

NewsVoice of Salvage, Waste and Recycling

Recycling makes cents for Missouri

The Missouri Department of Transportation (MoDOT) knows that recycling has many benefits.

With the increasing number of contractors in Missouri using recycled asphalt and tear-off shingles, MoDOT saved \$20 million on resurfacing projects last year alone in which recycled asphalt was used as a hot mix asphalt material.

In 2009, MoDOT used a half-million tons of reclaimed asphalt pavement (a process known as Hot In-Place Recycling) and 53,000 tons of recycled asphalt shingles: enough See MISSOURI, Page 6

Demand for plastic lumber remains high



■ Focus Section Cover, Page B1



Plastic bag recycling surges

by MIKE BRESLIN mbreslin@americanrecycler.com

The ubiquitous polyethylene grocery bag is a marvel of modern plastics technology – cheap at about a penny a piece, lightweight yet strong enough to hold a heavy load without leaking, reusable for thousands of chores and eminently recyclable to make more bags or other greener products.

They are not without critics, however. They are too often found blowing in the wind, defacing the landscape, are not biodegradable in landfills and many consider them harmful to wildlife.

Regardless, plastic bags and wraps are inexorably intertwined with everyday life and are apparently here to stay. Many of the problems can be greatly mitigated by personal responsibility to prevent littering and by highly aggressive recycling programs to recover more of a valuable commodity.

In 2008, of the 2,900 thousand tons of polyethylene bags and wraps produced, 390 thousand tons were recovered for a recycling rate of 13.4 percent.

According to the United States Environmental Protection Agency (EPA), the recycling rate for polyethylene bags and wraps doubled from 2005 to 2008 going up to 832 billion pounds, growing 28 percent since 2005. "This is very strong growth and it even continued in 2008 when the economy was in a global recession. If you look at recycling of other commodities nationwide, EPA reported that recycling overall went down on a volume basis by about 2.7 percent in 2008, but bag and film recycling continued to grow," said Keith Christman, managing director of plastic markets for the American Chemistry Council.

Although significant progress has been made over the past few years, it is not nearly enough. When asked "paper or plastic?" at the checkout counter, consumers are faced with a range of complex economic-environmental issues, but have voted overwhelmingly for plastic. "About 95 percent of bags used in the United States are plastic. People have decided they prefer plastic bags and stores have largely decided on giving those out," said Christman.

To cope with the litter and wildlife endangerment issues, the City of San Francisco banned plastic bags altogether and dictated paper bags, or the alternative of bringing a carry-all. In effect, forcing a paper bag is a hidden tax because it costs five times more than its plastic counterpart and the burden is ultimately

Scrap Metals MarketWatch 15

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Recycled hardwood sawdust, called "wood-flour" used to make composite lumber comes from wood flooring manufacturers, cabinet and furniture makers.

borne by the consumer. Few realize the environmental life-cycle consequences of this policy. Making paper bags produces about twice the greenhouse gas emissions as plastic and results in about 80 percent more waste. And because paper bags are much heavier than plastic, it takes seven times greater trucking to get bags to the store, resulting in more emissions. If not made from recycled paper, consumers should also consider the destructive forestry-wildlife implications of paper bags, the costs and emissions of transporting wood, and the serious energy, air and water consequences of pulping and paper mills.

On January 1, Washington DC imposed a five cent tax on paper and plastic grocery bags. "Since a plastic bag only costs about one cent, comparatively it's a huge tax. We are concerned about programs like that and the impact it may have on bag and wrap recycling," commented Christman.

Polyethylene is created through polymerization of ethene gas with approximately 80 percent of the material coming from natural gas. It is the most widely used plastic, primarily used for films, bags and packaging. Today, most commercial polyethylene winds up in See PLASTIC BAGS, Page 4

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State legislation protects against mercury vapor

When Governor Chris Gregoire signed Senate Bill 5543, Washington became the first state to address the dangers of unsafe packaging and transportation of used fluorescent lamps and mercury containing devices. This new legislation is set to be the precursor of future state and federal legislation as awareness of mercury vapor dangers increases.

Due to deficiencies of most current packaging configurations utilized for shipping used fluorescent lamps, the new law requires that lights and other mercury-containing devices are packaged and shipped in material that will minimize the release of mercury into the environment. The law also states that packages should include mercury vapor barrier materials if lamps are transported by the United States postal service or a common carrier or collected via curbside programs and mail-back businesses.

Recent research studying the packaging employed to transport used fluorescent lamps has indicated the need for



much stricter legislation to prevent the release of mercury vapor from used lamps. This research, published in the March, 2009 issue of the Journal of the Air & Waste Management Association, revealed the need for proven vapor containing packaging. The results indicated that four out of five commonly-used packages failed to minimize levels below acceptable occupational exposure limits, as defined by state and federal regulations and guidelines.

Community recycling award presented to Virginia Beach

The 2010 American Forest & Paper Association (AF&PA) Community Recycling Award was presented to the City of Virginia Beach. The annual awards recognize outstanding community, business and school paper recycling programs across the country.

In 2009, Virginia Beach recovered nearly 23,800 tons of paper and paperbased packaging for recycling – more than 68 percent of all recyclables collected. Virginia Beach residents were educated about the recycling program through print and online promotional recycling resources that featured a "Catch the Wave...Recycle!" slogan and clear visuals depicting recyclable materials. Community-wide events and activities, such as the Annual Virginia Beach Earth Day Celebration and Virginia Beach Celebrates America Recycles Day, helped to further promote the recycling program, and resulted in an impressive 67 percent participation rate in 2009.

The City's curbside recycling program was developed and implemented in 1997 in conjunction with TFC Recycling. The program currently services 124,000 households at curbside, with additional recycling services provided to 94 city schools and related buildings, 106 municipal buildings and 5 publicuse recycling drop-off sites.

Coca-Cola and KAB help support recycling programs

Recycling programs in 82 towns and cities throughout the country received a significant boost to their local recycling efforts when Keep America Beautiful and The Coca-Cola Company announced the recipients of the spring 2010 Recycling Bin Grant program. Chosen from over 1,700 applications submitted, the 82 grant recipients represent a cross section of community groups, local governments, colleges and nonprofit organizations across the country. Grant recipients receive recycling bins from a pre-set list of options.

Grants were awarded for a diverse range of settings from 37 states, including 14 colleges and universities, 32 municipalities and other local government entities, 20 K-12 schools, 17 nonprofit organizations, and additional community groups and Native American tribes. Recipients were chosen by KAB 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 provides recycling bins directly to recipients and leverages the purchasing power and recycling expertise of KAB.

For a direct link to the program site, view this article on www.AmericanRecycler.com.

Seattle recycles food waste

The food scraps recycling by Seattle residents increased by 47 percent in 2009, thanks to new weekly collection contracts and customer participation. This puts Seattle's recycling of food waste at approximately 10 times the national average.

To thank customers for their efforts, Seattle Public Utilities (SPU) and Cedar Grove Composting ran a special campaign called Compost Days. Seattle residents were given two free bags of Cedar Grove compost and free Green Kitchen Kits.

Coupons for the free compost and the kitchen kits were distributed through SPU's CurbWaste & Conserve Newsletter in late March. Coupons were also available in Pacific Northwest Magazine and the Sunday Seattle Times during late April and May. Local retailers also participated with discounts on additional bags or bulk loads of compost. In 2009, Seattle residents turned more than 89,000 tons of organics into earth-friendly compost through food waste collection, backyard composting and grasscycling.

More than 26,000 tons of food waste was collected at the curb and returned back to local gardens, instead of going to the landfill. Food waste made up about 20 percent of the 400,000 tons of garbage Seattle sent to the landfill in 2008. Cedar Grove Composting has been composting Seattle's yard waste for almost 20 years, and now handles yard and food waste collected from cities and counties all around Puget Sound.

Cedar Grove is one of the largest composting facilities in the United States, and the sole facility handling all the food waste in the immediate Seattle area.

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Plastic bags -Continued from Page 1

landfills and some, unfortunately, in streams, lakes and oceans, which is a shame because when reused or recycled it is a useful material. Conventional polyethylene is not considered biodegradable and takes hundreds of years to degrade, except when exposed to ultraviolet light.

There are "biodegradable" alternatives being marketed, but they are usually more expensive compostables that only breakdown when professionally managed in industrial food-composting facilities, of which there are fewer than 100 in the United States.

These so called biodegradables, however, pose a threat to recyclers. If incorporated into recycled products such as plastic lumber, the inherent ability to breakdown is a major problem.

It is unlikely that society will revert to paper bags, or toting wicker baskets, for that matter. In the effort to "reduce, reuse and recycle", the humble plastic grocery bag could be the poster child for reuse. According to a national survey conducted by APCO, an international research firm, over 92 percent of Americans reuse plastic bags for things like wastebasket liners, trash disposal, carrying articles and disposing of animal refuse. Google "reusing plastic bags" and you can find hundreds of other clever ways people have found to reuse them, ranging from packing material to storage applications to emergency rain cover. Sadly, only four percent said they recycled.

The most expedient and practical solution to the disposal problem is a continuous life cycle of recycling driven by a growing recognition that plastic is a resource well worth recovering. To that end, many new collection programs are being expanded across the country. Christman cited a few examples of the momentum – "A few weeks ago Target announced that they were starting to take back plastic bags at their stores. In addition, we know of about 15,000 plastic bag and wrap drop off locations in the 50 states. We helped establish 133 of those in 2009 with pilot programs in Lake County, Illinois and Orange County, North Carolina. Recently the City of Philadelphia started working with community partners on a new program called "Bring it Back Philly."

Last year the Progressive Bag Affiliates, an industry group of major United States bag manufacturers, launched their Full Circle Initiative. Members committed to the goal of having 40 percent recycled content by 2015. This is feasible as more governments require bag recycling. California, New York, Rhode Island and Delaware and cities like Chicago and Tucson have recently passed laws requiring stores to take back plastic bags and film for recycling, and many more mandates are coming.

Once educated, retailers should welcome recycling bins at their stores. It's not only a responsible community service, but also an additional revenue stream.

Companies like Trex, the country's largest manufacturer of wood-alternative decking, railing and fencing products that uses 95 percent recycled plastics and wood scrap such as sawdust, are hungry for bales of reclaimed polyethylene. "Last year we collected over two billion bags. That

equates to over 30 million pounds of bags," said Dave Heglas, director of material resources for Trex. "We sample our bales and count the numbers of bags just to see what the breakdowns of our mixed bales are. For all plastics we were over 200 million pounds last year. We recycle a lot of stretch film, too, and packing for furniture and electronics, primarily polyethylene, but we can tolerate a little bit of polypropylene and mitigate it with our process," Heglas added.

Trex's largest source of inbound plastic comes through partnerships with national retailers that have distribution centers serving a large number of stores. After products are delivered to a store, the empty truck picks up plastic from collection bins and waste plastic generated through operations and returns it the distribution center. There it is combined with waste film generated at the distribution center, baled and accumulated in a trailer. In many cases, Trex parks an empty trailer outside the distribution center. When it is full, Trex picks it up and provides another empty trailer.

"We help the distribution center consolidate the material, whether we sell them a baler, or help them buy a baler with the plastics they generate," Heglas explained. A large Trex account can pay off a baler costing about \$12,000 in a year and a half with the plastic it generates, but the company calculates whatever investment it makes is a two-year payback. After that, since balers have a long life a recycler can count on a long term, consistent revenue stream. "Depending on how much we have to invest in helping a company collect and how clean the stream is, we pay anywhere from zero to 15 cents a pound," said Heglas.

According to Heglas, the stream does not have to be super clean, but it has to be dry with a conscious effort that the collection process is distinct from trash. Trex also has other collection channels through food distributors that serve multiple grocery chains, through companies that call on smaller stores and with and recyclers that consolidate the material.

To collect more material Trex is going deeper into the collection stream. They are in the early stages of developing a 50pound baler that it is targeted at a \$3,000 dollar cost. This will permit small retailers, schools and non-profits to efficiently pack and tap an income source.

"Almost every large grocery store has a collection bin out front. It may not be in a place where easily seen, so we try to get them to promote and manage it better. We have to educate people to the fact that if they want to use plastic packaging there is a way to recycle it. That's why we have really targeted the schools. We have over 160 programs in 21 states and Canada at the elementary school level getting kids educated to the fact that polyethylene packaging can be recycled," said Heglas.

The problems caused by plastic grocery bags, dry cleaning bags, bubble wrap and other polyethylene packaging materials can largely be solved through an aggressive recycling effort. To increase recovery, more highly-visible recycling bins and drop off points are needed. Just as consumers have been educated to recycle cans, bottles and paper, there must be a greater effort to get a strong message out to the public.



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Shaw Industries wins award

The Carpet America Recovery Effort (CARE) honored two leaders from the growing world of post-consumer carpet recycling at the organization's eighth Annual Conference in April. The recycling group announced winners of the CARE Recycler of the Year and Person of the Year awards.

Shaw Industries was recognized by CARE for its continued investment in both people and processes designed to increase the diversion of post consumer carpet from landfills. Shaw Industries was previously honored by CARE for its carpet recycling efforts in 2007, when it received the Recycler of the Year award following its purchase and launch of the Evergreen Nylon Recycling facility. As a cornerstone of their reclamation efforts, Shaw's Evergreen Nylon Recycling program converts Nylon 6 fiber from post consumer carpet back into raw material to make new carpet fiber. As the leader in carpet recycling by volume, Shaw currently recycles enough nylon fiber to wrap the earth more than 2,000 times each year.

Since Shaw opened up the Evergreen plant in 2007, the company has recycled more than 220 million pounds of post-consumer Nylon 6 carpet and more than 36 million pounds of postconsumer carpet filler. In addition to its current reclamation operations, Shaw continues to research opportunities for ways to utilize waste carpet.

In 2009, Shaw began construction of Re2E (Reclaim to Energy), a first-of-its kind, carpet-fueled co-generation facility in Dalton, Georgia. The facility will consume 76 million pounds of post-consumer and post industrial carpet annually and will generate electricity and steam power for one of the company's carpet mills. The project addresses three of Shaw's main environmental priorities: alternative energy sourcing (and energy cost stabilization), the diversion of post-consumer and post industrial carpet waste from landfills, and the expansion of Shaw's post-consumer carpet reclamation network.

Another example of Shaw's forwardlooking strategy is its creation of the Materials Recovery Strategic Business Unit. This newly-staffed team is dedicated to developing products derived from all types of post-consumer carpets and then finding paths to markets for these newly-created products.

In recognition of her exemplary leadership as CARE's executive director. Georgina Sikorski was named CARE Person of the Year. Since joining CARE in 2009, Sikorski has guided the group overwhelmingly difficult through economic conditions, managing during that time to significantly increase both revenues and membership - CARE membership currently stands at 280, up from 50 just a year earlier. In addition, influenced by Sikorski's enthusiasm and skill at accomplishing goals, the CARE board of directors has made remarkable progress towards the organization's corporate goals of achieving sustainable funding, developing end-markets for postconsumer carpet, and increasing awareness of CARE and its leadership position in carpet recycling.

New York City law significantly expands city's residential recycling program

New York City speaker Christine C. Quinn, together with sanitation and solid waste management committee chair Letitia James announced legislation that would dramatically expand and improve recycling in New York City.

The package of legislation would mark the first significant expansion of the city's residential recycling program since it was created in 1989.

In 1989, the City of New York enacted its first comprehensive residential recycling law, commonly known as Local Law 19. The law was one of the first of its kind in the United States, and its sheer scale – collecting recyclables from every residential building in the City of New York, and mandating collection from every commercial building – made it among the most ambitious recycling programs in the world. Within ten years of its enactment, the City of New York increased its residential recycling rate from less than one percent to more than 20 percent.

The new recycling legislation includes the following:

•Expanded plastic recycling – Currently, the city only recycles plastics made of types 1 and 2. The new legislation would require the Department of Sanitation (DOS) to begin recycling all rigid plastic containers, including items such as yogurt tubs, take out containers, flower pots and medicine bottles. It takes 88 percent less energy to produce plastics from recycled materials than it does to produce new plastics, and this expansion would divert over 8,000 tons of plastic each year from landfills and incinerators. This component of the bill would take effect following the opening of a new recycling facility located in Brooklyn, which is scheduled to open in 2012.

•Expanded public space recycling – There are approximately 300 recycling bins at public spaces around the city. The new legislation would require DOS to site 300 new recycling bins over the next 3 years, and a total of 700 bins within the next 10 years.

•Household hazardous waste – The legislation would mandate at least one department sponsored household hazardous waste collection event in each borough every year, with a long-term goal of increasing the number of events, or making such sites permanent.

•Clothing and textile recycling – The new legislation would require DOS to establish a citywide textile collection program by placing deposit bins on cityowned or city-managed property throughout the city.

•Paint recycling pilot – The Council's legislation would establish a voluntary manufacturer and retailer take-back program for unwanted household paint, which makes up about 50 percent of household hazardous waste.

Changes and improvements to existing programs:

•Improved recycling at city schools. Would require every school within the Department of Education (DOE) to designate a recycling coordinator and to provide recycling receptacles in each classroom and other locations such as entrances and lunch rooms. Similar requirements would also apply to non-DOE schools.

•Improved recycling at city agencies. Would require each agency to designate a recycling coordinator and implement plans to increase recycling in all city-owned and city-run buildings.

•Improvements in leaf and yard waste composting. Extends the DOS collection period from March 1 – November 30, and requires the city to establish a new leaf and yard waste composting facility in Queens or Brooklyn.

•Replaces obsolete tonnage mandates. The original Local Law 19 set mandates requiring DOS to recycle a fixed number of tons of waste per year. These mandates were set at a time when the City produced substantially more waste than it does today and continuing reductions in the city's waste stream have prevented the City from ever meeting the targets.

The new legislation would replace this single vague mandate, with a series of more specific requirements and a more sensible methodology for calculating diversion rates.

To assess the success of recycling more effectively, the bill would establish two different sets of recycling goals, one to calculate the recyclable material that DOS actually collects from the curbside, and a second to calculate all materials recycled from residences in the City, including e-waste, plastic bags and bottles returned for refund. If any of these goals are not met, DOS must first consult with Council to improve its recycling program.



ON TOPIC

Recycling plastic in its various forms not only reduces America's dependence on energy sources, but when recycling is done right, makes the nation's industries that rely on plastic feedstock more efficient and profitable in a competitive world.

The American Chemistry Council (ACC), Plastics Division, continues to be an active player in pushing for more efficient use of plastics and for recycling this material, from collection, processing and reuse.

Steve Russell, vice president of plastics for the ACC, recently granted an interview to American Recycler to discuss the latest in plastics recycling and reuse.

How has the current economic downturn affected plastics recycling?

Russell: It is true the economic downturn has significantly impacted key markets for plastics. However, at the same time, recycling rates for many plastics have made impressive gains. Even though nationwide the recycling rate for all materials combined dropped 2.7 percent in 2008, plastics recycling achieved increases. The total amount of bottles recycled grew from 2.3 to 2.4 billion pounds, and the recycling rate rose to 27 percent, a 3.2 percent increase for the year. Similarly, the recycling of plastic bags and film grew to over 832 million pounds. and the recycling rate for this material climbed to 13 percent, doubling in just 3 years. And the recycling of rigid plastic containers grew almost 11 percent in a single year to reach 361 million pounds.

Has there been any new research in sorting technologies?

Russell: Yes. In fact, ACC sponsored a newly released study, "Demingling the Mix: An Assessment of Commercially Available Automated Sorting Technology" (4R Sustainability, April, 2010). According to the study, as of 2008 about 120 of the 570 material recovery facilities in the United States were receiving single-stream material. As a result, the technology offerings for sorting equipment have increased significantly in recent years, particularly for flake. The study examined 52 systems: 25 for sorting whole plastic containers and 27 for handling flake.

What are some of the things driving increases in rigid plastic recycling?

Russell: Rigid container recycling is one of the fastest growing areas in plastics recycling. Currently, 62 percent of California's communities recycle rigid containers and nearly 30 percent of the nation's largest cities recycle them. The New York City Council is poised to pass legislation that would significantly expand the recycling of rigid containers in the city and indirectly help to increase the recycling of other plastics. If this legislation passes, New York City would add important momentum to strong recent growth in recycling rigid plastic containers. ACC testified in support of this legislation, and we hope it will serve as a model for cities and towns around the country. In addition, the Association of Postconsumer Plastics Recyclers (APR) has formed a rigid plastics recycling program of which ACC is an active member.

How has the recycling of plastic bags and film continued to evolve?

Russell: We believe that the strong and continuing growth we're seeing with plastic bags and film is due in large part to increases in access and education. According to Moore Recycling Associates, the firm that conducts our annual survey on recycling plastic bags and film, there are currently more than 15,000 drop-off locations for bags and film in the United States, most of them at major grocery stores and retailers. In addition, some communities are starting to collect bags and film curbside, though we've heard from recyclers that at-store programs tend to

vield cleaner, more desirable material. We've also seen an increase in education and outreach programs at the community level. To name a few examples, King County, Washington; Lake County, Illinois; Philadelphia and the State of Florida have all launched programs to help increase awareness of programs to recycle plastic bags and wraps. Other efforts are underway in Minnesota, Iowa and Arizona.

Do single-stream municipal recycling programs help or hinder the collection of plastic recyclables?

Russell: One of the things we've learned through the "All Plastic Bottles" program is that when we simplify what can go into the bin, the amount of recyclable material that gets collected goes up. Single-stream recycling offers tremendous potential in this regard. And in localities that have energy recovery facilities, there's no wastage factor. Materials are sorted at a MRF, and plastics that can't be recycled are converted into energy to power homes, buildings or municipal facilities. Even in areas without energy recovery, there is evidence that more plastics can be recovered through single-stream collection programs. It's documented that areas with energy recovery programs have higher recycling rates, so the two solutions work hand-and-hand.

Are there examples of business and government working together to raise awareness of the importance of plastics recycling?

Russell: ACC's Plastics Division has been working with officials in the State of California to do just that. Since late 2007, we've partnered with the California Department of Parks and Recreation and the nonprofit Keep California Beautiful to place nearly 700 recycling bins and instructional signage on beaches in 19 coastal communities. We've also partnered with LA's BEST, a non-profit afterschool program to increase plastics recycling know-how among 15,000 students in the Los Angeles area. This year, we're working with the California Department of Transportation to place recycling bins at heavily trafficked rest stops.

We hear a lot about inefficiencies in the recycling value chain. Does recycling actually help the environment?

Russell: Together with the Association of Postconsumer Plastic Recyclers, the National Association for PET Container Resources and the PET Resin Association, ACC's Plastics Division recently helped sponsor a study that confirms that recycling plastics, specifically PET and HDPE, results in significant savings in energy and greenhouse gas emissions.

Combined with data from EPA, the study confirms that the generation of cleaned recycled resin requires 71 trillion Btu less than the amount of energy that would be required to produce the equivalent tonnage of virgin PET and HDPE resin. In other words, the amount of energy saved in 2008 by recycling PET and HDPE containers (including bottles) was the equivalent of the annual energy use of 750.000 homes.

RecycleMania – another successful campaign 607 colleges and universities compete

Every spring, students across the country become RecycleManiacs competing for national supremacy to determine which school can reduce, reuse and recycle the most campus waste.

RecycleMania wrapped up its 10th annual recycling competition in late March, with over 84.5 million pounds of recyclables and organics recovered from 607 colleges and universities across the country.

The spirit of friendly competition sparked huge environmental gains. The total amount of recyclables and organic materials recovered during the 2010 competition added up to 84.5 million pounds, which in turn prevented the release of nearly 137,500 metric tons of carbon dioxide equivalent.

Colleges and universities chose to participate in one of two divisions, either the Competition or Benchmark. The Competition Division houses the traditional competitive rankings based on standard tracking and reporting criteria. The Benchmark Division allows schools to unofficially compare themselves with other schools and to promote RecycleMania on campus without the formal reporting requirements of the competitive ranking.

Within each division, schools participate in any of eight categories, including the "Grand Champion," which measures recycling as a percentage of the total waste generation; the "Per Capita Classic," which measures the largest amount of combined recyclables per person; the "Waste Minimization" competition, which tracks the lowest amount of waste per person; and the "Gorilla" Prize, which acknowledges the schools with the highest total combined recycling weights.

In addition to these main categories, schools also compete in targeted material categories to see who can recycle the most paper, cardboard, cans, bottles and food waste on a per capita basis.

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roofing material to cover the tops of nearly 17,000 homes. Beyond the cost savings, the environmentally friendly effort reduced the amount of petroleum MoDOT used in its road construction program by 20 percent and significantly cut down the amount of shingles that went into Missouri landfills.

Using recycled asphalt shingles on roadways has been a success in Missouri and is growing in popularity. Two years ago, there were only about a half-dozen shingle suppliers and contractors using or furnishing the recycled roofing material in Missouri. According to Joe Schroer, a MoDOT field materials engineer, many contractors had a wait-andsee attitude.

"When MoDOT first began to allow recycled asphalt shingles to be added



The "Grand Champion" top three finalists, determined by the percentage of overall waste that is recycled over 10 weeks, were:

•California State University-San Marcos (71.82 percent) - San Marcos, California.

•New Mexico State University (69.05 percent) - Las Cruces, New Mexico.

•American University (64.90 percent) – Washington DC

The "Per Capita Classic" top three finalists, determined by total pounds of recyclables collected per person over 10 weeks, were:

•United States Coast Guard Academy (81.75 lbs.) - New London, Connecticut.

•Franklin W. Olin College of Engineering (63.14 lbs.) – Needham, Massachusetts.

•Colorado College (60.8 lbs.) – Colorado Springs, Colorado.

The "Waste Minimization" top three finalists, determined by the lowest amount of waste (recyclables and trash) per person over 10 weeks, were:

•North Lake College (6.17 lbs.) -Irving, Texas.

•Harford Community College (7.87 lbs.) – Bel Air, Maryland.

•Santa Monica College (8.13 lbs.) -Santa Monica, California.

For a complete list of winners, view this article on www.AmericanRecycler.com.

into hot mix asphalt, many contractors were leerv about how well the product would hold up on the road," said Schroer. "It didn't take long for that mindset to change. Now contractors are stepping up their use of recycled materials to be able to compete for jobs."

The asphalt mixture has proven to be very durable, more rut resistant and lower in cost – factors that can't be ignored in a highly competitive contracting environment. Today there are 13 contractors who use recycled asphalt shingles as a standard part of their business and 14 collectors/processors of shingles in Missouri.

MoDOT also uses other recycled materials on the roadways such as tires, concrete and coal cinders.

For a list of Missouri companies that recycle asphalt shingles or paving contractors that use them, visit www.modot.org/goinggreen.



Q&A

by Irwin Rapoport

Steve Russell

Recycling in school awarded

The 2010 American Forest & Paper Association (AF&PA) School Recycling Award was presented to the Parkway School District of Chesterfield, Missouri. The annual awards recognize outstanding school, community, and business, paper recycling programs across the country.

Parkway School District's recycling program serves more than 18,000 students in 29 school buildings. The program began in 1990 after several elementary students made a presentation to the board of education requesting that the district be a better steward of the environment. Since that time, expanded efforts have resulted in an Environmental Services Department that oversees all District sustainability efforts. Results are impressive, including the recovery of more than 1,031 tons of newspaper, magazines, catalogs, direct mail, office paper, envelopes, and brochures and more than 138 tons of paper-based packaging in 2009.

Students remain actively engaged, collecting paper in each classroom in deskside totes. Parkway Materials Recovery Specialists then make their rounds through their school collecting the full totes and taking them to green and yellow Paper Retriever® bins, a centralized recycling location. The paper is then recycled through the AbitibiBowater's Paper Retriever program, which pays the Parkway School District for each ton of paper recycled through the bin. Parkway uses these earnings to pay for school supplies, technology or other worthy projects. The bins are also easily accessible so that families and the surrounding community can participate in the paper recycling program.

Continental Airlines wins recycling award

The 2010 American Forest & Paper Association (AF&PA) Business Leadership Recycling Award was presented to Continental Airlines. The annual award recognizes outstanding business, community, and school paper recycling programs across the country.

Through targeted, cost-effective, manageable, and sustainable recycling opportunities across the system, Continental Airlines recovered more than 6,000 tons of paper and paper-based packaging for recycling from 2006 to 2009.

This success was the result of increased recovery on Continental's aircraft, at its hubs, and in offices and supporting facilities. Equally important was the work of Continental environmental affairs and communications staff to increase employee awareness by e-mailing updates and factoids, posting information on video monitors and ticker displays, placing articles in employee and customer publications, and sharing information on company blogs and websites.

Recycling results are tracked and measured, and have become part of the company's Eco-Skies brand. Proceeds from the recycling program are donated to We Care, a non-profit organization that helps Continental Airlines employees.

PepsiCo and Waste Management partner for on-the-go recycling

Inc., have partnered in support of the Dream Machine recycling initiative designed around PepsiCo's goal of increasing the United States beverage container recycling rate from 34 percent to 50 percent by 2018. Dream Machine kiosks are computerized receptacles that include a personal reward system that allows consumers to collect and redeem points for each bottle or can they recycle in the kiosk.

The program also intends to provide funding to the Entrepreneurship Bootcamp for Veterans with Disabilities (EBV), a national program offering free, experiential training in entrepreneurship and small business management to post-9/11 veterans with disabilities. The more that people recycle bottles and cans in a Dream Machine, the more support PepsiCo can provide EBV for career training, education and job creation. The relationship with EBV is a natural extension of PepsiCo's current partnership

PepsiCo and Waste Management, with American Corporate Partners, a the program, starting with 150 kiosks in nationwide mentoring program dedicated to helping veterans transition from the armed services to private enterprise.

Currently, less than a third of plastic beverage containers are being recycled.

Only 12 percent of public spaces are equipped with recycling receptacles, illustrating a clear need for greater public access to recycling bins.

The Dream Machine recycling initiative will introduce thousands of new recycling kiosks in popular public venues such as gas stations, stadiums, and public parks to make it more convenient and rewarding for consumers to recycle on the go. In addition to over fifty machines being rolled out in Southern California, Rite Aid is set to be one of the first national retailers to sign on to

their North Carolina locations. PepsiCo has also entered into a partnership with Keep America Beautiful, Inc. (KAB) to encourage community involvement in the program by engaging nearly 600 local KAB affiliate organizations in communities nationwide.

The Dream Machines will be provided by GreenOps, LLC, a subsidiary of Waste Management, and operated by Greenopolis, the first interactive recycling system that brings together online and on street technologies and rewards people for recycling their beverage containers in kiosks by allowing them to receive awards when they visit www.greenopolis.com.

The multi-year agreement with Waste Management is unique in that it enables the local capture and recycling of PET and aluminum, using both technology enabled and non-technology enabled Dream Machines.

Agricultural leaders partner in composting

Pennsylvania leaders broke ground on an innovative facility to turn both excess manure from local farms and waste from yards and kitchens into compost and prevent polluted runoff from reaching Lancaster County's streams and rivers. By composting manure from local farms, food waste from local schools and restaurants, and leaves and yard waste from Manheim Township, the new facility - Oregon Dairy Organics will turn trash into treasure for organic farmers, home gardeners, landscapers, and park and athletic field managers. Oregon Dairy Organics will be selling finished compost by this fall.

Most manure composting takes manure from the host farm only and is managed by the host farmer, which usually results in low quality final compost, with higher emissions of ammonia, and compost that is only suitable for on farm use. While many townships operate larger regional composting facilities for greenwaste, few of them accept manure because of the odor and transporting manure can be expensive beyond about 10-15 miles. These municipal facilities must add commercial nitrogen to make the composting work because greenwaste contains very little nitrogen, which is a required ingredient to make compost.

Oregon Dairy Organics has the diversity of partners and stakeholders needed to make it work: Oregon Dairy and the Hurst Family to provide a farm site for the project; a professional composting company, Terra-Gro, will help manage the facility and market the finished compost; a local agricultural consulting company, TeamAg Inc., to coordinate farmer participation in the project; and a nonprofit conservation organization, Environmental Defense Fund, to coordinate the overall project and secure needed funding.

close collaboration with Manheim Township, local farmers and the Chesapeake Bay Foundation. It is funded by the Chesapeake Bay Funders Network, the W.K. Kellogg Foundation, the Obetz Inc.), the Chesapeake Bay Foun-National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, Pennsylvania Department of Environ-

The project has been developed in mental Protection, Pennsylvania's Rural Education Achievement Program (with corporate sponsorship from Trout Ebersole & Groff LLP, The Phillips Group, B R Kreider & Son Inc., and Worley & dation, and Terra-Gro.



E-mail paul@sasforks.com adam@sasforks.com 877-sasfork (727-3675)

Medical waste recycled into new products



Sharps Compliance Inc. has unveiled the first of its kind, patentpending Green Waste Conversion Process, eliminating medical waste going into landfills by 100 percent.

The process transforms discarded medical waste into a new product called Pella-DRX – a clean, raw material used in the manufacture of industrial resources, vital to everything from highways to high-rise buildings.

Sharps currently addresses medical waste for approximately nine million individuals in the United States who self-inject, producing a staggering three billion syringes per year, professional offices, clinics and other related regulated sites.



WasteSecure partners with **Republic to** recycle lamps

Republic Services, Inc. announced that it is providing its commercial customers with an environmentally safe process for disposing of fluorescent lamps. Through an alliance with WasteSecure, Republic provides a convenient, cost-effective solution to help customers manage their recycling activity.

Republic's commercial and industrial customers who sign up will participate in a simple, turnkey, mail-back program for recycling fluorescent lamps. An all-inclusive price covers recycling containers, shipping by FedEX, processing, and complete online tracking and reports. Auto-reorder is available to make sure customers always have a supply of recycling boxes for their fluorescent lamps.

Republic launched the program for its large national industrial and commercial customers. Once the initial roll-out of the program is complete, the Company anticipates offering it to all of its industrial and commercial customers in 2011. Republic selected WasteSecure as a partner due to its large geographic footprint and its industry-leading practices.

CARE releases 2009 annual report

Carpet America Recovery Effort (CARE) reports that in 2009, CARE members diverted more than 311 million pounds of post-consumer carpet from landfills. Of that amount, 246 million pounds - nearly 80 percent of the total was recycled back into carpet and other consumer products.

Also in 2009, the carpet recycling industry continued its growth trend, employing more than 1600 people across the United States.

The past year has been one of significant accomplishments for CARE, said board chairman Frank Hurd. Most notable: a six percent increase in carpet diversion and 561 new jobs resulting directly from carpet recycling.

2010 scholarship winners chosen by National Demolition Association

Association also adds seven board members

The National Demolition Association (NDA) presented five college scholarships to deserving students at their annual convention.

The Bill and Wanda Baker Scholarship was presented to Zoe Foy of Newfoundland, Pennsylvania. Foy, a 2010 graduate of Wallenpaupack Area High School, was nominated for this award by Haines & Kibblehouse, Inc., Skippack, Pennsylvania.

The Patrick H. O'Rourke Scholarship was given to Samantha Hartmann of East Stroudsburg, Pennsylvania, a student at East Stroudsburg University. The scholarship's sponsor is Haines & Kibblehouse, Inc.

Jaclyn Nicole Miller of Quakertown, Pennsylvania, received the National Demolition Association Scholarship. The 2010 graduate of Quakertown Community Senior High School was sponsored by Haines & Kibblehouse, Inc. Pamela Rose Kirkpatrick of Hatfield, Pennsylvania, a student at Messiah College, received the National Demolition Association Southern California Chapter Scholarship. She was nominated by Haines & Kibblehouse, Inc.

Seton Hall University student Laurel Shirk of Conklin, New York, received the Sims Adams Scholarship. She was sponsored by Gorick Construction Co., Inc., Binghamton, New York.

New board members

The NDA also announced the addition of seven new demolition professionals to its board of directors.

Newly named to the board are Andrea Reveile of A & R Demolition. Del Valle, Texas; Heidi Wellen of Gateway Environmental Service Inc., Highland, Illinois; Bill Moore of Brandenburg Industrial Service Co., Chicago, Illinois; Christopher Godek of New England Yankee Construction, LLC, Milford, Connecticut; Sam Bacon of Republic Demolition Inc., Smyrna, Georgia; Jim Martin of Sequoia Construction Development Inc., Martinez, California; and Greg Gray of NASDI, LLC, Waltham, Massachusetts, serving as alternate.

Continuing as the Association's officers are Raymond Passeno, CIH, Bierlein Companies, Midland, Michigan as president; Don Rachel, Rachel Contracting LLC, St. Michael, Minnesota as vice president; Jeff Kroeker, Kroeker Inc. Demolition & Recycling Contractors, Fresno, California as secretary; Peter Banks, CEI Boston LLC, Norfolk, Massachusetts as treasurer; and Drew Lammers, Cohen Brothers Inc., Springfield, Ohio as past president. Michael R. Taylor, CAE, serves as executive director.

Goodwill expands recycling to include Microsoft products

addition to collecting for recycling purposes PCs and computer accessories, the Goodwill locations participating in Reconnect will also now accept Microsoft entertainment products including Xbox, Zune and accompanying accessories.

Launched in 2004, Reconnect has diverted more than 96 million pounds of ewaste from landfills and created about 250 "green jobs," with Goodwill employees managing the collection and disassembly

Dell and Goodwill announced that in of the equipment. Donated equipment meeting Reconnect's criteria are resold, and devices needing repair are either refurbished or broken down into parts to be recycled by Dell partners. The program supports Goodwill's job training programs, employment placement services and other community-based programs for people who have disabilities, lack education or job experience, or face other challenges to finding employment.

> For more information, visit www.reconnectpartnership.com.

Recycling events keep e-waste out of landfills

More than 21,000 pounds of electronics have been collected at two Verizon locations in New Jersey and Virginia to nelp the company's employees and surrounding communities keep discarded computers, stereo equipment, space heaters and other e-waste out of landfills. Items collected will be recycled or disposed of in a responsible manner.

The recycling events, held in Basking Ridge and Ashburn, Virginia, followed similar events held at other Verizon locations over the past several months. As a result, the company has collected more than 40,000 pounds of e-waste.



EPA names new regional administrator for Region 8

The Environmental Protection Agency (EPA) administrator Lisa P. Jackson announced the election of James B. Martin to be the regional administrator for EPA's Region 8. This region encompasses Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations.

Martin has worked in the environmental field for more than 20 years, most of them spent in Colorado. He most recently was the executive director of the Colorado Department of Natural Resources, managing and administering a department of more than 2,000 employees that oversee the state's environmental protection policies.

He was also the executive director of the Colorado Department of Public Health and Environment. There he managed an organization of 1,225 employees with a budget of \$470 million, with responsibility over both state environmental and public health programs.

From 2005 to 2007, he managed a non-profit organization that focuses on energy, public lands, and water issues. In 2004, he headed the Natural Resources Law Center at the University of Colorado School of Law where he managed an interdisciplinary public policy think tank with a staff of lawyers, economists and scientists. He also taught advanced seminars on energy law and policy and land use planning.

Martin spent a decade as the senior attorney for the Environmental Defense Fund in Boulder, Colorado and Oakland, California. Earlier in his career, he was State Director for then United States Senator Tim Wirth.

Company to build \$124 million wood waste pellet plant at Louisiana Port

Energy, LLC, is developing a \$124 million wood pellet project at the Port of Greater Baton Rouge in Louisiana.

The plant, which plans to begin deliveries late in 2011 is expected to produce 450,000 metric tons of pellets. Company officials boast of the site's ideal location to shipping and international markets and said it has negotiated letters of intent with local feedstock suppliers and a European buyer at attractive terms.

Point Bio Energy CEO Bill New said renewable energy requirements in the European Union are driving demand for the wood pellets, which power plants burn as fuel. Wood pellets provide roughly the same amount of energy as low-grade coal and can be burned in coal-fired power plants. New said that European demand for wood pellets, now around 8 million tons per year, is expected to double or triple over the next decade. Shaw Capital, Inc. and LaPointe Partners are helping to finance the project.

Point Bio Energy, LLC is developing a wood pellet project at the Port of Greater Baton Rouge in Louisiana with the assistance of Shaw Capital, Inc. and LaPointe Partners.

Wood pellets consist of debarked, dried, unitized, compacted and pelletized wood that is suitable to be burned as a green fuel. The 400,000 metric ton per year wood pellet facility will receive the feedstock for the plant from the underutilized wood basket in the Baton Rouge area as well as by barge from the Mississippi River, Atchafalaya River, Red River, and the Intracoastal Waterway.

Point has negotiated letters of intent with local feedstock suppliers and a

Boston becomes first to approve Ford Transit Connect taxi

Saying the 2011 Ford Transit Connect Taxi "fits the bill," the city of Boston became the first municipality in America to approve the versatile cab for taxi use, paving the way for taxi owners to purchase the new vehicle for their fleets.

Boston, the 10th largest metropolitan area in the United States, regulates which types of vehicles can be used as taxicabs in its city streets. To be approved for taxi use, a vehicle must meet basic size requirements for headroom, legroom and cargo space.

The roomy, flexible interior of the Transit Connect – 2010 North American Truck of the Year – is perfectly suited for taxi service. Its open architecture provides excellent interior headroom and passenger visibility and, with 6.5 inches of ground clearance, passengers step easily through the sliding doors.

With its standard 2.0-liter fourcylinder gas engine and automatic transmission, the conventionally powered Transit Connect is expected to deliver an

estimated 30 percent improvement in fuel economy versus many of today's traditional taxis.

Because taxi operators also asked for a version that runs on alternative fuels, Ford is offering new engine prep packages that allow conversions to both compressed natural gas (CNG) and liquefied propane gas (LPG).

Both CNG and LPG lower taxi fleets' operating costs and are better for the environment. According to the United States Environmental Protection Agency, CNG is less expensive and burns cleaner than gasoline, resulting in 30 to 40 percent less greenhouse gas emissions. Propane also burns cleaner than gasoline.

Built on a dedicated commercial vehicle platform tested to meet Ford's light commercial vehicle durability standards. Ford's new Transit Connect Taxi also features a wiring upfit package, vinyl flooring and standard third-row windows - all of which are factoryinstalled.

A new company, called Point Bio European buyer at attractive terms. Point has also gone through an extensive technology and EPC selection process to enable utilization of proven state-of-the art equipment working synergistically throughout the facility. The company will have the storage and loading capabilities at the existing deepwater port for ocean going ships delivering the pellets to both European power generators and domestic customers.

> Construction is expected to start in the third quarter of 2010 and commercial pellet manufacturing operations are expected to commence in the last quarter of 2011.

The site provides superior logistical flexibility with truck, rail, barge and Panamax vessel access. The land secured at the Port has existing roadways with direct access to major transportation arteries, unit train rail capacity, deep water and barge docks, fire water protection system, weight scales, port cranes, security, drinking water, natural gas and power. By being located directly on a deepwater port, Point has a cost advantage to other projects of \$10 to \$25 per ton due to the avoidance of double-handling of the wood pellets.

The European wood pellet market is well established with existing and expanding power generators aggressively seeking new sources of fuel to meet renewable fuel mandates. The European market for fuel pellets was approximately 7 million metric ton per year in 2007 and 9.5 million ton in

2008. It is expected to continue to grow by 25 to 30 percent per year in the coming years with large users paying approximately \$190 per ton CIF at North European ports.

The Company considers the permitting for the wood pellet operations at the Port to be streamlined and believes that minor source air permits can be secured for the project on a timely basis without public hearings.

Utilizing an experience engineering and construction contractor along with the proven wood pellet technologies that will be used for the facility, which are already used in many other plants in operation today minimizes the technology risks.

Experienced Management Team. The senior management team has over 100 years of combined experience in forest products, biomass processing and large capital projects. The team has significant experience with international sales and distribution of wood and fiber products.

Feedstock Advantage. The Plant will obtain sustainable harvested round wood as the feedstock for the wood pellet plant from land located close to the deepwater production facility and will also be able to take delivery of wood delivered by barge from a number of locations on the Mississippi River, Atchafalaya River, Red River, and Intracoastal Waterway through existing barge unloading facilities.



PAPER

Kimberly-Clark reports sustainability progress

ued to make progress toward its economic, environmental and social responsibility commitments according to its seventh annual sustainability report, Choices for a Sustainable Future. The report was recently issued and highlights the company's numerous achievements such as improving energy efficiency by 3.7 percent since 2005, reducing water usage by 13 million cubic meters, contributing \$22.7 million to charitable causes worldwide and forming new relationships with environmental groups such as Greenpeace.

Among its sustainability achievements in 2009, Kimberly-Clark:

•Strengthened environmental protection through fiber procurement practices;

•Achieved a 3.7 percent improvement in energy efficiency since 2005, saving enough energy to power approximately 125,000 houses for one year;

•Reduced water usage by 13 million cubic meters, saving enough water to fill

Kimberly-Clark Corporation contin- more than 5,000 Olympic-sized swimming pools;

> •Introduced new, innovative products such as Scott Naturals consumer tissue products and Huggies Pure & Natural diapers that combine high performance and exceptional quality with environmental benefits;

> •Launched the Reduce Today, Respect Tomorrow global marketing campaign within its Kimberly-Clark Professional business, emphasizing how reducing the environmental impact at every stage of a product's lifecycle has a more powerful, far-reaching effect beyond recycling;

> •Supported social issues around the world, including the ongoing funding of UNICEF's Urban Platform Initiative in Brazil, which has helped more than 1.1 million children and their families; and

> •Contributed \$22.7 million in cash and product donations for charitable causes worldwide.

March 2010 containerboard report

For the fifth straight month, containerboard paper production has risen sharply when compared to last year. Current total production saw an increase of 379,100 tons or 15.6 percent over March 2009.

Although, total production amounts also increased compared to February 2010, average daily production was down slightly due to the number of days in March. Year-to-date 2010 production has increased 13.2 percent over 2009. The containerboard operating rate for March 2010 rose 16.3 points over March 2009 to 93.6 percent. The capacity figures for the March release are based on AF&PA's 50th Annual Survey of Paper, Paperboard and Pulp Capacity released in March 2010.

Additional key findings from the report include:

•Linerboard production posts a large increase over same month last year.

•Medium production follows the trend and increase over March 2009.

•Operating rates also reflected the year over year increase.

March 2010 boxboard report

According to the American Forest & Paper Association's March 2010 Boxboard Report, total boxboard production increased from March 2009 totals by 64,000 tons or 6.0 percent. The production of boxboard increased by 7.5 percent in March 2010 compared to last month, however the average daily production was down 2.5 percent.

Additional key findings from the report include: •Solid Bleached Folding production

was up over last year.

•Unbleached Kraft Folding posted a decrease over February 2009. Folding production •Recycled

increased as well over prior year.



WASTE

Waste Connections shows jump in profits for first quarter

its results for the first quarter of 2010. Revenue totaled \$307.5 million, a 17.1 percent increase over revenue of \$262.7 million in the year ago period.

Operating income was \$59.6 million, or 19.4 percent of revenue, versus \$47.6 million in the first quarter of 2009. Net income attributable to Waste Connections in the quarter was \$27.6 million, or \$0.35 per share on a diluted basis of 78.7 million shares.

Net income attributable to Waste Connections in the quarter includes an approximate \$1.5 million, or \$0.02 per share, increase in the income tax provision associated with an adjustment in deferred tax liabilities primarily resulting from a voter-approved increase in Oregon state income tax rates in the period. Results in the prior year period included approximately \$3.0 million

Waste Connections, Inc. announced (\$1.8 million net of taxes, or approximately \$0.02 per share) primarily related to acquisition-related costs expensed due to the implementation of new accounting guidance for business combinations effective January 1, 2009, and a loss on the Company's prior corporate office lease due to the relocation of the Company's corporate offices.

> Non-cash costs for equity-based compensation, amortization of acquisition-related intangibles, and amortization of debt discount related to convertible debt instruments in connection with the adoption of new accounting guidance on January 1, 2009, were \$7.8 million (\$4.8 million net of taxes, or approximately \$0.06 per share) in the quarter compared to \$5.8 million (\$3.5 million net of taxes, or approximately \$0.04 per share) in the year ago period.

Waste Management of Orange County receives safety certification

Waste Management of Orange County's (WMOC) Sunset Environmental Transfer Station has achieved Star Certification as part of the Voluntary Protection Program (VPP), the highest achievement offered safety by Cal/OSHA.

WMOC's Sunset Environmental Transfer Station is the first transfer station in the United States to be recognized as a Cal/VPP Star site, and only the second facility in the municipal solid waste industry to achieve this certification, joining Waste Management's VPP Star Certified hauling district in Carlsbad, California.

Cal/OSHA estimates that there are 76 Star Certified sites in California and approximately 2,000 Star sites (as designated by Federal/OSHA) in the United States.

WMOC's Sunset Environmental Transfer Station has 40 employees who perform various jobs including collection drivers, maintenance technicians. equipment operators and recycling processing line sorters, in addition to office personnel.

The Star Certification is the result of a voluntary invitation for site visits and consultation by the state's work safety division, culminating in a multiday audit in April. WMOC first applied for consideration for VPP in July of 2009 and spent the time between the application submission and the Cal/OSHA official VPP review conducting site improvements, safety program reviews and encouraging employee participation to meet the goals of the VPP program.

Waste Services' first quarter 2010 exceeds expectations

Waste Services, Inc. announced financial results for the first quarter ended March 31, 2010. Fully diluted earnings per share before merger charges and other unusual items were \$0.14 for the quarter as compared to \$0.03 in the first quarter of 2009. The reported results include expenses relating to the pending merger with IESI-BFC Ltd. and a gain in the valuation of warrants. Including these items, fully diluted earnings per share were \$0.12.

Revenue for the quarter was up 24.6 percent to \$119.4 million compared to \$95.8 million for the same quarter in 2009. The results for the quarter are highlighted by:

•Internal revenue growth generated from price increases was 5 percent.

•Internal revenue growth relating to volume was 2.4 percent.

•Positive organic growth in both Florida and Canada.

translation Foreign currency accounted for \$10.0 million in reported revenue increase.

Acquisitions added \$6.1 million in revenue.

Adjusted EBITDA was \$32.2 million as compared to \$20.5 million in the first quarter of the prior year and the company's previous best quarter result of \$30.5 million (fourth quarter, 2009).

Fame usually comes to those who are thinking about something else.

-Oliver Wendell Homes

WASTE

Ohio EPA and Stark County remedy problems at landfill

Ohio EPA and the Stark County Health Department are joining forces to address significant maintenance concerns at the closed Exit C&D Landfill located in Osnaburg, Ohio. The combined state and local effort is made possible with funding from Ohio's Environmental Protection Remediation Fund.

A smoldering underground fire is suspected as the cause of severe settling on the landfill's surface. If left unattended, the settling could destabilize the landfill's slopes. To deal with the problem, Ohio EPA is dedicating more than \$100,000 so its contractor can assess the landfill's hotspots and fix any damage caused by the subsurface heating. Particular attention will be paid to the settled areas and large cracks visible on the landfill's slopes.

In addition, the Stark County Health Department (SCHD) continues efforts to manage the landfill's leachate (contaminated water being recirculated in the old waste disposal area). While recirculation is an economical way to manage leachate, it also causes waste to decompose at a faster rate, creates heating, and may be contributing to the underground fire. To alleviate that concern, Ohio EPA is providing a \$25,000 grant to SCHD to remove accumulated leachate and truck it to a wastewater treatment plant. SCHD also will make road repairs so the trucks are able to access on-site leachate tanks.

Thanks to the grant, SCHD will not have to spend county funds to do the work.

Orphaned landfills require state agencies to take over the expense of proper closure from the absent owner.

Exit C&D operated as a licensed construction and demolition debris landfill until 2002. At that time, SCHD revoked the landfill's license due to numerous and repeated violations of Ohio's waste disposal regulations. The landfill's owner subsequently abandoned the site without properly closing the facility. Since 2005, SCHD has used \$482,000 in financial assurance money (paid by Exit C&D's insurance company) and \$240,000 in county funds to properly close, cap and maintain the landfill.

SCHD has placed a lien on the property in an effort to recoup expenses incurred by the county.

Exit C&D is one of dozens of "orphaned" Ohio landfills – solid waste and construction and demolition debris landfills in various states of disrepair and need of attention. Orphan landfills have no current owner or funds set aside for proper closure and maintenance. Exit C&D is the first Ohio landfill to directly benefit from the Environmental Protection Remediation Fund.



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Maryland to limit trash dumping in the Anacostia

The United States Environmental Protection Agency (EPA), the District of Columbia, and the state of Maryland announced a new Total Maximum Daily Load (TMDL) or "pollution diet" for trash in the Anacostia River. This makes the Anacostia only the second river in the country with a daily trash limit, and the first in the mid-Atlantic region.

Each year, hundreds of tons of trash and debris are washed into the Anacostia from stormwater runoff, not only creating a nuisance and an eyesore, but endangering birds, fish and other wildlife that ingest or become entangled in the debris.

The federal Clean Water Act directs states to develop "pollution diets" for impaired water bodies, such as the Anacostia River. A TMDL establishes the amount of a pollutant, in this case trash, that a water body can assimilate without exceeding water quality standards. TMDLs provide the basis for establishing water quality-based controls, reducing pollution from both point and nonpoint sources and restoring the quality of water resources.

The District and Maryland both included the Anacostia River on their respective list of impaired waters due to excessive quantities of trash and debris in 2006. To complement this TMDL, the District and Maryland are developing innovative storm water permits for municipalities.

The District Department of Environment, and Maryland Department of Environment along with members of several non-governmental organizations have worked collaboratively with EPA to develop this draft trash TMDL for the Anacostia River.

Fire damages disposal operation

Town and Country Disposal, located north of Harrisonville in Missouri, was damaged by a fire in April. The fire was confined to one building and 21 trucks at the business that were destroyed.

Exploding tires flew 12 feet into the air. The explosions were due to pressurized tires. "We had a large fire and lots of explosions, but nobody got hurt," said George Poulignot, assistant chief of the Central Cass County Fire Protection District. About 20 firefighters were at the scene. When they arrived, two other buildings were threatened and the priority was to keep them from catching fire, said Poulignot. Company owner, J. R. Pesek, indicated that even with the extent of the damage, there would be no interruption in service. It was business as usual with replacement trucks already on order.

"The building was in the neighborhood of 80 percent involved," said Poulignot. Cause of the fire was due to an electrical malfunction.



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2005 COLMAR 403 MATERIAL HANDLER With 5-tine grapple and gen-set. 3,300 hours very nice condition. A steal. \$97,500





2004 KOMATSU PC400LC-7 WITH SHEAR With Genesis GMS1000R shear. 4,099 hours, 36" track pads, 75% undercarriage remaining. Jaw opening 38", jaw depth 38", cab guard and pump sump reservoir for increased cycle times, 110,000# machine. \$239,000



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1993 MAC PORTABLE CAR CRUSHER Good operating condition. \$62,500



1996 MOSLEY BULLDOG BALER 200 h.p., 12" main cylinder, bale release. Reconditioned with 90 day warranty \$195,000

Visit DADECapital.com for a complete list of current equipment and more photos.



Very good condition.

\$75,000



2005 AL-JON 580CL AUTO LOGGER/BALER Good machine, 5,000 hours. \$315,000



1999 HARRIS CENTURION 2-RAM BALER 13 x 8 x 150 baler with bale door and bale release. Very little use since overhaul. \$185,000



2009 IBC LD60-XHD-10 HORIZONTAL BALER Bale size 30 x 45 x 60. ONLY 700 hours. Steal this baler immediately! \$95,000



1997 SIERRA 700-TON S/L/B 17,000 hours, electric power. Runs well.

\$440,000

METALS

Steel imports increase 25 percent in March

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the United States imported a total of 1,971,000 net tons (NT) of steel in March, including

1,568,000 NT of finished steel (up 25 percent and 28 percent, respectively, vs. February final data). This was the highest monthly total since January 2009. Finished steel import market share was an estimated 19 percent in March.

Key finished steel products with significant import increases in March 2010 compared to February include

plate in coils (up 67 percent), oil country goods (up 61 percent), sheets and strip galvanized hot dipped (up 53 percent), cut-length plates (up 51 percent) and hot rolled bars (up 40 percent).

In March, the largest volumes of finished steel imports from offshore were from Japan (137,000 NT, up 19 percent), South Korea (109,000 NT, up 11 percent), Germany (83,000 NT, up 207 percent), China (58,000 NT, up 27 percent) and Australia (57,000 NT, up 18 percent).

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

	MAR 2010	FEB 2010	2010 Annual (est)	2009 Annual	% Change 2010 Annual vs. 2009
JAPAN	137	115	1,333	981	35.9%
SOUTH KOREA	109	98	1,430	1,323	8.1%
GERMANY	83	27	590	495	19.3%
CHINA	58	46	682	1,463	-53.4%
AUSTRALIA	57	48	530	285	86.1%
TURKEY	49	46	460	492	-6.4%
INDIA	39	35	436	581	-24.9%
ITALY	31	48	515	323	59.4%
All Others	1,004	759	10,326	8,237	25.3%
TOTAL	1,568	1,222	16,301	14,179	15.0%

February steel shipments down 4.1 percent

The American Iron and Steel Institute (AISI) reported that for the month of February 2010, United States steel mills shipped 6,311,076 net tons, a 4.1 percent decrease from the 6,579,808 net tons shipped in the previous month, January 2010, and a 46.1 percent increase from the 4,319,545 net tons shipped in February 2009.

A month-to-month comparison of shipments shows the following changes: hot dipped galvanized sheet and strip, down 1 percent; hot rolled sheet, down 4 percent; and cold rolled sheet, down 5 percent.

Commercial Metals issues guidance for third quarter

Commercial Metals Company announced estimated results for its third quarter ending May 31, 2010. The Company expects third quarter results to be between breakeven and a \$0.10 per share loss. This compares to a loss of \$0.12 per share in last year's third quarter and a loss of \$1.53 per share in the second quarter of this fiscal year.

CMC will issue its comprehensive third quarter release and hold its regular quarterly conference call, June 22, 2010.

Based on the Commerce Depart- NT, a 27 percent increase from the ment'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 March totaled 1,971 ,000 net tons (NT).

This was a 20 percent increase from the 1,644,000 permit tons recorded in February and a 25 percent increase from the February preliminary imports total of 1,574,000 NT. Import permit tonnage for finished steel in March was 1,627,000

1,278,000 permit tons recorded in February and a 34 percent increase from the February preliminary imports total of 1,214,000 NT. The gains in apparent steel demand

and domestic production (March vs. February) were 14 percent and 10 percent, respectively. Finished steel import market share in March is estimated at 20 percent (vs. less than 15 percent in August of last year).

Don't fear failure so much that you refuse to try new things. The saddest summary of a life contains three descriptions: could have, might have, and should have.

Steel import permits increase

-Louis E. Boone

60 x 90 FERROUS **AUTO SHREDDING SYSTEM**

COMPLETE AMERICAN PULVERIZER SHREDDING SYSTEM

RipSteel Pre-Shredder 200 h.p.

Infeed conveyor 80" wide with 35' incline load section, 5' top horizontal section, with hydraulic motor and gearbox.

Infeed belt replaced two years ago.

2004 American Pulverizor 60 x 90 Top Feed Shredder.

DC 1500 HP Quad Plus Motor with controls (Primary Motor).

AC 1500 HP Toshiba Squirrel Cage Motor with starter (Spare Motor).

Transformer

Drive Shaft

Pin Puller

Dual Magnetic Separator - refurbished 4 years ago. Stearns 4272 drums, gearmotor/chain drives.

Undermill Oscillator

Vibratory Feeder, frame, and chutes. Various conveyors.

Complete Motor Control.

Osborn two stage Non Ferrous trommel (fines removal, and oversize scalping).

Hydraulic Units for Shredder and other components.

Spare parts.

This system is in good working order and can be demonstrated.

Was producing 30 to 35 tons per hour. It was replaced last year by a larger

shredding system.

Priced for a quick sale at \$1,250,000. Immediate availability.



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METALS

Novelis recycled 40 billion cans

Novelis Inc. has recycled an estimated 40 billion used beverage cans in 2009

The company's focus on beverage can recycling saved more than 76 trillion BTUs of energy in the last year alone the equivalent of more than 13 million barrels of oil. The impact of this savings avoids the emission of five million metric tons of greenhouse gases.

In 2009, Novelis recycled more than half a million metric tons of aluminum cans through its extensive and expanding recycling operations on four continents. By utilizing recycled cans to produce the aluminum needed to make new beverage cans, the company eliminates 95 percent of the energy required to produce primary aluminum from mining and smelting.

Used beverage cans are an excellent source of aluminum because they can be recycled and returned to the store shelf as new cans in as little as 60 days. There is no limit to the number of times an aluminum container can be recycled, making it one of the most successful examples of sustainable manufacturing in the world today.

EPA settles with Alro Steel for violations

The United States Environmental Protection Agency (EPA) Region 5 recently settled a case of hazardous chemical reporting violations involving Alro Steel Corp., Jackson, Michigan.

The consent agreement and final order applies to Alro facilities in Lansing, Michigan, Melrose Park, Illinois, and Indianapolis and Fort Wayne, Indiana.

Federal law requires that state and local authorities be notified of hazardous chemical storage. In the event of a fire or emergency, responders need to know what they are dealing with so they can take steps to protect people living or working in the area.

Alro Steel paid \$120,000 to resolve the EPA notice that the company failed to submit to state and local authorities in four locations, the required chemical inventory forms for a variety of hazardous chemicals. The hazardous chemicals Alro used in its processing of steel include hydrogen, cutting fluid, acrylic enamels, chemtane, methane, propylene, propane, nitrogen, carbon dioxide gas, oxygen, argon and acetylene. Alro also has sulfuric acid and lead in its lead-acid batteries that must be reported.

The main purpose of holding childrens' parties is to remind yourself that there are children more awful than your own.

United States sues metal dealers and recyclers for mercury releases

Southern District of New York, Preet Bharara, and Judith Enck, the regional administrator of the United States Environmental Protection Agency (EPA), announced that the United States filed a civil complaint in Manhattan federal court against eight defendants, seeking recovery of more than \$7 million in response costs that the EPA has incurred since April 2004 in connection with the clean-up of mercury at the Port Refinery Superfund Site in the Village of Rye Brook in Westchester County, New York.

The Complaint alleged that the defendants - Jacob Goldberg & Son, Inc.; Kearny Scrap Metal Company; Leonard Sherman d/b/a L&B Metals; L&B Metals, Inc.; Levin & Sons, Inc.; Vincent A. Pace Scrap Metals, Inc.; PSC Metals, Inc.; and PSC Metals-New York, LLC (collectively, the "Defendants") are liable to the United States for the EPA's response costs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund statute, which was passed by Congress to help accomplish the cleanup of hazardous waste sites around the country and to require those responsible for pollution to pay the costs of cleanup. because they arranged for treatment or

Commodity

Plate and Structural

#1 & 2 Mixed Steel

Shredder Bundles (tin)

Crushed Auto Bodies

Steel Turnings

Aluminum Cans

Auto Radiators

Heater Cores

Stainless Steel

Aluminum Core Radiators

Moving

#1 Copper

#2 Copper

#1 Bushelings

#1 Bundles

Scrap Metals

MarketWatc

per gross ton

per pound

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Zone 1

\$270.00

270.00

318.00

315.00

244.00

245.00

2.88

2.73

.67

1.87

1.10

1.00

.69

The United States Attorney for the disposal of mercury, a CERCLA haz- their predecessors, the United States ardous substance, at the Site.

> According to the Complaint filed in Manhattan federal court:

> The Defendants were involved in the metal industry as dealers, producers or recyclers, and sold scrap mercury to Port Refinery, Inc., to be refined at the site. Scrap mercury they sold had no commercial use until it was refined and purified, and the process of refining scrap mercury inevitably resulted in mercury-containing wastes. Between the 1970s and 1991, Port Refinery was engaged in the business of refining scrap mercury and reselling the refined, commercial-grade mercury for use in dentistry and electronics. During the course of refining and purifying scrap mercury, Port Refinery caused mercury or wastes containing mercury to be spilled or discarded, or otherwise released at the site.

> From 1991 to 1996, the EPA conducted an initial clean-up of mercury at the site. In November 1996, the United States sued the owners of Port Refinery and other responsible parties, including the Defendants or their predecessors, to recover under CERCLA the costs that the EPA incurred for the initial clean-up of the Site. The United States settled the 1996 CERCLA action and received more than \$2.4 million. In the settlement agreements signed by Defendants or

specifically reserved its right to seek additional clean-up costs incurred at the Site subsequent to those settlements.

In April 2004, residents in a private housing complex adjacent to the Port Refinery site discovered mercury alongside a walkway. The EPA immediately began an emergency action to respond to this new mercury release. Since April 2004, the EPA has undertaken a variety of investigative and removal activities at the site, including: Testing air, water and soil at the Site for mercury contamination; excavating and disposing of more than 9,300 tons of mercury-contaminated soil from the Site; installing air and water filtration systems for residences at the Site; cleaning up the underground pipes; and demolishing a residence that had significant mercury contamination.

The Defendants are liable for the costs that the EPA has incurred after April 2004, because they "arranged for treatment or disposal" of mercury at the Site. The Complaint seeks \$7,062,969 in response costs that the EPA has incurred to date in connection with the recent response actions. The Complaint also seeks a judgment declaring that Defendants are liable for any future costs to be incurred by the EPA in connection with the Site.

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	435.00	285.00	300.00	250.00
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Conventional DC Magnets	250.00	185.00	240.00	243.00
	250.00	185.00	240.00	242.00
ESA Fully Enclosed	250.00	150.00	105.00	85.00
Hook up two hydraulic lines	2.85	2.61	2.90	2.75
and your system is running! Quick install and	2.72	2.51	2./4	2.62
removal, great for rapid attachment swaps.	./0	.62	.64	.65
	1.85	1.65	1.60	1.70
Gen-sets	.62	.60	.64	.65
Hydraulic, Diesel	1.40	1.25	1.20	1.08
Of Beit-Driven	1.15	.85	.90	.80
Kinshofer Scrap Shears and Rail Croppers Extremely strong tools for scrapping.	etal transactions plicable) prior to may not be con- ys a chance for the information amage resulting	cilitators of scrap m otained by AR (if ap es. Figures shown ation, there is alwa or completeness o e entity for loss or d	ers, sellers and fac d on information ob ual transaction price de credible informa e for the accuracy of to any person of	erienced buy pricing based bly affect acture ve is to provision ot responsible ms any liabilit
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AUTO

LKQ posts record first quarter

LKQ Corporation reported diluted earnings per share from continuing operations of \$0.36 for the first quarter ended March 31, 2010, an increase of 63.6 percent from \$0.22 for the first quarter of 2009. Revenue for the first quarter was \$603.5 million, an increase of 18.1 percent as compared to \$510.9 million for the same period of 2009. Income from continuing operations for the first quarter of 2010 was \$52.0 million, an increase of 62.4 percent as compared to \$32.0 million for the same period of 2009.

In April 2010, LKQ received ratings upgrades from both Moody's Investors Service and Standard & Poor's Ratings Services. Moody's upgraded the rating of LKQ's senior secured debt facilities and the corporate family rating to Ba2. Standard & Poor's raised the rating of LKQ's senior secured debt to investment

LKQ Corporation reported diluted grade BBB and LKQ's corporate credit rating to BB.

During the first quarter of 2010, LKQ entered the tire recycling industry with its acquisition of a tire recycling business in Sterling, Connecticut. The acquired business had historical revenue of approximately \$3 million in 2009. Also in the first quarter, LKQ opened start-up self service retail locations in Savannah, Georgia and Durham, North Carolina, and a heavy-duty truck facility in Monterrey, Mexico.

In January 2010, LKQ completed previously announced divestiture transactions with the sale of two self service retail facilities in Dallas, Texas to Schnitzer Steel Industries, Inc. The results of the facilities sold have been classified as discontinued operations for all periods presented.

Ford utilizes sustainable printing

In the past year, Ford Motor Company has reduced its use of paper made exclusively from virgin sources by 6,000tons – the equivalent of a loaded freight train with two locomotives and 100 cars.

Those results were achieved through an increased use of paper from recycled content instead of virgin sources for all high-volume, consumer and employee

printing projects. Beginning this year, about 2.2 million Ford, Lincoln and Mercury vehicle owner's manuals will be printed annually in the United States on paper containing at least 10 percent recycled fiber and certified by the Forest Stewardship Council (FSC). The effort supports Ford's comprehensive sustainability strategy.

Salvaging Millions

by Ron Sturgeon Autosalvageconsultant.com

Calculating customer acquisition cost

Whenever you are wondering whether you should continue to run an advertisement or whether your last mailer was worth the cost, you need to consider customer acquisition costs.

Customer acquisition cost is not hard to understand, but few businesses do the math required to evaluate their advertising efforts.

I first learned about calculating customer acquisition costs while serving on the board of an Internet games company. At this firm, revenue per employee was fairly low, but the cost of acquiring a customer from certain kinds of promotional efforts was very high.

The calculations go like this. If you mail out 1,000 advertising fliers at a cost of 50 cents apiece, you will spend \$500. If you get 20 responses, it cost you \$25 per response. But you can't spend responses; you can only spend sales/profits. Now, if you were able to convince 100 percent of the people who responded to become customers, your customer acquisition cost would be \$25. But no one closes all their prospects. In most businesses, closing 25 percent would be a reasonable rate. So, from the 20 responses, with a 25 percent close rate, you can expect to add 5 customers. Now your customer acquisition cost is \$125. WOW. That could still be great if your average sale were \$1,500, with a 50 percent gross margin. Simply put, it would cost you \$125 to bring in one customer that produces \$750 of gross margin.

Now, if your cost to mail those brochures were \$1.00 each, then your customer acquisition cost just doubled, to \$250.

Without considering the numbers and the lifetime value of the customer in the case of repeat business, it's impossible to make an intelligent decision about whether your advertising is working.

In my small business consulting, I frequently find businesses that run \$1,000 print ads without ever doing the customer acquisition math. Even if the advertisement only resulted in one new customer per time it ran, it still could be a good investment if the new customer contributes enough to profits.

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.

INTERNATIONAL WRAP explores new recycling opportunities

Two pilot projects will explore new ways to overcome barriers to recycling for small and medium sized enterprises. The projects will be managed by Waste & Resources Action Programme (WRAP) and funded by Defra as part of its Commercial and Industrial Waste programme. They will run a bring bank service for at least six months on three sites, with the aim of developing commercially viable service models that can be replicated across England.

By offering a bring bank solution to enable several nearby small to medium enterprises (SME) to recycle, it is hoped that a number of the barriers previously encountered can be overcome. Barriers to recycling for SMEs include lack of storage, difficulties in obtaining recycling collections and lack of incentive to recycle.

One project will operate at two business parks on the outskirts of Bristol, where steel storage containers to collect the recyclable materials will be located in accessible places on each business park. Businesses that sign up to the scheme will be able to recycle glass, cardboard, paper, cans and plastic bottles. Incentives such as free waste reviews and free glass collection will be used to attract businesses to the scheme.

The second project will trial a new model using a bring bank site adjacent to a cash and carry warehouse on Merseyside. This system is similar to those used at Household Waste and Recycling Centers across the country. The Merseyside trade recycling center will operate on a membership basis and provide SMEs with a viable, cost-effective opportunity to recycle their waste. SMEs will be able to sign up to the scheme via a bespoke website, and will be able to recycle paper, cardboard, rigid and flexible plastics and WEEE.

WRAP will be reviewing the pilots after six months of operation and if successful, will be encouraging the roll out these service models more widely.

Canada seeks public opinion on waste import and export

Canada's Environment Minister Jim Prentice announced the start of a public consultation period that begins the process of updating Canada's regulatory framework for the transboundary movement of waste and hazardous recyclable materials. Environment Canada posted a discussion paper online that interested stakeholders and Canadians can comment until mid-June.

The Government of Canada is updating three existing regulations under the Canadian Environmental Protection Act, 1999 (CEPA 1999), to ensure greater protection of the health and environment of Canadians and of other countries, improve policy alignment with international agreements, and add clarity to enhance the efficiency and effectiveness of the regulations.

The regulations to be updated are the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations, 2005, the Interprovincial Movement of Hazardous Waste Regulations, 2002, and the PCB Waste Export Regulations, 1996. The new regulatory framework will ensure that electrical and electronic equipment (commonly referred to as e-waste), being exported or imported for disposal, recycling or reuse is managed in an environmentally sound manner.

It will strengthen the implementation of Canada's international commitments to control the movement of waste, particularly under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989), ratified by Canada in 1992. The regulatory update will also improve the enforceability of the regulations while reducing administrative and paperwork burden on stakeholders.



Steel plant acquired by Mechel OAO

Mechel OAO, a Russian mining and metals company, announced the acquisition of Laminorul Braila metallurgical plant located in Romania.

Mechel acquired 100 percent of the shares of Donau Commodities SRL, which holds 87.9 percent of the shares of Laminorul SA, a steel plant located in Braila, Romania, for a consideration of 9.4 million Euros subject to a final price adjustment.

Laminorul Braila plant is located in southeast Romania in close proximity to Braila ports. The ports' facilities allow for embarkation onto ships with cargo capacity of up to five thousand tons. Constantsa international port (Black Sea) is also located nearby, thus providing convenient logistics for the plant.

The plant's main production facilities include two rolling mills with total capacity of over 380 thousand tons per vear. Rolling mills manufacture structural shapes of different types: beams, channel bars, equal and unequal angles for industrial, civil and machinery construction. This is the only plant in Romania manufacturing special profile (bulb bar) which is used in shipbuilding. All product types have European quality certificates. Bulb bars manufactured by the plant are certified by the international sea registers such as DNV, BV, LR, ABS, GL and the Russian Sea Register.

In 2009 the plant manufactured more than 50 thousand tons of structural shapes. 65 percent of the plant's products are delivered to Western and Eastern Europe and the rest is consumed at the domestic market of Romania. Laminorul Braila is sourced with billets supplied by Mechel Targoviste steel plant, one more Romanian subsidiary of Mechel. The plant employs more than 570 people.

INTERNATIONAL Legislation propels growth of the European batteries waste market

Battery waste management has been a growing market across Europe principally because legislative pressure and impending deadlines are altering the way battery waste has been dealt with so far.

The EU Batteries Directive is one of the most dominant tools that have shaped market demand, supported scientific advances and encouraged investment in the batteries waste management market. While automotive and industrial batteries have already achieved a high recycling percentage due to the economic benefits of recycling, the directive now has stringent targets for the regulation of portable batteries, paving way for new opportunities for the market participants.

New analysis from Frost & Sullivan European Batteries Waste Management Market, found that the market earned revenues of \$10.3 million in 2009, and estimates this to reach \$74.0 million by

Hirschmann names Brazilian dealer Hirschmann Automation and Control,

Chambersburg, Pennsylvania, has named Crane Service, located in Belo Horizonte, Minas Gerais, a premier dealer in Brazil. Crane Service offers Hirschmann's entire line of branded crane operator aids. These systems include load moment indicators, wireless and hard-wired indicators and anti-two block systems.

Crane Service has been providing consulting, training, service, and support for the heavy machinery industry for over ten years. Specializing in cranes, their facility includes a training center and service yard enabling them to efficiently provide training programs, certifications, specialized service and overhauls for their customers.

Manager of Vortex Valves' new Switzerland office appointed

Vortex Valves International announced the appointment of Oliver Küng as the new sales manager of Vortex Valves GmbH. Oliver will oversee Vortex's new office based in Zurich, Switzerland, and will be responsible for sales development in Switzerland, France, Germany and Austria. The office will also provide support for Vortex's existing Italian representative, Normicom, srl.

Küng brings seventeen years of experience from Bühler AG Switzerland, to the Vortex Valves team, which gave Küng an impressive edge over other candidates, according to Jon Naylor, Vortex Valve's European Managing Director. Joining Bühler at the young age of 17, Küng was apprenticed to the Head Millwright, building equipment such as sifters, valves and mills. He became chief installation engineer for Worldwide operations before taking up the post of sales manager in 2006. Küng will use his industry contacts, processing knowledge, and language skills in English, German, French, Spanish, Italian and Portuguese to head the Central European sales office in Switzerland.

Often-heard Ranting: Stop causing that pop-up ad for Classmates.com! There's a reason you don't talk to people for 25 years. Because you don't particularly like them! Besides, I already know what the captain of the football team is doing these days: he's mowing my lawn.

2016. The regions covered in this research service are the United Kingdom, Germany, France, Benelux (Belgium, the Netherlands and Luxembourg), Alpine (Switzerland and Austria), Scandinavia (Sweden, Denmark, Norway and Finland), southern Europe (Italy, Spain and Portugal) and central and eastern Europe (CEE).

"The new battery directive imposes collection targets and recycling efficiencies for all batteries and introduces extended producer responsibility (EPR) as a regulatory instrument," said Frost & Sullivan program manager Suchitra Padmanabhan. "Therefore, the transposition of this directive is expected to have a radical impact on the countries that are not yet forerunners in this field."

The intensifying volumes of waste batteries in Europe widen the scope of market opportunities for battery disposal services companies. With fast-approaching deadlines for legislative compliance, the demand for efficient solutions and material recovery is on the rise.

However, the diverse nature of local legislation regarding batteries across the European Union has made the implementation as well as its potential interpretations extremely varied.

"Waste management companies find it challenging to manage these variations arising from lack of clarity, unified registration and reporting requirements across member states in the EU," explained Padmanabhan. "This has hampered development of an integrated unified waste management solution by these companies."

Companies are seeking to address these local variations by gradually formulating strategies depending on the state of compliance with the EU legislation and the availability of infrastructure to meet these demands.

OPIC funds loan for Turkish aluminum recycling project

The Overseas Private Investment Corporation (OPIC) is providing a \$30 million loan for the construction of an aluminum recycling plant in Turkey that will use environmentally-friendly United States technology to deliver up to 60,000 tons of recycled aluminum annually in liquid form, saving customers valuable processing time and expense.

OPIC is providing the loan for construction and operation of a 6,500 square meter aluminum recycling facility in Tekirdag, outside of Istanbul. The plant will receive both used beverage cans and clean industrial scrap for conversion into liquid aluminum, which will be sold to primary and secondary manufacturers in Turkey or on the local spot market. The plant, which will use natural gas as fuel, became fully operational in November.

The United States sponsor of the project is Chinook Sciences International, LLC, part of Chinook Sciences Group, a New Jersey-based scientific research engineering company and a leader in gasification technology.

The facility will employ state-ofthe-art Rodecs[®] equipment, which is able to gasify all organic material from scrap metal, thereby transforming low quality contaminated metal scrap into clean, high-value metal in an environmentally-friendly process. The Rodecs gasifies, rather than burns, the materials so that the scrap metal is cleaned with minimal yield loss.

In so doing, it is able to rid the aluminum of oil, paint, plastic, polyethylene, paper and water. Since these waste materials are evaporated, harmful emissions are eliminated from the process. The Rodecs equipment can also process any kind of organic waste and produce energy in the form of electricity or biofuel with emission levels that are well within United States and European regulatory standards.



BUSINESS BRIEFS

Clean energy council appoints new president

■ The New England Clean Energy Council has appointed Peter Rothstein as its new president, succeeding founding president Nick d'Arbeloff. As president, Rothstein will be instrumental in continuing the council's mission to accelerate New England's clean energy economy to global leadership, expanding the active community of stakeholders assembled under d'Arbeloff.

Rothstein joined the council in 2009 as senior vice president to lead the council's Energy Innovation Consortia project. He also directed the council's Clean Energy Fellowship Program, launched in 2008. The same year, the Department of Energy awarded the council with its Energy Innovator Award, recognizing the regional cluster for its creative programs and events designed to promote clean energy.

d'Arbeloff will assume a co-chairman role at the council as he steps into a new executive position at EnerNOC, Inc.

Beck Aluminum acquires assets of former Met-Al

■ Beck Aluminum, a Cleveland-based aluminum manufacturer, recycler and distributor, has acquired the assets of the former Met-Al, Inc. in Racine, Wisconsin.

The Beck Companies currently operate manufacturing facilities in Lebanon, Pennsylvania, import primary aluminum and alloy through its trading arm and are the largest distributor of foundry ingot in the United States.

All management and staff will remain in place.

Hirschmann chooses new Brazilian dealer

■ Hirschmann Automation and Control (PAT), Chambersburg, Pennsylvania, has named Crane Service, located in Belo Horizonte, Minas Gerais, a premier dealer in Brazil. Crane Service offers Hirschmann's entire line of PAT, Krueger and Hirschmann branded crane operator aids. These systems include load moment indicators (LMI), wireless and hard-wired indicators and anti-two block systems.

Crane Service has been providing consulting, training, service and support for the heavy machinery industry for over ten years. Specializing in cranes, their facility includes a training center and service yard enabling them to efficiently provide training programs, certifications, specialized service and overhauls for their customers.

Verenium makes management changes

■ Verenium Corporation announced Gregory Powers, executive vice president of research and development (R&D), will be leaving the company to pursue another opportunity. Nelson Barton, senior vice president of R&D, will assume leadership of the group.

Barton joined the company in May of 2000. Prior to Verenium, he was a manager of R&D at Calbiochem-Novabiochem International. Barton completed his postdoctoral work at the Howard Hughes Medical Institute at the University of California San Diego and at Harvard University. He received his Ph.D. in Molecular and Cell Biology in 1990.



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Enerkem names members of board of directors

■ Enerkem Inc. announced the expansion of its board of directors. Timothy J. Cesarek, managing director in the Organic Growth Group of Waste Management, Inc., joined the company as a director. As announced last February, Waste Management became a strategic investor in Enerkem during the company's last financing round.

The addition of Cesarek was announced at the Advanced Biofuels Leadership Conference in Washington. D.C. His contribution as a director will enhance Enerkem's expertise in the waste sector. Currently, Cesarek is responsible for originating and commercializing innovative technologies that are consistent with Waste Management's core business. Waste Management is actively involved in developing ways to create value from waste streams by converting them into energy, fuels and chemicals, as well as commercializing technologies that enable the recycling and reuse of waste materials.

Prior to joining Waste Management, Cesarek was the president of Koch Genesis where he led the corporate venture arm, identifying and commercializing technologies external to the research and development effort of Koch Industries. Koch is one of the largest privately held companies in North America, with businesses in chemicals, refined fuels, polymers, resins wood products and consumer products.

Metso expands product line with Viconsys system

■ Metso acquired Viconsys web inspection and web break system business. The acquired business, comprising around 30 persons, will be affiliated to Metso's Energy and Environmental Technology Segment.

The target of the acquisition is to complement Metso's product and service offering to the paper and other process industry. The expanding product offering will fit well into Metso's global sales and service network. Through this network, Metso is able to improve customer service for existing and new customers of acquired business.

Schnitzer Steel acquires Golden Steel & Recycling

■ Schnitzer Steel Industries, Inc. announced that it has acquired substantially all of the assets of Golden Recycling & Salvage, Inc. of Billings, Montana. Schnitzer's subsidiary, SSI Big Sky LLC, purchased the assets and is now operating the facility as Schnitzer Steel Billings.

Golden Steel & Recycling has been collecting, processing and recycling scrap metal from the greater Billings community for nearly 19 years at its current location. Terms of the transaction were not disclosed.

Knowledge is realizing that the street is one-way, while wisdom dictates looking in both directions anyway.

Orchids Paper CEO named Executive of the Year

■ Orchids Paper Products Company announced that Bob Snyder, the company's president and CEO, was named the 2010 Executive of the Year by TAPPI and PIMA.

TAPPI is an association for the worldwide pulp, paper, packaging and converting industries and PIMA is the Paper Industry Management Association.

The award is the highest recognition for leadership and management given by PIMA and is traditionally presented to a senior-level executive in the pulp, paper or converting industries for excellence in management and outstanding contributions to the industry as a whole.

Covanta Holding directors retire from the board

■ Covanta Holding Corporation announced that Clayton Yeutter and Richard L. Huber, both longtime Covanta directors, retired from the board when their terms expired in May 2010.

Events Calendai

June 22nd-25th

Air & Waste Management Association's 103rd Annual Conference & Exhibition (ACE). Calgary Telus Convention Centre, Calgary, Alberta, Canada. 800-270-3444 • www.awma.org

August 9th-13th

National Environmental Monitoring Conference (NEMC) 2010. Hyatt Regency Capitol Hill, Washington. www.nemc.us

August 15th-17th WASTECON 2010. Boston Convention and Exhibition Center, Boston, Massachusetts. 800-467-9262 • www.wastecon.org

August 30th-September 2nd Power Plant Air Pollutant Control "MEGA" Symposium. Baltimore Marriott Waterfront Hotel, Baltimore, Maryland. 412-904-6012 • www.megasymposium.org

September 13th-15th 20th Annual Arkansas Recycling Conference & Trade Show. The Robinson Center, Little Rock, Arkansas.

866-290-1429 • www.recyclearkorg September 28th-30th

The GREEN Expo. World Trade Center, Mexico City, Mexico. 52-55 1087 1650 www.ejkrause.com/thegreenexpo

September 29th-October 1st 2010 Rubber Recycling Symposium. Sheraton Centre Hotel, Toronto. 905-814-1714 • www.rubberrecycling.ca

October 3rd-6th 2010 Global Waste Management Symposium. JW Marriott San Antonio Hill Country Resort & Spa, San Antonio, Texas. 800-559-0620 • www.wastesymposium.com

November 3rd-4th Canadian Waste & Recycling Expo. International Centre, Toronto, Ontario 877-534-7285 • www.cwre.ca

BUSINESS BRIEFS

Doosan Portable Power names new dealer

■ Doosan Portable Power has appointed Central Texas Equipment Company of Round Rock, Texas, as an authorized dealer of its Ingersoll Randbranded line of portable air compressors, light compaction equipment and lighting systems for the Austin and San Antonio areas of Texas.

Central Texas Equipment provides full sales, rental, parts and service of large construction equipment such as cranes, excavators, forklifts, asphalt and soil compactors, as well as air compressors, generators and light towers.

Universal Stainless chief financial officer resigns

■ Universal Stainless & Alloy Products, Inc. announced that Richard M. Ubinger has submitted his resignation as vice president of finance, chief financial officer and treasurer.

Ubinger decided to leave the Company in order to pursue other business opportunities. The Company noted that a search for a new CFO has commenced and that Ronald Hauck, who joined the Company as controller in 2005, will serve as the Company's principal financial officer on an interim basis through the conclusion of the search process.

Prior to joining Universal Stainless, Hauck held several senior financial positions, including various positions held during his 24 years with PNC Financial Services Inc.

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A5	The Recycle Depot
A16	Tryco International

WM appoints Carl Rush to senior leadership team

■ Waste Management announced that Carl Rush, vice president of the company's organic growth group, has joined the company's senior leadership team.

Rush joined Waste Management in 2001. He became vice president of Upstream in early 2005, and a year later, he accepted the position of vice president of organic growth. Before joining Waste Management, Rush was president and CEO of The GNI Group for 15 years.

The Metcalf Group chosen to represent Tubelite

■ Tubelite Inc. has named The Metcalf Group Ltd. as a manufacturer's representative for the Company's architectural aluminum products in northern New Jersey and in the five boroughs and Long Island in New York.

Tom Metcalf is the president and namesake of The Metcalf Group Ltd., located in Sea Girt, New Jersey. For 16 years, Metcalf has provided architects, buildings owners, contractors and consultants with educational and technical information, as well as dependable building systems, products and components.

Advanced Disposal acquires Fore Recycling

■ Advanced Disposal Services, Inc., headquartered in Jacksonville, Florida, has acquired certain assets of Pat Fore Truck Lines, Inc., dba Fore Recycling, located in Biloxi, Mississippi. Terms of the acquisition were not disclosed.

CMC appoints Alvarado as executive VP and COO

■ Murray R. McClean, chairman of the board, president and chief executive officer of Commercial Metals Company announced the appointments of Joseph Alvarado as executive vice president and chief operating officer of CMC and Tracy L. Porter as vice president of CMC and president of the CMC Americas Division.

Alvarado will be responsible for the direction of CMC's two operational divisions, the CMC Americas Division and the CMC International Division.

During his career, Alvarado has held many leadership positions within the steel industry, including Ispat International N.V. (prior to its acquisition by Arcelor Mittal), Birmingham Steel and Inland Steel. Most recently he served as president of U.S. Steel's Tubular Products Division, and prior to that as president and chief operating officer of Lone Star Technologies (prior to its acquisition by U.S. Steel).

Vermeer Midwest named new Fecon dealer

■ Fecon named Vermeer Midwest as their dealer and service provider in Illinois, Indiana, eastern Missouri and the Detroit area of Michigan. Vermeer Midwest will offer Fecon's line of Bull Hog[®] mulchers, FTX track carriers and various other forestry attachments.

E-Z Pack adds two new regional sales managers

■ E-Z Pack Manufacturing, LLC announced the addition of two industry professionals to its sales team. Mark Clindaniel has been named regional sales manager for the Midwest region, and Kevin Coombes has been named regional sales manager for the East region.

Clindaniel most recently was vice president of sales and marketing for Galbreath, a division of Wastequip. It was a position he held for eight years. Prior to that he was the Southeast marketing manager for Galbreath, developing a dealer network in Florida, among other responsibilities. He started in the waste industry in 1989 as a salesperson for Link Environmental Equipment, representing E-Z Pack, as well as other product lines, and moved to Mid-Atlantic Waste Systems to cover the Florida market before joining Galbreath in 2000.

Coombes has spent the last two and a half years as a regional sales manager for American LaFrance, representing the class 8 Condor truck line. Prior to that, he spent 28 years with Heil Environmental Industries in a variety of positions. Starting in the accounting department, Coombes rose through the ranks as a regional sales manager, director of marketing and distributor development, ready-truck sales manager, international sales manager and national account manager. Early in his career he was also general manager of Sanco, a division of Heil.

EPA names new regional administrator for Region 5

■ The United States Environmental Protection Agency (EPA) administrator Lisa P. Jackson announced the selection of Susan Hedman to be the regional administrator for EPA's Region 5. This region encompasses Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin and 35 Tribal Nations.

Hedman has experience in the environmental protection field dating back to the early 1980's when she taught environmental policy courses at Northland College in Ashland, Wisconsin. Since 2005, she has served as Illinois attorney general Lisa Madigan's environmental counsel and senior assistant attorney general, playing a role as chief negotiator for litigation and legislation relating to environmental protection, energy efficiency, renewable energy, carbon capture technology and associated consumer issues.

Prior to that, she held numerous positions in environmental law and policy including senior policy advisor on energy and recycling at the Illinois Department of Commerce and Economic Opportunity; staff attorney for the Environmental Law and Policy Center with cases focused on facilities in Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio and Wisconsin; first legal officer for the United Nations Security Council team charged with analyzing environmental damage from oil fires in Kuwait; and as research director for the Center for Global Change at the University of Maryland.

Genesis Poly Recycling open for business

■ Genesis Poly Recycling, Inc. announced that it is accepting rigid plastic containers for recycling. The announcement marks a significant advancement in local recycling allowing residents, businesses and farms in Minnesota and throughout the Midwest the opportunity to recycle millions of pounds of plastic that are currently landfilled and illegally destroyed by burning.

Genesis Poly specializes in recycling plastic materials that have been largely overlooked by mainstream recyclers. As part of phase one, Genesis Poly is accepting triple rinsed pesticide jugs, plastic pails, drums, kegs, totes, mini-bulks, flower pots, landscape pots, drain tile and lawn edging. Genesis Poly works with local governments, co-ops, nurseries and others to develop collection programs that are efficient and convenient to use. These materials can also be dropped off directly at Genesis Poly's facility in Mankato, Minnesota.

Genesis Poly expects to be fully operation this summer when phase two comes on line. Phase two will allow the recycling of silage bags, grocery bags and other plastic films. Genesis Poly expects to recycle 60,000,000 pounds of plastic annually.

AISI announces steel industry award recipients

■ AISI's Steel Market Development Institute (SMDI) announced that David C. Jeanes, P.E., retired president of the SMDI, is the recipient of the 2010 Market Development Lifetime Achievement Award. The award recognizes steel industry professionals who have made significant contributions over the course of their careers in advancing the competitive use of steel in the marketplace.

AISI also announced that three individuals have received the 2010 Market Development Industry Leadership Award – Edward G. Opbroek, director, WorldAutoSteel; Roger A. LaBoube, Ph.D., distinguished teaching professor, Department of Civil Engineering and director of the Wei-Wen Yu Center for Cold-Formed Steel Structures at the Missouri University of Science and Technology; and Julia Hurst, executive director, National Lieutenant Governors Association.

Veolia names Valentine Vice President of HR

■ Veolia ES Solid Waste, Inc. appointed Dana Valentine to vice president of human resources.

As the vice president of human resources, Valentine will be responsible for talent acquisition, team building and strategic problem solving. Valentine comes to Veolia from Johnson Controls Inc., where she was director of human resources for the North America systems business. She holds a bachelor of arts degree in English Literature and a master's of science in Human Resources Management, both from Villanova University.

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SCRAP METAL BUSINESS. Both nonferrous and ferrous. 27,000 sq. ft. covered. Located in NE Ohio, owner retiring after 25 years. Well-established, first time offered. Reply in confidence to: neoscrapbusiness@gmail.com.

BIBB AUTO PARTS AND SALVAGE YARD in Macon, Georgia. Has been in business since 1949 with same phone number. 22.77-acre site. Zoned C4 highway commercial, future zoning restricts additional salvage yards. Compliant with EPA. \$1.2 million or best offer. Call 478-718-5528 or 478-743-8682.

13 ACRE SALVAGE/SCRAP YARD for sale, located in Middlesex County, CT, halfway between Boston and New York City. Priced to sell, financing available to qualified buyer. Call Mrs. Michael at 860-345-2677.

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eter options. L&P Wire Tie 330 and 340 models can be

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L&P Wire-Tie Systems 635 East Central Carthage, MO 64836 417-358-8322 www.lpwiretie.com



PRECISION HUSKY INTRODUCES BIOMASS DRUM CHIPPER

The Precision Husky Corporation in Leeds/Moody, Alabama announced the startup of the Model 4042 Drum Chipper powered by Cummins 600 h.p. or CAT C15. The machine does not have a bunch of "bells and whistles" and is very economical to operate.

The machine produces more than 75 tons per hour, and is totally dedicated to biomass.

Precision Husky Corp. PO Drawer 507 Moody, AL 35004 205-640-5181 www.precisionhusky.com



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Crusher valued for more than its big 10' opening

OverBuilt Inc. of Huron, South Dakota, is distinguished by the high-speed option available for its Model 10 crusher. The Model 10 has a 10-foot high door opening allowing operators to crush vans, buses and other tall vehicles, as well as loading up to six cars per cycle. The 400-gallon on-board fuel tank allows operators to refuel loaders as well as go long periods between



fillups. A similarly sized 400-gallon tank holds fluids reclaimed from flattened vehicles.

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JUNE 2010

Demand for plastic lumber remains high

by MIKE BRESLIN mbreslin@americanrecycler.com

Recycling waste plastics into plastic lumber has been doing quite well despite a weak economy. "Even though construction is down, we are seeing that plastic lumber is more a preferred material, especially in environments where customers are looking for long life. Contractors, builders and property owners are looking for better value," said Brian Larsen, president of the Plastic Lumber Trade Association. Larsen is also president of Bedford Technologies, a major manufacturer of plastic lumber products headquartered in Minnesota.

The name Recycled Plastic Lumber (RPL), is deceptive and has come to encompass a continually expanding array of products beyond plastic and composite plastic substitutes for dimensional wood lumber. Today RPL is a catchall term that can refer to material used for construction, outdoor furniture, playground equipment, curbing, speed bumps, railroad ties and commercial-industrial products, to mention a few of the applications.

In less than 20 years, RPL in the United States grew from virtually nothing to what it is now – an innovative and growing industry that mainly relies on recycled consumer plastics for feedstock. The processes were first developed in Europe and Japan in the early 1970s using post-industrial plastic scrap, the only source of low priced polymers at that time.

In the mid 1990s, a small number of American entrepreneurs and engineers formed the Plastic Lumber Trade Associ-



At a ship loading pier on Lake Michigan, plastic fendering material is used. Plastic lumber makes sense in marine applications due to its reslience and ability to with stand harsh, wet conditions.

ation (PLTA) and began to work to improve the woefully inadequate technical standards for plastic lumber that were impeding adoption by architects, engineers and builders.

The U.S. Army Corps of Engineers also became interested in using green building materials in the 1990s. Working with PLTA and Rutgers University, the Corps' Construction Engineering Research Laboratory embarked on a long-term research and development effort to explore the optimization and use of RPL products. This culminated in the groundbreaking 1997 study Development and Testing of Plastic Lumber Materials for Construction Applications.

The study found that RPL offers advantages over wood, namely resistance to rot and insects, but that the major barriers to wider adoption were lack of understanding of the property differences between wood, the lack of material specifications and design guidance. The Corps submitted its draft test methods, material specifications and usage-design guidance to the American Society of Testing Materials (ASTM).

Prabhat Krishnaswamy, PhD, is a mechanical-structural research engineer. Today he is vice president of the Engineering Mechanical Corporation of See LUMBER, Page 5

Innovation drives new bio-based plastics applications

Improvements in product performance and an expanding product range continue to propel bio-based plastics into new and high-growth applications despite the challenges posed by the economic downturn and resulting price sensitivity of customers. The global bioplastics market has reached a critical juncture in its growth phase, with a large number of companies now focusing on transitioning from laboratory and pilot scale to full-fledged commercialization. New analysis from Frost & Sullivan, Global Bio-based Plastics Market, found that the market earned revenues of euro 570.6 million in 2008, and estimates this to reach euro 1.1 billion in 2015.

"The move towards sustainability in key end user markets for plastics will continue to drive the demand for sustainable bio-based plastics," noted Frost & Sullivan's Performance Materials Industry Principal, Dr. Brian Balmer. "The ever increasing product

mix in bio-based plastics will ensure that a wide range of applications is made available for bio-based plastics to capitalize upon."

Plastics are expanding into newer areas that were traditionally catered to by engineering plastics like polybutylene terephthalate (PBT) and acrylonitrilebutadiene-styrene (ABS). This was made possible by significant improvements in the production methods and additives in bio-based plastics, opening up new avenues of growth for bio-based plastics.

The development in bio-based commodity and technical plastics will pave the way for bioplastics to expand into two different ends of the performance scale. While bio-based commodity plastics will accelerate the growth of bioplastics in packaging and similar applications, the growth in technical bio-based plastics will enable expansion into automotive, electronic and consumer goods applications.

See BIOPLASTICS, Page 2



A Letter from the Editor

Hello Readers,

Welcome to this latest edition of American Recycler. This June, we're focusing on everything plastic. Plastics are incredible materials that have integrated themselves into almost every facet of modern day living, and in this issue, we're discussing the folks and processes that break down these materials for reuse in other applications.

As plastics and plastic composites have evolved to be stronger, lighter and more durable, they've grown beyond such simple uses as action figure packaging or shopping bags. Today, plastics play vital roles in many advanced areas such as transportation, construction and medicine, to name only a few.

Plastics have supplanted traditional materials such as wood, metal and concrete in many applications. Soon, the days of staining and sealing your home's deck will be over, and instead, new plastics decks will require only minimum time and effort for their preservation. Homes may even be framed with composite lumber, meaning that the average home might last decades beyond today's homes that have been erected with treated lumber.

Even concrete and metal have been replaced by plastic. Sidewalks and marina piers are fine examples of how plastic can be used to accomplish the same task as stone, and plastic trusses are being examined as replacements for traditional steel and concrete bridges.

However, this very expansion has created a huge need for innovators and inventors to conceptualize new ways of disposing of and reusing plastic in all of its many iterations.

If one examines the resources required to create new plastics, specifically, the petroleum the production requires, it just makes more sense to reuse the existing plastics and their petroleum content than it does to create new plastics from virgin materials. Not only does reuse keep plastics out of landfills, but it also reduces the amount of oil needed for the production of new material, making recycling a win-win solution.

The reuse of plastics takes many forms, and we've highlighted some of them in this issue. From lumber, to take-home food boxes, to living room furniture, plastics do it all. The tough part is keeping this fantastic resource out of landfills, and getting it into the hands of recyclers.



Dave Fournier Focus Section Editor david@americanrecycler.com

Restaurant chain utilizes PET bottle boxes

Rubio's Fresh Mexican Grill[®] is the first restaurant chain in the country to use a new 100 percent recycled post-consumer PET Bottle Box[™] container. In May, Rubio's will roll out a new Bottle Box salad bowl, which is the first custom-made product designed by Direct Pack, Inc. and manufactured by Global PET of Perris, California, using a true bottle-to-box recycling process. The collaboration is the first in the United States to turn 100 percent post-consumer recycled PET bottles into recyclable food grade containers.

The new packaging is just one part of a new comprehensive plan for ecofriendly practices that Rubio's has unveiled. Other initiatives include:

•The expansion of in-store recycling. •An environmentally-friendly design for new restaurants.

•Eco-friendly packaging and printing.

•The support of local green charities. •Beach clean-up projects.

•A goal to be totally Styrofoam-free and to use only compostable, reusable, recycled and/or recyclable containers by the end of 2011.

"While Rubio's offers grilled chicken, steak and pork menu items, we're famous for our Baja-style fish tacos and other seafood specialties; so it's important for us to preserve a healthy ocean," said Ralph Rubio, chairman and cofounder of Rubio's. "We understand that of the 15 billion pounds of plastic produced each year in the United States, about ten percent of it ends up in the sea. Rubio's sells approximately 460,000



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Ralph Rubio of Rubio's, Craig Snedden of Direct Pack, Inc. and Nadim Bahou of Global PET stand in front of bales of bottles waiting to be recycled into boxes.

water bottles a year, which could be recycled and used to make 115,000 Bottle Box salad bowls and lids, keeping them out of the ocean and saving approximately 37 cubic yards of landfill space."

Craig Snedden, president of Direct Pack, Inc., said, "More than 80 percent of households in the country have access to curbside or community drop-off recycling centers, and surveys show PET bottles have the highest recycling rates of any plastic bottle types. We encourage Californians and the rest of the country to recycle so that we can do our part for the environment. Producing new plastic products from recycled materials uses two-thirds less energy than producing plastics from new raw materials, and reduces greenhouse gas emissions as well."

Nadim Bahou, president of Global PET, added, "The Bottle Box food pack-

Bioplastics

Continued from Page 1

The main challenges facing the bio-based plastics market in the short term stem from the impact of the economic slump, which will make funding of major project expansions complex. However, in the long term, the challenges are more structural, such as enhancing the recycling infrastructure as well as technical properties for bioplastics.

"The recession has seen some of the major expansion and market entry projects suffer setbacks," explained Dr. Balmer. "Although, sufficient capacity is currently available for most of the bio-based plastic types, future market growth will mainly depend on crucial capacity additions taking place according to schedule."

Partnership with key market participants will be critical to long-term ages are a culmination of over half a decade of work between us and the State of California's Department of Recycling. The California Department of Conservation supported our efforts through a grant which allowed us to bring this recycling process to life. And now, companies like Rubio's are enhancing their green initiatives by using it in all of their United States restaurants."

On Earth Day, Rubio's launched a web page at www.rubios.com to share its plans and progress in using recycled, compostable, reusable or FSC certified packaging and printed materials; recycling; offering sustainable and nutritious foods; community involvement; and specifics about Rubio's eco-friendly design elements in its new restaurants such as "smart lighting," the broad use of recycled materials and low VOC paints.

success in the rapidly growing biobased plastics market. For example, partnership with major chemical companies will ensure that bio-based plastic producers with a predominantly agricultural background will gain rapid access to critical technology and market development capabilities.

"Bioplastic suppliers should focus on improving product performance and the depth of their product range if they are to succeed in the rapidly evolving markets for bio-based plastics," concluded Dr. Balmer. "End users need to be made aware of the various alternatives available in biobased plastics, with a clear definition of the performance and end-of-life characteristics of each of these biobased plastics."

> For additional information, view this article on www.AmericanRecycler.com.

The doctor thought for a moment and then asked, "Well, have you tried counting sheep before you go to bed?"

The accountant replied, "That's the problem, Doc. I make a mistake and then spend three hours trying to find it!"

An accountant was having a hard time sleeping, so he decided to go to see his doctor. "Doctor, I just can't get to sleep at night," he complained.

Coca-Cola and Emeco create chair made from recycled plastic bottles

The Coca-Cola Company and furniture manufacturer, Emeco, have combined their products, the Coca-Cola contour bottle package and the Navy® Chair, to create a new chair made from at least 111 recycled plastic bottles. The aptly named "111 Navy Chair[™]" debuted at the 2010 Salone Internazionale del Mobile, one of the top furniture trade shows in the world.

Modeled after the original aluminum Emeco Navy Chair, designed in 1944 for the United States Navy, each 111 Navy Chair contains a mix of 60 percent recycled polyethylene terephthalate plastic (rPET) and a special combination of other materials including pigment and glass fiber for strength. It is estimated that more than three million PET plastic bottles will be repurposed annually for the production of 111 Navy Chairs.

"The 111 Navy Chair is a reflection of our commitment to sustainability, constant innovation and originality in design," said Kate Dwyer, group director, worldwide licensing, for The Coca-Cola Company. "This latest addition to our line of rPET licensed merchandise underscores the fact that Coca-Cola bottles are valuable recyclables. It is another step in our vision to recover and reuse all of our bottles and cans."

The rPET content in each chair is sourced from the world's largest plastic bottle-to-bottle recycling plant that began operation in 2009 in Spartanburg, South Carolina in the United States through a partnership between The Coca-Cola Company and United Resource Recovery Corp.

The chairs will be available for sale in June 2010 in select retail locations worldwide and can also be ordered by sending an email to coca-cola@emeco.net. 111 Navy Chairs are available in six colors: Coca-Cola Red, Snow, Flint, Grass, Persimmon and Charcoal.

"When Coca-Cola approached me with this project I jumped on it," said Gregg Buchbinder, chairman of Emeco. "Although reengineering a core product is a significant investment for us, I was excited about the impact of reusing the PET from about three million plastic bottles a year. That's a lot of bottles and a lot of chairs. The new chair is the strongest, and most beautiful we can make. We've turned something many people throw away into something you want and can keep for a long, long time."

Coca-Cola first launched rPET merchandise in 2007 as a way to inspire people to recycle by showing them how PET bottles can be transformed into



products for everyday use. rPET merchandise includes t-shirts, bags, caps, notebooks and now a chair made of recycled plastic bottles. Each item indicates the number of plastic bottles used to create it.

Waste Management and MicroGREEN Polymers enter into strategic investment

MicroGREEN Polymers, Inc. announced a strategic investment as part of a Series B round of financing that generated a total of approximately \$6.9 million from Waste Management, Seattle-based WRF Capital, Northwest Energy Angels and other private investors. This round of funding will enable MicroGREEN to increase engineering, sales and marketing staff and expand its commercial production capabilities for a wide range of consumer products.

MicroGREEN is a plastics company that uses its patented Ad-air® technology to reduce the amount of plastic required for the production of consumer products, thereby significantly lowering raw material costs. Ad-air technology creates bubbles within solid-state plastics to expand the plastic and improve its functionality by creating an internal microcellular structure that is lighter in weight, more insulating, strong and highly reflective. Unlike other expansion technologies for plastics, Ad-air technology does not involve petrochemical blowing agents or volatile organic compounds in the manufacturing process. The technology works especially well with recycled PET (rPET) the world's most recycled plastic, commonly used to create beverage bottles.

Later this year, MicroGREEN will begin offering a line of Ad-air enhanced

Waste Management, Inc. and rPET sheets in various gauges for con- mers, will enable us to extract more verters to transform into consumer products and packaging. MicroGREEN also plans to launch its first converted product - a low-density, thermally-insulating beverage cup that is recyclable and is itself made from recycled material. MicroGREEN is initially targeting consumer foodservice applications, which according to Global Industry Analysts will represent an over \$16 billion market in the United States by 2015.

> In a recent lifecycle inventory and analysis study of hot beverage cups conducted by Franklin Associates, Ad-air technology as applied to a recycled PET hot beverage cup has the lowest total amount of energy required to produce a hot beverage cup and the lowest total solid waste as measured in both volume and weight when compared to expanded polystyrene (EPS) and coated paperboard hot beverage cups, the two most commonly used in the market today.

> This investment in MicroGREEN Polymers complements Waste Management's recycling operations. This investment will also help Waste Management meet two of its sustainability goals: tripling the amount of recyclables it processes by 2020, and investing in emerging technologies for managing waste.

> "Investing in new technologies and companies, such as MicroGREEN Poly

value from the materials we manage than anyone else in our industry," said Pat DeRueda, president of WM Recycling. "As North America's largest residential recycler, we handle a growing stream of PET and other plastics that can provide the feedstock for Ad-air technology. This could create more value from the materials we recover at our recycling facilities every day."



Kroger encourages reusable bagging

The Kroger Co. invited customers to design a reusable shopping bag through an annual online contest. Customers went online at www.kroger.com/green to submit their designs for Kroger's reusable grocery bags.

The winning designer received a \$1,000 gift card and a chance to see their bag design sold in Kroger stores. In addition to the winner of the contest, 4 finalists were awarded a \$250 Kroger gift card and 5 runners-up received a \$100 Kroger gift card.

Lynn Marmer, group vice president of corporate affairs for Kroger, said the contest was a natural fit for the retailer and its family of stores, given the company's commitment to sustainability efforts. In 2009, Kroger and its family of stores sold an average of nearly 13,000 reusable shopping bags per day. Every reusable bag has the potential to save 1,000 plastic bags over its lifetime.

"By using more reusable shopping bags and engaging in more efficient bagging techniques, Kroger customers and associates diverted nearly 200 million plastic bags from local landfills – about 20 percent toward our goal of saving 1 billion plastic bags," she said.





OUIPMENT

by MARY M. COX

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Plastic items comprise much of the solid waste tossed out by individuals and businesses across the nation, and are not biodegradable. As such, recycling is the only option for reducing the amount of plastic waste sent to landfills. Granulators break down plastic and other materials so they can be recycled.

Kirk Winstead, president of Rapid Granulator, said the firm's 600-series product is the largest of their range of easy-access granulators. "These 'openhearted' products allow cleaning and maintenance times to be reduced by up to 50 percent, without compromising safety or regrind quality. The 600-series uses the same patented technology that's already been proven highly successful in our 300, 400 and 500-series products. The concept is completely modular and can be tailored to any application within the plastics processing and recycling industries," Winstead reported.

The term "open-hearted" refers to a product's ergonomic design that, during a production change, for example, allows the operator to gain complete access to the rotor and cutterhouse at the heart of the machine in just three steps, without the aid of any tools.



Rapid Granulator, Inc.

"When one considers that apart from initial investment, cleaning and maintenance represent the biggest cost factor over a granulator's lifecycle, whenever savings can be safely incorporated, it can enhance the processor's bottom line," said Winstead. Centrally located or besidethe-press, the 600-series is designed for the high-volume granulation of injection molded, blow molded or extruded plastic parts and waste, and can handle throughputs up to 10,000 PPH.

The series, which has a rotor diameter of 24"/600 mm, is available in 36"/900 to simple polypropylene, we provide

mm, 48"/1,200 mm and even 60"/1,500 mm widths. Even greater flexibility is available, as the machines can be equipped with Rapid's Super Tangential Cutter House to allow the granulation of parts bigger than the rotor diameter.

Rotogran International designs and manufactures a full line of size reduction and auxiliary equipment for the plastics recycling industry. Mike Cyr, vice president of sales, said, "Rotogran's solid reputation is based on our ability to customize products to meet specific applications while remaining sensitive to today's economic reality.

"Our granulators can be used as single pass primary units producing up to 8,000 lbs. an hour of regrind, or our products can be paired with a pre-sizing shredder to increase overall production. Metal detecting conveyors with auto reject mechanisms prevent contamination from ferrous, nonferrous and stainless steel. Easily replaceable wear inserts within the solid steel cutting chamber save considerable time and expense normally associated with processing harsh, abrasive material. Hydraulically-assisted hopper and screen operation dramatically decreases down time for routine maintenance."

In the realm of plastics reclamation, and in specific plastic granulators, John Farney, global technical sales manager, said, "Cumberland Engineering offers a complete product array, the most extensive application knowledge base and the most overall experience of any manufacturer. We offer the highest quality, most durable units available in the industry. Our solutions are based on principles of durability and reliability – a benchmark of the plastics industry."

According to Farney, Cumberland designs stress attributes such as strength and longevity. Units are fabricated from solid steel, do not employ weldments and include the highest fit and finish possible. Units are assembled using individually fabricated components, which are doweled and bolted in assembly, resulting in an end-product that can be cleaned and maintained through years of service. There are Cumberland units that have been operating regularly since 1958, according to the original owners.

"As the longest operating supplier, we have application experience in all areas of the reclamation of plastics. From tires to PET or post-industrial waste, our units excel, whether the performance level is 500 lbs. per hour, or 12,000 lbs. per hour. From engineering-grade resins to simple polypropylene, we provide solutions to achieve the highest performance, with fantastic return on investment.

"Our X-series granulators, commonly used in recycling, offer key economical attributes such as ease of operation, main-



Cumberland Engineering

tenance and high output with low power consumption. These units provide easy and safe access for maintenance and cleanout, with optimal design for feeding and operation," Farney said. He claimed that complete machine maintenance, including knife changes, can be accomplished in about 90 minutes. Clean-out or change-over from one resin or color to another requires less than 15 minutes. "Add high energy efficiency, and the lowest operating costs possible, and the units bring the quickest payback possible," said Farney.

He added, "In an industry where demands for constant improvement and growth in terms of performance are needed, these and other units are adapted for ever-growing and changing achievements. One key enhancement is the addition of an in-feed crammer, designed to augment the feeding of PET bottles and other reclaimed materials, to increase ingestion, reduce feeding time and increase output.

By restricting the bounce and movement of materials fed to the unit, the crammer aids in material feeding, and augments the performance of applications and units suited to its use."

Farney noted that within industry segments, the prevailing trend is to achieve more performance, without increasing costs and without creating a larger demand on energy resources.

Manufacturer List

American Pulverizer Skip Anthony 314-781-6100 www.ampulverizer.com

Plastics

Granulators

Cresswood Recycling John Connor 800-962-7302 www.cresswood.com

Cumberland Engineering John Farney 262-641-8638 www.cumberland-plastics.com

Foremost Machine Builders,

Inc. Drew Schmid 973-227-0700 www.foremostmachine.com

Franklin Miller Inc James Heyden 800-932-0599 www.franklinmiller.com

Herbold Meckesheim USA David Lefrancois 888-612-7774 www.herboldusa.net

Hosokawa Polymer Systems Jack Bowne 860-828-0541 www.polysys.com

Jordan Reduction Solutions Richard Pyle 888-733-8248 www.jordanreductionsolutions.com

Pallmann Pulverizers Co, Inc. Kevin Moros 973-471-1450 www.pallmannpulverizers.com

Rapid Granulator, Inc.

Kirk Winstead 724-584-5220 www.rapidgranulator.com

Rotogran International, Inc. Mike Cyr 905-738-0101 www.rotogran.com

Vecoplan LLC Kim James 336-861-6070 www.vecoplanllc.com



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Plastic lumber

Continued from Page 1

Columbus, but in the 90s he was one of the engineers who worked with PLTA to help establish the ASTM standards (D6108 for Manufactured Recycled Plastic Lumber and Shapes; D6109 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber and D6662 Specification for Polyolefin-Based Plastic Lumber Decking Boards). "The Army Corps study was one of the first technical evaluations of plastic lumber which eventually led to the ASTM standards. That triggered the growth. The part of the industry that has really taken off in the marketplace is the wood-plastic composite for decking where sawdust is added to polyethylene."

How much recycled polymer goes into finished goods varies by manufacturer and is unknown proprietary information, but a key selling point are products where a majority of the material is recycled, or even better, 100 percent recycled. This has unique appeal to green-builders, environmentally conscious government agencies and those seeking LEED accreditation (Leadership in Energy and Environmental Design). "I would say it is a fair statement that most manufacturers use a majority of recycled plastics in their products," said Larsen.

According to Larsen, plastic-composite residential material such as decking costs from 10 to 20 percent more than wood and higher end commercial products two to three times more. "But that added cost is made up in the durability of the product and savings in labor and maintenance, and the cost to go back and replace or reinstall, especially in municipalities." This is widely apparent in renovated streetscapes and parks across the country where RPL benches, tables and waste receptacles have significantly replaced wood that was pressure treated with chromated copper arsenate or the less toxic alkaline copper quat.



must manufacture the equipment featured. We require a company name, contact person, telephone number and, if applicable, a website address.

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Over the past decade there have been tremendous technological advancements in RPL. Although recycled plastics are used, fillers such as sawdust, colorants and stabilizers are added as well as reinforcing materials such as fiberglass and natural fibers like jute, kenaf and flax. Reinforcing materials provide rigidity and strength and can constitute from 20 to 25 percent of total RPL weight.

Because RPL does not contain toxic chemicals, it is a viable alternative to treated wood, especially in environmentally sensitive wetland areas. There are mechanical property differences between plastic lumber and wood, but with appropriate design considerations, durable, low-maintenance structures can be built. While innovative designs can be competitive on a first-cost basis, RPL structures built from plastic lumber are clear winners on a lifecycle basis.

"It's more than durability, especially for residential applications. The driving factor is that you don't have to stain or paint it every few years. Today, if you go to a Home Depot or Lowe's and pick up composite lumber decking, you are getting a top quality product. All the early generation materials had too much wood flour and other problems, but they have been fixed," Krishnaswamy noted.

When it comes to brute strength, RPL is making impressive progress. Krishnaswamy was involved in testing a 30-foot arch-truss bridge in Albany, New York constructed of laminated and solid members made from approximately 70,000 recycled milk jugs. Designed to carry highway loading, a fully loaded dump truck weighing almost 32,000 pounds was used to test the bridge. The maximum deflection was only 1.2 inches. The test data is being used to develop further standards for structural RPL designs.

Bedford Technologies manufactures reinforced RPL made of 100 percent recycled high density polyethylene combined with fiberglass, colorants and ultraviolet stabilizers. This combination provides better strength and rigidity for more demanding applications. With over 35 profiles, 15 color options and the ability to manufacture custom shapes and sizes, Bedford claims its products can meet most any need and offer advantages over composite plastic-wood lumber.

Founded in the early 1990s, Bedford has developed a wide variety of commercial-industrial markets. "Our markets associated with manufacturers of outdoor furniture, playground sets, agricultural related equipment and the marine industry are actually going quite well," Larsen noted.

In fresh water and ocean marine environments, Bedford RPL is used for piers, dock decking and as fendering material in canal locks. "We make a really wide variety of dimensional RPL, from 2x2 up to 12x12 inches," said Larsen. The larger sizes can be used for piles that can be set in hydraulic cement and are strong enough to be pile driven, or used as cross members.

RPL is ideally suited to marine applications despite costing two to three times as much as treated wood. That is because durability and low maintenance costs are prime considerations, especially for corrosive salt water environments. Equipment and labor costs associated with building and maintaining marine infrastructure are also typically higher than in conventional construction.

"Most of the recycled polymers we use are PE grade with limited recycled PVC. Typically we get our raw material from municipal recycling centers, usually bottle-grade. We buy bales and sometimes ground. We buy in a lot of different forms," said Larsen.

Even with the growth in recycled plastics over the past several years, in 2008 only 10.9 percent of HDPE (high density polyethylene) and 14 percent of LDPE/LLDPE (low density polyethylene and linear low density polyethylene) was recovered. Obviously, there is tremendous potential for recovery of materials that can go into RPL and a steady demand for durable, low maintenance, green building products. Beside the fact that RPL is heavier than wood, no special training or tools are required to build with it.

"Through the economy downturn there have been some RPL manufacturers that have gone out of business, but that's true in most industries at this point. There's been some consolidation. Nevertheless, it's still a very positive outlook. There are still good markets and good things going on in the industry," Larsen said.

Alan Robbins, the founding president of PLTA, became a casualty of the late 2008 perfect storm of high commodity prices, a crash in construction and the credit freeze. He was founder and president of The Plastic Lumber Company, which began in 1989 as one of the earliest American extruders of structural RPL for the commercial market. Robbins, one of the early leaders in the industry, contributed to the establishment of the ASTM standards, and developed the markets for the playground, park and recreation industry by designing some of its first products.

Due to defaults by several of his major customers during the economic crisis, Robbins was forced to liquidate Plastic Lumber in June of last year and sell off extrusion equipment. A month later he established Bright Idea Shops LLC as a fabricator of RPL products. "I still have faith in the business. The whole principle of using recycled bottles and making it into product is a very feasible business. I see some nice things going on in the structural arena where these material systems are going for long term durability, good aesthetics and cosmetics looks. I think it's a great way to go."



Graham Packaging agrees to purchase China Roots Packaging

Graham Packaging Company, L.P., expects to acquire China Roots Packaging PTE Ltd., a plastic container manufacturing company located in Guangzhou, China.

Graham Packaging has signed a share purchase agreement to acquire from PCCS Group Berhad 100 percent of the shares of Roots Investment Holding Private Limited, which will be the sole equity holder of China Roots.

China Roots operates a world-class container manufacturing plant in the Guangzhou Economic and Technological Development District. The plant makes plastic containers and closures for food, health care and petrochemical products. Its customers include several global consumer product marketers.

The purchase of China Roots will be the first operation for Graham Packaging in China.

A Closer Look

by Donna Currie

Phoenix Technologies Bob Deardurff • 419-353-7738

Bob Deardurff has been president and CEO of Phoenix Technologies for the past five years, but he was "involved in the inception of the company" nearly 18 years ago.

Before Phoenix Technologies existed, Deardurff worked at Plastics Technologies, Inc., which was founded by Dr. Tom Brady in 1985 to engineer and develop polyethylene terephthalate (PET) products. Deardurff called Plastics Technologies "the catalyst of Phoenix," although the two are now separate companies.

"We saw a need for recycling," Deardurff said, and the 90's was the right time to seize the opportunity to launch a PET recycling company. While at Plastics Technologies, Deardurff wrote the business plan for the company that became Phoenix Technologies. He has been involved with Phoenix ever since, beginning with overall management of the new company before becoming president.

Deardurff's involvement with PET goes back even further. When he was in college, he interned in the plastics field and said, "I really enjoyed it. It was an exciting area at that time. It was all brand new." It also introduced him to other people in the field. "It gets down to relationships."

Unlike many other recycling companies that have expanded their product lines to cover a broad spectrum of material, Phoenix focuses on recycling just one thing: PET.

Phoenix employs about 60 people at its single location in Bowling Green, Ohio, but the company has some international ties as well, with "technology that has been licensed in Australia." While Phoenix doesn't manage or run businesses in Australia, Dearduff said that "an occasional visit" is sometimes necessary.

The PET that Phoenix handles is all post-consumer material from curbside collections. Deardurff said that they get most of the material from "reasonable shipping distances in the United States," but what those reasonable distances are depends on the current markets. At times, Phoenix brings in material from much greater distances.

Phoenix produces three major products. The original product is a non-foodgrade plastic for use in detergent jugs, soap bottles, and similar products. And in the late 90's the company perfected a process that allowed them to sell material that could go into the manufacture of food-grade plastic products.

The newest product is material that can be used in food-grade products at a 100 percent concentration. Deardurff said that the new product is clear or light blue "what you'd expect to see in your standard water bottle."

In the time that Deardurff has been president of Phoenix, he said the recycling stream has become more complex, with new additions in the finished plastics that have to be accounted for when recycling those materials. "It continues to require a strong eye towards quality," he said, and that a continuing challenge is "yield coming in versus high quality material going out."

To feed the recycling process, Phoenix buys material from 10-15 different suppliers each month, and the material that goes out is ready for use by injection molding companies. "We're focused on being a resin manufacturer." Deardurff said

He is also very concerned about the carbon footprint of the entire process, and is concentrating on new technologies that would allow smaller plastics recyclers to pull materials from a smaller geographical area, thus reducing the shipping costs. To that end, Phoenix is looking at licensing its technologies in the States, much as it licensed its technology in Australia.

Deardurff said that part of the company's success has been "recognizing that relationships are key," and maintaining those good relationships in the industry. But the company's success also relies on technology, particularly in an industry where the incoming products are constantly evolving as manufacturers change their formulas.

Deardurff is confident that Phoenix is staying ahead of the technology curve, and he said the company is dedicated to "advancing the value of recycling through technology."

'Plastics Make it Possible' helps raise nearly \$50,000 for athletes

athletes that competed in the 2010 Paralympic Games and all athletes with disabilities, Plastics Make it Possible, an initiative sponsored by the plastics industries of the American Chemistry Council, helped raise nearly \$50,000 for Athletes with Disabilities Network (ADN), a partner with Easter Seals -Michigan, which provides services and mentorship for disabled athletes across the country.

During March and April, people across the United States visited the Plastics Make it Possible website and Facebook page to make donations to ADN and help inspire athletes with disabilities to become future Paralympians. Plastics Make it Possible then matched dollar-for-dollar the \$23,291 that was raised through corporate and private donations, for a total gift of \$46,582 to ADN.

"We are thrilled to have raised money for an organization like Athletes with Disabilities Network to help inspire a whole new generation of athletes," said Steve Russell, vice president, Plastics Division of the American Chemistry Council. "From carbon fiber technology used for shock absorption to custom-fitted sockets made from resilient polyethylene and polypropylene, plastics are a vital part of the innovative, active prostheses that are used by many disabled athletes in the sports they typically enjoy. This is a wonderful demonstration of how plas-

To celebrate the achievements of tics are being used in innovative ways to help make people's lives better."

According to the Centers for Disease Control and Prevention, there are 1.7 million amputees in the United States, many of whom rely on active and sports-grade prostheses to keep fit and stay healthy. These prostheses have been revolutionized by plastic materials that help make them stronger, lighter and more flexible, and to function more like natural limbs. These high-tech prosthetic devices are being used by Paralympic athletes and by many noncompeting amputees who want to continue to live an active lifestyle.

"We've seen firsthand how innovations in plastics used in active prostheses have helped athletes to not only overcome the trauma of limb loss, but flourish in competitive events like our own Extremity Games," said Elizabeth Taylor, executive director of ADN. "The donations made through this program will help many athletes continue to compete in the sports they love."

Established in 2009, ADN promotes a better quality of life by creating opportunities for people with physical disabilities. ADN operates and organizes the Athletes with Disabilities Hall of Fame, the only Hall of Fame completely dedicated to honoring individuals with disabilities for sport and recreation achievement, and Extremity Games, an international extreme sports competition for athletes living with limb loss or limb difference.

The best way to make a fire with two sticks is to make sure one of them is a match.



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PET more earth-friendly than glass and aluminum bottles

A newly released life cycle inventory of single-serving soda containers concludes that PET plastic bottles offer a better environmental footprint than aluminum cans or glass bottles by using less energy, generating less solid waste, and creating significantly fewer greenhouse gases.

Cradle-to-grave, PET beats glass & aluminum emmisions

The cradle-to-grave study, conducted by Franklin Associates for the PET Resin Association (PETRA), compared total energy, solid waste and greenhouse gas emissions per 100,000 ounces of soft drinks packaged in typical 20 oz. PET bottles, 8 oz. glass bottles, or 12 oz. aluminum cans. The PET bottles showed appreciably lower numbers across the board.

Most notable were the lower greenhouse gas emissions for the PET bottles, which registered 59 percent less than aluminum and 77 percent less than glass. Franklin calculated the greenhouse gas emissions for the PET bottles at 1,125 lbs. of carbon dioxide equivalents, compared to 2,766 lbs. for aluminum and 4,949 lbs. for glass.

Energy use for the PET bottles totaled 11.0 million BTU per 100,000 ounces of soft drink, compared to 16.0 million BTU for aluminum and 26.6 million BTU for glass.

Solid wastes for the PET bottles totaled 302 lbs., versus 767 lbs. for aluminum, and 4,457 lbs. for glass. Solid waste volume was 0.67 cubic yards for PET, 0.95 cubic yards for aluminum, 2.14 cubic yards for glass.

"This study again confirms the excellent environmental profile and value of PET for packaging foods and beverages," said PETRA executive director Ralph Vasami. "Since 2005, PET containers have been the subject of several independent life-cycle analyses and PET has consistently shown itself to be a sound environmental choice whether compared to glass, metal or other plastics."

The post-consumer disposal and recycling calculations included transporting to a landfill or incinerator, equipment operations at a landfill, and energy recovered by an incinerator, but excluded incinerator and landfill emissions. Post-fabrication transportation to the filling site, filling, distribution, storage, retail use and consumer use were excluded.

> For additional information view this article on www.AmericanRecycler.com.

JM Eagle moves to dismiss lawsuit by ex-employee

JM Eagle, a manufacturer of plastic pipe, asked a federal judge to dismiss a lawsuit filed by an ex-employee because it lacks any evidence the company's pipe was substandard and failed to achieve basic legal thresholds for success.

In addition, JM Eagle filed with the court a motion to strike certain irrelevant and objectionable references in the complaint to the ethnicity and nationality of individuals connected with the company. The plaintiff's law firm, Phillips & Cohen, was provided an opportunity to remove the offending references themselves, as the law requires, but declined to do so.

JM Eagle asserted that its pipe has always been of the highest quality as verified by regular, independent tests and constant internal inspections. In fact, according to the motion, the plaintiffs did not connect any of the few instances of claimed pipe failures to sales to governmental entities or even allege the problems were the result of fraud.

As proof of its confidence, the company recently placed an unprecedented 50-year warranty on its products for manufacturing defects - including for pipe already in the ground for decades.

The company's motion asserted that the lawsuit's accusations are unfounded. "This is a case of a dishonest and disgruntled former employee cobbling together ambiguous technical details, baseless insinuations and innocent mistakes into an inflammatory fraud complaint," the motion stated. "These fraud allegations are meritless and malicious."

The lawsuit "fails to identify any pipe sold by JM Eagle that failed to meet contract requirements, specifications, or standards. When pieced together, the allegations do not show that any nonconforming product was received by any particular government customer, much less that any has worn out prematurely," the motion added. "The allegations boil down to insinuations, misinterpretations, unsupported conclusions, and disagreements over technical matters."

The motion also notes that the complaint, though still pending in federal district court, has already begun to unravel. "One of Relator's primary witnesses showcased in the complaint, Brian Wang (a former plant manager for 22 years) gave a sworn statement claiming the falsity of the quotes attributed to him," the motion stated. "Not surprisingly, the Federal Government and the States of California and Florida have already declined to intervene in this illconceived complaint (and others are expected to follow)."

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