, 2008 amendments to this rule revise or clarify several compliance and monitoring provisions in the October 12, 2005 rule. In addition, these amendments correct several omissions and typographical errors. These changes are as follows:

- —Finalizes a sunset provision for the interim standards for incinerators, cement kilns, and lightweight aggregate kilns:
- —Clarifies the applicability of the particulate matter detection system requirements for sources equipped with fabric filters;
- —Clarifies that periodic confirmatory performance testing for dioxin/furans is not required for sources

The National

Arbor Day Foundation

that are not subject to a numerical dioxin/furan emission standard;

- —Clarifies the periodic performance testing requirements for sources operating under the interim standards;
- —Finalizes a performance test waiver provision for sources subject to hazardous waste thermal concentration limits if the source feeds low levels of metals or chlorine in the hazardous waste;
- —Clarifies the procedures to calculate rolling averages for the metals and chlorine standards;
- —Revises when a source must submit subsequent periodic reviews of its eligibility for the health-based compliance alternative for total chlorine;
- —Clarifies the mercury standard for new and existing cement kilns;
- —Clarifies whether interim status sources need to obtain approval before proceeding with facility modifications



The revised standards affect facilities such as the Lehigh cement kiln in Maryland.

required to meet the MACT emission standards:

- —Clarifies the applicability of Title V permit requirements for area sources for boilers and HCl production furnaces:
- —Revises the startup, shutdown, and malfunction plan provision.

The revised provisions are effective immediately and the final rule doesn't change the October 14, 2008 compliance date set by the October 2005 final rule.

The EPA believes that these amendments will reduce compliance uncertainties and improve understanding of the final rule requirements.



Continued from Page 1

"The rise in investment in clean tech comes despite the recent economic slow down and indicates that the sector is continuing to attract significant interest from investors," said Estelle Lloyd, chief executive officer of the research firm.

Lloyd said that investments in solar and wind technology are overheated. Lloyd said that she does not expect much new investment going into these segments. Instead, she predicted the next winners would be technologies in energy efficiency, technologies helping traditional oil companies be greener, and new green building technologies.

Heesen, from the National Venture Capital Association, said that the United States is behind other countries in investing in clean tech research and development.

"We are in kind of an unusual position of playing catch up to other countries," Heesen said, as opposed to other areas like IT or medical device develop-

Clean tech companies are extremely research intensive, Heesen said. "It is going to take a lot longer for a clean tech company to get to a point where it is making money and is able to go public. It is much easier to create a web-based kind of company."

The clean tech sector is also more regulated than the IT sector, Heesen said. Because public policy has such an impact on the clean tech sector, investors need to know what is happening at both the federal and state level.

"Decisions that come out of these agencies will have a fundamental impact on whether your company can succeed. That is a little different than venture capitalists are used to," Heesen said. Therefore, he said, it is important for venture capitalists to put government policy at the forefront of their minds instead of as a secondary thought.

A massive flow of research dollars is needed to further fund development of the clean tech sector, Heesen said. He noted that venture capitalists do not invest in basic research and development. Instead, venture capitalists invest in applied R&D.

"We take the R&D that has been germinated in the federal labs and in the universities and help grow companies out of those ideas," Heesen said.

"If there is not that basic R&D, we do not have anything to invest in."

Government research money is an integral part of advancing the clean tech sector, Heesen said. Stable tax credits also play an important role. Waiting to see if the tax credits are re-authorized every other year destabilizes the investment environment.

Heesen said that critics often claim that government money artificially props up clean tech companies that would fail without tax credits. But he said that in this sector of the economy big oil and utility companies make it difficult for startups to compete.

"We do think that you need to shepherd these companies in a way to make them successful for the good of the country and from a security perspective," Heesen said.



American Recycler, June 2008 Section B • Page 3

Caskata and Alter NRG create demonstration project at Pennsylvania waste facility

40,000 gallons of cellulosic ethanol expected per year

Alter NRG Corp. (Alter NRG), the owner of Westinghouse Plasma Corp. (WPC), announced that the existing WPC plasma gasification pilot facility has been chosen as the site for a cellulosic ethanol commercial demonstration project using Coskata Inc.'s (Coskata) proprietary synthesis gas (syngas) to ethanol conversion technology.

Coskata, a developer of next generation biofuels, is expected to begin construction in 2008 on a 40,000 gallon-peryear cellulosic ethanol plant located at the WPC gasification facility in Madison, Pennsylvania. The commercial demonstration facility costs, which are expected to be \$25 million, will be borne by Coskata. Alter NRG will convert biomass and waste material in its existing gasification reactor to provide syngas, a key component of Coskata's ethanol conversion process. This commercial demonstration will increase the utilization rate of the WPC gasification facility and is anticipated to provide approximately \$2.5 million in revenue to the Company during 2009.

On January 13, 2008 General Motors and Coskata announced a partnership which, they believe, "affordably

and efficiently makes ethanol from practically any renewable source, including garbage, old tires and plant waste. According to Argonne National Laboratory, which analyzed Coskata's process, for every unit of energy used, it generated up to 7.7 times the amount of energy, and it reduces CO2 emissions by up to 84 percent compared with a well-to-wheel analysis of gasoline."

The plant is expected to deliver ethanol in early 2009, and Coskata partner General Motors will use the next generation ethanol, produced at the demonstration facility, at their Milford Proving Grounds to run in their E85 capable fleet of vehicles.

Coskata leverages proprietary microorganisms and efficient bioreactor designs in a unique three-step conversion process that can turn virtually any carbon-based feedstock into ethanol. Coskata's biological fermentation technology is ethanol-specific and enzyme independent, contributing to high energy conversion rates and ethanol yields. Additionally, the process requires no additional chemicals or pre-treatments, serving to streamline operational costs.

Stericycle fined \$65,500 for infectious waste violations

The Department of Environmental Protection (DEP) has fined Stericycle Inc., of Bannockburn, Illinois, \$65,500 for infectious waste shipping manifest violations that occurred during the past two years at clinics owned by Cancer Care of Central Pennsylvania in Selinsgrove, Lewisburg and Elysburg.

A shipping manifest is a detailed list of the type and quantity of infectious waste that is transported.

Infectious waste is municipal waste that is generated by diagnosing medical conditions, treating humans or animals, or producing biological materials. It can include cultures and stocks, pathological waste, human blood and body fluids.

"DEP is disappointed with the continued non-compliance by Stericycle, especially since the company paid a \$224,765 fine for similar violations in 2004," said DEP Northcentral regional director Robert Yowell.

An inspection in March 2007 at the Cancer Care of Central Pennsylvania's Elysburg Clinic showed a recent infectious waste manifest was dated November 22, 2006, a day the clinic was closed.

DEP later determined that Stericycle had advised an employee at the clinic to leave the infectious waste storage area unlocked so that it could pick up infectious waste for shipment.

The Elysburg clinic would either provide pre-signed manifests at the clinic without filling out the container type or number, or the Stericycle driver would have the pre-signed manifest in their possession and would fill out the container type and number when it was picked up.

A subsequent investigation determined that this illegal activity had occurred at least 13 times. Accepting presigned manifests is a violation of the Pennsylvania Solid Waste Management Act and DEP's municipal waste regulations.

DEP fined Cancer Care of Central Pennsylvania, headquartered in Selinsgrove, Snyder County, \$3,338 last July for providing the pre-signed manifests to Stericycle, and other related violations.

The \$65,500 fine paid by Stericycle was deposited in the Solid Waste Abatement Fund, which finances cleanups across the commonwealth.

Idaho wind farm project approved by county

Ridgeline Energy announced that the Bingham County Planning and Zoning Commission, Idaho, approved a special use permit for the Goshen South wind farm. The permit gives Ridgeline approval to build 150 wind turbines on leased land in Bingham County, Idaho. The wind farm will have the capability to generate up to 450 megawatts of electricity. One megawatt is enough electricity to meet the needs of about 650 homes.

Ridgeline Energy vice president Rich Rayhill said, "The Goshen South project will more than double Idaho's wind energy production. It will help to diversify the region's energy supply and continues southeastern Idaho's tradition of clean energy generation."

The wind farm will use only about 200 of the 20,212 acres in the project area, thereby helping to preserve existing uses of the land. The project will rely primarily on improving existing public and farm

roads to meet the wind farm's needs for road access.

Construction of the wind farm could begin in 2009 and will provide



a substantial stimulus to the local economy in the form of construction jobs and local expenditures for goods and services needed in construction.

When completed, the project will provide a large and steady source of tax revenue for Bingham County, primarily through the local property tax. Tax revenues to the County could total from \$24 million to more than \$100 million over a 30 year operating period, depending on factors such as electricity prices and total generating capacity.

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ADVERTISE &

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GM and Marathon enter into biofuels relationship with Mascoma

General Motors Corp. (GM) and Mascoma Corp. have entered into a relationship to develop cellulosic ethanol focused on Mascoma's single-step biochemical conversion of non-grain biomass into low-carbon alternative fuels to help address increasing energy demand.

The relationship, which includes an undisclosed equity investment by GM, complements an earlier investment in a cellulosic ethanol startup that uses a thermo-chemical process to make ethanol from non-grain sources.

"Taken together, these technologies represent what we see as the best in the cellulosic ethanol future and cover the spectrum in science and commercialization," GM president Fritz Henderson said. "Demonstrating the viability of sustainable non-grain-based ethanol is critical to developing the infrastructure to support the flex-fuel vehicle market."

Mascoma and Marathon Oil Corporation announced a \$10 million equity investment by Marathon in Mascoma. The investment, which is part of \$61 million raised in Mascoma's third round of funding, reflects Marathon's commit-







ment to collaboration on the development, adoption and deployment of environmentally-friendly and cost-effective next generation ethanol production.

Marathon's investment will go towards the funding of research and development activities at Mascoma, as well as the construction of operating facilities. As part of this new investment, Cliff Cook, senior vice president of supply, distribution and planning at Marathon, has joined the Mascoma board of directors.

With the completion of this round of financing, Mascoma has raised approximately \$100 million in equity investment. Mascoma has also received commitments for over \$100 million in state and federal grants, including the recent awarding of a \$26 million grant from the U.S. Department of Energy.

Mascoma has raised significant equity from venture capital investments

and secured more than \$60 million in state and federal grants, including the recent awarding of a \$26 million grant from the United States Department of Energy.

Mascoma's single-step cellulose-toethanol method, called Consolidated Bioprocessing, or CBP, lowers costs by limiting additives and enzymes used in other biochemical processes.

Based in Boston, privately held Mascoma is using proprietary microorganisms developed at the company's laboratories in Lebanon, New Hampshire, and is collaborating with research partners globally to identify and patent additional biomass-to-ethanol technologies.

Mascoma is testing its CBP technology and expects to begin producing ethanol later this year at its demonstration plant under construction in Rome, New York. Mascoma also has partnered with The University of Tennessee to develop a switchgrass-to-ethanol pilot facility near Knoxville, Tennessee, and is pursuing opportunities in the state of Michigan.

Casella Waste puts hybrid collection vehicle in service

Casella Waste Systems, Inc. deployed its first hybrid diesel electric collection vehicle.

The company expects the vehicle, an International DuraStar Hybrid diesel electric hybrid truck, to reduce fuel consumption by 30 to 40 percent and reduce greenhouse gas emissions by 65 percent. The vehicle was put into service on an organics recycling route in the greater Burlington, Vermont market in early May

Earlier this year, the company installed an on-board oil refining system on over 800 of its vehicles, significantly extending time between oil changes, reducing oil consumption and maintenance costs, and reducing greenhouse gas emissions. Combined with the commitment to deploy hybrid truck solutions, the company expects to make further strides toward adopting innovative technologies to reduce fuel consumption and greenhouse gas emissions.

Casella expects to reduce greenhouse gas emissions by an estimated 8 to 11 metric tons of CO2 equivalents annually with this single hybrid vehicle through reduced vehicle emissions.



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Crown Disposal fined \$88,000 for excess emissions

The California Air Resources Board (ARB) fined Crown Disposal Company, Inc., with more than \$88,000 in fines for a two-year failure to inspect their diesel trucks for compliance with the state's smoke emissions standards, and for violation of trash hauler rules.

Crown Disposal, based in Sun Valley, California, will pay \$88,275 following an ARB investigation that found the company failed to conduct diesel truck smoke tests in 2005 and 2006. Further, a small number of Crown Disposal's trucks were missing ARB-required labels for solid waste collection vehicles. Under the penalty, Crown Disposal must:

- •Ensure that staff responsible for compliance with the diesel truck emission inspection program attend diesel education courses and provide certificates of completion within one year;
- •Instruct vehicle operators to comply with the state's idling regulations;
- •Complete heavy-duty diesel engine software and control technology upgrades in compliance with regulations;
- •Supply all smoke inspection records to ARB for the next four years; and
- •Properly label engines to ensure compliance with the engine emissions certification program regulations.

The California Air Pollution Control Fund, established to mitigate various sources of pollution through education and the advancement and use of cleaner technology, will receive \$66,206.25. The remainder will go to the Peralta Community College District to fund diesel education classes.

Axion manufactures containers from recycled plastics

Axion International, a wholly-owned subsidiary of Analytic Systems, Inc. announced the signing of a lease/license agreement with American Container and Recycling (ACR). Under the terms of the agreement, Axion has exclusive rights to manufacture, distribute and license ACR's patented technology and retain an option to buy ACR in a stock transaction.

Axion will combine its technology with established marketing channels to expand the market for these receptacles. Jim Kerstein, Axion International CEO stated, "Axion, in conjunction with Rutgers University, has developed plastics technology focused on using recycled plastics in a wide variety of industries. Our technology will open up opportunities in markets that have been made obsolete by skyrocketing oil prices."

Greenstar North invests in solar, wind and single stream recycling

Greenstar North America, located in Houston, Texas, announced with its Irish parent company, NTR, continuing innovations in sustainable environmental services. The development program will include \$300 million in investments in solar, wind and single stream recycling capabilities.

Greenstar North America continues to grow its recycling business with significant investment in single stream recycling capacity across the United States. Currently, Greenstar's single stream processing capacity is 500,000 tons per year with announced expansions bringing capacity to over 1 million tons per year by the end of 2008.

"We believe that single stream recycling technology is critical to the future of the recycling industry," said Steve Ragiel, CEO, Greenstar North America. "The process decreases the cost of collection, and increases the convenience of recycling by placing all materials into one bin. However, due to the upfront investment required, only 30 percent of all recyclables in the United States are

Greenstar North America, located in stream. Those markets who have controlled in stream. Those markets who have converted have seen recycling rates increase dramatically."

Greenstar provides single stream services across Delaware, New Jersey, Pennsylvania, Texas and surrounding areas. It is adding new facilities and upgrading its equipment with automation and optical sort technology currently employed in its European operations. The optical sort and automation technology significantly enhances the efficiency and recovery rates of single stream recycling.

Greenstar's parent company NTR, based in Dublin, Ireland, announced an agreement to invest \$100 million for a controlling interest in Stirling Energy Systems, Inc. (SES), a Phoenix, Arizona-based developer of utility-scale, solar powered, electricity generation plants. On April 24, NTR announced an additional renewable energy project with a \$150 million investment in Wind Capital Group, a leading wind energy developer in the Midwest.

Waste Management to develop largest liquefied natural gas facility LNG intended to fuel fleet in California

Collecting garbage and recyclables in California is about to get a lot cleaner, thanks to a joint venture between Linde North America and Waste Management that will create the world's largest facility to convert landfill gas into clean vehicle fuel.

Waste Management and Linde North America announced a joint venture to build a liquefied natural gas (LNG) facility, located at the Altamont Landfill near Livermore, California to convert landfill gas into a clean vehicle fuel. The project offers a unique opportunity to "close the loop" by fueling hundreds of collection trucks with clean fuel produced from garbage.

The companies will partner to install systems to purify and liquefy the landfill gas Waste Management collects from the natural decomposition of organic waste in the landfill. When the facility begins operating in 2009 it is

expected to produce up to 13,000 gallons a day of LNG.

Duane Woods, senior vice president of Waste Management, said, "This project has the potential to allow us to tap into a valuable source of clean energy while greatly reducing our dependence on fossil fuels. This will be the largest plant of its kind and we hope to break new ground by producing commercial quantities. Natural gas is already the cleanest burning fuel available for our collection trucks, and the opportunity to use recovered landfill gas offers enormous environmental benefits to the communities we serve."

The \$15.5 million Waste Management-Linde project will receive grant assistance from the California Integrated Waste Management Board, the California Air Resources Board, and the South Coast Air Quality Management District.

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Santa Cruz shares biodiesel initiative pilot results

Projections of 190,000 gallons next year

In 2005, the United States Environmental Protection Agency awarded a \$75,000 grant to Ecology Action to pilot the first community-based biodiesel production initiative in the United States.

The nonprofit, along with local restaurants, Salinas Tallow, BioEAS, Inc., a biodiesel plant, distributors and local Public Works Departments, collects about 5,500 gallons of high-quality waste cooking oil from restaurants, which was then blended to make 22,000 gallons of B20 — a 20 percent biodiesel fuel — and sold to local fleets.

"Over the coming year, this community effort will result in almost 47,000 gallons of waste cooking oil being used to make 190,000 gallons of the B20 biodiesel blend - enough fuel to fill the tanks of over 4,000 city of Santa Cruz recycling trucks, or enough to fuel a fleet of school buses for an entire school district for a year," said Tom Huetteman, the EPA's Waste Management associate director the Pacific Southwest region. "This project is a model for other cities and counties across the country."

Ecology Action expects more restaurants will participate as the program expands, resulting in higher quantities of biodiesel made from local waste feedstock.

Biodiesel fuel generated from waste feedstock is more sustainable and far less polluting than petroleum diesel. Biodiesel significantly reduces greenhouse gases, particulate matter, or soot, carbon monoxide, and sulfur dioxide in air emissions. Produced from renewable resources, such as waste cooking oil or soybean oil, biodiesel reduces dependence on limited energy resources and foreign oil.

The pilot is a partnership program spanning the whole process from post-consumer feedstock to the fuel consumer:

Restaurants, which usually pay to haul away their waste oil, now give waste to grease haulers free of charge. Grease haulers are paid by the biodiesel manufacturers.

The pilot program's biodiesel fuel consumer market has expanded to the city and county of Santa Cruz Department of Public Works and the county's waste franchise Green Waste, Inc., and the local oil waste hauler, Salinas Tallow, all of whose vehicle fleet will be running on the alternative fuel.

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Pittsburgh trash trucks soon to be cleaner with EPA funding

Agency (EPA) announced a \$127.000 grant to the Mid-Atlantic Regional Air Management Association who will, in turn, issue a grant to the City of Pittsburgh and two partners for a pilot project to cut emissions from the city's heavyduty diesel trucks used for hauling waste. Clean Water Action and the Group Against Smog and Pollution are implementing the project with the city.

EPA said the grant will provide staff resources and expertise to retrofit eight

The Environmental Protection to 12 diesel trash trucks in Pittsburgh with filters that will reduce air emissions of diesel particles. The grant may also be used to purchase equipment to clean and maintain the filters.

> Mid-Atlantic Regional Air Management Association coordinates the Mid-Atlantic Diesel Collaborative, a partnership of public and private entities in the five Mid-Atlantic States and the District of Columbia who are working together to reduce emissions from diesel engines.

Energy Holdings to acquire coal and waste fuel power generation facility

(EHL) has signed a Letter of Intent (LOI) to acquire a 25 megawatt electric generation plant from Goodland Energy Resources, LLC (GER) for \$42.0 mil-

The plant is located in Sherman County, Kansas and is approximately 80 percent complete and designed to burn coal and waste derived fuel that normally is disposed of in municipal landfills. The Goodland plant will provide power and steam to a newly constructed

SOLUTION IS FOUND ON PAGE B7

Energy Holdings Limited LLC ethanol facility and other industrial facilities in the area and is expected to be fully operational by June 30, 2008.

> The facility is designed to be fueled by coal and biomass, but can also generate electricity and industrial steam from diversified fuel sources such as railroad ties, tires and other waste products. Since the plant utilizes waste for fuel, emissions credits will be created - an important element of EHL's desire to produce eco-friendly energy and an asset with significant future value.

> The LOI provides EHL with exclusivity for a specified period and is contingent upon completion of final due diligence, entering into a definitive purchase and sale agreement for the plant, obtaining acquisition financing and other closing conditions.

Stericycle reports results for first quarter 2008

Stericycle revenue for the quarter ended March 31, 2008 were \$254.8, up 20.7% from \$211.0 million in the same quarter last year. Acquisitions less than 12 months old contributed approximately \$19.5 million to the growth in revenues for the quarter. Gross profit was \$113.6 million, up 20.5% from \$94.2 million in the same quarter last year. Gross profit as a percent of revenues was 44.6% versus 44.7% in the first quarter of 2007.

Net income for the first quarter of 2008 was \$31.7 million or \$0.35 per diluted share compared with GAAP net income of \$29.4 million or \$0.32 per diluted share for the same quarter last year. The impact of the charge described was to reduce net income by \$3.3 million or \$0.04 per diluted share. Adjusted non-GAAP net income for the first quarter of 2008 (GAAP net income without including the charge described) was \$35.0 million or \$0.39 per diluted share.

Cash flow from operations was \$63.6 million for the first three months of 2008

Waste Connections sees strong first quarter

Waste Connections, Inc. announced its results for the first quarter 2008. Revenue totaled \$250.3 million, a 14.3% increase over revenue of \$219.0 million in the year ago period. Operating income was \$50.8 million, a 9.4% increase over operating income of \$46.4 million in the first quarter of 2007. Net income in the quarter was \$23.1 million, or \$0.34 per share on a diluted basis of 68.1 million

MONTHLY CROSSWORD

BY Myles Mellor

ACROSS

- 1. Portion of solid waste that can be economically recycled
- _2 Inc., plastic company that had to complete FDA testing in the first quarter of 2008
- 7. San Francisco's curbside recycling program now includes this type of plastic, as of April 2008
- 11. Containers from this Pennsylvania recycling company will hold 100-150 light bulbs
- 14. __inking, process that removes inks, dyes or other contaminants from wastepaper
- 15. Even, old way
- 16. Diet stat
- 18. ____-Cycle, magazine that does a survey each year that assesses how much material is being recycled
- 20. Bar bill
- 23. Rock star playgrounds
- 26. Behold's partner
- 27. These types of bags have been banned in Oakland
- 29. American Institute of Architects, for short
- 31. ___ Parker, president and CEO of EIA
- 32. Mister
- 34. Very large size of clothing
- 35. Shy
- 37. Engineering Corps, abbr.
- 39. Bottle ____, containers meant to receive bottles which people drop off to be recycled
- 41. Recycle, Pittsburgh area compost facility
- 42. Fitness center
- 43. ___ Oil Corporation, Michigan-based distributor who won the **Environmental Achievement Award**
- 44. Polo maker, initials
- 45. ___ rubber, shredded rubber
- 46. For each
- 47. You, before
- 48. Me and you
- 50. Steel _ __, rigid container that is 100% recyclable
- 52. Be in the play
- , fine residue left after trash is burned
- 56. Airline, for short
- 57. Cola company who is launching the "Have we met before?"
- 59. Word document option
- 61. Rodent
- 62. Crushed glass
- 67. Operating system, abbr.
- 68. __-collection, the collection of bagged recyclables together with other municipal garbage
- 69. Away from shore
- 70. ___lysis, process of producing fuel from waste by heating it in an oxygen-deficient atmosphere
- 71. NSWMA part
- 72. ___fill, trash heap

DOWN

- 1. Commonly recycled metal
- 2. Go off on

- 3. Channel where mysteries can be seen
- 4. Press relations rep
- 6. More energy efficient light bulb, for
- _ & Paper Stock Co., company who holds the Annual Junque Yard Art Sculpture Contest
- 9. Social security card, for example
- 10. Environmental protection department letters
- 12. Copy on email
- 13. Battery recycling corporation
- 17. Church recess
- 19. That is
- 21. Spring mo.
- 22. "Go Green Use ____," pilot program implemented by Hartford
- 23. Oxygen giver
- 24. Airline, abbr.
- 25. Pack number?
- 28. Account, briefly
- 30. Penn State _____, this institution offers a class on the basics of large-scale composting
- 31. Side __ side
- 32. Safe place
- _1 Inc., alternative energy

- 35. Oshins, composting expert and educator for Rodale Institute and PROP
- 36. Flirt
- 38. Energy efficient way to travel (2 words)
- 40. Topeka locale
- 42. Company exec, for short
- 45. AquaNet emissions, perhaps
- 49. Boot or a flip-flop
- 51. Hybrid version of this is best 52. Suitable
- 53. ___-tac-toe
- _ Energy, New York company that is planning to build a \$45 million solar energy farm
- 55. Famous Prize
- 57. Professional Recyclers of Pennsylvania, initials
- 58. Simple
- 60. New Hampshire company that sponsored an annual compost bin
- 63. Laughter on the internet, abbreviation
- 64. Little bit
- 66. Green stuff

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Pennsylvania grants for the development of clean energy resources offered

Applications are available for three programs that are helping Pennsylvania grow its economy, achieve energy independence, and make it easier for consumers and businesses to develop and use advanced, clean energy resources.

Applications for the Energy Harvest and Alternative Fuels Incentive Grant programs, as well as funding from the Pennsylvania Energy Development Authority, can be downloaded from http://www.depweb.state.pa.us/.

Department of Environmental Protection Secretary Kathleen A. McGinty said the funds available through these programs will expand the use of renewable energy technologies in the commonwealth and help citizens and businesses manage increasing energy costs by using alternatives that also boost the state's economy.

Details on the three grant program rounds are as follows:

Pennsylvania Energy Development Authority (PEDA)

This year, up to \$12.8 million is available through two PEDA grant opportunities. Up to \$11 million will be available statewide for innovative, advanced energy projects and advanced energy businesses interested in locating to the state.

Another \$1.8 million is available to municipalities, local government authorities and first responders in Duquesne Light Company's electric service territory and immediately adjacent areas for energy efficiency and renewable power.

The funds are intended to help local governments and first responders cope with rising energy costs and to ensure a secure energy supply for critical operations.

Alternative Fuels Incentive Grants (AFIG)

AFIG grants help support energy security by investing in companies that produce and market homegrown biofuels and consumers that purchase hybrid vehicles. This year, more funding is available to for fleet vehicles, providing incentives for businesses to incorporate the latest fuel and engine technologies.

Approximately \$10 million is available this year. AFIG will continue funding to cover the added cost to purchase biofuel blends, as well as continuing the \$.05 per gallon production incentive for biofuels.

Energy Harvest

Approximately \$5 million will be available through the Energy Harvest grant program, which was established by Governor Rendell in 2003.

Applications for all three grant programs must be postmarked or received by June 20. Directions for submitting applications to each of the programs can be found in the respective application guideline.

For more information and to download applications and guidelines, visit www.depweb.state.pa.us, keywords: PEDA, Energy Harvest or Alternative Fuels.

Hong Kong to offer tax cuts for energy and waste facilities

Hong Kong will soon introduce one-off and accelerated tax cuts for environment-friendly machinery and installations, the Hong Kong Special Administrative Region (HKSAR) government.

A 100 percent deduction under profits tax will be provided in the year of purchase for the capital expenditure incurred on the provision of eligible machinery according to a government official.

The amendments will be made to the tax law upon the passing of a Revenue Bill by the Legislative Council, the HKSAR government said in a statement.

Environmental protection machinery includes low-noise construction machinery or plants registered under the Quality Powered Mechanical Equipment system, certain waste treatment, wastewater treatment and air pollution control machinery or plant.

Environmental protection installations, mainly renewable energy installations, include solar photovoltaic installations, wind turbine installations, thermal waste treatment installations, and certain energy efficient building installations.

The reductions will also be available to those who own or have been using environmental protection machinery or installations before implementation of the proposal.

It's a matter of personal preference — I don't want buns of steel. I want buns of cinnamon!



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1999 IPS Model CD965HS Baler, excellent condition, \$65,000.

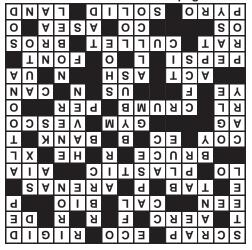
Koehring 6644-7 with LaBounty MSD70 shear, \$125,000.

1982 Case W36 loader with forks, \$27,500.

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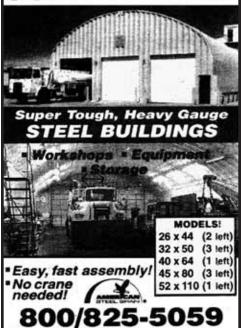
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