Environmental Services

Spotlight On:
Used Oil Collection & Re-Refining

Market Update Page 10

Industry executives share insights on market dynamics, investment activity, and their outlook for re-refining expansion.

Perspective Page 20

Rick Fortier, Director of Bravo Energy Latin America LLC, discusses the used oil collection and re-refining market in Latin America.

Water Management Page 21

We provide an introduction to water management, an area drawing increasing attention and investment as market forces threaten sustainable water supplies. Major changes in the way water quality is controlled are creating new opportunities for environmental services firms.

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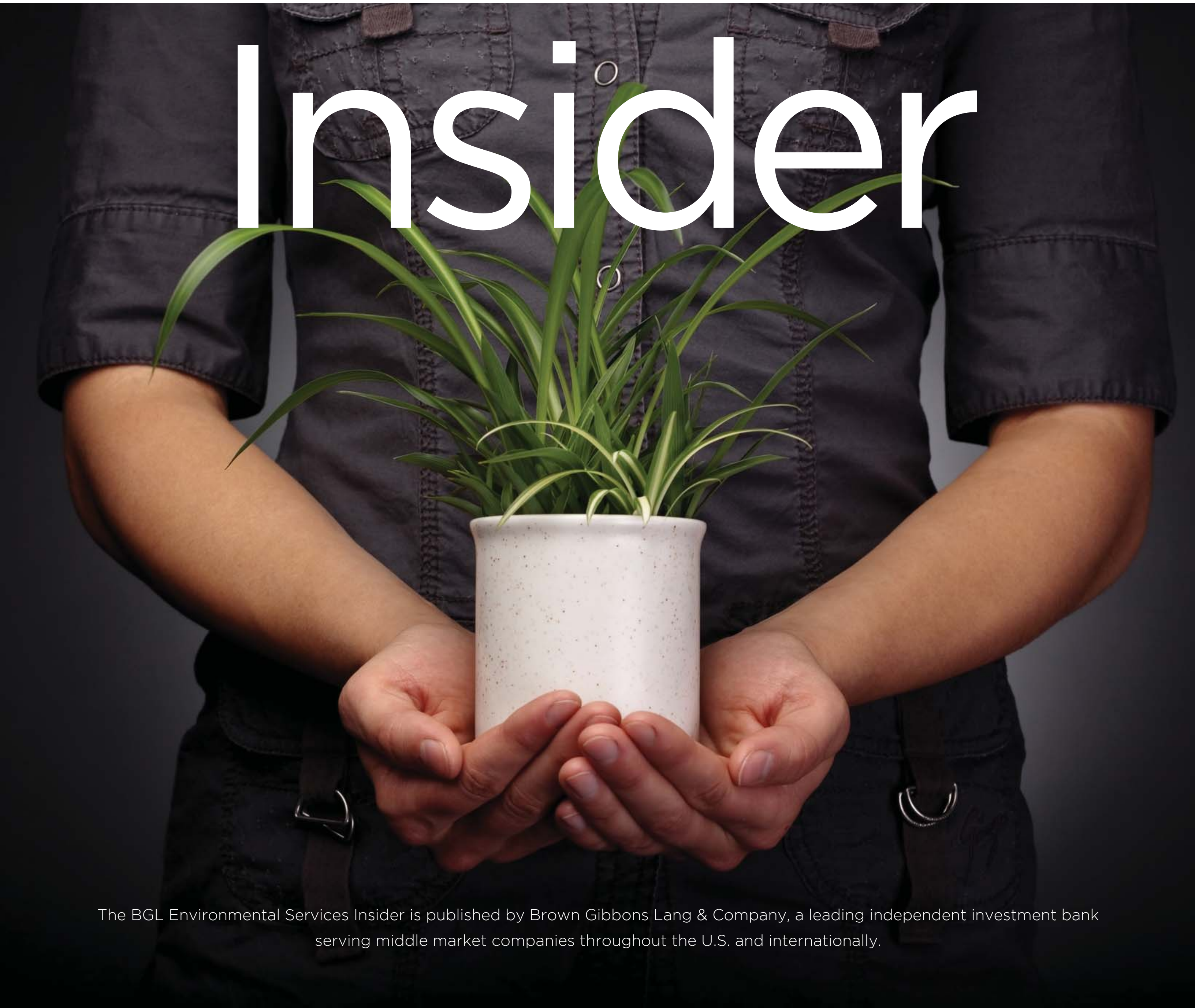

The BGL Environmental Services Insider is published by Brown Gibbons Lang & Company, a leading independent investment bank serving middle market companies throughout the U.S. and internationally.

The Environmental Services Insider discusses valuation metrics, recent mergers and acquisitions and capital markets activity, and select sector commentary for BGL's core focus areas within the environmental services industry:

- *Solid Waste (Non-Hazardous)*
- *Special Waste (Hazardous as well as other non-traditional waste streams)*
- *Environmental Engineering & Consulting (EE&C)*
- *E-Waste & Metals Recycling*
- *Reclamation & Remediation*
- *Waste-to-Energy (WtE)*
- *Cleantech*

Feature spotlights present our views and views of the market on certain sectors gathered through primary research and industry-focused transaction expertise.

M&A Activity

- Overall M&A activity in the middle market[1] is down year-over-year, with deal value through August 2013 down 12 percent on 14 percent fewer transactions. Improving company performance and pent up demand from buyers and capital providers point to a market poised for increased deal flow.
- M&A activity in environmental services remains steady, with deal flow (based on number of transactions) in the first half of 2013 (96 transactions) on pace with the year ago period (96). Q2 '13 saw a modest dip in deal volume from the previous quarter with 4 percent fewer announced transactions. By sector, EE&C continues to lead with robust transaction activity, seeing a twofold increase in deals in the quarter. Solid Waste also saw an uptick with 40 percent more deals and the highest quarterly volume since Q4 '11.
- In Solid Waste, Highstar Capital's Advanced Disposal Services grabbed the spotlight tallying ten tuck-in acquisitions between the months of May and August. Following the flurry of buying activity, the company announced in August it was divesting its New York and New Jersey assets with Action Environmental Group (Summer Street Capital Partners, Ironwood Capital) emerging as the buyer. Waste Management is building scale in energy services, announcing the acquisition of Liquid Logistics and Summit Energy Services in August. In EE&C, acquisitive Terracon Consultants completed two acquisitions in June and July. Private equity backed Accutest Laboratories (Bolder Capital, The Edgewater Funds, and JZ Capital Partners) purchased the Laboratory Services Business of Meta Environmental and Nautic Partners acquired Applied Consultants.
- Debt financing appetite remains healthy. It continues to be a borrower's market with acquisition financing multiples reaching record highs in August. Standard & Poors Leveraged Commentary & Data reported middle market senior leverage (senior debt to EBITDA) of 4.7x—the highest level since 2007.

Industry Valuations

- Volatility in the public equity markets has seen broad indices erase gains in recent weeks as economic uncertainty and geopolitical risk are rattling investor confidence. Year-to-date*, the S&P 500 and DJIA are up 16 percent and 14 percent, respectively. BGL Solid Waste and Special Waste composite indices outperformed the broader market during the period, with Vertically Integrated Solid Waste up 18 percent and Diversified Special Waste and Other Special Waste up 23 percent and 24 percent, respectively. All sectors saw EBITDA multiple expansion in Q2 '13.

**As of September 11, 2013.*

1 Middle market defined as enterprise values between $25 million and $500 million.

Operating Highlights

- Solid waste operators are reporting improving volume and pricing fundamentals. Pricing discipline and cost containment remain in focus resulting in positive trends in margin performance. Growth through M&A continues to be a priority, with transaction activity picking up steam in the second quarter.
- The pricing environment in the used oil recycling market remains challenging. While base oil prices saw signs of stabilization in July, oversupply remains a concern with capacity additions coming online. Recyclers are looking to reduce pay for oil rates to lower input costs and preserve margin.
- Headwinds in the public sector are continuing from negative impacts of sequestration, with EE&C companies reporting lower federal revenue as they continue to navigate through a challenged budget environment. State and local revenues are growing on improving budgets. Participants maintain an optimistic outlook about end market demand in private sector markets, citing strength in oil and gas, infrastructure, and industrial, where cheap natural gas is spurring manufacturing activity.
- Scrap processors are reporting mixed results on slowing global growth with pricing soft on weaker demand. Continued recovery in the U.S. economy is expected to increase scrap supply and improve industry margins.

For more information on how BGL's Global Energy and Environmental Services Practice can assist your company, please contact:

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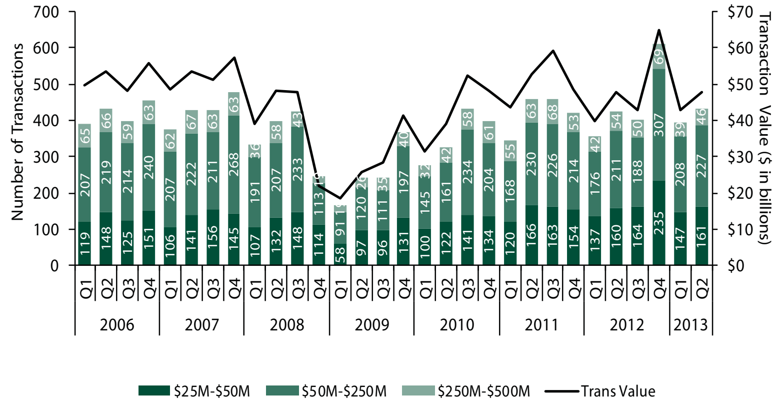
Overall M&A Activity

Mergers & Acquisitions Activity

Middle Market M&A Activity

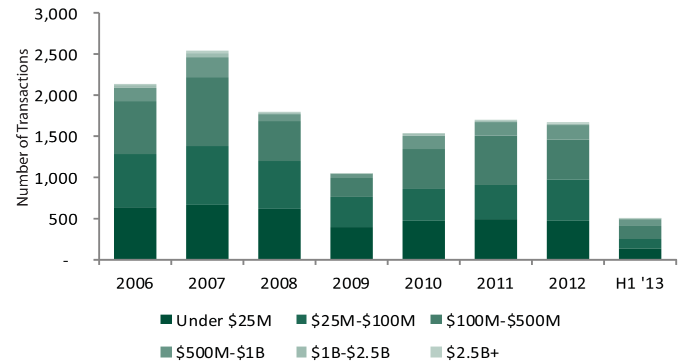


Based on announced deals, where the primary location of the target is in the United States. Middle market enterprise values between $25 million and $500 million.

SOURCE: S&P Capital IQ.

Private Equity Transaction Activity

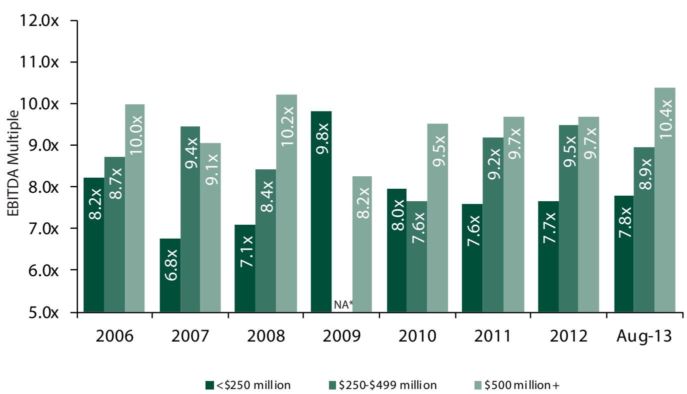
Transaction Count by Deal Size



SOURCE: PitchBook.

Trends in Valuation

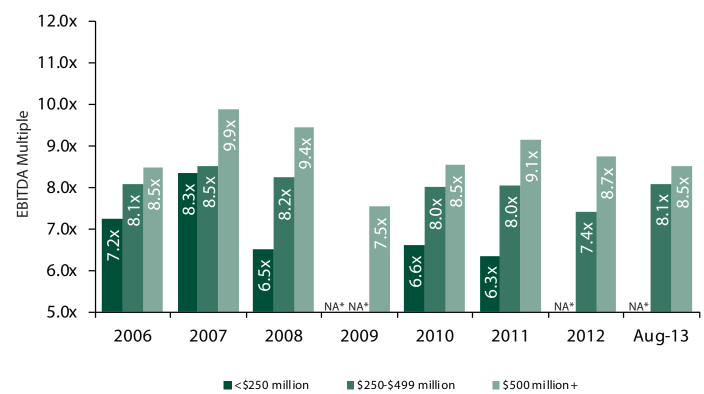
Transactions with Strategic Buyers



**NOTE: Data not reported due to limited number of observations for period.*

SOURCE: Standard & Poors LCD.

Transactions with Financial Buyers

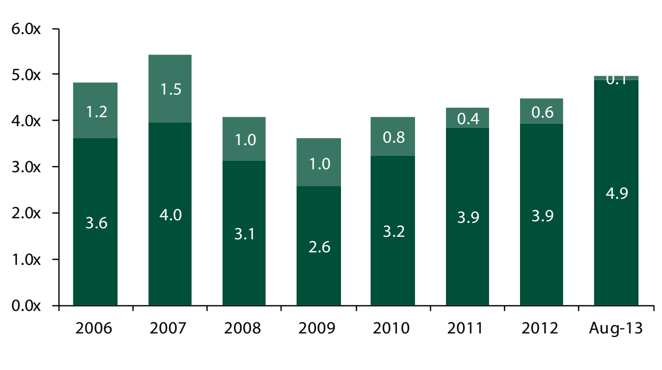


**NOTE: Data not reported due to limited number of observations for period.*

SOURCE: Standard & Poors LCD.

Acquisition Financing Trends

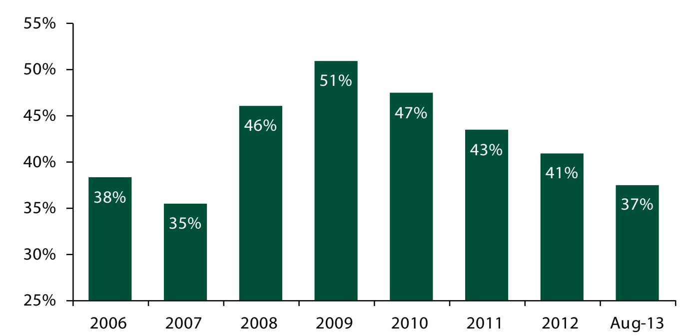
Leverage



Middle market enterprise values between $25 million and $500 million.

SOURCE: Standard & Poors LCD.

Equity Contribution



Middle market enterprise values between $25 million and $500 million.

SOURCE: Standard & Poors LCD.

Environmental Services M&A Activity

Notable M&A Activity in Solid Waste

SOLID WASTE

In September 2013, **Santek Waste Services, Inc.** announced that it had acquired Georgia-based **White Sanitation**. The acquisition includes residential, commercial, and industrial waste collection customers as well as the operation of a transfer station in Georgia. The deal marks Santek's third acquisition in Georgia this year after acquiring Davis Disposal and Evans Recycling Inc. in early January. Santek President Edward Caylor said, "The addition of White Sanitation and the transfer station gives us the ability to internalize new waste volumes at our Gordon County landfill, and solidifies our presence in the Northwest Georgia market." Santek provides residential, commercial, and industrial waste collection services as well as operates landfills in nine U.S. states.

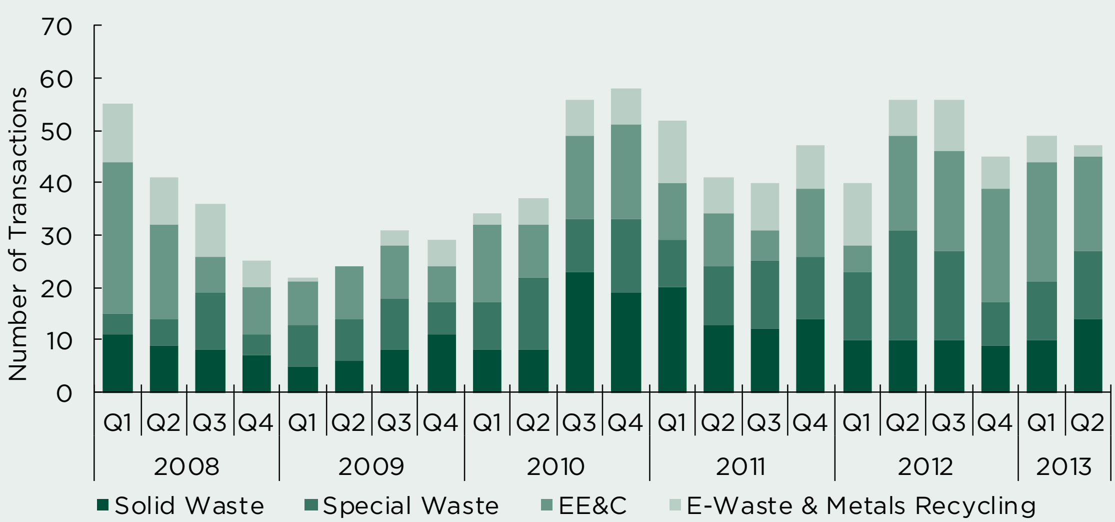
In August 2013, **Advanced Disposal Services Inc.** announced that it had sold off the majority of its **operations in New York and New Jersey** to **Action Environmental Group, Inc.** The acquisition includes four collection operations, a recycling facility, as well as six New York transfer stations and two in New Jersey. The acquisition will expand Action Environmental Group's footprint in the region by re-entering the Northern New Jersey and lower New York State markets. It was disclosed that the sell-off was not a result of the anti-trust requirements resulting from Advanced Disposal's $1.9 billion acquisition of Veolia ES Solid Waste in July 2012. Financing for the deal was provided by Action's private equity sponsors **Summer Street Capital Partners** and **Ironwood Capital**, as well as senior financing from a syndicate of lenders led by Comerica Bank.

Advanced Disposal Services has completed thirteen acquisitions so far this year. The flurry of recent deals represents an aggressive roll up strategy comprised primarily of small tuck-in acquisitions that are in either overlapping or adjacent markets or markets occupied by recently acquired Veolia.

In August 2013, the company completed its fifth acquisition in the Midwest with the purchase of Illinois-based **Matchbox Disposal Inc.** The acquisition includes four roll-off routes serving homeowners, construction, and industrial customers and increases ADS's footprint in Central Illinois.

Historical Environmental Services M&A Activity

Quarterly M&A Activity by Sector



Based on announced deals, where the primary location of the target is in the United States.
Source: S&P Capital IQ, mergermarket, PitchBook, and BGL Research.

SOURCE: S&P Capital IQ, PitchBook, Waste & Recycling News, Recycling Today, Equity Research, and Company Filings.

Environmental Services M&A Activity

Notable M&A Activity in Solid Waste

Advanced Disposal acquired four waste companies in July 2013: in South Georgia, the assets of **Valdosta Waste Services**, including seven municipal contracts which represent the addition of nearly 7,000 customers and eight new residential and commercial collection routes; Illinois-based **Benson Disposal Services Inc.**, which included several vehicles as well as customer contracts; Philadelphia-based **G&C Industries, Inc.** (dba **G&C Waste Services**), which included 20 collection routes and increases ADS's customer base in Eastern Pennsylvania to over 23,000 residential and 1,300 commercial and industrial customers; and Georgia-based **AAA Sanitation Inc.**, a provider of non-hazardous solid waste hauling to over 1,300 residential and 237 commercial customers.

Advanced Disposal's June 2013 acquisitions included a **transfer station** in Roscoe, Illinois. The transfer station is located near an ADS-owned landfill, Orchard Hills, one of the largest operating landfills in Illinois. Also in June 2013: Wisconsin-based **Sheboygan Waste Materials Co.**, which included property, a fiber material recycling facility, customer accounts, equipment, and vehicles; Wisconsin-based **Arrow Disposal LLC**; and Pennsylvania-based **Winsor Disposal**, which included three trucks, containers, and customer contracts.

In May 2013, **Advanced Disposal** announced the acquisition of certain assets of Tennessee-based **RW Edwards Equipment Company**. The purchase included six collection trucks and more than 400 commercial customers, including contracts and containers. The acquisition represents an effort to expand ADS's Tennessee footprint into the Tri-city area.

In August 2013, **Waste Services Industries LLC** (WSI) announced that it had acquired two groups of solid waste companies. In New Jersey, the company acquired **Regional Industries LLC**, **Waste Industries**, and **Meadowbrook Industries**. In Virginia, the company acquired two municipal solid waste landfills and regional collection operations from **CFS Group LLC** (**Container First Services**). WSI Founder, Chairman and CEO, David Sutherland-Yoest was the former CEO of Waste Services Inc. which merged with Progressive Waste in 2010. "Despite the distance between the operations, there are immediate administrative savings that will be realized with the two merged entities, such as insurance, purchasing, banking, etc.," said Sutherland-Yoest. WSI is estimated to have run-rate revenues of $60 million.

In June 2013, **Rumpke Consolidated Companies, Inc.** completed the acquisition of certain assets of **All Star Container Corp.** The purchase included the New Baltimore Construction and Demolition Landfill in Hamilton County, Ohio and portable restroom operations. Rumpke will add 30 vehicles, as well as roughly 15,000 residential customers which includes one municipal contract and approximately 300 commercial accounts. Rumpke is an Ohio-based commercial and residential waste and recycling firm servicing Ohio, Kentucky, West Virginia, and Indiana.

In May 2013, **Waste Corporation of Missouri**, a subsidiary of **WCA Waste Corporation**, completed the acquisition of **Automated Waste Services, LLC** (AWS). The company provides waste management services including municipal solid waste, recycling, and green waste collection for residential, commercial, and industrial customers in Springfield, Missouri and the surrounding counties. The acquisition represents an opportunity to leverage AWS's local market expertise with WCA's extensive resources.

In May 2013, Rhode Island-based **Waste Haulers, LLC** announced the acquisition of **Coastal Recycling Services, LLC**. Coastal Recycling provides construction and demolition (C&D) waste recovery and recycling to commercial haulers and other customers throughout Northeast Florida. Waste Haulers provides multiple waste management services, including residential and commercial collection, roll-off container/compactor rental, portable toilet rental, and grease trap pumping. The company also operates a waste transfer station and a paper and cardboard processing facility.

SPECIAL WASTE

In August 2013, **Darling International Inc.** (NYSE:DAR) announced that it had completed the acquisition of **Terra Renewal Services, Inc.** Terra Renewal is a provider of environmental services focused on the collection, hauling, reprocessing, and recycling of waste cooking oil and disposal of non-hazardous, liquid, and semi-solid waste streams for the municipal, industrial, food processing, food service, and energy markets. The acquisition of Terra Renewal strengthens the Darling's offerings in food process residuals as well as expands its service offerings into wastewater and grease trap waste hauling and disposal. Arkansas-based Terra Renewal was founded in 1995 and has operations in 24 states. The transaction represents a $120 million exit for private equity sponsor **Saw Mill Capital LLC** and other minority shareholders. **Transaction Multiple: 6.9x EBITDA**

SOURCE: S&P Capital IQ, PitchBook, Waste & Recycling News, Recycling Today, Equity Research, and Company Filings.

Notable M&A Activity in Special Waste

SPECIAL WASTE (continued)

In August 2013, **Darling International Inc.** (NYSE:DAR) also announced the $612 million acquisition of the assets of **Maple Leaf Foods Inc.** (TSX:MFI) **subsidiary**, **Rothsay Ltd.** Rothsay operates as a rendering company that collects, processes, and recycles edible and inedible animal by-products. The company offers animal by-product, on-farm, retail by-product, and waste cooking oil collection services as well as grease trap services. Rothsay has five rendering plants in Ontario and Nova Scotia and a biodiesel operation in Quebec. Rothsay employs approximately 550 people and generated approximately $85 million in EBITDA each of the past two fiscal years. The transaction is subject to customary closing conditions as well as review from the Canadian Competition Bureau. **Transaction Multiple: 7.6x EBITDA**

In August 2013, **Covanta Holding Corporation** (NYSE:CVA) announced the acquisition of the **Camden Resource Recovery Facility** from **Foster Wheeler AG** (NasdaqGS:FWLT). The facility, located in Camden, New Jersey, is a mass burn waste-to-energy plant that began operation in 1991. It comprises three boilers with capacity to process 1,050 tons per day, producing a net output of approximately 21 megawatts. The facility utilizes Selective Non-Catalytic Reduction (SNCR) technology for the reduction of nitrogen oxides, activated carbon injection (ACI) for removal of mercury and dioxins, a spray-dryer absorber scrubber for acid gas neutralization and flue gas desulfurization, and an electrostatic precipitator (ESP) for particulate removal. The acquisition was financed with $48.6 million in cash.

In August 2013, **Waste Management, Inc.** (NYSE:WM) announced the acquisition of the combined operations of **Summit Energy Services, LLC** and **Liquid Logistics**. The two companies provide various energy services, including oil well-site maintenance, road and well-site pad construction, storm water and erosion control management, aggregate crushing and sales, and well monitoring pumping. The acquisition will enhance Waste Management's environmental service offerings to oil and gas industry customers in the Bakken Shale formation while also adding unique expertise with the addition of 140 employees. The companies are each located in North Dakota, central to the Bakken Shale formation which is one of the largest oil fields in the United States.

In August 2013, **Synagro Technologies, Inc.**, backed by **The Carlyle Group LP** (NasdaqGS:CG), sold substantially all of its assets to **EQT Partners AB** through a comprehensive plan of reorganization for $455 million. The Texas-based company filed for Chapter 11 Bankruptcy in April 2013 and received $30 million debtor in possession financing. Synagro provides waste capture and conversion services to municipal and industrial water and wastewater facilities throughout the United States. The company offers solutions for civic and commercial organizations including recycling industrial and municipal waste and organic by-products into environmentally sustainable resources such as biosolids, fertilizer, fertilizer pellets, and compost. The company also offers cleaning solutions, including site reclamation, land sampling and nutrient analysis, lagoon cleaning, dewatering, dredging and pumping, digester and separator centrifuge repair, rail transportation, and drilling solutions. Synagro's primary end markets include municipal, renewable energy generation, chemical manufacturing, food and beverage production, pharmaceutical, pulp and paper, textile, water/wastewater, and oil and gas industries. Carlyle acquired Synagro in 2007 in a transaction valued at $750 million.

In July 2013, **Versatile Processing Group, Inc.** (VPG) backed by private equity firm **Insight Equity**, acquired **Environmental Management Systems, Inc.** Arizona-based Environmental Management provides dielectric oil and equipment recycling services and transportation equipment to the electric utilities industry. The company recycles diesel fuels, turbine oils, hydraulic oils, and lube oils. It also recycles electric utility equipment, such as transformers, oil circuit breakers, sodium hexafluoride breakers, reclosures, cables, and capacitors. VPG offers similar services, including electric-utility equipment and oil recycling, on-site sampling and teardown, and repair services. VPG was acquired by Insight Equity in 2011.

In May 2013, **Renewable Energy Group, Inc.** (NasdaqGS:REGI) (REG) acquired a **biodiesel plant** located in Iowa from **Soy Energy, LLC**. The bio-refinery produces biodiesel from animal fats, used cooking oil, and other bio-solids and liquids and has an annual processing capacity of 30 million gallons, bringing REG's annual production capacity to over 250 million gallons across eight plants. REG plans to reopen the facility by the end of 2013 using soybean oil and low free fatty acid feedstocks. The purchase price consisted of $11 million in cash and $5 million in promissory notes.

SOURCE: S&P Capital IQ, PitchBook, Waste & Recycling News, Recycling Today, Equity Research, and Company Filings.

Notable M&A Activity in Environmental Engineering & Consulting

SPECIAL WASTE (continued)

In April 2013, **Action Resources**, a portfolio company of **Joshua Partners**, acquired **LW Environmental Services**, Inc., an Oklahoma-based provider of emergency response, inland and inter-coastal cleanup, tank cleaning and maintenance, soil remediation, oilfield maintenance, hazardous waste disposal, and facility services. Action Resources provides non-hazardous and hazardous waste hauling, rail to truck transfer, spill response equipment rental, and other services. The company operates a fleet of vacuum trucks, chemical and vacuum tanks, containers, and trailers with locations in Alabama, Georgia, and Texas.

ENVIRONMENTAL ENGINEERING & CONSULTING

In July 2013, **Terracon Consultants, Inc.** announced the acquisition of **New England EnviroStrategies, Inc.** The New Hampshire-based company provides environmental consulting and water resources services across various client sectors, including legal, institutional, industrial, commercial, municipal, and non-profits. Terracon plans to retain all of New England EnviroStrategies' employees and expects to leverage the company's strong regional reputation.

In June 2013, **Terracon Consultants** acquired **Dunkelberger Engineering & Testing, Inc.** Dunkelberger is an environmental services and geotechnical engineering company with four offices located throughout Florida. Environmental services offered include diligence studies and evaluation of contaminated soil, sediment, and groundwater serving agricultural tracts, industrial sites, landfills, golf courses, petroleum stations, and dry cleaning contamination sites. In addition, the company offers a wide range of construction materials testing, building inspections, and geotechnical engineering services. Terracon expects to retain all of Dunkelberger's 60 employees as well as each of its locations, bolstering Terracon's Florida presence and market share.

In July 2013, environmental testing laboratory, **Accutest Laboratories, Inc.** announced the acquisition of the **Laboratory Services Business** of **Meta Environmental Inc.** (MEI). The company's laboratory services business includes environmental forensic testing, on-site laboratory services, bioavailability and degradation studies, treatability studies, analytical method development, and data validation and data usability assessment, as well as routine water, soil, sediment, NAPL, and air analyses. The business line primarily serves utility, petroleum, industrial, government, and engineering clients. With the acquisition, Accutest looks to expand its service offering, capacity, and market coverage. Accutest is the fourth largest operator of environmental testing laboratories in the United States. Accutest received $75 million in development capital from **Bolder Capital**, **The Edgewater Funds**, and **JZ Capital Partners** in 2007. The MEI laboratory business is the fourth add-on for Accutest. Other acquisitions include SouthWest Water and Barney Family Labs in 2009 and Entech Analytical Labs in 2008.

In July 2013, **Nautic Partners, LLC** announced the acquisition of oil and gas pipeline inspection provider **Applied Consultants, Inc.** Applied Consultants offers inspection and engineering services on pipelines, compressor stations, and processing facilities used in midstream oil and gas energy transport. Offerings include AFE preparation, bid development and solicitation, construction specification documents, engineering, estimating, inspection, permitting, project development, project management, acquisition and support, surveying, and welding procedure development services. Commenting on the investment, Doug Hill, Managing Director at Nautic shared in a press release, "We think Applied will continue to thrive, as the surge in U.S. energy development continues to demand the build-out of new pipeline infrastructure to support increased production. We also believe that increases in regulation of energy development will support customers demanding more inspection services from high-quality, trusted partners like Applied." The company currently has over 450 inspectors across the country. The acquisition represents an exit for **Pine Tree Equity Management** which acquired the company in March 2011.

In July 2013, **Infinity Resources Holdings Corp.** (OTCQB:IRHC) acquired the remaining 50 percent interest in **Quest Resource Management Group, LLC**. Infinity subsidiary Earth911, Inc. already owned a 50 percent interest in the company. Quest provides environmental consulting and complete commercial waste stream management for large and mid-sized corporations located in the United States, Canada, and Puerto Rico. The company designs customized sustainability solutions, customized landfill diversion and waste management solutions, environmental solutions, and eco efficient products. Commenting on the transaction, Infinity CEO Brian Dick stated, "The underlying organizations will help Infinity achieve overall growth in stockholder value, benefiting from a simplified operating and financial structure and significant commercial synergies." Consideration consisted of $22 million in promissory notes and 22 million shares of Infinity common stock. Quest generated revenues

SOURCE: S&P Capital IQ, PitchBook, Waste & Recycling News, Recycling Today, Equity Research, and Company Filings.

Notable M&A Activity in E-Waste & Metals Recycling

ENVIRONMENTAL ENGINEERING & CONSULTING (continued)

of approximately $131 million in 2012. **Transaction Multiple: 1.2x Revenue**

In June 2013, **Alliance Environmental Group, Inc.** acquired mold remediation provider **Seacliff Environmental Services, Inc.** California-based Seacliff offers testing, remediation, restoration, and construction services in connection with hazardous and invasive molds for businesses and home owners. The company will retain the Seacliff Environmental Services brand. The transaction follows the April purchase of AMP Abatement, Inc. AMP provides abatement services for residential and commercial customers which include asbestos removal, lead paint removal, mold removal, and other hazardous waste services. Alliance Environmental, also based in California, provides a diverse suite of environmental contracting services including abatement, demolition, site clearing, and hazardous waste disposal, among others.

In June 2013, environmental consulting provider **American Radiation Services, Inc.** (ARS) was acquired by Alaska-based **The Aleut Corporation**. ARS provides radiological testing, structure surveying, decontamination and remediation, project management, site characterizations and assessment, facilities maintenance, and training services primarily to the oil and gas and government sectors. The company is based in Louisiana with additional offices in Tennessee and New Mexico. ARS will join a group of Aleut subsidiaries that range from government contracting, telecommunications, mechanical engineering, environmental remediation, water testing, fuel sales, and real estate management.

E-WASTE AND METALS RECYCLING

In July 2013, **Metal Management Aerospace, Inc.**, a subsidiary of **Sims Metal Management Limited** (ASX:SGM), was acquired by **ELG Utica Alloys, Inc.** The company specializes in the recycling of titanium alloys and high temperature metals for the aerospace industry. According to Sims, the business was determined to be non-core due to the unique aspects of its processing capabilities and associated commodities. Sims expects a pre-tax loss of approximately $9 million to be recognized as a result of the transaction. The acquisition is expected to increase ELG's position and technological advantage within nickel and titanium superalloy scrap processing.

In July 2013, **E-Waste Systems, Inc.** (OTCQB: EWSI) acquired Cincinnati, Ohio-based **WWS Associates, Inc.** (dba 2TRG). 2TRG provides electronic waste recycling, data destruction, cabling, and technology deployment services to small businesses, schools and governments, Fortune 500 companies, value-added resellers, electronics manufacturers, and local residents in the United States. The acquisition is expected to add more than $5 million in annual revenues and over 12 million pounds processed with the potential capacity to reach 75 million tons annually. E-Waste Systems intends to deploy the Ohio location as a strategic operational hub for the Midwest and to build upon the New York location to expand into the Northeast. The initial transaction involves acquiring 25 percent of the equity of 2TRG in exchange for $385,000 of E-Waste Systems preferred stock, leading to the acquisition of 100 percent of the business as soon as the final agreement is concluded.

In July 2013, **Metalico, Inc.** (NYSE:MEA) subsidiary **Goodman Services, Inc.** announced it had acquired the assets of family-owned scrap metal recycler **Segel & Son, Inc.** Based in Pennsylvania, Segel & Son offers scrap recycling and processing of ferrous and non-ferrous metals. The company also provides electronics recycling for computers and other electronics as well as cardboard and mixed paper recycling services. The acquisition is expected to enhance Goodman's position along the southern New York border as an aggressive competitor for the region's scrap and to boost supply materials for Metalico's Buffalo shredder. Goodman Services, also based in Pennsylvania, was acquired by Metalico in January 2011.

In July 2013, **Miller Electronics Recycling LLC** was acquired by **ARCOA Group**. Miller provides recycling services for obsolete and used computer equipment in the Midwest. The company offers collection, breakdown and sorting of equipment into recyclable components, disposal and recycling toxic components, and provision of certified data destruction to comply with state and federal regulations. The company will continue to operate out of its Wisconsin location and is expected to help ARCOA expand its reach into the greater Milwaukee and southern Wisconsin e-waste markets.

SOURCE: S&P Capital IQ, PitchBook, Waste & Recycling News, Recycling Today, Equity Research, and Company Filings.

Spotlight On: Used Oil Collection & Re-Refining

The challenging pricing environment in the used oil market is continuing. Base oil is seeing some price relief as attention turns to used oil feedstock with market participants actively looking to reduce input cost to preserve margin. Committed investors remain undeterred in their pursuit of re-refining expansion, holding fast to environmental drivers of sustainability and waste recovery to fuel demand.

Market highlights:

- Stabilization in base lube prices, supported by price increases from majors in late July and early August
- Growing pressure to reduce pay for oil to generators as collection spreads tighten
- Universal Environmental Services/AVISTA OIL AG 30 million gallon re-refinery fully operational in May, surpassing milestone of one million gallons of finished base lube produced and sold
- Clean Harbors selected as stalking horse bidder for the assets of Evergreen Oil in $60 million transaction
- Market participants pursuing strategic options

Seeking balance

In our December 2012 market update, discussion from industry participants centered on volatility in base lube prices, which had been on a continuous gradual decline since June of last year, putting pressure on re-refining spreads. Price hikes initiated by the majors this July and early August brought some relief; the 15 to 25 cents/gallon increases went into effect between July 26 and August 1, reported Lube Report. "Lube price is recovering," offered Greg Ray, chief operating officer at Heritage-Crystal Clean. "Base oil prices bottomed in February and began to recover from that low point. That recovery is still continuing, and it's been slow but steady." Although Group II pricing appears to be stabilizing, it is down over 90 cents/gallon from June of last year. Ray added, "While base lube prices have moved up, and the spread of base lube over VGO has improved from the historic lows in the first quarter of 2013, we remain concerned that new capacity, particularly the Chevron Pascagoula lube plant, could put downward pricing pressure on the market."

"Lube price is recovering. That recovery is still continuing, and it's been slow but steady."

—Greg Ray

Heritage-Crystal Clean

For our mid-year update, attention turned to current pricing dynamics for used oil and efforts being made by market participants to adjust pay for oil programs to offset pricing pressures in the market. National players have stated publicly their intentions to reduce pay for oil (PFO) rates to generators and their willingness to give up low-margin volume. In Clean Harbor's Q2 '13 earnings call, CEO Alan McKim underscored the disconnect between crude and base oil prices, calling recent trends "unprecedented". In an effort to reduce collection costs, the company is "rapidly adjusting its pay for oil program" and has undertaken an initiative to reindex national accounts from crude to base oil pricing, a move which it expects will take several more quarters to see results. McKim stated, "We continue to look for less expensive sources of waste oil in new geographic areas and among the Clean Harbors' legacy customer base. We're confident that over the next several quarters, we can continue to enhance the margin in this segment, even without any improvement in the currently depressed price of Group II base oils. We have walked away from some volume. We have pushed really hard on pricing." Clean Harbors reported lower revenue and EBITDA for the Oil Re-Refining and Recycling Business in Q2 '13 and is being conservative in its forecasts to account for anticipated volume loss. Revenue and EBITDA both contracted 17 percent in the second quarter to $75.1 million and $12.7 million, respectively. For the six months ended June 30, 2013, the Oil Business generated EBITDA of $28.0 million on revenue of $165.5 million.

"We are desiring to reduce what we pay on the street for used oil. We've made some efforts to work on that," offered Greg Ray of

Heritage-Crystal Clean in the company's Q2 '13 earnings call. "We believe that we continue to be at the low end of the industry spectrum in terms of what we're paying generators for used oil. And we certainly know that some collectors have indicated that they expect to put in place price changes and pay less for used oil. But we are not seeing that in the market at this point in time on a broad scale basis." Heritage-Crystal Clean reported higher revenue and EBITDA in the Oil Business in Q2 '13. The company generated EBITDA of $0.3 million on revenue of $27.7 million—a 10 percent revenue increase from the prior quarter. For the six months ended June 30, 2013, the Oil Business generated revenue of $52.9 million and an EBITDA loss of $1.2 million.

"I don't hear succinct steps from our competitors about reducing PFO rates. I know they are talking about it, but then we still see them doing things that make you scratch your head," observed Jan Horsfall, chief executive officer at Universal Lubricants. "I think part of it is if they have a re-refinery that needs the feedstock, they don't have any choice."

"When base lube prices fell six months ago, street pricing needed to readjust and that really has not taken place," observed Ben Cowart, chief executive officer at Vertex Energy. "The collections side of the business is very lethargic in adjusting to market conditions. There is a lot of trepidation in these companies to make street price adjustments for fear of losing the generator business." Heritage-Crystal Clean's Greg Ray added, "Our sense is that other people in the used oil business that pick up used oil and sell it for fuel are performing significantly worse in terms of margins and profitability than a couple years ago. They've given up too much of their margin to the generator customer."

"A lot of collectors are seeing lower same store volumes from their historical customer base so they are trying to rebuild market share and are having to pay up to do that. They are maintaining pricing even though it is very difficult for them to make a profit on that material," added Cowart. "It is interesting to see what people are paying for used oil today to the generator in order to gain access to that oil and have some sense of control over that volume. While it varies across the country, I would say there are plenty of data points out there north of $1.65/gallon paid to a generator." Juan Fritschy, chief executive officer at Universal Environmental Services commented, "Three to four months ago, there were collectors paying prices on the street that were not, in my opinion, profitable. Today the market is very slowly trying to adjust to a more rational pricing level."

"There are going to have to be leaders that step up, regionally or nationally—those that have a transparent view of the markets and can lead the charge and set the tone for where street prices should be."

—Ben Cowart
Vertex Energy

"The industry has to make certain adjustments in order to restore its value, which is mainly getting price at a street level right," said Cowart. "You may lose some generator business, but the business you keep will be profitable. At least you will be running the business right-sized to the market conditions."

"We are seeing large companies trying to walk away from third party volume. Who comes in behind them will be an interesting dynamic. It is the old adage; do you shoot at each other on the way down? If nobody pulls out their gun, I think that is when the price comes flying down pretty fast," added Horsfall. "We are walking away from some third party business that, after variable costs are reviewed, isn't profitable for us. It will be interesting to see whether that same discipline exists among the 15 to 20 largest players in the space."

"The only place we can go back is the generators and push back. We've instituted some price changes," said a regional used oil collector. "It's a matter of survival, and it's going to be a matter of survival for everybody. Regardless of technology, regardless of lube oil markets, that feedstock number will adjust."

"I think most of the participants are trying to reduce prices. We are doing our part also," Fritschy added. "We are going to keep the market as affordable for everybody as possible. We operate in 14 states and are buying from roughly 75 third party independents. We have good relationships with them and know we can draw in more volume. There is no reason to heat up the market in these conditions."

Spotlight On: Used Oil Collection & Re-Refining

"There are going to have to be leaders that step up, regionally or nationally—those that have a transparent view of the markets and can lead the charge and set the tone for where street prices should be," said Cowart. "Through a lot of innovation and application we have managed to find marketplaces and niches at a fairly good value. As regulation reduces capacity for people to burn used oil, which will happen over time, the only option will be re-refining," remarked Luke Staengl, chief executive officer at PESCO-BEAM Environmental Solutions. "The fact is there will be downward pressure on the street if lube oil prices continue to fall. It hasn't been that long since people were paying to get rid of used oil. There can be a much lower input cost should it be needed."

"There is conscious thinking from everybody about driving the PFO rates down. We all want it to happen. That naturally means that you are going to see a degradation of the PFO rate," added Jan Horsfall at Universal Lubricants. "We will have seen those rates drop 10 cents/gallon since the middle of last year. We are planning for another 10 cents in 2014, and if pressed, think it is going to be bigger than that because of the excess inventories we are seeing right now." Horsfall continued, "There are the ~600 small collectors that are picking up across the country; their issue is going to be what to do with the waste oil because the RFO market is so soft. There is unquestionably a backup of supply at that level right now. The small- to medium-sized collectors are the last to hold up the pricing. If they don't have an outlet to sell that oil, that price is coming down."

Environmental pressures have the effect to create supply/demand imbalances in certain markets. Most notably, recent legal actions brought against certain fuel blenders in the Northeast U.S. have mandated the cessation of used oil in heater and boiler applications, the result of which has created a surplus of used oil in the region. Further compounding the oversupply, New York has reduced the allowable sulfur content in fuels. "New York has taken the word residual fuel out of their fuel permits or burning permits," said a regional collector in the Northeast U.S. "In two years the permit renewal cycle will be completed, and there won't be any residual fuel burning. You will have a high concentration of people and a surplus of used oil." "That effect of oversupply in one region reverberates throughout the rest of the country," commented Staengl. "We've seen used oil prices dropping, especially in the Northeast, quite dramatically. That has had a major impact on the desire by many aggregators and collectors to start looking at re-refining." Juan Fritschy at Universal Environmental Services added, "Today the Northeast region is extremely long, and the prices that have been offered for used oil are substantially low. In contrast, the Southeast has plenty of outlets today that can take oil for a reasonable price. It is a more balanced market."

"It's a free market. That is what is interesting about collecting used oil in the U.S., where there is no government involvement to influence price," remarked Ben Cowart at Vertex Energy. "My concern is a lot of the small companies will run the margin out of their business by trying to hold on to their oil. That is going to put a number of companies in financial distress. Therein lies the M&A opportunities when that starts to take place."

> *"As regulation reduces capacity for people to burn used oil, which will happen over time, the only option will be re-refining."*
>
> *—Luke Staengl PESCO-BEAM Environmental Solutions*

Participants explore options

Collectors are experiencing margin erosion to protect volume as pressure to reduce street pricing builds. Insiders speak to a heightened level of interest to explore strategic options, with discussions taking place around collector cooperatives, merging collection operations, and partnering with re-refiners through long-term supply contracts or outright sales. "Collectors are struggling. I think it's a great time to go to them and say, I am interested in buying your company, or I want to buy your oil," observed a regional used oil collector in the Northeast U.S. "Negotiate a price and start to have an effect on the market. They have no idea when they are going to sell the next load of oil, and they have no idea what it's worth. To help balance the market, take out the question of what it's worth on the street to a generator. Give them part of the equation."

"I have yet to talk to a collector that is happy with their buyers of oil today," offered an existing equity investor in the space. "The world has changed over the last year. Most of the collectors that we are talking to are long used oil. They've seen a lot of their customers convert over to natural gas, so they are very interested in finding a stable buyer of their supply stream, whether that is a sale or a long-term partnership to solidify their offtake."

Collectors have been more receptive to entering into long-term supply agreements, said insiders surveyed. Contracts are being successfully negotiated with five to seven year terms guaranteeing specified volumes indexed off No.2 or No. 6 oil. "What we are offering collectors is a fair price for their oil without any of the volatility," the investor added. "We are hearing more discussions around participatory agreements where collectors can take part in the upside as the refinery does well, basically ensuring loyalty for supply," offered Luke Staengl of PESCO-BEAM Environmental Solutions. "We've had some conversations with small collectors (~2 to 3 million gallons) to bring them in as a cooperative," offered a regional collector in the Northeast U.S. "In exchange for guaranteed volume to profitably feed the plant, we would provide a token interest in the facility either directly or through the coop group."

"I think collectors are becoming more convinced that re-refiners are going to be the long-term winners in the used oil market," observed Juan Fritschy at Universal Environmental Services. "Collectors that we have been talking to for some time have now had a chance to visit our re-refinery. To see the quality of the facility we built and the quality of product we are producing makes the story real for them." Fritschy added, "They are more willing to meet at a reasonable valuation for the sake of closing a deal to be part of a group that has a long-term future."

"I think collectors are becoming more convinced that re-refiners are going to be the long-term winners in the used oil market."

—Juan Fritschy Universal Environmental Services

"The M&A environment is more active right now," commented Greg Ray at Heritage-Crystal Clean. "We have a number of deal opportunities available to us, right across the size spectrum, from small participants to large. They are looking for a way out."

"There will be more desire by collectors to sell over the next few years, particularly for those that have no processing capability or are just selling RFO. Those margins will continue to decline," Staengl added. "Collectors will sell to larger collectors or to operators that have collection and re-refining. "We offer a flexible approach. If a collector is interested in selling the business, we can have that conversation. If we cannot meet on valuation, we have a conversation around putting together a supply contract. There is interest in one of the options," offered an equity investor in the industry.

In June 2013, Clean Harbors emerged as the bidder for the assets of Evergreen Environmental Holdings, the parent company of used oil re-refiner Evergreen Oil (Evergreen). Evergreen filed for Chapter 11 in April 2013. According to NORA, the Evergreen re-refinery has an annual input capacity of 21 million gallons, which reflects a facility expansion in April 2010 that doubled its processing capacity. Evergreen faced operational issues resulting from two fires in less than a year which shut down the facility for an extended period.

Used oil is regulated as a hazardous waste in California, a market which Safety Kleen exited in 2005, reported Clean Harbors in its Q2 '13 earnings call. Clean Harbors employs more than 1,000 people from facilities in the state and can leverage its operations and experience managing hazardous waste. California is one of the lowest priced oil markets in the country, according to Clean Harbors CEO Alan McKim, commenting on the rationale for the purchase, "We want to tap into that market and be able to handle that lower-priced oil to provide a better feedstock…at a lower cost to our re-refineries. So this is one way for us to enter that market. It's not the only way, certainly, but that has really been our focus, is getting into the California market, which is exclusively what Evergreen focuses on today."

Spotlight On: Used Oil Collection & Re-Refining

Acquisitions will be a means for recyclers to build diversification into their business models. “We want to be a diversified petroleum recovery company that covers multiple industry verticals,” offered Ben Cowart at Vertex Energy. “We see vertical expansion opportunities around other residuals so we have been focusing heavily on our oil filter and antifreeze business.” Cowart added, “Collectors remain a key target for us within the footprint of our refining facility. And we are also looking at organic growth in that footprint as well.” In the company’s Q2 ’13 earnings call, Heritage-Crystal Clean announced it had completed the acquisitions of two antifreeze recycling companies, adding $6.3 million in annual revenue. CEO Joe Chalhoub identified antifreeze as a common waste stream from most of the company’s customers. With the technology and operational expertise gained from the acquisitions, the company will now be able to service the antifreeze recycling needs of its customers.

Expansion continuing, pace slowing

The current pricing environment is not deterring some investors from pursuing U.S. expansion plans. **Heritage-Crystal Clean** maintains an optimistic view on the market opportunity for re-refined oil, with CEO Joe Chalhoub stating in the company’s Q1’ 13 earnings call, “We believe the current base oil pricing and the resulting spread between crude oil and lube oil prices reflect conditions that are not sustainable in the long run for the virgin production of lube oil from crude. We remain confident that this is a good business that will provide attractive returns over the long run.” In February 2013, the company announced plans to expand the annual input capacity at its Indianapolis re-refinery from 50 to 75 million gallons, which will increase lube output from 30 to 45 million gallons—a move expected to improve the profitability of the oil business. The expansion is expected to be completed by the middle of 2014 according to Chalhoub. “We are still investing in expanding the facility,” commented Greg Ray at Heritage-Crystal Clean. “Even in a market with poor pricing, the expansion economics look attractive because they leverage our substantial fixed costs in the facility. Running a 75 million gallon plant will be more profitable than running a 50 million gallon plant. That is our expectation and so we are gearing up to accomplish that.” Ray indicated that Heritage-Crystal Clean is currently collecting about 75 percent of its feedstock needs to the re-refinery with the remaining 25 percent purchased from third-party collectors.

In May 2013, **Universal Environmental Services** (UES) started production at its 30 million gallon re-refinery in Peachtree City, Georgia, which is now running at full capacity, surpassing the one million gallon mark of base oil produced and sold. UES is producing a Group I-plus, which by measurable indicators according to CEO Juan Fritschy, is the highest quality Group I product in the market. With some modifications to the re-refinery, Fritschy indicated that UES could produce Group II; however, given the narrow spread today between Group I and Group II, the economics favor continuing on its current path without incurring the additional operational cost. UES and Germany-based AVISTA OIL AG are jointly pursuing U.S. expansion into re-refining. AVISTA is a majority owner in UES which it acquired in January 2011. “U.S. expansion is part of the long-term strategic plan for the AVISTA Group,” offered Fritschy. “AVISTA has committed the resources to look for and find the right partner in the right market to build a second U.S. re-refinery and is having advanced discussions with a handful of potential partners.” Fritschy added, “As we did in Peachtree City, once we announced we were going to build a re-refinery and run it, we did it. Once we find the right partner, we can immediately commit the necessary resources to begin construction. Those players with a long term view will push forward, like AVISTA is doing.”

> *“Those players with a long term view will push forward.”*
>
> *—Juan Fritschy Universal Environmental Services*

In December 2012, SKion GmbH acquired a 30 percent equity interest in AVISTA, with capital earmarked for future strategic acquisitions and the expansion of additional re-refining capacities in Europe and the United States, according to a press release announcing the transaction. Commenting on the strategic partnership with SKion, AVISTA CEO Bernd Merle said, "The capital increase will enable us to drive forward our global expansion dynamically. We gain a strong and industry experienced partner on our way towards a globally leading position in the production and sale of eco base oils, eco lubricants, and by-products as well as recycled fuels." Founded in 1951, Avista participates in the entire value chain, from used oil collections and re-refining to the marketing and sale of high-quality base oils and lubricant blending, serving more than 70,000 customers worldwide. The company employs approximately 550 people from four production and logistics sites in Europe and the United States. AVISTA's revenues were projected to exceed EUR 200 million in 2012.

In July 2012, **Nexlube Tampa LLC** broke ground on a 24 million gallon re-refinery slated to begin production in Q4 '13. In a public interview in July 2013, chief operating officer Enzio D'Angelo announced that Nexlube had upsized its capital budget from $80 million to $120 million in a strategy to produce technical grade white oil (TGWO), making it one of only a few producers in the world of the lubricating oil. The facility will also produce low-sulphur diesel fuel and asphalt flux. Nexlube is backed by Texas-based private equity firm Riata Corporate Group. While acknowledging the technology and capital are in place, some insiders are critical of the project because Nexlube does not have captive feedstock. "They are going to have to go out and pay a competitive rate for feedstock or they are going to have to go buy some collectors," observed a regional used oil collector.

Regional collectors believe in the re-refining value proposition but lack the capital to finance expansion, with insiders highlighting a growing capital need in the industry. One such collector offered his perspective, "The only thing that is going to make my company valuable is to have a market. I am either going to be in the export business and market used oil offshore or develop a refinery here and sell my waste oil as feedstock to the plant and with that I will be able to develop value for my collection company." The collector continued, "We are teed up and ready to go. We have feedstock. We have technology. We know the capital costs. We need an investor or a partner to come in and build this plant with us." He continued, "A number of small collectors are in the same situation. There is a real need for investor capital to come in to help finance the expansion and accelerate the consolidation. The businesses can be regional refiners, which you see a lot of in Europe."

The Northeast and several other regions are primed for additional re-refining capacity, said several insiders. "If you look at all the used oil generated in the U.S., there are several regional pockets of supply that have not yet been tapped by re-refining," observed an existing equity investor in the industry. The investor continued, "Our focus is on finding the right geography. You need access to the oil. You need access to rail and water. From a transportation standpoint, you are logistically advantaged to be where the oil is."

"If you look at all the used oil generated in the U.S., there are several regional pockets of supply that have not yet been tapped by re-refining."

— Equity investor

Universal Lubricants has partnered with private equity sponsor **Pegasus Capital Advisors**, which first supplied development capital to the company back in 2007 and has since overseen the construction of one re-refinery in 2009 and tuck-in acquisitions which include Texas-based Midstate Environmental Services in 2012. "The original thesis behind Pegasus putting this company together was not to build those high capacity systems. We have always felt it was better to build a series of smaller capacity refineries so you don't have to drive the used oil market up," offered Jan Horsfall at Universal Lubricants. "We are looking strategically at areas throughout Texas and the southern U.S. where we think there are great opportunities to expand our new oil business. We have found some very unique applications that are more profitable than selling into the road building or the burner markets. If we are successful executing on our plan in 2014 and 2015, at that point it might make strategic sense to build another refinery to feed the new oil business we have but not just to feed a refinery that we build."

"When we opened the re-refinery in 2009, we knew we had to create a base oil and get it blended and packaged into a finished product so that we could move up the profitability scale on that gallon. You could

Spotlight On: Used Oil Collection & Re-Refining

say that we've grown up a lot since then," offered Horsfall. "Aside from base oil, we are getting very smart about what by-products come out of the refinery and how we adjust for different outputs. Given our technology and set up, with adjustments to the re-refining process we can more rapidly take advantage of stronger commodity segments." Jan Horsfall at Universal Lubricants continued, "We have made it a focus to control the quality of feedstock that we accept in our re-refinery and are putting in place a formalized, measured program in Q4 '13. When you don't have to beg, borrow, and steal for gallons just to feed the refinery you can be a little more selective. Again, that is the advantage of building smaller facilities. Our belief is that if we can keep the quality of feedstock up, we don't have to turn around the refinery every 12 months. That is an enormous savings. There is a hardcore push toward technology and automation inside of our company. Our goal is to be the most modern, fast moving, and adaptive company in this space."

PESCO-BEAM Environmental Solutions is moving towards becoming involved in operating re-refining plants in the U.S., according to CEO Luke Staengl, who is a proponent of "appropriate sizing" when considering facility construction. "The closer to the resource base you are and appropriately sized to handle the oil being generated, the better off you are," commented Staengl. "Transportation is a significant part of your input cost, so it comes down to how much oil you can secure on a relatively local basis. We basically look at a two to three hour radius for a truck as a fairly decent parameter that we don't really want to exceed. Locating on the coast and having water and rail access changes some of those factors. I am an advocate for smaller, decentralized facilities."

PESCO-BEAM designs and builds oil recovery and solvent recovery systems and is credited with the successful installation of 14 used oil re-refineries worldwide. "There continues to be a lot of interest in the U.S. market, said Luke Staengl, commenting on re-refinery expansion. "There is a growing movement towards putting re-refineries throughout the South, which includes Texas and Louisiana, where there is a fair amount of export opportunity. My guess is that not too far in the distant future, material that is being exported will start being shifted towards plants in that region." Insiders said that the project finance market has opened up for the properly "packaged" project, and like other waste to energy investments, requires long-term contracts on the feedstock and offtake, experienced operators, proven technology, and a guarantee from a reputable EPC firm with a track record. "That is a very financeable project," observed an existing equity investor in the industry. "I think there are a lot of lenders that would step into that deal."

"There is a growing movement towards putting re-refineries throughout the South where there is a fair amount of export opportunity."

—Luke Staengl PESCO-BEAM Environmental Solutions

Staengl continued, "On a global basis, there is huge demand in the developing world, and we see it continuing to grow because in most countries the automobile fleets are growing fairly rapidly. There is more oil being generated, and as environmental restrictions are enforced, that oil will be looking for a home. At the same time, finished lubricants are very expensive, which makes re-refining a very attractive business proposition. The primary challenge in the developing world is obtaining reliable financing. Clients in Viet Nam and Ecuador, for example, have a difficult time lining up the capital for a re-refinery even though the business model is very sound."

Demand

Re-refiners are seeing stable demand and remain optimistic about the long-term outlook for re-refined base oil. "We are seeing healthy demand," commented Juan Fritschy at Universal Environmental Services. "We are addressing a lot of customers in our Southeast footprint and some further south of us that have not been serviced by other refiners. They welcome the fact that they are now 100 to 200 miles from a refinery whereas before they were 700 to 800 miles away." "We've consistently been sold out," added Greg Ray at Heritage-Crystal Clean. "We make a high quality Group II product which helps. Not all re-refiners are producing an equivalent product so I think we have some advantages there. Overall, demand seems pretty healthy." Ray added, "We think that the Group II spec is what most customers are demanding, and Group I is not as marketable a product, in the long-term."

"There is a lot of talk about pressure towards producing Group II and Group III and using Group III throughout the marketplace," commented Luke Staengl at PESCO-BEAM Environmental Solutions. "There will be a trend over time towards high quality lubricants. It is just a matter of adjusting the technology to meet those kinds of demands, which is something that we will need to address over the very long term." Staengl added, "There is now growing demand for plants that can produce a Group III from re-refined oil. In terms of what clients are asking of us, there is equipment that will give you a much higher likelihood of producing a Group III. It is more expensive, but you can do it. That is one of the trends we are seeing."

Staengl added, "We do a lot of business internationally and have built plants in the Middle East, Asia, and Central and South America. We see the demand for Group I oil continuing to be strong for a very long time in those regions. In the developing world, Group III is not even thought about in most countries that are growing their automotive fleets; many buyers of lubricants look for a decent product but for the lowest price they can find."

Re-refiners temper their optimism by a forecasted long base oil market, with all eyes on Chevron's Pascagoula Group II base oil plant which is reported to be on target for startup in Q1 '14. "Everybody is very cautious and will be closely monitoring the market when Pascagoula comes online," said Juan Fritschy at Universal Environmental Solutions. "Blenders don't want to make any long-term commitments so are only buying for immediate need because no one knows what the market is going to look like in six months."

"Industry forecasts point to a base oil market that could be long for the next seven years. We may not see that real demand and short in the market for base oils and re-refined base oils for a long time," commented Ben Cowart at Vertex Energy. "If re-refining product is going to make its own market, I see the discounts to virgin base oil getting bigger in order to be attractive enough to the blenders/compounders."

"The Pascagoula plant will bring a huge injection of base oil into the market which will naturally depress prices," remarked an existing equity investor in the industry. "My guess is that base oil prices will be under pressure over the medium-term and quite possibly, long-term. However, used oil prices will be headed down by at least as much because burner demand is drying up. The re-refining spread will be there."

"There is significant margin improvement with the assumption that Group I base oil facilities will be closing. It will consequently reduce the excess supply that everybody feels is in the market right now, especially with the Group II capacity additions. I think that should keep base oil prices afloat," remarked Jan Horsfall at Universal Lubricants. "There are the more optimistic industry players who believe that transition is going to happen over the next two to three years and others, three to five years."

"We have to be prepared for the worst," added Fritschy. "Borrowing a quote from Warren Buffett, only when the tide goes out do you discover who's been swimming naked. If base oil prices drop 20 percent, we will see who the most efficient and cost effective players are to produce base oil." Fritschy added, "Whoever is able to compete and make money in a depressed market will survive. We will continue to refine our technology, our production cost, and our logistics. We have to be the most efficient re-refiner in the United States."

> *"We have a legitimate closed loop with a strong sell through finished product that is solid and growing."*
>
> *—Jan Horsfall Universal Lubricants*

To combat volatility in the commodity base oil market, re-refiners are diversifying service offerings to achieve greater vertical integration, some by increasing blended lubricant sales. "I recommend to my clients that they get involved by any means possible in downstream product production—custom blending and packaging of various oils," remarked Luke Staengl. "We have been talking to large corporations with large fleets of vehicles about the concept of picking up their used oil and then returning a re-refined material to them. They are all very hot to get that going. It is a marketing approach that is going to be very successful." Staengl added, "There is high demand in the industrial market for various kinds of hydraulic oils and lubricants. That is a very practical and lucrative trend because the amount of investment in packaging and blending equipment is minimal compared to a re-refinery and the value-added is dramatic."

Universal Lubricants is afforded with a unique vantage point in the industry given its 80-year history as a lubricant blender. "Universal has been selling new oil—fleet oil, heavy duty oil, and passenger car motor oil—for decades," said CEO Jan Horsfall. "Other waste oil companies didn't grow up as new oil concerns so they don't have the salesforce or that history. We have a legitimate closed loop with a strong sell through finished product that is solid and growing." In August 2013, Universal Lubricants announced it trademarked its re-refined base oil as Eco-Clear™. "We are in the field hand-in-hand with heavy duty fleet operators helping them get extended drain intervals with the aid of our in-house laboratory. Not only does that partnership approach build a very healthy stream of revenue, it is what eats up our base oil." Universal Lubricants is seeing double-digit growth from new oil sales this year in what has been a flat market for the majors, Horsfall said.

Clean Harbors is targeting higher blended volumes for Safety Kleen, with the goal to achieve a 50/50 split between base oil sales and blended sales in 2014—up from 38 percent at mid-year 2013, according to the company's Q2 '13 earnings call. A recent major win was the selection of EcoPower by Nestlé USA as the motor oil for its entire fleet of tractor-trailers. According to CEO Alan McKim, the company is in discussions with a number of other well-known brands that are pursuing sustainability initiatives and want to reduce their carbon footprint. "We see a growing interest from...customers wanting a re-refined product given it's higher performance level and its environmental friendliness from a sustainability standpoint, that we believe that the demand for re-refined will increase going forward." Safety-Kleen invested $15 million in a new blending facility at its East Chicago site, adding 20 million gallons in annual blending capacity. Production at the facility began last June.

"Shareholder referendums at the corporate level are driving organizations to look at the lubrication of their fleet in the context of satisfying stakeholders who are looking for environmental productivity from those corporations," Horsfall added. "With a legitimate closed loop, you can make some significant environmental statements about reducing dependence on foreign crude, lowering emissions, saving energy, and protecting groundwater if you are a large national fleet." "The green movement—closed loop, cradle to cradle—is really gaining acceptance," added Luke Staengl at PESCO-BEAM Environmental Solutions. "I think that there is not only going to be acceptance by consumers but actually a preference—a seeking out of re-refined products."

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>
> *—Jan Horsfall Universal Lubricants*

Outlook

Growing environmental pressures and cheap natural gas are prevailing forces in the used oil market and support the need for additional re-refining capacity in the marketplace. "More stringent environmental legislation is restricting the burning of used oil," commented an existing equity investor in the space. "Probably an even stronger pressure is the abundance of cheap natural gas. Many of the larger industrial users, to the extent they have access, have converted or are converting to natural gas. That demand is going to get picked up by re-refining capacity which is the higher and better use for the material."

"Markets are getting tough," observed a regional used oil collector. "Natural gas—you can't compete with it. Environmental air quality emissions are starting to creep back and push products out of the market."

The collector added, "We're going to be in this state of the "haves" and the "have not's". The "haves" with the technology are going to win. "It's a challenging market, but that is always a good time for opportunities if someone has the wherewithal and the capital to invest."

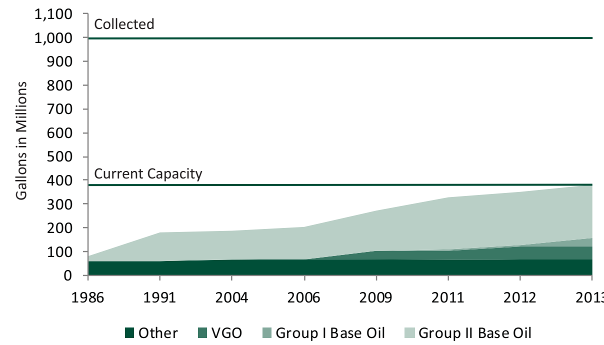
"The long-term outlook for re-refiners is going to remain very favorable," offered Luke Staengl at PESCO-BEAM Environmental Solutions. "Gradually the use of used oil as a fuel will be eliminated or at least changed to require some advanced processing to meet the sulfur specifications. That can easily be achieved through the re-refining process."

"The industry has made a paradigm shift from relying on small burner fuel markets and very local business models to becoming a regional and national industry where oil is moving around and finding technologies to create new outlets and offshore markets," observed Ben Cowart at Vertex Energy. "We have accomplished a lot by making these transitions. That has not been easy." Cowart added, "We are becoming better operators. We are becoming more efficient. All of those factors, long-term, will take us where we need to be."

Current U.S. used oil re-refining capacity stands at under 250 million gallons of feed,[1] with more than one billion gallons of used oil collected. "We still have a lot more used oil in the market than we are re-refining," commented a regional used oil collector. "Today that oil is going somewhere as fuel or is getting exported for other refiners. So there is a significant gap between current capacity, which represents more attractive and profitable markets, than the actual collection of gallons."

"Re-refining is going to be as accepted and as common as recycling plastic or recycling paper because in the long run that is by far the best use of the resource. Eventually the marketplace will catch up to what is the best use," Staengl added. "The concept of cradle to cradle is being implemented more and more by the larger corporations for their own corporate responsibility and is optimally applied in a case like this."

U.S. Used Oil Recycling Capacity



Source: NORA and BGL Research.

"The industry has made a paradigm shift from relying on small burner fuel markets and very local business models to becoming a regional and national industry where oil is moving around and finding technologies to create new outlets and offshore markets."

—Ben Cowart
Vertex Energy

1 Annual processing capacity for re-refined Group I and II base oils, NORA

Insider Perspective

Bravo Energy

Q&A with Rick Fortier, Director of Bravo Energy Latin America LLC. Founded in 1988 and headquartered in Newport Beach, California, Bravo Energy is a comprehensive waste management company specializing in the collection and refining of used oil. The company currently operates facilities in Mexico, Chile, and Argentina with other countries under consideration for expansion. Mr. Fortier shares his insights on the used oil collection and re-refining market in Latin America.

Bravo Energy began operating its first used oil re-refinery in Argentina in 2012 and is currently in the process of expanding its Mexico facility for re-refining. In addition to base oil, the company produces cutter stocks, specialty products, fuel oil, gasoil, and naphtha. Bravo Energy also offers environmental consulting services, including environmental studies, waste management plans, monitoring, lab analysis, and certified final disposal.

What is the demand outlook for lubricants and used oil re-refining in Latin America?

World demand for lubricants is expected to increase 2.3 percent annually; growing to more than 40 million tons (12 billion gallons) by 2017. Above average increases will occur in South America which is experiencing healthy economic growth, rising manufacturing output, and expanding motor vehicle fleets and will benefit from a continued shift of global manufacturing activity to these regions.

The lubricant market in Latin America is estimated at 4 million tons (1.2 billion gallons) and is expected to see healthy demand growth driven by rising manufacturing output, especially in South America. Mexico and Brazil are the two largest markets, combined accounting for approximately 2.4 million tons (720 million gallons).

The re-refining industry is in the infancy stage of its growth cycle so there is significant opportunity for expansion. Less than 50 percent of the base oil and lubricants used in Latin America is produced locally with the balance imported primarily from the United States. The dominant grade is Group I. Many countries import 100 percent of their demand. With local crude oil refiners focused only on producing fuels, re-refining used oil into base oil has become a viable alternative of supply. Brazil leads with roughly 18.5 percent of its base oil requirements supplied from re-refining.

What is the structure of the used oil collections market?

The used oil collections market is highly fragmented and immature, made up of a large number of collectors that are small operators with one or two trucks and no processing capabilities. Only a small fraction of used oil collected is properly treated as much of it is simply blended with other waste or fuel oil and sold as alternative fuels.

Generally speaking, the generator market is comprised of multinational and large corporations, as well as mid-size local industry, that adhere to regulations and consider the environment in the management of their waste. The larger market consists of thousands of small lube shops and garages that are interested only in obtaining an economic benefit from their used oil with little regard to the environment, and as such, are the hardest to reach and control by the regulatory agencies. The quality of used oil in the informal market is poor and typically contaminated with other wastes and toxic materials that make handling much more complicated and expensive.

Bravo Energy's priority is to secure used oil supply directly from generators. By servicing customers with our own truck fleet and running samples through our in-house lab, we ensure a consistent supply of quality used oil as feedstock to our refinery.

Historically, the demand for used oil has gone into the fuel market. However, the market is evolving as environmental regulations become more stringent and social media draws increasing attention to the harmful effects of improper treatment and disposal of used oil on the environment.

What is the current regulatory climate and how is it evolving to advance re-refining?

In most Latin American countries, used oil is considered a hazardous waste and prohibited from being transported across international borders. Environmental regulation and enforcement lags that of developed countries such as Europe and the United States. Many governments lack the resources for enforcement and are looking at ways to administer laws in new and creative ways.

Brazil has the most advanced regulatory framework in Latin America, placing the responsibility for proper collection and treatment of used oil on the manufacturers and importers of lubricants and base oil. The government sets the minimum volume that manufacturers or importers must collect either directly or through an authorized collector. Today, the mandatory collection percentage is 40 percent of total sales, which is increased each year. A critical requirement of the regulations is that all used oil collected must be re-refined. Brazil has the largest market of re-refined base oil, currently satisfying 18.5 percent of total in country demand for base oil.

Several other countries are looking to adopt a similar construct. With our practical operating experience and extensive knowledge of the regulatory landscape in Latin America, Bravo Energy's Environmental Services Division has worked closely with regulatory agencies in several countries in the development of best practices for waste management.

Water Management

Water management is drawing increasing attention as the effects of severe weather, population growth, and increased demand from energy production threaten sustainable water supplies. Significant capital will be invested in the coming years in green technologies and infrastructure to address these issues and protect this vital resource. In our upcoming Environmental Services Insider scheduled *to be released in December 2013, we will explore water management, identifying key areas of opportunity.*

Storm Water and Wet Weather Management

Increasing opportunities are being created in the area of storm water or wet weather management. The urbanization of large areas has increased dramatically the amount of impermeable surface cover resulting in increased flooding and storm water quantity and quality issues.

Urban Sewer Overflows

According to the U.S. Environmental Protection Agency (EPA), annually about 850 billion gallons of raw sewage and storm water is discharged into surface waters from combined sewer overflows (CSOs) and another 3 to 10 billion gallons from sanitary sewer overflows (SSOs). The EPA, through the enforcement of the Clean Water Act, has been successfully imposing enforcement actions against municipalities and sewer districts throughout the United States requiring the curtailment or complete elimination of SSOs and CSOs, which will amount to billions of dollars in infrastructure improvements. To address CSOs, communities must either separate storm and sanitary sewers, increase system and treatment plant capacity to handle excess flows, construct wet weather treatment facilities, reduce runoff through source control, or some combination of the above.

In the private sector, this issue is having a bottom line impact on industry. In urbanized areas, where large manufacturing and commercial facilities exist, wastewater utilities are pushing the costs to upgrade their systems (i.e., reduction of CSOs) upstream to the users (rate payers). Large industrial sites with acres of impermeable surfaces are being surcharged to account for the increased costs. In addition, more stringent water quality regulations at the sewer plants are forcing the permitting process to become more rigorous and creating increased regulation of outfalls for such chemicals as mercury, at levels that, in some cases, are not achievable with current technology.

Phase II Communities

The advent of the Federal Phase II Storm Water Regulations has put the responsibility of water quality onto the local municipalities for their storm water systems, requiring them to monitor, inspect, and investigate water quality issues for their Municipal Separate Storm Sewer Systems (MS4s) and develop ways to minimize storm water impacts.

Great Lakes Compact

As evidenced by the substantial investment of the Federal Government into the Great Lakes Initiative, more attention is being paid to water quality than ever before. This attention has spawned the creation of non-profit watershed management entities, soil and water conservation districts, parks, and other green space advocates to pursue state and federal funding for water quality improvement projects, such as stream restoration, constructed wetlands, dam removals, permeable pavers, rain barrels, and other sustainable solutions.

In addition to spurring traditional engineering and construction activity for the design and construction of new sewers and water retention systems, major changes in the way we value water and control its quality are resulting in new opportunities for environmental engineering and consulting firms. More specifically, the design and construction of green infrastructure for sustainable storm water management is benefiting:

- Consulting and engineering firms that design such systems and/or support the integration of green infrastructure in urban areas with brownfield redevelopment
- Waste disposal companies that manage waste generated by green infrastructure development in urban areas or previously impacted waterways and treat and handle wastewater
- Construction companies that specialize in green infrastructure (i.e., stream restoration, basins, constructed wetlands, etc.)

- Companies that design and manufacture wastewater treatment equipment and systems
- Companies that develop new technologies and methods for water quality treatment of storm water and wastewater

Water Needs To Service Energy Production

Energy exploration and production opens up significant areas of opportunity for the environmental industry, including engineering and consulting firms, technical service providers, and suppliers of technology and equipment that treat wastewater.

The unconventional drilling industry (i.e., hydraulic fracturing) is placing a greater strain on sustainable water supplies. An estimated three to five million gallons of clean water are needed for just one unconventionally drilled well, leaving water resources in critical supply in areas that support drilling activity. Permits are required to extract large volumes of water from fresh water supplies such as rivers, lakes, and reservoirs. Contaminated wastewater produced as a by-product of the drilling process must be treated so that it can be either reused or properly discharged to the environment.

Wastewater treatment technology is bridging the gap between water supply and demand, increasingly turning to produced water (desalination and recycled sources). It may be possible that consolidated treatment plants will be developed and used that collect water from the surrounding area and recycle it for reuse in the industry. Companies that develop wastewater technology and design and build water treatment equipment will benefit, as will consultants/hydro geologists with differentiated capabilities in water management and experience in the permitting process. ■

> *"Local municipalities and sewer utilities have seen their revenues negatively impacted with the economic downturn. This is causing communities and utilities to reevaluate how they manage the expenditure of limited funds. A new paradigm is emerging in municipal Clean Water Act compliance programs that moves away from a narrowly focused endpoint to programs that achieve broader community impact and generally maximize the return for investment within the community. EPA enforcement orders are in place, which is requiring money to be spent. With creative planning, viewed through a broader lens, these required expenditures represent an opportunity to truly impact the community and achieve multiple objectives beyond simply reducing sewer overflows."*
>
> John Lyons, P.E.
> Strand Associates, Inc.®

> *"Industries need to prepare for what this CSO and wastewater green build movement is going to do to their business. It will require enlisting the capabilities of general contractors, consultants and engineers, equipment manufacturers, and waste disposal vendors to help manage sanitary and stormwater treatment and discharge from industrial sites which is adding a whole layer of work that hasn't even materialized yet."*
>
> Dan Brown
> Partners Environmental Consulting

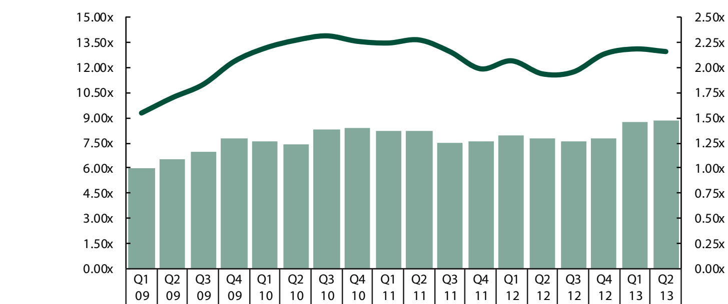
Contributing authors:

Dan Brown is the President of Partners Environmental Consulting, Inc. Based in Solon, Ohio, Partners offers a comprehensive range of environmental consulting services, with extensive experience in the areas of health and safety, natural resources, outsourced environmental health and safety, redevelopment, and remediation. The company employs 30 professionals from offices in Solon and Cincinnati, Ohio. For further information, please visit www.partnersenv.com or contact Dan at (440) 248-6005 or dbrown@partnersenv.com.

John Lyons is the Director of Operations for the Cincinnati office of Strand Associates, Inc.®, a multidisciplinary engineering firm with expertise in municipal/general civil, green infrastructure solutions, wastewater and water supply, transportation, and building and facilities. Based in Madison, Wisconsin, Strand serves public and private sector clients across the country, with 10 offices located in Arizona, Illinois, Indiana, Kentucky, Ohio, and Wisconsin. For further information, please visit www.strand.com or contact John at 513-861-5600 or john.lyons@strand.com.

Relative Valuation Trends

Solid Waste - Vertically Integrated



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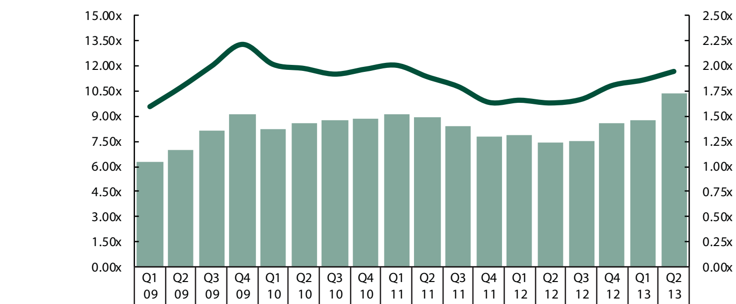
EV/EBITDA	6.0x	6.5x	6.9x	7.7x	7.6x	7.4x	8.3x	8.4x	8.2x	8.2x	7.5x	7.6x	7.9x	7.8x	7.6x	7.8x	8.7x	8.8x
EV/Revenue	1.5x	1.7x	1.8x	2.1x	2.2x	2.3x	2.3x	2.3x	2.2x	2.3x	2.2x	2.0x	2.1x	1.9x	2.0x	2.1x	2.2x	2.2x

Solid Waste - Waste-to-Energy



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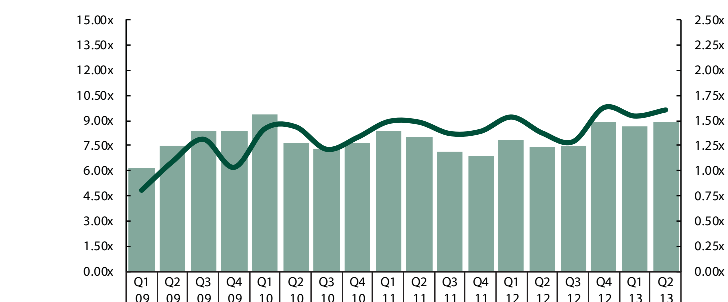
EV/EBITDA	6.2x	7.0x	8.2x	9.1x	8.2x	8.6x	8.7x	8.8x	9.1x	8.9x	8.4x	7.8x	7.9x	7.4x	7.5x	8.6x	8.7x	10.3x
EV/Revenue	1.6x	1.8x	2.0x	2.2x	2.0x	2.0x	1.9x	2.0x	2.0x	1.9x	1.8x	1.6x	1.7x	1.6x	1.7x	1.8x	1.9x	1.9x

Special Waste - Broadly Diversified



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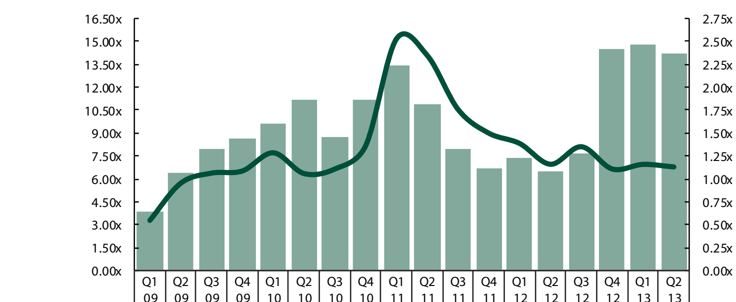
EV/EBITDA	6.2x	7.5x	8.4x	8.4x	9.4x	7.7x	7.4x	7.7x	8.4x	8.0x	7.1x	6.9x	7.8x	7.4x	7.5x	9.0x	8.6x	8.9x
EV/Revenue	0.8x	1.1x	1.3x	1.0x	1.4x	1.4x	1.2x	1.3x	1.5x	1.5x	1.4x	1.4x	1.5x	1.4x	1.3x	1.6x	1.5x	1.6x

Special Waste - Other



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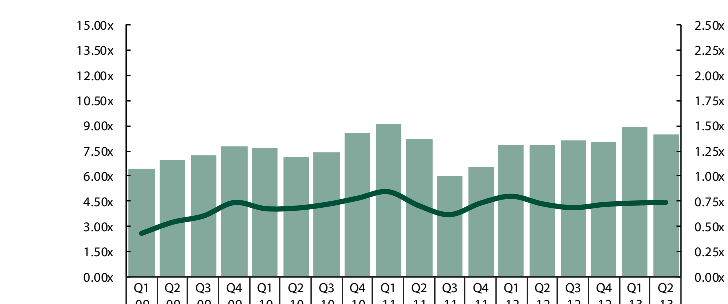
EV/EBITDA	3.8x	6.4x	7.9x	8.6x	9.6x	11.2x	8.8x	11.2x	13.5x	10.9x	7.9x	6.7x	7.4x	6.5x	7.7x	14.5x	14.8x	14.2x
EV/Revenue	0.5x	1.0x	1.1x	1.1x	1.3x	1.1x	1.1x	1.4x	2.5x	2.3x	1.8x	1.5x	1.4x	1.2x	1.4x	1.1x	1.2x	1.1x

Environmental Engineering & Consulting



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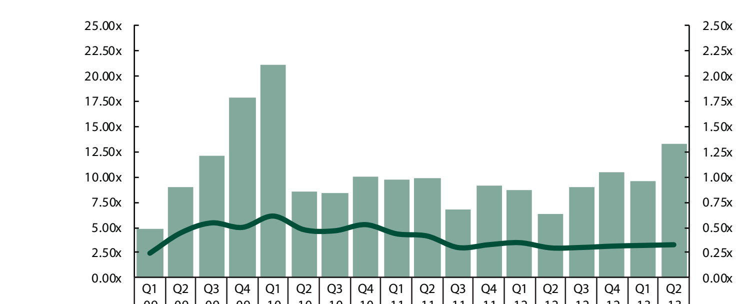
EV/EBITDA	6.4x	7.0x	7.3x	7.8x	7.7x	7.2x	7.4x	8.6x	9.1x	8.3x	6.0x	6.5x	7.9x	7.8x	8.1x	8.0x	8.9x	8.5x
EV/Revenue	0.4x	0.5x	0.6x	0.7x	0.7x	0.7x	0.7x	0.8x	0.8x	0.7x	0.6x	0.7x	0.8x	0.7x	0.7x	0.7x	0.7x	0.7x

E-Waste & Metals Recycling



	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10	Q4 10	Q1 11	Q2 11	Q3 11	Q4 11	Q1 12	Q2 12	Q3 12	Q4 12	Q1 13	Q2 13
EV/EBITDA	4.9x	9.0x	12.1x	17.9x	21.1x	8.6x	8.4x	10.1x	9.8x	9.9x	6.8x	9.1x	8.7x	6.4x	8.9x	10.4x	9.6x	13.3x
EV/Revenue	0.2x	0.4x	0.5x	0.5x	0.6x	0.5x	0.5x	0.5x	0.4x	0.4x	0.3x	0.3x	0.3x	0.3x	0.3x	0.3x	0.3x	0.3x

BGL Environmental Services indices defined on Page 24.
SOURCE: S&P Capital IQ.

Industry Valuations

Relative Valuation Trends

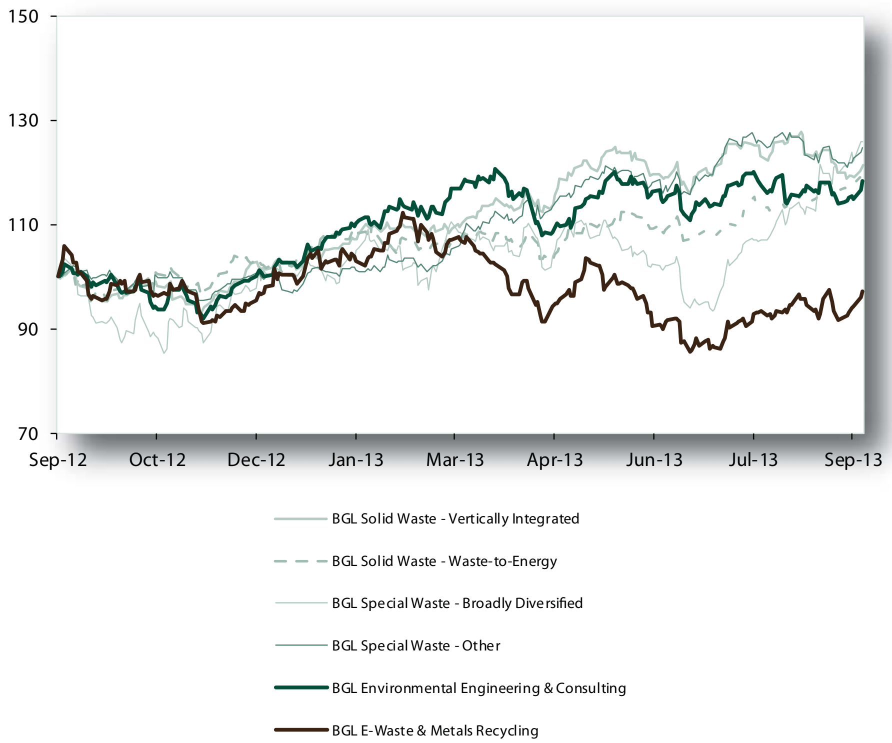
($ in millions, except per share data) Company Name	Country	Ticker	Current Stock Price (1)	% of 52W High	Market Capitalization (2)	Enterprise Value (3)	Enterprise Value / TTM Revenue	Enterprise Value / TTM EBITDA	Total Debt/ EBITDA	TTM Revenue	TTM Margins Gross	TTM Margins EBITDA
SOLID WASTE (VERTICALLY-INTEGRATED)												
Waste Management, Inc.	United States	NYSE:WM	$40.91	93.9%	$19,177.6	$29,132.6	2.1x	8.8x	2.9x	$13,757.0	34.8%	24.4%
Republic Services, Inc.	United States	NYSE:RSG	33.19	93.2%	12,015.5	18,950.2	2.3x	8.8x	3.3x	8,185.6	36.5%	26.2%
Waste Connections Inc.	United States	NYSE:WCN	43.49	98.3%	5,370.4	7,453.8	4.1x	12.6x	3.5x	1,813.7	43.7%	32.7%
Progressive Waste Solutions Ltd.	Canada	TSX:BIN	24.91	98.4%	2,860.6	4,479.2	2.2x	8.2x	3.0x	1,986.4	38.7%	27.1%
Casella Waste Systems Inc.	United States	NasdaqGS:CWST	5.64	98.3%	225.2	725.7	1.6x	9.6x	6.3x	466.3	29.2%	16.9%
Median			**$33.19**	**98.3%**	**$5,370.4**	**$7,453.8**	**2.2x**	**8.8x**	**3.3x**	**$1,986.4**	**36.5%**	**26.2%**
Mean			**$29.63**	**96.4%**	**$7,929.9**	**$12,148.3**	**2.5x**	**9.6x**	**3.8x**	**$5,241.8**	**36.6%**	**25.4%**
SOLID WASTE (WASTE-TO-ENERGY)												
Covanta Holding Corporation	United States	NYSE:CVA	$21.75	99.8%	$2,840.2	$5,074.2	3.1x	12.3x	5.9x	$1,628.0	39.6%	25.2%
Shanks Group plc	United Kingdom	LSE:SKS	1.53	97.6%	606.5	1,093.9	1.0x	10.4x	5.8x	1,017.4	14.2%	9.9%
Median			**$11.64**	**98.7%**	**$1,723.3**	**$3,084.0**	**2.1x**	**11.3x**	**5.9x**	**$1,322.7**	**26.9%**	**17.6%**
Mean			**$11.64**	**98.7%**	**$1,723.3**	**$3,084.0**	**2.1x**	**11.3x**	**5.9x**	**$1,322.7**	**26.9%**	**17.6%**
SPECIAL WASTE (BROADLY DIVERSIFIED)												
Veolia Environnement S.A.	France	ENXTPA:VIE	$16.78	97.8%	$8,969.3	$24,201.4	0.6x	6.2x	5.0x	37,782.3	16.2%	9.5%
Clean Harbors, Inc.	United States	NYSE:CLH	57.19	92.7%	3,466.0	4,597.2	1.6x	11.4x	3.5x	2,815.5	28.1%	14.3%
Newalta Corporation	Canada	TSX:NAL	14.91	94.0%	821.4	1,198.0	1.6x	9.3x	2.9x	717.4	22.7%	17.6%
Median			**$16.78**	**94.0%**	**$3,466.0**	**$4,597.2**	**1.6x**	**9.3x**	**3.5x**	**$2,815.5**	**22.7%**	**14.3%**
Mean			**$29.63**	**94.8%**	**$4,418.9**	**$9,998.9**	**1.3x**	**9.0x**	**3.8x**	**$13,771.7**	**22.3%**	**13.8%**
SPECIAL WASTE (OTHER)												
Stericycle, Inc.	United States	NasdaqGS:SRCL	$115.21	96.3%	$9,895.5	$11,213.1	5.5x	18.5x	2.2x	$2,024.5	47.4%	30.0%
Darling International Inc.	United States	NYSE:DAR	20.81	93.7%	2,459.7	2,576.3	1.5x	8.4x	0.8x	1,746.7	27.0%	17.8%
Secure Energy Services Inc.	Canada	TSX:SES	13.01	89.1%	1,412.9	1,559.1	1.4x	15.8x	1.5x	1,128.1	9.0%	8.6%
US Ecology, Inc.	United States	NasdaqGS:ECOL	28.03	90.1%	519.4	558.4	3.0x	8.9x	0.7x	184.8	38.5%	33.9%
Renewable Energy Group, Inc.	United States	NasdaqGS:REGI	14.68	89.0%	491.8	499.1	0.4x	4.3x	0.4x	1,204.0	12.2%	9.6%
Heritage-Crystal Clean, Inc	United States	NasdaqGM:HCCI	16.91	80.9%	311.3	292.8	1.1x	25.4x	1.9x	263.3	15.0%	4.4%
Vertex Energy, Inc.	United States	NasdaqCM:VTNR	3.31	78.8%	58.5	71.4	0.5x	13.7x	2.5x	136.8	8.9%	3.8%
Perma-Fix Environmental Services Inc.	United States	NasdaqCM:PESI	0.56	46.8%	31.5	47.1	0.5x	NM	NM	98.5	12.3%	-3.5%
Median			**$15.80**	**89.1%**	**$505.6**	**$528.8**	**1.2x**	**13.7x**	**1.5x**	**$695.7**	**13.6%**	**9.1%**
Mean			**$26.57**	**83.1%**	**$1,897.6**	**$2,102.1**	**1.7x**	**13.6x**	**1.4x**	**$848.3**	**21.3%**	**13.1%**
ENVIRONMENTAL ENGINEERING & CONSULTING												
Chicago Bridge & Iron Company N.V.	Netherlands	NYSE:CBI	$64.15	98.8%	$6,884.1	$8,566.5	1.1x	***11.7x***	2.9x	$8,086.6	11.5%	8.8%
AMEC plc	United Kingdom	LSE:AMEC	16.73	90.1%	4,974.8	4,940.1	0.8x	9.0x	0.6x	6,277.1	13.2%	8.3%
URS Corporation	United States	NYSE:URS	50.53	98.7%	3,784.1	5,778.6	0.5x	6.1x	2.5x	11,514.8	7.5%	7.3%
AECOM Technology Corporation	United States	NYSE:ACM	29.86	84.7%	3,010.0	3,707.3	0.5x	7.4x	2.4x	8,157.3	5.7%	5.8%
Arcadis NV	Netherlands	ENXTAM:ARCAD	26.65	89.5%	1,928.9	2,452.1	0.7x	9.2x	2.6x	3,327.0	21.1%	7.9%
Tetra Tech Inc.	United States	NasdaqGS:TTEK	24.41	77.5%	1,574.3	1,641.3	0.8x	13.2x	1.7x	2,029.5	13.2%	6.1%
Cardno Limited	Australia	ASX:CDD	5.91	76.5%	848.9	989.6	0.9x	7.9x	1.8x	1,094.3	15.1%	11.3%
Great Lakes Dredge & Dock Corporation	United States	NasdaqGS:GLDD	7.01	69.6%	416.9	688.6	1.0x	***16.7x***	7.0x	711.3	8.5%	5.9%
TRC Companies Inc.	United States	NYSE:TRR	8.23	87.6%	238.9	236.4	0.8x	11.0x	0.4x	312.8	16.6%	6.9%
Median			**$24.41**	**87.6%**	**$1,928.9**	**$2,452.1**	**0.8x**	**9.0x**	**2.4x**	**$3,327.0**	**13.2%**	**7.3%**
Mean			**$25.94**	**85.9%**	**$2,629.0**	**$3,222.3**	**0.8x**	**9.1x**	**2.4x**	**$4,612.3**	**12.5%**	**7.6%**
E-WASTE & METALS RECYCLING												
Commercial Metals Company	United States	NYSE:CMC	$16.33	93.5%	$1,910.3	$2,972.5	0.4x	8.7x	4.4x	$7,191.4	9.6%	4.7%
Sims Metal Management Limited	Australia	ASX:SGM	9.31	87.6%	1,902.6	2,039.2	0.3x	NM	NM	$6,594.1	7.6%	-0.1%
ALBA SE	Germany	DB:ABA	82.72	91.7%	814.0	896.7	0.4x	***34.6x***	3.9x	$2,279.0	8.1%	1.1%
Schnitzer Steel Industries, Inc.	United States	NasdaqGS:SCHN	27.21	82.5%	697.6	1,079.9	0.4x	9.7x	3.7x	$2,727.6	8.1%	4.1%
Metalico Inc.	United States	AMEX:MEA	1.43	49.3%	68.7	188.1	0.4x	14.5x	***9.5x***	$528.9	7.4%	2.5%
Industrial Services of America, Inc.	United States	NasdaqCM:IDSA	2.08	52.0%	14.7	35.9	0.2x	***33.3x***	***21.0x***	$157.6	4.9%	0.7%
Median			**$12.82**	**85.1%**	**$755.8**	**$988.3**	**0.4x**	**9.7x**	**3.9x**	**$2,503.3**	**7.9%**	**1.8%**
Mean			**$23.18**	**76.1%**	**$901.3**	**$1,202.0**	**0.3x**	**11.0x**	**4.0x**	**$3,246.4**	**7.6%**	**2.2%**

NOTE: Figures in bold and italic type were excluded from median and mean calculation.
(1) As of 9/11/2013.
(2) Market Capitalization is the aggregate value of a firm's outstanding common stock.
(3) Enterprise Value is the total value of a firm (including all debt and equity).
SOURCE: S&P Capital IQ.

Industry Valuations

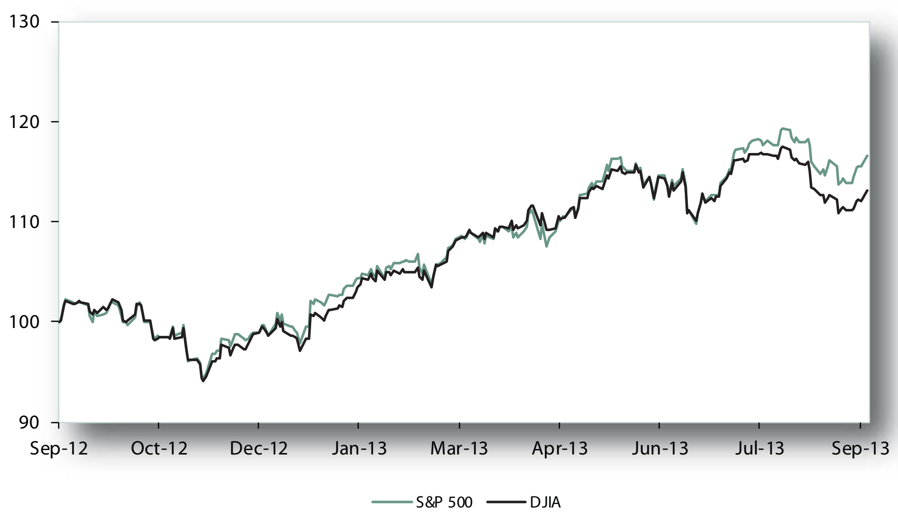
Sector Performance

By Sector



	1 Year
Solid Waste - Vertically Integrated	22.1%
Solid Waste - Waste-to-Energy	20.3%
Special Waste - Broadly Diversified	27.5%
Special Waste - Other	24.7%
Environmental Engineering & Consulting	19.5%
E-Waste & Metals Recycling	-0.5%

Overall Market



	1 Year
S&P 500	17.8%
DJIA	15.0%

Index: September 11, 2012= 100.

SOURCE: S&P Capital IQ.

Global Energy and Environmental Services Practice

Solid Waste
- Collection and Hauling
- Transfer Stations
- Material Recovery Facilities
- Landfills

Special Waste
- General ES and IS and Emergency Response
- Vacuum Truck Services / Hydro-Excavation
- Liquids (e.g., Water/Wastewater, Oil, Grease)
- ODS and Other Hazardous Streams

EE&C
- Reclamation and Remediation
- Environmental Consulting and Engineering
- Auditing, Compliance, and Testing

E-Waste & Metals
- End-of-Life / Data Destruction
- Remanufacturing
- Asset Management
- Scrap Metal (Ferrous/Non-ferrous)

Energy
- Waste-to-Energy
- Renewables
- Oilfield Services
- Oil Collection/Re-Refining

Representative Transactions

Allstate Power Vac
— acquired by —
The Environmental Quality Company
— a portfolio company of —
Kinderhook Industries
Brown Gibbons Lang & Company

Leading regional provider of environmental and industrial services including:

- Vacuum and hydroblast cleaning
- Emergency response
- Hydroexcavation
- Hazardous waste hauling and disposal
- Drill cuttings dewatering

Serves Fortune 500 customers in the utility, oil and gas, and industrial markets.

Recapitalization
Solid Waste Collection, Hauling, and Landfill Management
Brown Gibbons Lang & Company

Strategic Advisory
Liquid Waste Collection and Wastewater Treatment
Brown Gibbons Lang & Company

Capital Raise
Series of U.S.-based Waste to Energy Facilities
Brown Gibbons Lang & Company

Who We Are

Leading Independent Firm

- Independent investment banking advisory firm focused on the middle market
- Senior bankers with significant experience and tenure; partners average over 20 years of experience
- Offices in Chicago, Cleveland, and Salt Lake City
- Founding member and exclusive U.S. partner of Global M&A Partners, Ltd., the world's leading partnership of investment banking firms focusing on middle market transactions
- Deep industry experience across core sectors of focus, including: Business Services, Consumer Products and Retail Services, Energy and Environmental Services, Healthcare and Life Sciences, Industrials, Metals and Metals Processing, Plastics and Packaging, and Real Estate.

Comprehensive Capabilities

M&A Advisory	Private Placements	Financial Advisory
Sell-Side Advisory	All Tranches of Debt & Equity Capital for:	General Financial & Strategic Advice
General Financial & Strategic Advice	Growth	Balance Sheet Restructurings
Acquisitions & Divestitures	Acquisitions	Sales of Non-Core Assets or Businesses
Public & Private Mergers	Recapitalizations	§363 Auctions
Special Committee Advice	Dividends	
Strategic Partnerships & Joint Venture Formation		
Fairness Opinions & Fair Value Opinions		

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