



American Recycler

NewsVoice of Salvage, Waste and Recycling

AmericanRecycler.com

FOCUS: Waste

Ongoing safety initiatives in the waste and recycling arena

by MAURA KELLER

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According to the U.S. Bureau of Labor Statistics, waste material collection – specifically of refuse and recycling materials – is the fifth most dangerous job in the country, and incidents involving the transportation of waste are the cause of 40 percent of the injuries and fatalities.

That’s why a myriad of municipalities are turning their attention to the issue of the safety of waste collection workers. One of the more prominent initiatives is the “Slow Down to Get Around” law that was most recently signed into law by Virginia Governor Terry McAuliffe in 2015.

With this law, Virginia joined several other states that have enacted Slow Down to Get Around legislation including Wisconsin, North Carolina, West Virginia, Florida, Georgia, Indiana, Michigan, New York and Alabama.

The “Slow Down to Get Around” law says drivers must reduce their speed to at least 10 miles per hour below the posted speed limit and pass at least two feet to the left of any stationary vehicle that is collecting trash or recycling.

As Jeff Wolf, a Los Angeles-based personal injury attorney and partner of the personal injury law firm Heimanson & Wolf LLP, explained, the most significant risk of death or serious bodily injury facing waste and recycling collection employees is the risk of being struck by a driver.

“Slow Down to Get Around laws have now been enacted in more than a dozen states,” Wolf said. “They are designed to ensure that motorists slow down and exercise caution when encountering these workers – but they also make it easier for workers to show a violation of the law when they are injured on the job.”

These laws are meant to protect these workers who are in and out of their vehicles to do their job while drivers are simultaneously rushing to and from work and speeding around town – because this combination is so likely to create dangerous and potentially deadly scenarios, added protection for these circumstances is important.

“If a waste employee is injured by a motorist who fails to yield, that employee can point to the Slow Down to Get Around law to hold the driver responsible for the waste employee’s harm,” Wolf said. “Interestingly, the employee does not need to prove that the driver was negligent. Rather, he or she need only prove that the driver violated the Slow Down to Get Around Statute



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and the driver will be liable for the employee’s injuries or death. Again, this does make it easier for the employee to make their legal case and get the redress they deserve for their injuries.”

California does not currently have a Slow Down To Get Around law, however, the state’s “Move Over” law requires moving over for specific vehicles, including tow trucks and ambulances, but waste management vehicles are not among those specified.

“It would seem that the states that do include those vehicles are perhaps doing a better job of protecting those workers,” Wolf said.

“My home state of Virginia, recently passed a lane traffic law requiring drivers to reduce speed before passing sanitation trucks,” said Wayne D’Angelo, partner at Kelley Drye & Warren. D’Angelo advises heavily regulated companies and industries on environmental, health, safety and natural resources matters. “Many other states – and local municipalities – are similarly focused on vehicle safety.”

As D’Angelo explained, some companies have incorporated technological developments into their daily vehicle operations. For example, waste trucks have cameras capturing vehicle behavior for ongoing risk evaluation, lifting mechanisms to avoid strain and repetitive motion injuries.

Wolf added that the effective use of technology – alert systems and dash cams– as well as increased security and training of individuals in the field, does seem to have an impact on worker safety for roadside or highway workers generally. Different technology initiatives can

result in a safer working environment for waste workers as well.

“Now that it’s getting warmer out, you will see companies and regulators increasing awareness on the signs and symptoms of heat stress, as well as ways to avoid heat-related illnesses,” D’Angelo said.

Michael Benedetto, president and owner of TFC Recycling says that automation of the waste collection process is key to helping curb accidents and injuries in the collection process.

“For curbside recycling and waste collections, automation is important,” Benedetto said. “Some companies in Florida, for example, will drive from stop to stop with drivers on the back of the truck. Injuries are significant for manual collections.”

TFC is headquartered in Chesapeake, Virginia, employs over 350 people and operates more than 180 collection and transfer vehicles. They provide recycling services for over 700,000 households in 6 of Virginia’s largest cities, and more than 4,000 commercial customers in Virginia and North Carolina.

“Two things that are driving the increase in safety measures by companies and municipalities are the desire for safety and the high costs for insurance and claims,” Benedetto said. “TFC is part of a captive insurance program, with about 150 other companies that share risk and are partially self-insured.” A captive insurer is typically an insurance company that is wholly owned and controlled by its insureds; its primary purpose is to insure the risks of its owners,

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Landfill usage and its impact on the industry



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C1S Group constructs Dallas Recycling Plant

Facility will supply recycled plastic manufacturer



Plastic recycler CarbonLITE has engaged C1S Group as the primary contractor for the construction of a new North Texas recycling facility. C1S Group, a full-service professional engineering and construction firm based in Dallas, is converting an existing facility in southwest Dallas into a leading edge recycling center.

Plastic recycler CarbonLITE has engaged C1S Group as the primary contractor for the construction of its new North Texas recycling facility. C1S Group, a professional engineering and construction firm based in Dallas, Texas has begun the process to convert the facility located on Mountain Creek Parkway in southwest Dallas into a leading edge recycling center.

To prepare the facility for CarbonLITE's recycling operations, C1S is providing new electrical services, adding storage silos and increasing the height

on a 5,500 sq.ft. section of the 230,000 sq.ft. building.

Construction is expected to be completed by early summer 2017. CarbonLITE, one of the world's largest producers of food grade post-consumer recycled plastic, will use the building to manufacture new polyethylene terephthalate (PET) resin flakes and pellets created from old plastic bottles. At its similar California bottle-to-bottle recycling plant, CarbonLITE processes more than two billion post-consumer plastic bottles annually.

Call2Recycle launches U.S. all battery recycling service

Call2Recycle®, Inc., North America's largest consumer battery stewardship and recycling organization, launched a new, expanded all battery service that provides one-stop battery collection and recycling for both rechargeable and single use (AA, AAA, 9v, D-cell and button cell) batteries under 11 lbs. throughout the U.S.

"The widespread adoption of technology by consumers is rewriting the recycling landscape," said Carl Smith, chief executive officer and president, Call2Recycle, Inc. "The rising demand for batteries to power these devices calls for a national approach to keep all household batteries out of the waste stream."

"Call2Recycle research shows that the most effective way to boost battery collections is to collect all household battery types together so consumers don't need to figure out which can and can't be recycled," said Smith. "A national program expansion satisfies the needs of both collection site customers and consumers who have been lobbying for one-stop recycling because of its greater convenience."

The new all battery service is available to all of Call2Recycle's over 20,000 U.S. collection sites. In addition, Call2Recycle will offer separate services for single-use and rechargeable battery recycling. Fees vary, depending on the services selected as well as collection volumes and shipping method. Those interested in participating in the new service can use a new online tool to

identify which battery recycling solution best meet their needs based on location, type and volume.

As part of the new service, Call2Recycle has introduced pay-as-you-go all battery box recycling kits targeted to businesses, government agencies, individuals or those on a budget. Anyone can purchase collection kits for one upfront fee in a new online store. The collection kits include a US DOT approved collection box, plastic bags to safely protect battery terminals and a postage-paid return shipping label. The purchase price covers all shipping and recycling fees.

Single-use battery collection has already proven successful in Vermont, where Call2Recycle is the leading stewardship program for both rechargeable and single-use battery collections. Vermont is the first U.S. state requiring battery manufacturers and producers to finance a collection and recycling program for single-use batteries. Call2Recycle's collections in the state jumped 187 percent during 2016, the first year of combined collections.

Collection requirements vary widely throughout the U.S., with some jurisdictions collecting only rechargeable batteries under an industry-funded Call2Recycle program and others collecting both types. Consumers are typically required to sort rechargeable and single-use batteries prior to recycling. The all battery service eliminates the sorting that often discourages people from recycling.

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Forty-one grants created to improve recycling in parks

As Americans head to their favorite public park, beach or playground this spring, many will find new recycling bins helping keep those treasured spaces clean thanks in part to a significant grant by Dr Pepper Snapple Group in partnership with national nonprofit Keep America Beautiful.

In 2017, the Dr Pepper Snapple Group/Keep America Beautiful Park Recycling Bin Grant Program is funding 914 new recycling bins in public parks across the country in 2017, making recycling more accessible for Americans enjoying the outdoors.

Now in its fifth year, the Park Recycling Bin Grant Program from Dr Pepper Snapple Group and Keep America Beautiful has provided more than 4,300 recycling bins to local governments and community organizations across 41 states.

“Too many public parks and other public spaces lack recycling bins that are within reach,” said Brenda Pulley, senior vice president/recycling, Keep America Beautiful. “Our partnership with Dr Pepper Snapple Group has placed bins in hundreds of parks across the U.S., in the process giving nearly 1 million people

convenient access to new recycling opportunities.”

A recent national survey conducted by Keep America Beautiful revealed a lack of away from home recycling opportunities. While more than 90 percent of people indicated it was not a challenge to recycle at home, over 55 percent found it difficult to recycle in public places such as parks. Additional research conducted by Keep America Beautiful indicated only 12 percent of surveyed public locations had recycling infrastructure in place to recover the containers. The Dr Pepper Snapple

Group/Keep America Beautiful Park Recycling Bin Grant Program is designed to address the obstacles of overcoming lack of recycling convenience.

In addition to improving recycling opportunities, the grant program will make additional funds available to Keep America Beautiful community based affiliates and other grant recipients who commit to conducting a Litter Index in conjunction with the grant to help study the effects of the recycling bins to reduce litter in the immediate areas of the bins.

Over one million pounds of batteries recycled

The Home Depot has recycled more than one million pounds of rechargeable batteries in 2016 through its in-store takeback program, in partnership with Call2Recycle. The Home Depot is Call2Recycle’s first North American retail partner to achieve this milestone in a single year.

Call2Recycle is a non-profit product stewardship program that provides a take back recycling service at more than 2,000 Home Depot stores across the U.S. and Canada. In total, Home Depot has recycled more than eight million pounds of rechargeable batteries since the partnership launched in 2001.

Customers can drop off their rechargeable batteries in collection bins at Home Depot stores. The bins are then shipped to facilities where they are sorted and recycled. Various metals are extracted and used to create new stainless steel products including pots and pans, new batteries, and even golf clubs.

“For 16 years, The Home Depot has made battery collection and recycling part of its environmental commitment,” said Carl Smith, chief executive officer and president of Call2Recycle, Inc. “We recognize and applaud The Home Depot’s efforts not only for reaching this significant milestone of diverting one million pounds of batteries from landfills, but for their role in helping to raise consumer awareness around battery recycling.”

King County hits 41 percent increase in recycling volumes

Expanded recycling opportunities and more customers account for the massive increase

The King County Solid Waste Division saw a 41 percent increase in recycling volumes at its transfer facilities and drop boxes in 2016 over 2015.

The increase is the result of an expansion in the types of recyclable materials accepted, additional employees available to answer customer questions about recycling, and a jump in the number of customers who brought their sorted recyclable and compostable materials to these facilities.

The division handled 25,560 tons of separated recyclable and compostable materials in 2016, exceeding its goal of 24,000 tons.

“Employees and customers working together have made great progress toward our ultimate goal of zero waste of resources,” said Pat McLaughlin, director of the King County Solid Waste Division.

Yard waste – including branches, grass clippings, leaves, weeds and holiday trees – accounted for half of the total tons diverted from the landfill at King County recycling and transfer facilities in 2016.

Scrap metal comprised 14 percent of the diverted tonnage, followed by clean wood (lumber, pallets and crates) at 12 percent of the total. Cardboard made up 10 percent, and an additional 12 percent of diverted recyclable materials included paper, glass bottles and jars, metal cans, and plastic containers that

can be commingled in designated recycling bins at division facilities.

Types of recyclable and compostable materials accepted differ by facility, and many materials can be recycled at no charge. While fees are charged for large appliances, clean wood, and yard waste, those fees are lower than the garbage fee.

Since 70 percent of the materials still going into landfills could have been reused, recycled or composted, King County residents and businesses are encouraged to sort recyclable and compostable materials and to use the recycling services provided at King County facilities.

Recyclebank program funds 44 eco projects

Recyclebank, the incentives and education platform focused on waste, disclosed that 44 schools from Recyclebank’s partnering communities successfully raised a total of \$90,670 as part of the annual Recyclebank Green Schools Program.

Each year, participating schools work to encourage residents to donate Recyclebank points to fund their environmental projects. Recyclebank then transfers the points into real dollars – turning the community’s green actions into funds (up to \$2,500) for the school. This year, almost all of the participating schools (38 out of 44) were able to successfully raise the full amount of funds they needed for their projects.

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*** — Testimonial — ***

I received your publication by mail. I can confirm I have never seen it before in its hard copy version. I like the layout and it is very informative, in a league of its own in terms of quality information. No wonder it is the only recycling publication quoted on Lumistar's blog. I look forward to upcoming issues.

I have read issues of your publication in the past by accessing digital archives at one of two libraries I am a member of. Your website is also fantastic.

—Paul Angel, LUMISTAR CORPORATION

KAB launches Great American Cleanup

Keep America Beautiful officially launched the 2017 Great American Cleanup.

Entering its 19th year, Keep America Beautiful's Great American Cleanup is the nation's largest community improvement program with an estimated 50,000 events occurring from spring through fall in more than 20,000 communities across the country. Find a local Keep America Beautiful Affiliate at kab.org.

The Great American Cleanup engages more than 5 million volunteers and participants who take action in their local communities to create positive change and lasting environmental, economic and

social impact. Nationally, the Great American Cleanup annually delivers more than \$175 million in measurable economic benefits. The program is led by over 620 Keep America Beautiful state and community-based affiliates and hundreds of other partners:

- Clean and improve 100,000 miles of roads, trails, shorelines and waterways;
- Plant millions of flowers, trees, shrubs and community gardens;
- Revitalize and restore acres upon acres of public parks, nature trails and recreation areas as well as vacant lots;
- Collect litter, debris and other items for proper disposal, recycling or reuse.

This year's Great American Cleanup theme, "#cleanYOURblock Party," encourages people to volunteer at a local Great American Cleanup event in their community, organize an event on their own block and to celebrate their positive actions with friends, family and neighbors.

National sponsors of the 2017 Great American Cleanup include Altria, Dow, The Glad Products Company, Lowe's, Niagara Bottling and ReadyRefresh by Nestlé. In select Keep America Beautiful affiliate communities, Marco's Pizza will provide free pizza parties for volunteers and participants after Great American Cleanup events.

Safety initiatives

■Continued from Page 1

and its insureds benefit from the captive insurer's underwriting profits.

Additional Measures Taken

Environmental safety issues, as they relate to the waste worker industry, are top of the mind for many companies. Most worker safety regulations don't vary by company. Rather, regulations related to worker safety can be promulgated on a federal, state and local level. To the extent these regulations vary, the variation is geographic rather than company-specific.

Indiana is an example of a state that has more proactive rules and requirements for waste management workers. In general, waste management falls under Federal or State OSHA for workplace safety and these standards are typically fairly consistent.

"States with more focus tend to have more resources to help individual companies meet the expectations," said Rick Fineman, head of risk management at ICW Group. Based in San Diego, ICW Group Insurance Companies is the largest group of privately held insurance companies domiciled in California and represents a group of workers' compensation, property, and auto insurance carriers.

"Waste or recycling drivers are among the top 10 most dangerous professions in the U.S. per National Safety Council's Injury Facts," Fineman said. "Those accidents cost significant resources for increased insurance premiums and other indirect costs. There is also a driver shortage – we're seeing a trend where keeping the drivers you have is becoming more important to business."

According to Gregory Cade, principal attorney at Environmental Litigation Group in Birmingham, Alabama, waste management is a vital activity in the context of protecting human health and the environment.

Cade stressed that states are very involved in taking environmental safety measures, but regarding waste management worker safety they're more focused on minimizing occupational injuries than on protecting workers from bioaerosols, noise, and ultraviolet radiation exposures. California has been one of the leading states on waste worker safety issues.

"It's a shame the activities that waste management workers perform would expose them to various occupational health risks, and it's a shame professional health hazards have not yet been adequately assessed," Cade said. "A state like California, for example, offers initiatives that intend to strengthen EPA and the OSHA type of regulations. The recycling and waste industry pushes to reduce labor and increase mechanization of the processes involved. As human sorting remains an integral part of the process, material recovery facilities (MRFs) employing manual sorters need thorough worker safety regulations."

Having worked for private industry employers for his entire legal career, D'Angelo said that the number one reason employers prioritize safety is a deep and genuine desire to see their employees safely home at the end of their shift.

"As such, I think compliance assistance and awareness programs can be very effective," D'Angelo said. "Employers are generally motivated to provide their employees safe working conditions and often all they need is some assistance in identifying and mitigating risks."

In fact TFC requires a pre-employment physical to insure that they have the appropriate person for each job.

"We want to make sure they are capable of safely doing the job," Benedetto said. "We also drug test to ensure a drug-free workplace."

Benedetto and his team at TCF are not alone in their determination to provide a safe working environment, as more industry players believe municipalities and private waste management companies will continue to focus on safety.

"As the cost of accidents rise and the pool of available workers continues to shrink, all worker safety will become a priority for municipalities," Fineman said. "Waste worker safety should become a priority as it is a leading loss source."

And while insurance companies, risk mitigators, municipalities and private companies increase their focus on safety, the general public also has a key role to play.

"Municipalities focus on their priorities of their voters," D'Angelo said. "Nobody wants workers injured on the job, and if voters are observing unsafe operating or working conditions, they will make themselves heard."

Events Calendar

May 8th-11th

AISTech, The Iron & Steel Technology Conference and Exposition. Music City Center, Nashville, Tennessee. 724-814-3000 • www.aist.org

May 8th-11th

WasteExpo. Ernest N. Morial Convention Center, New Orleans, Louisiana. 800-927-5007 • www.wasteexpo.com

May 10th-11th

15th Annual CARE Conference. Hyatt Regency, Indianapolis, Indiana. 706-428-2127 • www.carpetrecovery.org

May 16th-17th

TCEQ Environmental Trade Fair and Conference (ETFC) 2017. Austin Convention Center, Austin, Texas. 512-239-3143 • www.tceq.texas.gov

May 21st-24th

The Federation of New York Solid Waste & Recycling Conference and Trade Show. The Sagamore on Lake George, Bolton Landing, New York. 585-325-7190 • www.nyfederation.org

May 22nd-23rd

NRRA'S 36th Annual Northeast Recycling Conference & Expo. The Radisson (Center of New Hampshire), Manchester, New Hampshire. 800-223-0150 • www.nrna.net

June 5th-8th

Air & Waste Management Annual Conference & Exhibition. Westin Convention Center, Pittsburgh, Pennsylvania. 800-270-3444 • www.awma.org

August 8th-11th

2017 ADS International Convention & Tradeshow. Wynn Las Vegas, Las Vegas, Nevada. 816-285-0810 • www.diesel.org

August 21st-23rd

Waste Conversion Tech Conference & Tradeshow. Hyatt Regency Mission Bay Spa & Marina San Diego, California. 850-386-6280 • wasteconversionconference.com

August 23rd-25th

Agricultural Plastics Recycling Conference & Trade Show. Hyatt Regency Mission Bay Spa & Marina San Diego, California. 850-386-6280 • www.agplasticconference.com

September 12th-14th

The Battery Show Exhibition & Conference 2017. Suburban Collection Showplace, Novi, Michigan. 855-436-8683 • www.thebatteryshow.com

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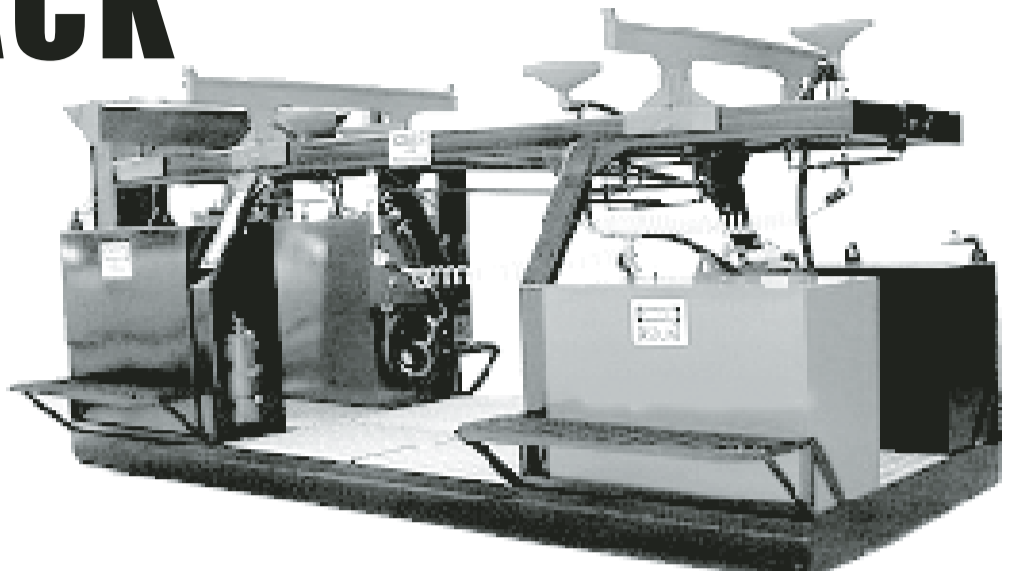
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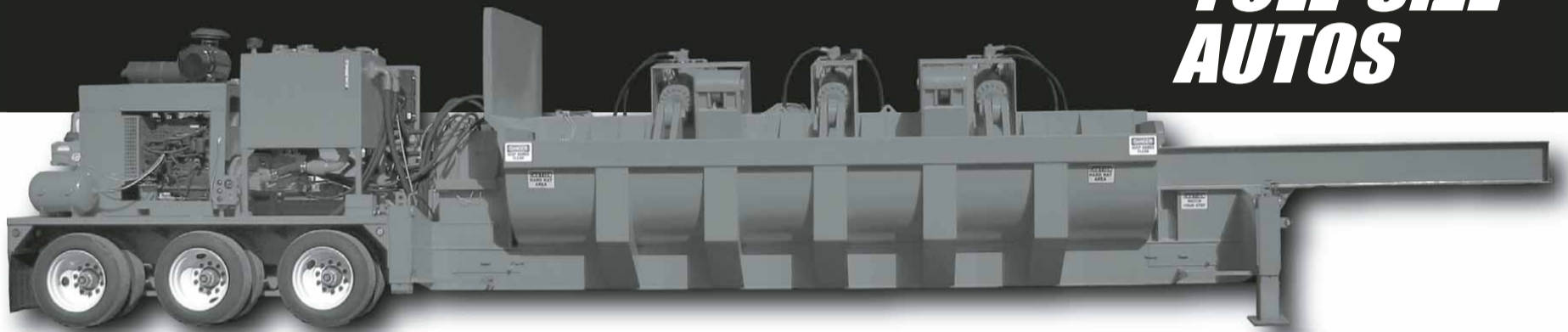
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The aircraft carrier, USS Independence, to be decommissioned and recycled by EMR Group

The decommissioned aircraft carrier, USS Independence has just passed by Costa Rica on its final mission, from Bremerton and onward to Brownsville, Texas.

This is the first leg of a long 16,000 mile journey that will take the 60,000 ton super carrier around the tip of South America, transiting the Strait of Magellan and eventually into EMR Group's International Shipbreaking Ltd. yard in Brownsville, Texas. EMR Group is a family business and employs over 4,000 people in 160 recycling facilities around the U.S.

USS Independence left on her final journey on Saturday, March 11th from the Kitsap Naval Base in Bremerton, Washington to Brownsville and is expected to take just under three months to reach Texas.

The carrier is being towed by a tug named the Dino Chouest and the journey will involve navigating down the West coast of the Americas and then back up the East coast of South America. She follows two of her fellow Navy vessels to the same site in Brownsville – the USS Constellation and the USS Ranger (of Top Gun fame).

The Brownsville site is a metal recycling yard operated by International Shipbreaking Ltd., part of the EMR Group. The company won the Navy bid to recycle the 60,000 ton vessel, the last of the Forrestal-class of "supercarriers."

Chris Green, the senior manager of the Brownsville site commented: "The scale of the logistical and towing preparation to set the USS Independence on her final voyage has been enormous. Preparations at the Brownsville yard are complete and the team is ready in anticipation for her arrival.

"We take great pride in having been awarded another US Navy ship recycling contract. It's testament to our parent company EMR's investment in the International Shipbreaking Ltd. facilities that we are able to complete large scale ship recycling contracts in a safe and environmentally responsible manner."

The arrival of the USS Independence in Brownsville, likely in early June, will be celebrated with a beach side event.



PepsiCo Recycling names eight Zero Impact Fund recipients

PepsiCo Recycling named the recipients of its Zero Impact Fund, an expansion of PepsiCo Recycling's college and university programs to help bring campus eco-innovations to life. Eight colleges and universities will each receive a contribution from PepsiCo Recycling to help accomplish their environmental goals:

"The Zero Impact Fund showcases great examples of the innovative and sustainable ideas that can come from college

campuses," said Tim Carey, senior director of sustainability at PepsiCo.

Winning project proposals include compost infrastructure development, student education campaigns, renewable energy to reduce greenhouse gas emissions, zero waste programs, a bike share program and landfill diversion programs.

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

EPS Excellence in Recycling awards industry innovators

Expanded polystyrene (EPS) packaging, while often targeted by environmental groups, is at the forefront of recycling – providing education, creating new technologies and upgrading existing programs. Since 2013, the efforts of these groups and organizations are celebrated with the EPS Excellence in Recycling Award.

From the U.S. and Canada, this year's candidates represent the best in technological and sustainable achievement in EPS recycling across North America. Award nominees include:

- Agilyx Corporation from Tigard, Oregon, for developing the first commercial pyrolysis system for EPS;
- Alpine Waste & Recycling from Denver, Colorado, for accepting curbside EPS and issuing an automated sustainability report to keep the general public in the loop;
- Colchester County, Nova Scotia, for upgrading their material recovery facility to accept EPS;
- Demand Products in Alpharetta, Georgia, for creating a hydraulic pressure EPS compacting machine to produce more consistent densified EPS;
- Foam Cycle LLC in Augusta, New Jersey, for their patent-pending reprocessing system to meet EPS recycling needs at the local level;
- Mansonville Plastics Group out of Surrey, British Columbia, who increased awareness about EPS recycling and reuse and for bringing attention to EPS recycling at a federal level in Canada; and
- Plastilite Corporation in Omaha, Nebraska, for working with the Henry Doorly Zoo by organizing a multi-faceted event to collect and publicize EPS as well as educate the public.

Despite recent product bans and cor-

porate announcements to eliminate foam plastics, recycling of EPS continues to grow. While bans are heavily publicized and cited as green initiatives, they tend to disregard the benefits of EPS which include a lower carbon footprint and reduced weight and fuel consumption. Those who head the bans routinely fail to provide metrics on the environmental tradeoffs for alternative materials or establish evidence that environmental benefits were actually achieved by their use. EPS as a material is very recyclable, and more locations that can process EPS are opening on a regular basis.

The award will be given not only on the innovations themselves, but also on the impact each initiative has contributed to EPS waste management improvements. The judges for this year's award include Nina Goodrich, executive director of GreenBlue, Brenda Pulley, vice president of recycling for Keep America Beautiful, Lisa McTigue Pierce, executive editor of Packaging Digest, and Patty Moore, president and chief executive officer of Moore Recycling Associates, Inc.

2017 Award Winner

The winner of the 2017 Excellence in EPS Recycling Award is Foam Cycle, LLC, who created an innovative and patent-pending container recycling system that allows counties, municipalities, schools, colleges and businesses to collect, recycle, process and market EPS foam. Their first one-stop EPS foam education, collection, processing and transportation system was recently installed at the Sussex County MUA Landfill that has been seamlessly integrated into daily operations. Over 2 tons of EPS foam was collected and processed in its first four months.

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Rinse, Recycle, Repeat campaign aims to divert personal care items

Nearly half of Americans do not recycle their beauty and personal care products, accounting for a significant amount of landfill waste.

To make a positive impact on the planet, Garnier and DoSomething.org, the largest organization for young people and social change, have teamed up to launch Rinse, Recycle, Repeat, a national campaign and college campus competition to educate America's youth about the importance of recycling beauty product #empties.

To further drive social participation, Remi Cruz, a lifestyle personality and YouTuber known for her popular channels MissRemiAshten and RemLife, will serve as the face of Rinse, Recycle, Repeat, starring in a public service announcement about recycling her own beauty products.

The goal of the campaign is to tap into the #empties social conversation and educate young people on the importance of bathroom recycling. The campaign will show them how recycling their beauty #empties can keep them out of landfills and be used to create green gardens within local communities. By rallying young people to recycle their #empties, Garnier hopes that this campaign will be able to divert a total of 10

million #empties from landfills by the end of 2017.

To participate in the national Rinse, Recycle, Repeat campaign, individuals can:

1. Sign up online at dosomething.org/rinse, decorate a bathroom recycling bin and share a picture with DoSomething.org on the "Prove It" page online or by texting RINSE to 38383 to be entered to win a \$5,000 scholarship.

2. Once the bin is filled with 10 pounds of beauty #empties, participants can print a free shipping label to send their #empties to TerraCycle to be responsibly recycled.

To help spread the word, encourage friends and family to also recycle in the bathroom and join the #empties conversation, participants can share a photo of their recycling bins on Twitter by tagging @garnierUSA and using #empties and #RRRSweepstakes.

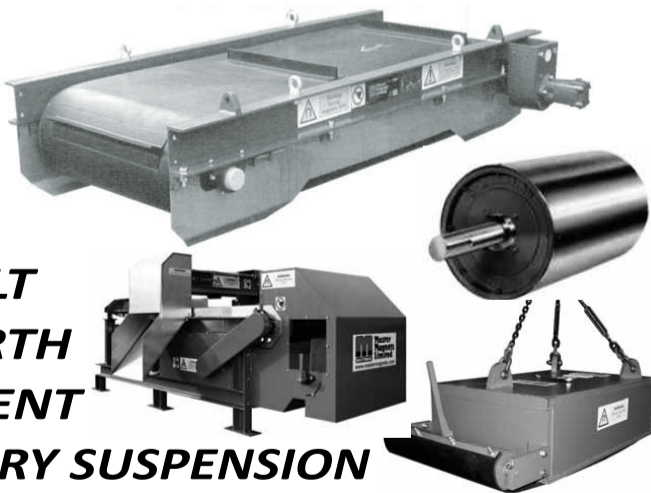
On April 1, a competition kicked off on 50 college campuses nationwide to collect the most #empties. The college team that collects the most #empties will be rewarded with a garden for their community, furnished by Garnier and TerraCycle.

*Police officer: "Can you identify yourself, sir?"
Driver, pulling out his mirror: "Yep, it's me all right."*

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RUBBER

Bandag marks anniversary with retread campaign

Bandag, a business of Bridgestone Americas, Inc. dedicated to the research, development and manufacturing of premium retreaded tires, is marking its 60th anniversary with the launch of a new global campaign designed to reinvigorate the retread category. Called Built for Better, the platform will unite the Bandag brand globally and position retreads as an innovative, sustainable business solution for fleet customers of any size.

"We continue to invest in the Bandag business to further strengthen our retread performance – from advanced rubber compounds that leverage the latest Bridgestone technology to advanced siping that improves wear performance," said Joseph Saoud, president, truck bus and retreads, Bridgestone Americas Tire Operations.

The Built for Better campaign builds on the leadership of Bandag in the

retread category. Founded in 1957, Bandag pioneered the commercial truck tire pre-cure retreading process. Today, the business continues to lead the industry with offerings that keep customers on the road as safely, efficiently and economically as possible. Bandag retreads help fleets maximize their total tire program and achieve greater cost-efficiencies in an increasingly competitive market.

In addition to cost savings and reliable performance, Bandag retreads deliver environmental benefits. Producing a Bandag retread requires only 7 gallons of oil compared to 22 gallons of oil required to manufacture a new tire. Across its 60 years, Bandag has kept an estimated 300 million tires out of the waste stream and saved up to 4 billion gallons of oil.

Edge Rubber expands PA facility

Edge Rubber, located in Chambersburg, Pennsylvania, will double its capacity for coarse crumb rubber. Edge Rubber has added a new cracker mill production line, giving the plant double capacity for ambient materials. The plant's total capacity is now 72 million pounds per year of ambient crumb (in mesh sizes 8 through 30).

This new cracker mill line was installed to meet the growing demand of

several of Edge Rubber's long-standing customers, to support new business, and to improve the cost of production through scale.

Edge Rubber reopened last November after a significant investment from DC-based Anzu Partners, who have worked closely with Edge Rubber's dedicated management team to reestablish itself in the rubber industry.

ALTERNATIVE ENERGY

Neutral Fuels pioneers dairy waste as biofuel feedstock

After two years of research into new and improved ways to create biofuels, Neutral Fuels has become the first company to successfully use butter, cream and ghee waste as a feedstock for creating commercial biofuel.

The new fuel is of the same high quality as the vegetable oil derived biofuel that Neutral Fuels has become known for and which has fuelled McDonald's UAE's logistics fleet for almost seven million kilometers over the past four years. It is European standards compliant, so customers won't notice any difference.

Karl W Feilder, chairman and chief executive officer of Neutral Fuels, said the company was inspired by Dubai Municipality's "Zero Waste by 2030" target.

"Dubai is one of the few places in the world with a proper clean energy vision and a commitment to achieving 100 percent recycling," said Feilder. "We concur with Engineer Abdulmajeed

Abdulaziz Saifaie, director of the Waste Management Department, when he says Dubai has to shift from waste collection to sustainable and innovative waste management. This includes more recycling, more waste-to-energy plants and more investment in this field."

According to a research company Mordor Intelligence, the UAE is the second largest producer of dairy products in the GCC after Saudi Arabia and is expected to experience swift growth to 2021. This means even greater quantities of waste and an even greater need to dispose of it intelligently.

The UAE's annual fresh milk production is 167,000 tons, and every 1 percent waste that is processed into biofuel will result in 1,670,000 liters of biofuel which will reduce the carbon footprint by 4,460 tons of carbon and equivalents. Add to this the waste from making butter, cream and ghee and the volume of biofuel from the dairy industry could more than double.

Vivint Solar reaches 100,000 customers

Vivint Solar, Inc., a full service residential solar provider founded in 2011, has surpassed more than 100,000 solar energy systems installed for the residential sector. This significant milestone underscores the tremendous, growing demand for Vivint Solar's clean solar energy systems.

Vivint Solar has installed over 634 megawatts of residential solar energy systems. With power purchase agreements, lease and cash purchase options, as well as loans customers can access, Vivint Solar provides a wide range of products. Customers save 10 to 30 percent relative to their current utility rate.



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ALTERNATIVE ENERGY

BioHiTech Global acquires interest in MSW facility

BioHiTech Global, Inc., a green technology company that develops and deploys sustainable waste management solutions, has acquired a 17.2 percent equity interest in the nation's first Resource Recovery Facility utilizing a proprietary Mechanical Biological Treatment (MBT) technology for the disposal and recycling of mixed municipal solid waste (MSW). BioHiTech, through its interest in Apple Valley Waste Conversions, has the exclusive development rights for this technology in 11 states in the northeast U.S. and the District of Columbia.

The state-of-the-art waste-to-solid fuel plant which utilizes a patented process developed by Entsorgafin S.p.A., an Italian engineering firm, is currently under construction in Martinsburg, West Virginia, and is expected to begin commissioning in Q4 2017.

Once complete, the facility is being partially financed with a \$25 million

tax exempt bond issued by the West Virginia Economic Development Authority.

The facility will receive MSW through a 10 year contract with a regional waste hauler, 40 to 50 percent of which, will be converted into a clean burning EPA approved alternative fuel (Solid Recovered Fuel or SRF) through the patented MBT process.

The facility has also entered into a 10 year contract for the sale of the SRF with a privately held company in West Virginia that intends to use the SRF as an approved supplement to fossil fuels in the production of cement.

BioHiTech acquired the 17.2 percent interest in Enstorga West Virginia, LLC, a privately held holding company that owns the facility, in exchange for a cash payment of \$1,034,000 and has an option to acquire an additional 22.8 percent for approximately \$1.4M.

Enerkem Inc. achieves new milestones

Enerkem Inc., a waste-to-biofuels and chemicals producer, disclosed that its first full scale commercial facility, located in Edmonton, Alberta, has met all operational milestones set by its senior lender Integrated Asset Management (IAM).

"The Enerkem Alberta Biofuels facility in Edmonton is fully operational in accordance with very rigorous production criteria", said Vincent Chornet, president and chief executive officer of Enerkem. "This third-party validation comes in at the right time as we are expanding our footprint in North America and Europe. Our disruptive solution sets a new standard in waste management, biofuels and chemicals, thus accelerating the transition toward a circular economy where waste becomes a resource to make everyday products."

In less than 5 minutes, Enerkem's technology turns household waste into 99.9 percent pure liquid chemicals and biofuels. Since the start of production, the Enerkem Alberta Biofuels facility has been meeting the highest quality standards set by the International Methanol Producers and Consumers Association (IMPCA) for the production and sale of methanol. Last year, Enerkem's biorefinery also became the first ISCC certified plant (International Sustainability and Carbon Certification) in the world to convert municipal solid waste into biomethanol.

This pioneering facility has been financed by private sources and received funding support from Sustainable Development Technology Canada (SDTC), Alberta Innovates and Alberta Energy.

Do you know what it means to come home at night to a woman who'll give you a little love, a little affection, a little tenderness? It means you're in the wrong house, that's what it means.

CONSTRUCTION & DEMOLITION

Construction employment increased by 58,000, showing continued growth

Construction employment increased by 58,000 jobs in February to the highest level since November 2008 with gains in both residential and nonresidential segments, according to an analysis of new government data by the Associated General Contractors of America. The association urged public officials to strengthen training and education programs to help students and current workers better prepare for careers in the high-paying construction field.

"These numbers match what many contractors have been telling the association – that demand remains strong for a variety of construction projects and that firms are still hiring, when they can find qualified workers," said Ken Simonson, the association's chief economist. "The increase from January to February was the largest one-month gain since 2007, which probably reflected the exceptionally mild weather conditions in much of the nation in February. However, the year-over-year growth was similar to the industry's employment growth rates since last spring, showing that the job gains in February were not solely weather-related."

Construction employment totaled 6,881,000 in February, an increase of 58,000 from the upwardly revised January total and an increase of 219,000 or 3.3 percent from a year ago. The year-over-year growth rate was almost double the 1.8 percent rise in total nonfarm payroll employment, Simonson noted. Average hourly earnings amounted to \$28.48 or 9.2 percent more than the overall private sector.

Residential construction added 18,900 jobs in February and 136,200, or 5.3 percent, compared to a year ago. Non-residential construction (building, specialty trades, and heavy and civil engineering construction) employment increased by 38,500 employees in February and 82,600 employees, or 2.0 percent, over 12 months.

Association officials noted that continuing growth in construction depends on having an adequate supply of new workers to replace those who retire or leave the industry for other reasons. The association urged lawmakers and government officials to expand and fund employment and training programs to equip students and workers with the skills needed to become productive construction employees.

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ELECTRONICS

E-cycleNYC recycles ten million pounds of electronics

Joint effort by ERI, New York City and manufacturers exceeds 10 million pounds

The New York City Department of Sanitation (DSNY), Electronic Recyclers International, Inc. (ERI) and proactive manufacturers, announced that the City's e-cycleNYC has collected and recycled more than 10 million lbs. of electronic waste from city residents.

Now serving over 2.3 million New Yorkers, the program is a public-private partnership between DSNY and ERI. Fully funded by electronics manufacturers, the program is free for NYC taxpayers and participating buildings.

"We are honored to have co-created this constructive collaboration and this historic and successful partnership with the great city of New York and forward thinking manufacturers such as Samsung, VIZIO and LG," said John Shegerian, chairman and chief executive officer of ERI. "That we have now collected more than 10 million lbs. of electronic waste from residents for responsible, effective recycling is a huge accomplishment. Plus, the program now serves more than 2.3 million New Yorkers – over a quarter of the New York City population."

Since the average American household owns 28 electronic devices, and 55 percent of households in New York City have no vehicle access to unload their e-waste, there is clearly a need for such a program.

With the program, New York City area buildings with at least 10 units can receive on-site pickup of stored electronics, including TVs, monitors, computers, laptops, small servers, printers/scanners, tablets/e-readers, mobile phones, MP3 players, VCRs/DVRs/DVD players, video game consoles, cable/satellite boxes, fax machines, keyboards, mice and hard drives.

Depending on the size and type of building, a variety of service options are available, including storage bins, room clean-outs and building events. Other disposal options include household special waste drop-off sites, SAFE Disposal events, and NYC's pilot curbside program in Staten Island. To learn more about electronics recycling in NYC, visit www.nyc.gov/ecycle.

The wife messaged her husband on a really cold winter morning, "Windows totally frozen, will not open."

Husband replied, "Carefully pour warm water over it and tap the edges

with your hand, if that doesn't work, then gently with a hammer."

Fifteen minutes later, the wife texted back, "Oh no, I think the laptop is now totally and forever dead!"

Global protests push Samsung to recycle Galaxy Note 7

At the end of March, Samsung officially published its plan to deal with the 4.3 million Galaxy Note 7 devices produced and recalled worldwide following battery faults. This major win comes after nearly five months of campaigning and global protests addressing the environmental impact of the recall.

"People around the world signed petitions, e-mailed Samsung's CEO, demonstrated in cities around the world, and finally Samsung has listened. This is major win for everyone that took action, and a step towards shifting the way we produce and dispose of electronics," said Jude Lee, Global Senior Campaigner at Greenpeace East Asia.

Samsung's commitment precedes the launch of the Galaxy S8, the first Samsung phone to be released since the Note 7 incident. The phone will be the first test to see how the company will apply these commitments to proceeding models. In a public statement released on its website, Samsung committed to:

- Refurbishing and selling the recalled phones or use them as rental phones

- Detach salvageable components, such as semiconductors and camera modules, for reuse or sale

- Extract metals using "environmentally friendly methods".

The company also claimed it will be joining new research conducted by the European Union aimed at developing a new environmentally friendly technology to recycle smartphones.

Electronics production, including smartphones, is incredibly energy and

resource intensive, according to a Greenpeace USA report published in February 2017 on the impacts of smartphone production since 2007. According to a United Nations report in 2014, e-waste volumes from small IT products, such as mobile phones and personal computers are predicted to rise globally to 50 million metric tons or more every year in 2017. This represents a massive waste of resources, and a source of contamination from hazardous chemicals.

"While we welcome this news, Samsung must share as soon as possible more detailed timelines on when it will implement its promises, as well as how it intends to change its production system to make sure this never happens again," said Lee.

"The average smartphone in the US is used for about two years, and added to growing piles of e-waste around the world. This is simply not sustainable. Samsung and other IT companies such as Apple should manufacture phones that are easy to repair, refurbish, and upgrade," said Lee.

Greenpeace Spain activists crashed Samsung press conference at the Mobile World Congress in Barcelona last February, asking the company to reuse, recycle and rethink the way the phones are produced.

Greenpeace East Asia will further push the tech sector in the coming month to rethink its impact on the planet. The Galaxy S8 and best selling models from 14 top IT companies will be scored to inform customers on how repairable the phones are.

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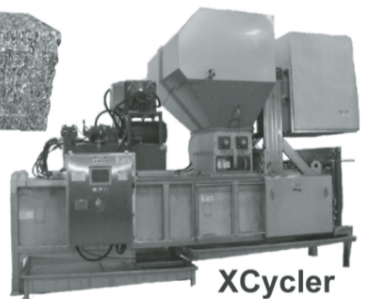
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Dell ships ocean plastics packaging

Dell sent out the technology industry's first shipment of ocean plastics packaging, the result of a commercial-scale pilot program. Dell recycled plastics collected from waterways and beaches for use in the new packaging tray for its Dell XPS 13 2-in-1, building on Dell's broader sustainable supply chain strategy. In 2017, its ocean plastics pilot will keep 16,000 lbs. of plastic from entering the ocean.

Dell transitioned its XPS 13 2-in-1 to ocean plastics packaging beginning April 30, 2017. The company also will include educational information on its packaging to raise global awareness and action on ocean ecosystem health solutions, an area of shared interest between Dell, its Social Good Advocate, Adrian Grenier and the Lonely Whale Foundation. To help ensure the packaging does not end up back in the oceans, Dell will stamp each tray with the No. 2 recycling symbol, designating it as HDPE which is commonly recyclable.

Dell's Packaging team designs and sources its product packaging to be more than 93 percent recyclable by weight so that it can be reused as part of the circular economy.

The ocean plastics supply chain process is made of multiple stages: Dell's partners intercept ocean plastics at the source in waterways, shorelines and beaches before it reaches the ocean. It then processes and refines the used plastics, mixes the ocean plastic (25 percent) with other recycled HDPE plastics (the remaining 75 percent) from sources like bottles and food storage containers. Finally, it molds the resulting recycled plastic flake into new packaging trays and ship the trays for final packaging and customer delivery.

Dell's pilot program follows a successful feasibility study launched March 2016 in Haiti.

In partnership with Adrian Grenier and the Lonely Whale Foundation, Dell has helped to increase understanding of ocean health issues, using virtual reality technology to bring people closer to the issues facing the oceans. A recent study reported between 4.8 and 12.7 million metric tons of mismanaged plastic waste entered the ocean in 2010 alone. Dell has published a white paper on sourcing strategies and plans to convene a cross-industry working group that will address ocean plastics on a global scale.

PAPER

AF&PA releases updated paper reports for March

The American Forest & Paper Association released its February U.S. paper reports.

Containerboard

Containerboard production was 0.7 percent higher compared to February 2016. The month-over-month average daily production compared to January 2017 was 0.5 percent lower. The containerboard operating rate for February increased from 96.5 percent to 97.8 percent, which was 4.0 percent higher compared to February of last year.

Printing-Writing Paper Report

According to the report released on March 21, 2017, total printing-writing paper shipments decreased 8 percent in February compared to February 2016. Total printing-writing paper inventory levels were flat from January 2017.

•Uncoated free sheet (UFS) paper shipments decreased 6 percent year-over-year in February. UFS imports increased 9 percent in January compared to January 2016, with exports decreasing 5 percent year-over-year in January.

•February coated free sheet (CFS) paper shipments decreased 8 percent compared to February 2016. Imports of CFS papers increased 5 percent year-over-year in January, and exports

increased 2 percent in January relative to the previous year.

•Uncoated mechanical (UM) paper shipments decreased 23 percent in February compared to February 2016. Imports of UM increased 11 percent in January, with exports of UM in January increasing 17 percent.

•Coated mechanical (CM) shipments in February decreased 8 percent when compared to February 2016. Imports of CM decreased 3 percent in January compared to January 2016, and exports increased 13 percent in January relative to the previous year.

Boxboard Report

Total boxboard production decreased 2.3 percent when compared to February 2016, and decreased 7.5 percent from January.

Unbleached Kraft Boxboard production decreased over the same month as last year and decreased from January.

Total Solid Bleached Boxboard & Liner production increased when compared to February 2016, but decreased compared to January.

The production of Recycled Boxboard decreased compared to February 2016, and decreased when compared to January.

A cannibal was invited to a teambuilding week in the mountains. The instructions said he could bring one friend.

When he arrived with 10 people, the

organizer accused, "Come on Alan, the invitation said you can only bring one!"

"Yeah, but it also said to bring your own food, didn't it?"



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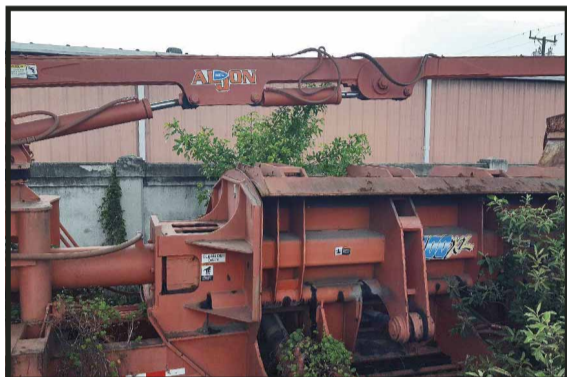
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METALS

March steel import permit applications increased

Based on the Commerce Department's most recent Steel Import Monitoring and Analysis (SIMA) data, the American Iron and Steel Institute (AISI) reported that steel import permit applications for the month of March totaled 3,413,000 net tons (NT). This was a 23.9 percent increase from the 2,755,000 permit tons recorded in February and a 25.4 percent increase from the February final imports total of 2,722,000 NT.

Import permit tonnage for finished steel in March was 2,479,000, up 19.2 percent from the final imports total of 2,080,000 in February. For the first three months of 2017 (including March SIMA permits and February final data), total and finished steel imports were 8,949,000 NT and 6,889,000 NT, up 18.9 percent and 7.2 percent, respectively, from the same period in 2016. The estimated finished steel import market share in March was 26 percent and is 25 percent year-to-date (YTD).

Finished steel imports with large increases in March permits vs. the February final included heavy structural shapes (up 66 percent), reinforcing bar (up 55 percent), hot rolled sheets (up 43 percent), oil

country goods (up 40 percent), wire rods (up 29 percent), hot rolled bars (up 28 percent) and wire drawn (up 22 percent). Products with significant year-to-date (YTD) increases vs. the same period in 2016 include oil country goods (up 151 percent), cold rolled sheets (up 43 percent), sheets and strip all other metallic coated (up 39 percent), standard pipe (up 27 percent), mechanical tubing (up 26 percent), sheets and strip hot dipped galvanized (up 23 percent), line pipe (up 17 percent), reinforcing bars (up 13 percent) and tin plate (up 13 percent).

In March, the largest finished steel import permit applications for offshore countries were for Turkey (301,000 NT, up 53 percent from February final), South Korea (296,000 NT, up 14 percent), Japan (149,000 NT, up 50 percent), Germany (85,000 NT, up 63 percent) and Taiwan (85,000 NT, down 18 percent). Through the first three months of 2017, the largest offshore suppliers were South Korea (868,000 NT, down 3 percent from the same period in 2016), Turkey (805,000 NT, up 10 percent) and Japan (394,000 NT, down 13 percent).

A guy walked into a bar and took a seat. Before he can order a beer, the bowl of pretzels in front of him said, "Hey, you're a handsome fellow."

The man tried to ignore the bowl of pretzels, and ordered a fine beer.

The bowl of pretzels then said,

"Ooooh, great choice. You're smart!"

Starting to freak out, the guy said to the bartender, "Hey, this bowl of pretzels keeps saying nice things to me!"

The bartender replied, "Don't worry about it, the pretzels are complimentary."

Newport of AK STEEL named AIST Steelmaker of the Year

Roger K. Newport, chief executive officer and board member, AK Steel, will be named Steelmaker of the Year at AIS-Tech 2017 — The Iron & Steel Technology Conference and Exposition. The Steelmaker of the Year Award is presented annually by AIST to recognize notable leaders for their impact on the steel industry.

Newport is being recognized for his strategic and dynamic leadership at AK Steel, engaging and empowering employees to drive innovation, quality, safety, environmental stewardship, and productivity to meet the needs of its customers with outstanding products and processes — today and for the future. He is also a leader in the industry, fighting for steel manufacturing in America and serving as a voice for support and change in the domestic and global steel industry.

Newport started his career with the company in 1985 in the accounting department. He advanced through a number of increasingly responsible finance, sales and marketing roles at the corporate headquarters and the company's Middletown Works. He was named controller in 2001 and chief accounting officer in 2004. He advanced to vice president, business planning and development in 2010, and vice president, finance and chief financial officer in 2012. He was named senior vice president, finance and chief financial officer in 2014, and executive vice president, finance and chief financial officer in 2015.

Newport has steered efforts to strengthen the company's balance sheet and has helped to bring new steels to the market, including the company's NEXMET family of advanced high-strength steels. In addition, he has continued to support AK Steel's ongoing investment in research and innovation, which can be seen in the expansion of its research team and the opening of the company's brand new research center in Middletown, Ohio. As chief executive, Newport also helped to guide a significant upgrade to AK Steel's Dearborn Works to a successful completion late in 2016.

Newport serves as vice chairman of the board of directors of the American Iron and Steel Institute (AISI) and is chairman of the AISI finance committee. He is a member of the board of directors of the World Steel Association, and a member of the Steel Market Development Institute CEO Group. Newport is a member of the Washington, D.C., Business Roundtable. He is also a member of Financial Executives International.

Newport serves on the board of directors of the Cincinnati, Ohio Regional Chamber and the business advisory council for the Lindner College of Business at the University of Cincinnati. Newport holds a B.B.A. degree in accounting from the University of Cincinnati and an M.B.A. with honors from Xavier University.

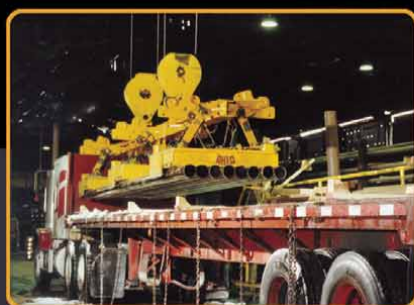


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METALS

Constellium boosts recycling capabilities with furnace at its Muscle Shoals facility

Constellium N.V. has installed a new recycling furnace at its Muscle Shoals, Alabama facility in an effort to expand recycling capabilities in North America.

The now fully operational furnace is expected to increase the total recycling output by 170 million pounds. The Muscle Shoals facility will then be expected to recycle the equivalent of nearly 20 billion cans per year – almost one-fifth of the cans sold in the U.S.

“This new furnace is a major step for our Muscle Shoals facility, great news for our customers and an exciting step forward in our commitment to promote recycling and sustainability, said Mike Tanchuk, president and chief executive officer of the plant. “This increased recycling capacity will enable us to better leverage aluminum’s infinite recyclable properties.”

Using advanced technologies, the new furnace, which meets the Best Available Control Technology (BACT) environmental requirements, is expected to improve the safety, energy efficiency and environmental footprint of the plant.

Known as Element 13, the recycling facility at the Muscle Shoals plant is one of the largest recyclers of used beverage containers in the world. This capacity, which enables the plant to recycle products at their end-of-life (EOL) as well as scrap from customers, contributes to Constellium’s overall engagement to ‘close the loop’ in beverage can recycling.

Constellium is part of the Sustainable Committee of the American Aluminum Association and works closely with the Can Manufacturers Institute to raise environmental awareness and promote recycling within communities.

Nucor to modernize Ohio mill

Nucor Corporation will invest \$85 million to upgrade the rolling mill at its steel bar mill in Marion, Ohio. Nucor Steel Marion, Inc. is Ohio’s largest producer of rebar and signpost, capable of producing over 400,000 tons annually.

“Our Marion mill recently celebrated its 100th year of steelmaking. With this project to modernize the rolling mill, we are investing in the next 100 years,” said John Ferriola, chairman,

chief executive officer and president of Nucor.

Nucor Steel Marion, Inc. employs 265 teammates and has an annual payroll of approximately \$23 million, making it one of the highest salary manufacturers in Marion County and the state of Ohio. The modernization project has the potential to add an additional 15 jobs at the mill.

AUTOMOTIVE

Government of Canada announces \$18.2 million for automotive innovation

Two Canadian companies – one in Lakeshore near Windsor, the other in Ottawa, Canada – have developed innovations that have the potential to make cars lighter, more fuel efficient and, in the case of electric cars, better performing due to a longer battery life.

These innovations lead to well-paying jobs for the middle class and business opportunities for Canadians working in the automotive sector. They also lead to cleaner technologies that are better for the environment, resulting in healthier communities for all Canadians.

The Honorable Navdeep Bains, Minister of Innovation, Science and Economic Development, announced funding totaling \$18.2 million for the two companies.

Astrex Inc. of Lakeshore will receive a repayable contribution of up to \$17 million from the Federal Economic Development Agency’s (FedDev Ontario) Advanced Manufacturing Fund. The investment will enable Astrex, a manufacturer of auto parts, to establish a facility that produces lightweight, high-strength aluminum com-

ponents. The parts manufactured at this plant will reduce fuel consumption and lower carbon emissions.

The company plans to create 62 new full time jobs this year and an additional 24 jobs in the next 2 years as a result of the federal investment.

Another \$1.2 million in a non-repayable contribution will go to GBatteries Energy Canada Inc. of Ottawa. The funding from Sustainable Development Technology Canada’s SD Tech Fund, which funds clean-technology projects, will allow the company to develop longer lasting batteries for electric cars. The battery system would also recharge much more quickly than existing ones.

The Government of Canada’s Innovation Agenda will promote clean growth, good jobs and higher living standards for the middle class. The investments in Astrex and GBatteries are examples of this plan in action.

Other programs that support research and development activities in the auto sector include the Automotive Innovation Fund and the Automotive Supplier Innovation Program.

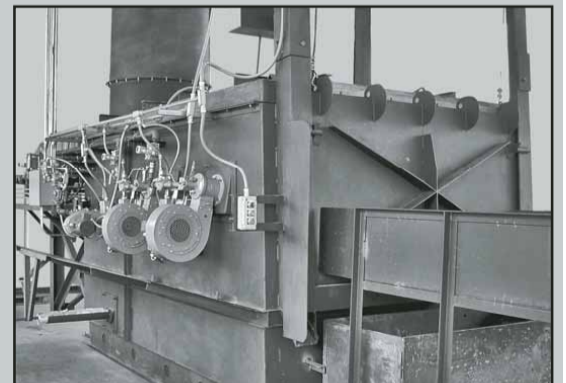
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#1 & 2 Mixed Steel	per gross ton	195.00	190.00	226.00	250.00	292.00
Shredder Bundles (tin)	per gross ton	175.00	170.00	172.00	200.00	225.00
Crushed Auto Bodies	per gross ton	175.00	170.00	172.00	200.00	225.00
Steel Turnings	per gross ton	96.00	105.00	100.00	180.00	192.00
#1 Copper	per pound	2.35	2.30	2.42	2.54	2.50
#2 Copper	per pound	2.20	2.18	2.21	2.35	2.34
Aluminum Cans	per pound	.62	.60	.68	.60	.65
Auto Radiators	per pound	1.60	1.60	1.55	1.59	1.65
Aluminum Core Radiators	per pound	.60	.58	.54	.54	.63
Heater Cores	per pound	1.14	1.10	1.10	1.20	1.25
Stainless Steel	per pound	.57	.52	.60	.54	.58

All prices are expressed in USD. Printed as a reader service only.

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SALVAGING Millions

by Ron Sturgeon
Autosalvageconsultant.com

Tools for Success – Do you have a succession plan?

The first article in this series listed more than 25 tactics to increase your business success. I have used all of them.

Well over half of my consulting assignments end up being about succession. It's always the same story, the business isn't doing as well as it used to. The leaders – many times dads – are getting older and haven't changed enough, and are waiting for things in the industry and marketplace to return to the way that "they used to be".

Business owners almost never sell at the top. Ego prevents them from doing so. From the top, the businesses have only one way to go: down. Decline usually happens slowly at first. Eventually it reaches a critical point where the business won't support the lifestyle of the owner or even pay the bills. Those who consider selling usually have unrealistic expectations about what the business is worth. They always think it's worth more than it is. That's human nature. The owners wait too long to sell partly because they never created a smart succession plan.

If you own a business, when should you start talking about succession? You should at least talk about it 10 years before you expect to turn the business over to your successor. If you are about 50 years old, now is a good time to have a conversation about what will happen to your business after you exit.

Usually when I get a call for consulting about succession, this is how it goes: The business is headed downward and the owners have figured out that they don't have a succession plan. If there are kids, the parents are convinced their kids aren't ready to run the business.

That's why I recommend having a talk about succession long before you think you need to. With a decade to the time of succession, you can do quite a bit to create a mentoring plan to ensure that, if the kids are keeping the business, they will be prepared to run it successfully.

Of course, successors are going to make mistakes, just as you did when you started the business. In some ways, they can make mistakes that you couldn't because a mature business insulates them more from failure than you were insulated when you started from scratch.

If you are an owner, trying to value your yard, I offer one caution in assigning value to inventory. Just because your warehouse is full does not mean that everything you have really adds value to the business. A lot of what is in the warehouse is there because you have not been able to sell it, because no one wants it.

When I was growing, I bought a few salvage yards. Almost the first thing we did was to back a dump truck up to the roll up door and start throwing away what our systems showed us would not sell quickly enough or for enough to be worth holding. Sellers were always shocked at what we disposed of, but we needed the space for inventory we could turn profitably.

Here's some good news: Your relatives can likely pay you a little more than market price for your business. The premium they can pay is partly because you will have to offer seller financing. They are paying extra to get reasonable terms. No one else is going to finance the sale of your yard to your sons or daughters.

So, what does a perfect succession look like for a current owner? Write a succession plan at 50. Prepare the next generation for a decade. Sell it when you are 60. Get a 20 year note that provides income and a comfortable standard of living for you in retirement and that offers your children an opportunity to carry on your legacy through the business that you started.

Another way that can work well is selling the business first, on a shorter note, and renting your successors the land with an option to buy the real estate later, with little or no down payment and financing over a longer term.

You may want to add a modest salary for staying around and doing whatever needs to be done (taking bank deposits, helping with banking and community relations, etc.) during times when you are not out travelling and enjoying life.

Perfect or not, make a succession plan. I admit that it's hard to talk about the future of a business that you founded. I try to make it easier. Usually, I talk to potential buyers and sellers separately, then together, and reach agreement or lay the groundwork. Having a facilitator can be helpful because he or she is not emotionally involved. Often, owners thinking about succession planning make the wise choice to work with an attorney, an accountant, or an industry expert.

No matter where you are on the journey in succession planning, it is also wise to have more than one source of income. Don't rely solely on your business. Before you get to 60, make sure you are investing some of your profits in rental property or other assets that will produce income for you after you sell the business. Put your eggs in a few baskets. That will also make it a little easier to pass the business on, when the right time comes.

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.

AUTOMOTIVE

Navistar and Volkswagen Truck close strategic alliance

Navistar International Corporation has Closed its wide-ranging strategic alliance with Volkswagen Truck & Bus, which includes an equity investment in Navistar by Volkswagen Truck & Bus and framework agreements for a procurement joint venture and strategic technology and supply collaboration.

With the closing of the alliance, Volkswagen Truck & Bus acquired approximately 16.2 million newly issued shares in Navistar, representing 16.6 percent of post-transaction undiluted common stock (or 19.9 percent of pre-transaction outstanding common stock), effective February 28, 2017. As a result, Navistar receives \$256 million to be used for general corporate purposes.

As part of the alliance agreement and in line with Volkswagen Truck & Bus's ownership stake, Renschler and Matthias Gründler, chief financial officer of Volkswagen Truck & Bus, are joining Navistar's board of directors.

Global Truck & Bus Procurement LLC, the procurement joint venture created by Navistar and Volkswagen Truck & Bus, will start work effective immediately. As part of the alliance, it will create new opportunities for quality improvement and cost reduction, and will enable both companies to benefit from increased global scope and scale. The joint venture is operating out of Navistar's headquarters in Lisle, Illinois, and comprises representatives from both companies who will be combining the demand of five brands.

Navistar continues to expect significant synergies from both the strategic technology collaboration and the procurement joint venture. As previously announced, Navistar expects the alliance to be accretive beginning in the first year, and for cumulative synergies for Navistar to ramp up to at least \$500 million over the first five years. By year five, it expects the alliance will generate annual synergies of at least \$200 million for Navistar. This annual run rate is expected to grow materially thereafter as the companies continue

to introduce technologies from the collaboration.

Renschler is from Stuttgart, Germany. After completing his training as a banker and graduating with degrees in business engineering and business administration, Renschler began his career at Daimler-Benz AG in 1988. Following various posts at Daimler-Benz AG, he took charge of the M Class unit, serving as president and chief executive officer of Mercedes-Benz US. In 1999, he served as senior vice president, executive management development, at the company then known as DaimlerChrysler AG. He was assigned to Mitsubishi Motors in Japan in spring 2004 and subsequently named member of the Daimler AG board of management with responsibility for the Daimler Trucks Division. He was appointed member of the Daimler AG board of management in charge of Manufacturing and Procurement at Mercedes-Benz Cars & Mercedes-Benz Vans in 2013.

Matthias Gründler was appointed member of the board and chief financial officer at Volkswagen Truck & Bus GmbH, Wolfsburg, Germany. Gründler, also from Stuttgart, studied economics at the IFW in cooperation with the Daimler Academy. In 1986, he joined Daimler Benz AG in Stuttgart. He took up his first management position in 1993 in supply chain management at DaimlerChrysler, followed by positions in sales planning and controlling at Mercedes-Benz Passenger Cars.

From 1999 to 2011, he held various senior positions in Africa and Asia. In 2011, Gründler was appointed head of procurement trucks and buses and business development powertrain and later that year took up the position of head of product platforms, sales & quality powertrain. In 2012 he became chief financial officer Daimler Trucks & Buses at Daimler AG and in 2013 was appointed member of the divisional board Daimler Trucks & Buses and CFO Daimler Trucks & Buses.

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AUTOMOTIVE

Embracing green practices from Ford, suppliers join in

As manufacturing continues to become greener, Ford Motor Company is going further to shrink its environmental footprint by sharing even more leading sustainability practices with its suppliers around the globe.

The Partnership for A Cleaner Environment (PACE) is part of Ford's environmental commitment. While many sustainability practices already have been implemented at the company's manufacturing sites, Ford has expanded the program now to include tools that help suppliers reduce carbon-dioxide emissions and waste, as well as help make water and energy consumption more efficient.

Last year, a second select group of suppliers were invited to join the voluntary program, bringing the number of participating companies to more than 40 in two years. PACE now has the potential to impact nearly 1,100 supplier sites in more than 40 countries.

As part of PACE, Ford offers best practices and monitoring tools to help its suppliers track and achieve their own sustainability goals. In return, the suppliers report their environmental progress and share their own best practices. Already, participating suppliers are on track to save an estimated 550 million gallons of water over the next five years – enough to fill 837 Olympic swimming pools– according to data

collected in 2016.

Thanks to the current suppliers participating in PACE, carbon emissions could be reduced by nearly 500,000 metric tons worldwide during the next five years.

Leading practices make perfect

Recognizing sustainability is an ongoing commitment, Ford is providing suppliers with a PACE toolkit, complete with more than 350 leading practices across four categories: energy, water, air emissions and waste.

While varying in effort, leading practices include optimizing cooling tower operation, reducing compressed air usage in manufacturing operations and eliminating single-pass cooling systems.

In addition to larger scale projects, even the simplest leading practices, such as replacing incandescent light-bulbs with LED bulbs, also will help conserve valuable resources.

Taking a bigger step to leave a smaller footprint

Ultimately, sharing its impact on environmental sustainability with suppliers has the potential to affect millions around the world.

PACE is just one portion of Ford's supply chain sustainability strategy, which also includes initiatives on human rights, working conditions and conflict minerals.

INTERNATIONAL

MEPs pave the way for bioplastics in vote on waste legislation

European Bioplastics (EUBP), the association representing the bioplastics industry in Europe, welcomed the positive outcome of a vote of the European Parliament plenary on the waste legislation proposal concerning the EU Circular Economy Package. The vote of the Members of Parliament recognizes the contributions of bioplastics to the EU circular economy.

The plenary's vote on amendments of the Packaging and Packaging Waste Directive encourages Member States to support the use of bio-based materials for the production of packaging and to improve market conditions for such materials and products.

"This vote is an important milestone in strengthening the link between the circular economy and the bioeconomy in Europe. Bio-based and recycled materials are starting to be equally recognised as a viable solution to make packaging more sustainable and reduce our dependency on finite fossil

resources," said François de Bie, chairman of EUBP.

In line with its ambitious goals to increase recycling targets and waste management efficiency, the Plenary also voted for amendments of the Waste Framework Directive that support a definition of recycling that includes organic recycling. A separate collection of biowaste will be ensured across Europe facilitated by certified collection tools such as compostable bio-waste bags.

In addition, the MEPs have voted to exclude mechanically or organically recyclable waste from landfills. "This will provide an important boost to the secondary resource market within the EU. Bio-based mechanically or organically recyclable plastics support circular thinking by lowering carbon emissions, helping to reach recycling quotas and keep valuable secondary raw materials and renewable carbon in the loop," said de Bie.

"You're going out to play golf again?" his wife complained.

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"But its true," he said, while walking out the door: "He told me specifically that I should get some iron everyday."

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WASTE

Waste Management board elects new chairman and appoints new CEO

The board of directors of Waste Management Inc. has elected Bradbury H. Anderson, who previously served as a member of the board of directors, to the position of board chairman.

Anderson takes over from Bob Reum, who served as chairman of the board since 2012 and who passed away in February.

Anderson, who is former vice chairman and chief executive officer of Best Buy Co. Inc., was first elected to Waste Management's board of directors in 2011. Over the past five years, Anderson has served on the Nominating and governance committee and the management development and compensation committee of the board. As board chair, Anderson will join the audit committee, serving on all three committees of the board.

Anderson has over 20 years of experience as a member of public company boards of directors and currently also

serves as a director of General Mills, Inc., Mayo Clinic and Carlson Companies, a private travel and hospitality company. In addition, he was a director of Best Buy Co., Inc. from 2013 to 2016.

In addition, the board also appointed Devina A. Rankin, formerly vice president, treasurer and acting chief financial officer, to the position of senior vice president, chief financial officer and treasurer and reporting to Jim Fish, president and chief executive officer.

In her role, Rankin is responsible for all finance functions for the company. She also has executive responsibility for the internal audit, investor relations and supply chain functions.

Rankin joined the company in 2002 and has held a number of corporate finance positions of increasing responsibility during her tenure, including assistant treasurer and treasurer. She began her career at Arthur Andersen, a public accounting firm, in 1999.

Waste Connections reports increased revenues

Waste Connections, Inc. announced its results for the fourth quarter of 2016. Revenue in the fourth quarter, which included \$497.9 million from the Progressive Waste acquisition completed on June 1, 2016, totaled \$1.049 billion, up from \$531.9 million in the year ago period. Operating income, which included \$23.0 million of impairments and other items primarily related to the expected divestiture of certain assets acquired in the Progressive Waste acquisition and \$16.0 million of items also related to that transaction, was \$139.2 million compared to \$101.7 million in the fourth quarter of 2015, which included acquisition-related transaction costs of \$2.9 million associated with the acquisition of Rock River Environmental Services.

Net income attributable to Waste Connections in the fourth quarter was \$85.6 million, or \$0.49 per share on a diluted basis of 175.9 million shares. In the year ago period, the company reported net income attributable to Waste Connections of \$52.1 million, or \$0.42 per share on a diluted basis of 123.1 million shares.

Adjusted net income attributable to Waste Connections in the fourth quarter was \$120.3 million, or \$0.68 per share, versus \$59.8 million, or \$0.49 per share, in the prior year period. Adjusted EBITDA in the fourth quarter was \$325.4 million, as compared to adjusted EBITDA of \$175.6 million in the prior year period. Adjusted net income attributable to Waste Connections, adjusted net income attributable to Waste Connections per diluted share and adjusted EBITDA, all non-GAAP measures, primarily exclude the impact of acquisition-related items and impairments and other operating items, as reflected in the detailed reconciliation in the attached tables.

"Our acquisition of Progressive Waste made 2016 a transformational year for Waste Connections. More importantly, our culture and operating playbook enabled us to drive significant improvements in safety, quality of revenue and operating performance within these operations, all pacing 12 to 18 months ahead of our initial expectations. This was evident in the fourth quarter as our results once again exceeded expectations. This underlying strength, together with the previously announced acquisition of Groot Industries and continuing improvements in recycled commodity values and E&P waste activity, should position us well for 2017," said Ronald J. Mittelstaedt, chairman and chief executive officer.

For the year ended December 31, 2016, revenue was \$3.376 billion, as compared to revenue of \$2.117 billion in 2015. Operating income, which included \$118.3 million of items primarily related to the Progressive Waste acquisition and \$27.7 million of impairments and other items, was \$452.3 million, compared to operating loss of \$61.5 million in the prior year. In 2015, the company recorded net impairment charges of approximately \$497.1 million against its E&P segment.

Net income attributable to Waste Connections in 2016 was \$246.5 million, or \$1.60 per share on a diluted basis of 154.1 million shares. In 2015, the company reported net loss attributable to Waste Connections of \$95.8 million, or \$0.78 per share on a diluted basis of 123.5 million shares.

Adjusted net income attributable to Waste Connections in 2016 was \$395.2 million, or \$2.57 per share, compared to \$244.9 million, or \$1.98 per share, in the prior year. Adjusted EBITDA in 2016 was \$1.071 billion, as compared to \$710.6 million in the prior year.



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Waste Pro opens MRF in FL

Waste Pro has opened a new 14,000 sq.ft. state-of-the-art material recovery facility at its Regional Operations Center in Sarasota, Florida.

The project is a direct result of the need to process the large volume of recycled materials collected curbside by Waste Pro's vehicles. "The convenience and larger capacity of the new recycling carts has increased the overall amount of recyclables," said Waste Pro regional vice president, Keith Banasiak.

The material recovery facility was designed by Tom Walter of the Walter Group of Sarasota and constructed by Metropole Construction of Fort Myers in preparation for Manatee County's conversion to single stream recycling which went into effect last October and will process up to 2,000 tons of mixed glass, metals, plastics, paper and cardboard,

per month, from residential and commercial sources throughout unincorporated Manatee County.

The facility is equipped with the latest advances in single stream technology and safety from CP Manufacturing, a recycling manufacturer based in California, including disc screens that detect and mechanically separate recyclables based on material, size and density.

The implementation of a single stream system enables customers to dispose of their recyclables responsibly in a larger container without the hassle of sorting through materials manually. In addition, the advanced technologies integrated into Waste Pro's new sorting line, as well as a team of 20 employees, will ensure that the majority of the materials collected can be salvaged.

BUSINESS BRIEFS

National Waste acquires Burts Refuse operation

■ National Waste Management Holdings, Inc., a growing and emerging vertically integrated solid waste management company, has acquired Burts Refuse LLC, continuing its commitment to completing one acquisition per quarter.

Burts Refuse is a waste disposal and recycling business located in West Daventry, New York. The acquisition of the company, which closed February 28, 2016, increases National Waste's territory for commercial and residential garbage collection in Upstate New York, as well as expands its roll-off customer base and business relationships. Additionally, the acquired trucks, equipment and containers fortify National Waste's existing line of equipment.

The transaction is a direct tuck-in of operations in which National Waste will not absorb the overhead of Burts Refuse, allowing for expected EBITDA numbers in the 45 percent range of carved-out operations.

Santek acquires Picklesimer Garbage Service

■ Officials with Santek Waste Services, LLC, disclosed its acquisition of Picklesimer Garbage Service in Jasper, Georgia.

Santek began servicing all of Picklesimer's residential waste customers in Cherokee and Pickens counties, Georgia. This acquisition will complement Santek's growing waste collection presence in the North Atlanta market.

Santek chief business development officer Edward Caylor said the Picklesimer acquisition is the first of more business opportunities currently being considered by the company in the new year.

ShearCore employs new regional sales manager

■ ShearCore, the first company to offer and support a full shear line for the metal recycling and scrap processing markets, has appointed a new regional sales manager, Ian Lewandowski.

Lewandowski will conduct sales for the company, continuing to serve its customers throughout the mid and North West and Canada, with 12 years of industry experience.

Timken acquires Torsion Control Products

■ The Timken Company, a global leader in bearings and mechanical power transmission products, has acquired Torsion Control Products, Inc., a manufacturer of engineered torsional couplings used in the construction, agriculture and mining industries.

Based in Rochester Hills, Michigan, Torsion Control Products serves an established original equipment customer base primarily in North America. In 2016, sales were approximately \$20 million.

This acquisition is part of the company's strategy to grow its portfolio of bearings and mechanical power transmission products. In recent years, acquired mechanical offerings have included gears and gear drives, chain, belts, couplings and lubrication delivery systems, as well as a variety of related services.

TransAxle adds two to sales force employees

■ TransAxle disclosed recent organizational changes.

Doug Everett has been appointed as the vice president of sales, reporting to the chief executive officer. In this role, Everett will set the direction and support for their 30 regional parts managers. The focus will be on execution across the company to provide a unified support system. Everett most recently served as the director of sales – Southern Region and previous to that was the regional manager in the Southern Region.

In conjunction with this move, Scott McCrea is joining TransAxle as the director of sales – Northern Region, reporting to Doug Everett. McCrea has a distinguished career in both commercial vehicle and heavy equipment aftermarket within Caterpillar, International, and Freightliner dealer networks.

A wife said to her programmer husband, "Can you go down to the grocery store and get a gallon of milk, and if they have eggs, get 6."

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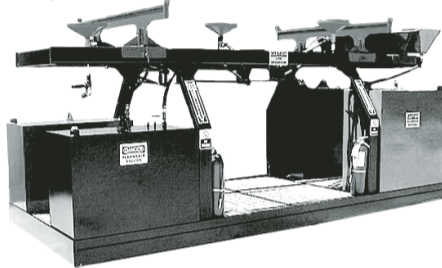
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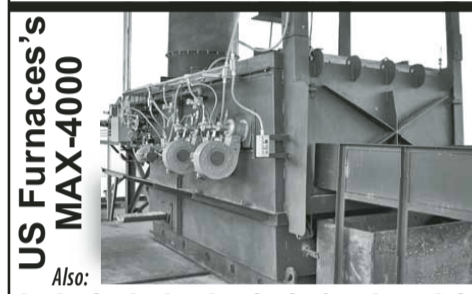
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TALBERT INTRODUCES 55-TON EXTENDABLE TRAILER

Talbert Manufacturing now offers the 55SA-TELE heavy-haul trailer. The deck length is 54' when open, allowing users to haul a wide range of large equipment. Operators can then retract the trailer to 32' 6". This shortens the overall trailer length to 53', eliminating the need for permits.

Talbert designed the 55SA-TELE with a 90" swing radius that can be extended to 114" with the use of a gooseneck extension. This optimizes the deck length while keeping it within the legal 53' limit when retracted.

The trailer also features one of the lowest deck heights in the industry at just 20", optimizing headspace.

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BUSINESS BRIEFS

Terramac appoints C.N. Wood as authorized dealer

■ Terramac, a manufacturer of rubber track crawler carriers, expands its representation in the North American market to include C.N. Wood as part of its dealer network. C.N. Wood will represent the versatile Terramac product line in Massachusetts and Rhode Island.

C.N. Wood will offer Terramac's RT9, RT14 and RT14R crawler carriers to serve a wide range of industries including general construction, environmental and agriculture. In addition to Terramac's three standard options – convertible dump-to-flat beds (RT9), rock dump beds (RT9, RT14 and RT14R) and flatbeds (RT9 and RT14) – C.N. Wood will offer Terramac units customized with support attachments such as cranes, personnel carriers, water tanks and hydroseeders.

The team at C.N. Wood will provide professional sales, rental and aftermarket support on the Terramac product line across 4 branch locations. C.N. Wood's representatives will deliver timely service and their parts and service technicians are equipped with state-of-the-art technology to ensure machines are maintained at the highest standard.

C.N. Wood is a family owned equipment dealership with 50 years of success in delivering reliable service, excellent product support and the finest lines of construction equipment products available.

Hansen named general manager at Intertractor

■ Timothy Hansen has joined ITM Group as general manager of Intertractor America Corporation, a designer and manufacturer of earthmoving crawler undercarriages and track frames.

Prior to joining Intertractor America, Hansen was director of aftermarket sales for undercarriage manufacturer Berco of America, Inc. He has also had leadership roles in account development and sales management for key accounts in manufacturing for the heavy equipment industry. Hansen has an MBA degree and is completing an MS in Strategic Planning and Leadership from Michigan State University, as well as a BS in Technical Management.

BladeCore appoints new managers

■ BladeCore has appointed a new territory manager, Betsy McDevitt. McDevitt will work in the Midwest and western Great Lakes states. She has a diversified background ranging from the construction and design industries to sales and marketing.

BladeCore, which offers replacement blades for shears, has also appointed a new territory manager in the western US, Leah Glucoft.

Glucoft grew up in the scrap business and knows her way around a scrap yard. She has a wealth of experience ranging from sales to people placement.

Peterson Pacific names additional new dealers

■ Peterson Pacific Corp., Peterson Pacific, a Eugene, Oregon based manufacturer of horizontal grinders, drum and disc chippers, blower trucks, and screens announced Goodfellow Corporation as their new distributor for their products in the states of Utah, Nevada and southern Idaho. Also, Border Equipment is a new distributor for their products in the state of Georgia.

Goodfellow Corporation was established in 1960, and has seen steady growth in the aggregate crushing business. Adding environmental equipment such as the products that Peterson offers is a natural progression for the company for future growth.

Border Equipment, the local Case construction equipment dealer in Atlanta, Augusta and Savannah area, has a long tradition of serving the state of Georgia. Border Equipment has three retail locations and service and support personnel throughout the state to provide exceptional service after the sale.

Covanta's Matt Newman added to advisory board

■ Matt Newman, director of business management at Covanta has been appointed to the advisory board for the National Institute of Standards and Technology Manufacturing Extension Partnership (NIST-MEP.)

Newman will join a team of 10 manufacturing professionals chosen to provide advice and guidance to NIST-MEP. The advisory board is expected to assist in identifying proactive actions that will enable small manufacturers to successfully address and implement changes in technology and the business environment in the future.

NIST-MEP is a public-private partnership coordinated by the U.S. Department of Commerce with centers in all 50 states and Puerto Rico. It's dedicated to serving small and medium-sized manufacturers by enhancing productivity and technical performance. Last year, MEP Centers worked with 25,445 manufacturers, leading to \$9.3 billion in new and retained sales and the creation of more than 86,602 high-wage jobs.

In his current position at Covanta, Newman is responsible for all business matters pertaining to the financial management and public affairs initiatives of Covanta Tulsa, an Energy-from-Waste facility which serves the City of Tulsa, neighboring communities and area businesses with a sustainable alternative to landfills, while producing clean, renewable energy. Newman is also charged with leading special projects which advance Covanta's strategic growth strategy in the U.S. An entrepreneur and "intrapreneur," his career has focused on business development, turnaround projects, modernization initiatives and sustainability, leveraging and improving energy conversion assets, management of construction projects and mission-critical initiatives.

Agilyx names new CEO and CFO

■ Agilyx Corporation announced that Joseph Vaillancourt will assume the role of chief executive officer in addition to his role as chairman. Ross M. Patten, who has served as chief executive officer since 2012, will remain on the board of directors and will transition to president.

In addition, William Cooper, who has over 20 years of experience in investment banking in the industrial and cleantech sectors, will assume the role of chief financial officer. These moves, in combination with other planned changes, will allow the company to focus on strategic partnerships and financing relating to the next phase of its growth: scaling its polystyrene recycling technology platform domestically and in certain international markets. As president, Patten will oversee the company's operations and project development activities related to this next phase of growth.

Vaillancourt brings more than 25 years of operational, financial, and strategic experience in industrial and environmental infrastructure development. He has participated in the financing and commercialization of more than 15 environmental technologies and has worked closely with private equity firms in the energy and industrial sectors. In 2014, Vaillancourt retired from a 15 year tenure with Waste Management Inc. where he held several senior roles across the company and ultimately was involved in creating and managing the company's corporate venturing activities. Vaillancourt has also held various roles in founding more than 10 companies in a diverse set of industries.

Cooper has spent over 20 years in investment banking with ABN AMRO, Donaldson, Lufkin & Jenrette, Seven Hills, and Wedbush Securities, specializing in M&A and growth financings across industrial, environmental, cleantech and medtech sectors.

Romco Equipment joins Atlas Copco's as dealer

■ Atlas Copco Construction Equipment welcomed Romco Equipment Co. to its growing dealer network. The Texas based company will rent, sell and service Atlas Copco compressors, generators and light towers to meet customer demands for portable energy equipment across the state.

Romco serves the heavy construction and mining industries in Texas. Expanding its line of equipment to include Atlas Copco compressors, generators and light towers, allows Romco to serve additional industries, including oil and gas refineries and shipyards.

Romco Equipment Co. sells replacement parts and attachments as well as provides maintenance and full refurbishment for worn equipment.

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Landfill usage and its impact on the industry

by MAURA KELLER

mkeller@americanrecycler.com

There's one thing we know – there will always be landfills. In fact, regardless of a tremendous effort on the part of state and local governments, companies and individual households, landfill usage has increased or remained stagnant in many areas across the U.S.

According to David McConnell, vice president for North America business development at Enerkem, a biofuels and clean chemicals producer that converts the carbon still contained in non-recyclable and non-compostable municipal solid waste (MSW) into methanol, ethanol or other renewable chemicals, MSW generation has continued to increase in recent years.

“Based on Environmental Research and Education Foundation (EREF) data, 347 million tons of MSW were managed in 2013 versus 342 million tons in 2010. Landfill usage remains high as 64 percent is still being landfilled,” McConnell said.

Each year, the EPA produces a report called *Advancing Sustainable Materials Management: Fact Sheet*, which includes information on municipal solid waste generation, recycling, combustion with energy recovery and landfilling.

According to the EPA's most recent report, in 2014, in the U.S., about 258 million tons of MSW were generated. Over 89 million tons of MSW were recycled and composted, equivalent to a 34.6 percent recycling rate. In addition, over 33 million tons of MSW were combusted with energy recovery and 136 million tons were landfilled. And in 2014, 89.5 percent of corrugated boxes were recycled and about 61 percent of yard trimmings were composted.

“Overall in the U.S., recycling programs have had a minimal effect on landfill usage,” McConnell said. “However, effective residential and commercial recycling and composting programs can have a significant effect on reducing landfill volumes as demonstrated on the West Coast in cities such as San Francisco and Seattle. In addition, landfill usage can be further reduced by using waste conversion technologies.”

These technologies, like Enerkem's MSW-to-biofuels and chemicals process, can turn non-recyclable and non-compostable garbage into valuable products, hence enabling to achieve over 90 percent waste diversion rate.

Michael Benedetto, president and owner of TFC Recycling in Chesapeake, Virginia, said the more that gets recycled, the less is landfilled.

“I believe there are more corporate social and environmental responsibility



PHOTO BY JUSTIN PLUNKETT | DREAMSTIME

initiatives to produce and landfill less or strive toward zero landfill waste, which is a major step in the right direction,” Benedetto said.

Waste management and recycling companies are responding to the increase in recycling programs.

“Landfills can be cash cows for certain companies,” Benedetto said. “Less volume equals less profit. But recycling is better for the environment and better for communities, creating more jobs, generating tax dollars and sustainability.”

Accelerated Efforts

Allison Skinner, certification project manager, sustainability, NSF international oversees NSF's landfill free verification and Environmental Product Declaration (EPD) programs. Prior to joining NSF international, Skinner managed energy efficiency, renewable energy, and alternative fuel projects that helped individuals and businesses reduce their impact on the environment.

NSF International offers third-party verification of landfill free claims, granting recognition to companies demonstrating that they send less than one percent of waste to landfill.

“While NSF International can't necessarily speak to what is going on across the entire country, we do know that our customers have significantly decreased the amount of waste they send to landfill,” Skinner said. NSF International customer West Liberty Foods alone has eliminated more than

55,000 tons of waste from landfills since they instituted the landfill-free verification.

For many companies, the bottom line is paramount in their decisions on landfill usage versus recycling initiatives. Landfill and recycling costs vary across the country, as do disposal regulations that are related to landfill usage.

“Here in Michigan, where NSF International is headquartered, a 2016 report on annual landfill and incineration stated if all the disposed materials were instead recovered and sold to the market, it would have an estimated economic impact of up to \$399 million per year,” Skinner said.

Most materials that are typically considered “waste” are actually valuable commodities that organizations can sell to be made into new products, which can have a positive local economic impact.

“MillerCoors' Milwaukee campus is realizing a savings of about \$89,000 per year from landfill-free efforts and, as an example, they have been using recycled materials to make grills and coolers,” Skinner said. “As companies begin to look for ways to reduce their impact and waste generation, innovative ideas will come about and eventually become best practice across industries.”

NSF International customer SunPower invested in an industrial compost machine, which supplies compost for a greenhouse that provides fresh produce for the 1,300 employees on site.

“More and more companies are beginning to realize that generating less waste saves money on raw materials, energy and labor costs. Consumers prefer to buy products they perceive as having a lower impact on the environment and corporate investment in sustainability is higher than ever,” Skinner said. “For those looking to be leaders in environmental leadership and social responsibility, achieving landfill-free status is a significant accomplishment.”

Exploring New Avenues

Daniel de Liege, chairman of Alliance Bio-Products, Inc. said that while recycling and reuse of non-organic materials such as metal or plastic has become familiar and even mandatory in some cities to conserve space in landfills, recent technological advancements are now making it possible for the organic waste to also experience a second chance at life outside of the landfill.

As de Liege explained, some companies, such as Alliance Bio-Products, have found use in residential, commercial and agricultural waste through its ability to provide cellulose material used in the production of low-cost biofuels and other products including nutraceuticals, pharmaceuticals, carbon fiber nanotubes and construction products.

“Advanced cellulose extraction technologies that use a patented mechanical process known as Cellulose to Sugar (CTS), are enabling the trans-

See LANDFILL USAGE, Page B7

Republic Services kicks-off its first national championship truck ROAD-EO

Fifty drivers and technicians join in competition

Republic Services, Inc. celebrated its industry leading safety program by hosting its first national championship truck ROAD-EO competition, a rigorous skills competition for Republic's top drivers and technicians from across the country. The competition involves a series of driving and diagnostic tests in challenging scenarios, in order to determine national champions in five distinct categories.

"Safety is at the center of everything we do," said Don Slager, president and chief executive officer. "We recruit the best drivers with the strongest safety records and talented technicians with outstanding mechanical knowledge. Every day, these men and women are responsible for maintaining highly engineered, sophisticated pieces of heavy equipment in order to provide total reliability while safely navigating through our neighborhoods, serving our 14 million customers and collecting over 5

million tons of recycling and waste materials. What better way to celebrate our commitment to safety than by having our best drivers and technicians showcase their skills and really find out who's the best-of-the-best."

The driving competition involves 40 drivers who earned the opportunity to compete in the National Championship by winning their respective local competitions. These top drivers are competing in one of four truck categories: front load, side load, roll-off and rear load. The competition consists of seven timed challenges that replicate the obstacles that drivers experience on their routes, from backing up in a narrow alleyway to navigating tight turns.

The technician competition involves 10 technicians from around the country who also won their respective local competitions. Their competition consists of diagnostic tests on a roll-off truck, where competitors are challenged with

identifying 10 vehicle problems in an allotted amount of time.

In addition to bragging rights with their friends and fellow drivers and technicians, the first and second place winners in each of their respective categories will receive a cash award, additional paid time off, and other special gifts and amenities.

Republic has been steadily building on its industry-leading safety program, beginning with a 42 percent better safety performance record than the industry average, based on Occupational Safety and Health Administration data, over the past eight years. Since 2009, Republic drivers have won 18 of the 24 National Waste & Recycling Association "Driver of the Year" awards. In addition, last year, over 12,000 employees earned Republic's Dedicated to Safety Award, and more than 5,000 employees received Republic's Dedicated to Excellence recognition.

Waste Connections rebrands Canadian operations

Waste Connections, Inc. will rebrand its operations in Canada from Progressive Waste Solutions to Waste Connections of Canada. The rebranding follows the June 1, 2016 all stock business combination of the company (formerly named Progressive Waste Solutions Ltd.) and Waste Connections US, Inc.

"This is a very exciting change for our employees," said Dan Pio, president Canadian operations. "We are proud to be rebranding our business operations in Canada to better align them with the Waste Connections brand and its high correlation with safety, corporate culture, integrity and customer service. The tireless efforts of our talented and dedicated employees have garnered significant customer loyalty and support throughout the years, and we believe Waste Connections of Canada is well positioned for continued growth and success in the communities we serve."

The roll out of the new brand will take place over the next 12 to 16 months.

Casella Waste Systems increased revenues for 2016

Casella Waste Systems, Inc., a regional solid waste, recycling and resource management services company, reported its financial results for the three and twelve month periods ended December 31, 2016.

Highlights for the 3 and 12 months ended December 31, 2016:

- 2016 results exceeded guidance for revenues, adjusted EBITDA and normalized free cash flow.

- Revenues were \$143.8 million for the quarter, up \$3.8 million, or 2.7 percent, from the same period in 2015. Revenues were \$565.0 million for the fiscal year, up \$18.5 million, or 3.4 percent, from fiscal year 2015.

cent, from fiscal year 2015.

- Net loss was \$(12.0) million for the quarter, down \$(5.0) million, or 70.6 percent, from the same period in 2015. Net loss was \$(6.9) million for the fiscal year, up \$4.9 million, or 41.8 percent, from fiscal year 2015.

- Adjusted net income attributable to common stockholders was \$1.9 million for the quarter, up \$3.6 million from the same period in 2015. Adjusted net income attributable to common stockholders was \$7.8 million for the fiscal year, up \$19.0 million from fiscal year 2015.

- Adjusted EBITDA was \$29.4 million for the quarter, up \$1.6 million, or 5.9 percent, from the same period in 2015. Adjusted EBITDA was \$120.6 million for the fiscal year, up \$14.5 million, or 13.7 percent, from fiscal year 2015.

- Adjusted operating income was \$10.9 million for the quarter, up \$2.7

million, or 33.7 percent, from the same period in 2015. Adjusted operating income was \$45.8 million for the fiscal year, up \$15.4 million, or 50.3 percent, from fiscal year 2015.

- Net cash provided by operating activities was \$80.4 million in the fiscal year, up \$9.9 million, or 14.1 percent, from fiscal year 2015.

- Normalized free cash flow was \$27.1 million for the fiscal year, up \$8.5 million, or 45.6 percent, from fiscal year 2015.

Net cash provided by operating activities was \$24.4 million in the quarter, down \$(5.6) million from the same period in 2015. Normalized free cash flow was \$12.2 million in the quarter, as compared to \$8.7 million for the same period in 2015. The fourth quarter of 2016 included a \$6.8 million adjustment for the interest payment associated with the redemption of the 2019 notes.

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To be listed in the appropriate spotlight, please call 877-777-0043.

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JUN	Primary Reduction
JUL	Auto Crushers
AUG	Tire Recycling
SEP	Dust Control
OCT	Crushed Car Haulers

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

Ontario reaches waste diversion milestone

Ontario Tire Stewardship's (OTS) Used Tires Program, has reached an incredible milestone of recycling its 100 millionth tire since the program opened in 2009.

Before the implementation of the program many of these tires ended up in landfills across the province or accumulated in tire piles, which pose serious environmental and safety risks. Through the Used Tires Program 100 per cent of scrap tires generated in Ontario are recycled into high value, sustainable products – and importantly, no tires are burned, disposed of in landfills or are illegally dumped.

"Since its inception, the Used Tires Program has accomplished a number of things, chief among them, the waste diversion rate," said Andrew Horsman, executive director of OTS. "This milestone would not have been possible without the help of Ontarians across the province and the commitment of our industry partners."

OTS's network of over 700 stewards, 7,000 collectors, almost 100 haulers, and group of 30 processors and recycled product manufacturers are building a sustainable future for the province and supporting the circular economy. Through these planet-positive partnerships, old tires are now redesigned into eco-friendly products like patio tiles, rubber landscaping mulch, gym flooring, playground surfacing, floor underlay and more.

"Along with its numerous partner organizations, OTS is committed to bringing new life to scrap tires, supporting the Ontario economy, local communities and the environment," said Horsman. "Because of the Used Tires Program we have been able to create the conditions to support the circular economy. By ensuring there was a consistent supply of scrap tires for Ontario recyclers, as well as investments into new manufacturing, we now have a new generation of recycled tire products available for consumers and businesses."

Every used tire in Ontario now has a longer life because of the more than \$100 million of investment provided by OTS into Ontario's economy. This includes research and development and investments in new markets.

The program continues to have a positive and lasting impact in communities across Ontario. For example, through OTS's Community Renewal Fund (CRF) grant program, a total of 60 projects have been awarded over \$1 million in funding for new and need-to-be-renewed public spaces, like playgrounds and fitness tracks. All of this encourages earth friendly building and development, improves the lives of Ontarians and boosts the local economy.

OTS is committed to ensuring all tires in the province of Ontario are responsibly recycled and successfully diverted from landfills.

Slow Down To Get Around adopted in Kentucky

Motorists will be required to proceed with caution when passing waste vehicles making collections or face strict penalties

Kentucky Governor Matt Bevin, signed into law new legislation that will protect workers in the waste and recycling industry. HB144, Kentucky's version of the Slow Down to Get Around law, requires motorists to slow down or move out of the way of waste and recycling vehicles. The bill was co-sponsored by Representatives Sal Santoro (R-60) and David Hale (R-74.)

Kentucky is now the 13th state to enact this vital legislation, commonly referred to as Slow Down to Get Around, which is designed to protect waste and recycling workers. The Kentucky State Chapter of the National Waste and Recycling Association (NWRA) took the critical steps to develop this legislation and achieve its support in the Kentucky legislature.

The law went into effect upon the signature of the Governor on March 16, and requires motorists to slow down around waste and recycling trucks when actively engaged in making collections when safety lights are flashing, similar to cautions motorists must now exercise when traveling through a construction work zone or when passing a stopped public safety vehicle. Slow Down to Get Around is a nationwide campaign by NWRA and its state chapters. The effort in Kentucky involved a coalition of private waste and recycling companies, labor groups and municipal leaders in getting this important worker safety measure enacted into law.

"This law is about the safety of waste and recycling collectors who serve our communities statewide," said Robert Lee, chief executive officer EcoTech Waste Logistics and Kentucky Chapter Chair of NWRA. "All

National Waste Management acquires Northeast Data Destruction

National Waste Management Holdings, Inc., a growing vertically integrated solid waste management company, has acquired Northeast Data Destruction and Recycling, LLC.

National Waste's reach in upstate New York now extends south to Kingston, New York, where Northeast Data Destruction and Recycling offers cardboard recycling and document destruction, hard drive destruction, and other data destruction. Implementing its existing services offered in other areas, National Waste will grow its new Kingston operation to also include roll-off services.

The acquisition also provides an additional revenue stream as National Waste continues its acquisition based growth strategy in vertical markets.

motorists are to exercise caution and must slow down to get around waste and recycling vehicles, which will save lives and prevent unnecessary accidents and injuries. Our focus now turns to raising awareness of the new law and educating residents of the dangers that collection workers face daily on our roadways."

The most recent data from the U.S. Bureau of Labor Statistics shows that the waste and recycling collection occupation ranks fifth in the nation for injuries, accidents and fatalities, and more recent data shows that many accidents involving waste and collection workers are caused by inattentive motorists and distracted driving. Kentucky now joins twelve other states that have enacted Slow Down to Get Around, including Alabama, Florida, Georgia, Indiana, Illinois, Michigan, New York, North Carolina, Oklahoma, Virginia, Wisconsin and West Virginia.

In all states, NWRA encourages motorists to be aware of the roadside dangers facing refuse and collection workers. NWRA is asking the media, public safety and transportation agencies and community leaders in Kentucky to educate motorists about the new law.

DEP receives Phase II application

The Pennsylvania Department of Environmental Protection (DEP) has received the Phase II portion of Elcon Recycling Services, LLC's application for a commercial hazardous waste treatment and storage facility proposed for Falls Township, Bucks County.

DEP has 90 days to determine if the application is considered administratively complete. The initial review is done to determine if the material submitted is sufficient and complete so that the technical review may commence. If the application is incomplete, it will be returned with a letter citing deficiencies. The applicant may resubmit the application, restarting the 90-day administrative review process. If the application is deemed administratively complete, it will undergo a technical review. It is during the technical review that full details of the proposed operations and design will be evaluated. The Phase I portion of the application was found to be in conformance with the exclusionary siting criteria regulations on November 12, 2015.

Throughout the review process, DEP will conduct public outreach through public meetings and hearings, information sheets, status updates and DEP's website. At this time, it is still too early to confirm a schedule of in-person opportunities over the duration of the review.

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EQUIPMENT SPOTLIGHT

Containers

by MARY M. COX

maryc@americanrecycler.com

There is a myriad of options in the global market for the containment of waste and recycled materials. A wide range of options is necessary due to the vast number of settings and processes that might be involved when waste or recyclables must be contained.

Molok provides waste containment systems for trash, recycling, organics and even used cooking oil. "Our containers are all two-thirds underground, which offers many benefits: odor control, hygienic handling, pest control and greater capacity. This is all due to the basic law of nature, coolness of the earth and gravity. New waste always caps older waste, compacting the older material and minimizing odors.

Due to the secure containment design, pests cannot access the waste," Marja Hillis, president and chief executive officer stated. Containers are used wherever waste is generated:



Molok North America Ltd

industrial, commercial, institutional and residential settings, as well as parks and open spaces. Hillis said, "As landfill trends lean towards densification to reduce their footprint, the crane-lifted semi-underground Molok® system occupies less than 10 percent of conventional systems and makes excellent use of space."

Containers range from 0.4 cubic yards up to 6.5 cubic yards. Due to the vertical design and small surface area, waste material compacts – allowing for 1.5 to 2 times the volume of the container by weight. The vertical capacity of the Molok system may

provide a significant reduction in service requirements, often up to 50 percent, which may also provide significant operating efficiencies and environmental benefits. The Molok container for organics collection has a capacity of 1 cu.yd. and a safe working load of 880 lbs., making it a large, secure container for organics.

Hillis noted that the uniqueness of the Molok container goes beyond the underground innovation and into another dimension of their exclusive design – they are emptied by an articulated crane. The benefits of articulated crane collection are twofold: one is freedom of installation location and the second is further waste containment control.

The containers can be installed in places where they are most convenient and accessible for people of various ages and abilities. Space savings may aid in more options for designers and planners. Because the containers are emptied by lifting the inner container from the main chamber and the contents are released through the bottom of the inner container, there is never any moving or tipping of the main container. No tipping of the Molok container means less dripping, less escaped litter and less pest attraction. Also, the Molok system is one of the only waste containers easily accessible by persons of all ages and abilities. The lightweight filling lid is easily managed and the opening height meets most accessibility guidelines. In 1991, Molok was established in Finland and has operated in North America since 1999. Molok containers are used in more than 40 countries

and scores of original containers are still in use 25 years later.

"Snyder Industries is our nation's largest rotational molder. We've been a premier molder since 1957 and our containers are manufactured at 3 of our 17 U.S. locations. Our hottest



Snyder Industries

product is the round, 300 gallon container but we also offer 200 and 450 gallon sizes," said Dian Sommers, national account manager, refuse & utility at Snyder Industries. The 300 is used at recycling centers, schools, apartment complexes, alleys, city events and parks. The containers are stationary and molded from high density polyethylene (HDPE) plastic. Sommers explained, "They are very durable and can be ordered in custom colors, with hot stamping and decals. Each order that we receive seems to be customized. Clients have started adding multiple decals, hot stamps, style of lid and a variety of color combinations to reflect the image of the city or operation involved."

The 300 gallon containers have a slightly larger foot print than the 95 gallon carts, but the 300 can hold triple the waste of the 95. In large cities, the end user property size is typically quite limited, so having one container that will do the same as three is a clear advantage. The 300 is also popular at special events like the Sturgis, South Dakota Motorcycle Rally, downtown

See CONTAINERS, Page B6



T.M. Fitzgerald & Associates

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Ohio EPA launches online materials marketplace

Ohio EPA director Craig W. Butler disclosed the launch of a new online service where Ohio businesses, not-for-profits and government organizations can advertise and acquire potentially useful products and materials that might otherwise be destined for disposal in landfills. The new Ohio Materials Marketplace (OMM) is a free online platform allowing these organizations to connect and find solutions to material reuse and recycling needs.

"With statewide access to thousands of Ohio's businesses, communities and other organizations, Ohio EPA's Division of Environmental & Financial Assistance (DEFA) is well positioned to bring members together in this modern online marketplace," Butler said. "This new service positions Ohio as a leader in the circular economy, helping remove materials from the waste stream, promoting jobs and allowing for better efficiency and savings in the processes of creating goods and services."

Examples of materials posted on OMM (and their potential re-uses) might include common items such as bulk wooden pallets (mulch base) or used bricks (building materials). Other items might reflect materials from industrial processes such as spent foundry sand (to be mixed with potting soil), or specialized items such as spent hydro-treating catalyst (metals recovery).

Along with browsing for materials, users of OMM can post "wanted" items that might substitute for raw materials or other items members currently purchase. Examples of such requests that have been

posted thus far include bulk alumina oxide (for metals harvesting/recovery) and bulk food waste in packaging (to be used for anaerobic digestion/energy recovery).

What differentiates the Ohio Materials Marketplace from other online markets is that the platform is active in design and functionality rather than passive. Previous models (such as the Ohio Materials Exchange) and similar services in other states worked as a simple bulletin board with little or no engagement by the host. The new OMM is maintained by Ohio EPA which markets the site to potential users, verifies that users (and items posted) meet qualifications to participate, and actively works to facilitate connections between users. The site is specifically designed as a business-to-business or business-to-community exchange for recyclables and reusable materials.

In the circular economy, products and by-products recirculate productively through reuse, remanufacturing, recycling and maintenance. Users of OMM can make or save money by finding a market for their unwanted materials and avoiding landfill tipping fees; buyers save money by having access to sellers' discounted (or free) materials; Ohio's environment benefits by having more material removed from the waste stream.

The program is being launched with support from the not-for-profit United States Business Council for Sustainable Development. More information about OMM is available online at ohio.materialsmarketplace.org.

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INDUSTRY PROFILE

A Closer Look

by Donna Currie

Recla Metals

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Recla Metals was founded by Diann and Garry Fulks in 1974, according to Matthews Alvarez, one of the current co-owners. The company actually encompasses three different types of business now: recycling, a steel service center, and sales of rusty corrugated roofing material.

The company started as a recycling business, but then they started pulling usable metals from the scrap piles. Later, Recla Metals started buying new metal for resale.

Galvanized corrugated roofing material was one of the products Recla Metals bought and sold. One particular load arrived without its usual galvanized coating, and it rusted. Much to everyone's surprise, customers loved the look, and wanted to buy it.

Alvarez said that the rusty metal has a "rustic look" that customers in the mountains of Colorado particularly like, but the product is sold all over the country. Alvarez noted that because the metal is thick, it's actually more durable than typical shingled roofs, even with the rust.

Besides having three different types of business, Recla Metals has grown to have three different locations. They started in Clifton, which is near Grand Junction, then later opened facilities in Montrose and Durango. The main office is now in Montrose.

Meanwhile, Alvarez had been selling industrial machinery and became familiar with the scrap industry through his association with manufacturers. "One day I got fed up with New Orleans and moved to Colorado," he said. "It's important to live somewhere you like."

After the move, Alvarez started working for a shredding company that purchased scrap metal from Recla Metals. He got to know the owners, and they got to know him. Finally, the couple started looking towards their eventual retirement, and wanted to bring on someone new who could take over the company. Alvarez seemed to be a good fit.

Alvarez started with the company about eight years ago, but not as an owner. He worked there for about 1 1/2 years because both he and the owners wanted to make sure he would be comfortable both with the company, and with the location.

Alvarez said he had never lived in a small town before, and he was interested in "a place like Montrose to raise a family." At that time he and his wife had one child. Now he has three children and he's even more enthusiastic about small-town mountain life as well as the availability of skiing and outdoor activities.

While there isn't a lot of heavy industry in Colorado mountain towns to support a recycling business, Alvarez said, "every community needs one." Recla Metals is looking into opening a new facility, but even in "green" communities, residents aren't always enthusiastic about having a scrap yard in their back yard. On the other hand, if the scrap yard is nearby, people are more likely to recycle, Alvarez said.

Alvarez said that the best part of the job is "meeting all of the different people in the scrap metal game." Since the company is fairly small, Alvarez said that he gets to wear a lot of hats, which makes the job even more interesting.

Buying scrap has its challenges, Alvarez said. Coal mines, which once were good sources of scrap metal, are now shutting down. But selling material is also a challenge. When he first moved to Colorado he said "it blew me away that we could export so much from Montrose, Colorado," which is nowhere near any coasts. Now, even though export is still possible, those markets aren't buying as much and more scrap needs to be sold within the U.S.

Alvarez enjoys visiting industrial customers. "I'm fascinated by manufacturing and industry in general," he said. Because of his job, he has a chance to see how things are made.

While Alvarez enjoys the beauty of his new hometown, he's a bit more pragmatic about the industry he chose. "What we do, it's not a glamorous business," he said, "it's dirty, but it's needed." And while being green is trendy these days, Alvarez said, "It's one of the oldest trades in the world."

Oregon DEQ issues order to Industrial Harbor to prevent overflow at closed landfill

The Oregon Department of Environmental Quality issued an order in February to Industrial Harbor USA LLC requiring it to immediately hire an operator to supervise its wastewater treatment facility at the company's closed paper mill waste landfill off Highway 101.

DEQ issued the order after learning that since February 21 the wastewater treatment facility has not had an operator – a violation of the facility's wastewater permit and state law. Without an operator, wastewater will overflow from an interim storage tank, which collects leachate from a paper mill waste landfill, within three to five days eventually making its way to the Umpqua River. The overflow would travel from the tank to the river through a stormwater conveyance system on the property.

Leachate is the liquid that drains or leaches from a landfill. Paper mill waste leachate has a high pH and contains pollutants such as ammonia and salts; however, DEQ does not expect the leachate to be toxic to fish or harmful to the public because it is diluted with rain water.

The facility's permit allows it to operate a wastewater collection, treatment, control and disposal system and discharge to waters of the state only from a permitted discharge point. When properly operated, treated leachate from the site is pumped to an outfall that discharges to the Pacific Ocean.

Such violations are subject to fines of up to \$25,000 per day per violation and may also be subject to criminal penalties.

Containers

■Continued from Page B4

events, festivals, and at city beaches. Because the containers also holds more waste than the 55 gallon drum container previously used in such settings, it is not as typical for the container to overflow, allowing waste to spread. Since the cans are so large and sealed, the 300 is also popular for use in restaurant kitchens, for holding food waste.

The containers have been sold since the 1990s and "the continued growth of the specialized unit is due to the flexibility of the container. The 300 was originally molded using high density crosslink plastic resin and when the cans needed to be retired, we wanted to avoid sending them to landfills. Any container that is molded using crosslink resin can't be recycled. So, the construction material for the 300 changed to HDPE plastic. HDPE has excellent thermal and impact properties, plus it's rated as a Class 2 recyclable plastic," Sommers said.

For close to three decades the T.M. Fitzgerald & Associates company has been manufacturing and distributing quality American made plastic containers. According to Tom Fitzgerald, president, "We take pride in our quality products and responsive customer service. We are happy to offer our full line of TripleRCan® containers, which offer everything needed for any size project – perfect for commingled recycling, green waste, trash and yard waste. We offer capacities of 20, 25 or 32 gallons

as well as a smaller 50 quart model, ideal for valet trash services. We offer lids, solid or with various openings, containers available with either a solid bottom or drain holes, and a large selection of standard and custom colors are available. Customers can even choose to add recycling logos or custom imprints across multiple branding areas. Clients can customize an order to include the color and logo desired, for any recycling program. We also stock standardized containers so we can meet the needs of non-municipal programs."

Fitzgerald noted that the firm's commitment to quality and service comes standard with every order. All products are made in America with impact resistant, all weather material containing UV stabilizers, to protect against sun damage. "We use seamless, high pressure injection molding that puts plastic where it is needed most for strength and resilience. That includes reinforcing radial ribs under the rim and base for added durability. Our containers are designed with users in mind – featuring large, open handles that are easy for a gloved hand to grip. The height of our containers means less bending and lifting for homeowners and collection workers.

The TripleRCan nests inside itself for easy delivery, distribution & set-up. We look forward to increased growth within the recycling industry, as our country continues to embrace green initiatives across all levels – municipalities, universities, corporations and military bases – as all do their part to reduce, reuse, and recycle," said Fitzgerald.



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Simply put, if you want to reach serious equipment buyers, there is no other publication."

—John Kitchens, Vice President
Iron Ax, Inc.

Covanta extends partnership

Covanta disclosed a new agreement with the Southeastern Connecticut Regional Resource Recovery Authority (SCRRA) for sustainable waste disposal at the Southeastern Connecticut Resource Recovery Facility (SECONN) located in Preston, Connecticut. The new four year agreement will extend the partnership until December 2020.

SCRRA was created to implement solutions for solid waste, recyclables, household hazardous waste and additional waste materials for 12 municipalities in Southeastern Connecticut including East Lyme, Griswold, Groton, Ledyard, Montville, New London, North Stonington, Norwich, Preston, Sprague, Stonington and Waterford.

Since 1991, Covanta SECONN has provided reliable and sustainable waste management to municipalities across Southeastern Connecticut. The Energy-from-Waste facility processes 689 tons of post-recycled municipal solid waste daily into 18 megawatts of clean, renewable energy, enough to power approximately 15,000 homes continuously. The facility also recycles more than 9,000 tons of metal annually.

During its 26 years of operation, the facility has:

- Saved over 50 acres of land from landfilling;
- Reduced net greenhouse gas emissions by over five million tons, the equivalent of removing nearly one million passenger vehicles from the road for one year;
- Recovered 88,000 tons of metals for recycling, equivalent to the steel used to build two Gold Star Memorial Bridges (New London, Connecticut).

EPA orders Toa Alta's landfill to stop accepting waste

The U.S. Environmental Protection Agency (EPA) has ordered the Municipality of Toa Alta, Puerto Rico, along with current and past operators of the Toa Alta Municipal Solid Waste Landfill, to take immediate actions to address conditions at the landfill that may present potential threats to human health and the environment. Under the order, the landfill's owner, the Municipality of Toa Alta, and its operators will be required to:

- Repair leachate collection systems.
- Cover exposed areas of the landfill on a daily basis to help control odors and blowing debris.
- Cover inactive areas of the landfills.
- Inspect incoming loads of waste to separate out hazardous wastes and prohibited materials.

One of the most serious problems to be addressed is the landfill's leachate collection system, which is not functioning. Leachate is a liquid that has percolated through or been generated by decomposition of waste material. The Toa Alta Landfill sits on top of Puerto Rico's North Coast Limestone aquifer system, which is a potential source of drinking water. The landfill is adjacent to a number of homes of Toa Alta residents.

The order also requires the municipality and current operator to better manage stormwater, institute mosquito control measures, and, improve landfill security. In addition, because the landfill has reached capacity, the order directs the municipality to permanently stop disposing of waste at the landfill by December 31, 2017.

"The violations at this landfill may present an imminent threat to the community, so the EPA is using its authority to require immediate actions to address these problems to protect the community and the drinking water aquifer," said Catherine McCabe, EPA acting regional administrator. "Throughout Puerto Rico, EPA has been taking similar actions at landfills where we have authority to do so, while working with the government of Puerto Rico to make improvements to its overall solid waste management program."

This order comes after the Puerto Rico Environmental Quality Board cited the municipality for various violations of environmental regulations in recent years, and yet operations at the landfill continued to deteriorate. The Environmental Quality Board has primary responsibility for regulating solid waste landfills in the Commonwealth of Puerto Rico.

The Toa Alta landfill has been receiving waste since 1966. During this period, the landfill has been owned by the Municipality of Toa Alta and has been operated by a number of entities, including the Municipality of Toa Alta, Empresas Municipales Toalteña, Corp, CMA Environmental, LLC, and Landfill Technologies of Toa Alta. The municipality and Empresas Municipales Toalteña, Corp have been the landfill's primary operators since 2016.

Since 2007, the EPA has reached agreements with 12 municipalities and other owners and operators of landfills in Puerto Rico to improve landfill operations and to put them on schedules for closure.

Landfill usage

■ Continued from Page B1

formation of waste which would traditionally take up significant space in landfills, into fuel and other products at a fraction of the cost," de Liege said.

Moving forward, de Liege believes we're going to see recycling and waste reuse play an even larger role at the residential level, giving local residents an opportunity to transform their waste into products for everyday use. One of the biggest opportunities de Liege sees is the concept of "grass to gas" where people will be able to transform yard waste, cardboard, wood and other green materials into bioethanol fuel for their cars.

"The industry is currently focused on technologies that transform waste into fuel at the commercial level however, it's only a matter of time before we see the demand reach consumers who will require individual solutions," de Liege said.

The use of residential waste in the production of ethanol will also be extremely important as it will pull green waste out of landfills, can reduce the amount of carbon dioxide being released into the atmosphere both at the

landfill and with reduced emissions once it's transformed into fuel, and will provide an energy source that does not pull from the nation's food supply.

"Simultaneously, with processes such as Alliance Bio-Product's patented CTS process, ethanol producers will be able to reduce the cost of fuel to only \$0.91 per gallon, making fuel cheaper for consumers while productively riding counties of their unneeded waste. The bioethanol market in particular is expected to rise to \$9,544 million by 2022, presenting those who are capable of identifying a solution that transforms waste into biofuel with a significant market opportunity."

So what do these advancements in technology mean for the waste and recycling industry? Dawn Grimes, vice president of enterprise and business at RecycleForce said there's no question recycle and landfill operations will increasingly overlap as both look to "crack the nut" on mining and processing landfills that are full of recyclable plastic and precious metals.

"Landfills stand to recapture land for re-fill or redevelopment while for recyclers – with the right equipment and processes – landfills could be the urban gold mine of the 21st century," Grimes said.

Indeed, cities and municipalities that are focusing on achieving zero waste targets in future years and leveraging the full suite of technologies and best practices, including waste conversion technologies, will have a positive effect on reducing volumes to landfill.

"Landfill usage is more prevalent in the American South and the Central U.S., McConnell said. "But the increased adoption of innovative waste conversion technologies – that can produce valuable products such as liquid biofuels and chemicals – and complementary activities to upstream recycling will have a large reduction effect on landfill volumes. They also can contribute to the transition to a circular economy where the large majority of waste is used as a resource for the production of valuable products."

Technological advancements and governmental regulations aside, industry experts recognize that the U.S. is a society created on convenience. "Items such as single use coffee pods (K-cups) are typically not recycled," Benedetto said. "We need to change the mindset and stop creating an environmental burden on future generations. It starts with consumers."

Advanced Disposal reports quarterly results

Advanced Disposal Services, Inc. reported revenue for the 3 months ended December 31, 2016 of \$352.0 million versus \$349.6 million in the same period of the prior year. Net loss during fourth quarter 2016 was \$20.1 million, or \$0.24 per share, versus a net loss of \$8.8 million, or \$0.14 per share, in fourth quarter 2015.

The company achieved quarterly adjusted EBITDA and adjusted EBITDA margins of \$107.7 million and 30.6 percent, respectively, or an increase of \$6.2 million in adjusted EBITDA and 160 basis points in adjusted EBITDA margins versus fourth quarter 2015.

During the fourth quarter, the company completed its initial public offering, which raised nearly \$375 million net of fees between the initial share issuance and the underwriters exercising their option to purchase additional shares. Those proceeds were used to repay debt, driving improvements in the company's leverage ratio. The company also received credit ratings upgrades by both Standard & Poor's and Moody's.

Based on the momentum generated from the initial public offering and subsequent ratings upgrades, the company refinanced its outstanding debt and credit facility in the fourth quarter. This debt refinancing coupled with the debt repayments from the initial public offering is expected to save the company over \$30 million in cash interest savings annually. A \$64.7 million pre-tax loss on debt extinguishments and modifications was recorded, which is the driver of the decline of fourth quarter net income. However, fourth quarter adjusted net income, which includes an adjustment for the debt refinancing charge, was \$17.2 million or an increase of \$11.7 million versus fourth quarter 2015. Strong pricing was a key driver of the increase in adjusted net income with average yield for the quarter of 2.7 percent. Additionally, the company benefited from the rollover impact of accretive acquisitions exceeding lower margin divestitures.

For the full year ended December 31, 2016, revenue was \$1,404.6 million versus \$1,396.4 million for the prior year period. Net loss improved \$3.2 million to \$30.4 million, and adjusted net income increased \$17.6 million to \$33.5 million. Additionally, adjusted EBITDA of \$411.1 million was \$11.1 million better year-over-year, and adjusted EBITDA margins also improved 70 basis points to 29.3 percent.

"Advanced Disposal has undergone transformational changes during 2016," said Richard Burke, chief executive officer. "We were also able to continue to execute on our strategy of entering vertically-integrated operations in secondary markets earlier this month by closing on the acquisition of CGS Services, Inc. in Indiana."

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