



CRONUS

INVESTMENT BANKING

Environmental Services Industry Bulletin

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MARKET REPORT: COAL ASH

As an investment banking firm covering the environmental services industry, Cronus Partners has over the last several years assisted clients involved in or entering the coal ash marketplace. To this end, the firm has researched various factors that have led to recent federal legislation and regulation and sees opportunities in the sector. The marketplace is still evolving as additional rulings and decisions are pending. While the current Administration policy is favorably disposed toward coal usage for utility power generation, the overall projected cost to clean up coal combustion residuals is extremely high, and any change in the executive branch in the future could result in even higher cleanup costs for the utility industry.

Introduction

Coal ash, also known as coal combustion residuals (CCR), is the second largest industrial waste stream generated by volume in the U.S. Coal ash is a broad term encompassing various by-products produced in the combustion process, including:

1. Fly Ash: a mostly silica based fine powder generated from burning fine ground coal in a boiler.
2. Bottom Ash: heavy angular waste product which forms at the bottom of a coal furnace.
3. Boiler Slag: molten bottom ash from slag tap and cyclone furnaces that turns into pellets with a glassy appearance after it is cooled with water.
4. Flue Gas Desulfurization Material: a wet sludge-like residual consisting of calcium sulfite or calcium sulfate or a dry powdered mixture of sulfites and sulfates produced in the emission control process when flue gas is scrubbed or cleaned after coal burning.

Coal-fired power plants of utilities and independent power producers, which account for about 30% of total power generation in the U.S., currently are the predominant generators of CCR waste.

Antecedents

Historically, power utilities managed their generated CCRs in landfills and surface impoundments or ash ponds. Surface impoundments are natural topographic depressions, man-made excavations, or diked areas primarily of earthen materials that are used to manage slurry, a mixture of coal ash and water. While most of these impoundments are not lined with synthetic liners, use of a compacted clay barrier is sometimes employed as a safeguard measure, though there can be susceptibility to seepage into surrounding waterways or soils. Landfills are “dry” excavations filled with CCR which may, or may not, be lined with protective composite plastic geosynthetic materials atop a compacted clay barrier. When surface impoundments and the landfills reach capacity, both are then sealed or capped with synthetic materials to control and limit moisture infiltration. Both surface impoundments and landfills have long been regulated by state authorities. The efficacy of these legacy management techniques came under scrutiny following several high-profile environmental incidents:

Tennessee Valley Authority (TVA): In December 2008, an ash dike ruptured at the TVA’s 84-acre solid waste containment area at its Kingston Fossil Plant in Roane County, TN. More than one billion gallons of fly ash slurry was released and traveled across the Emory River and its Swan Pond recess, onto the opposite shore, covering up to 300 acres of surrounding land. The stored waste also traveled up and down stream in nearby waterways, such as the Clinch River, damaging at least 42 residential properties along the way. As of April 2015, the TVA estimated that the total cost of the cleanup

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amounted to \$1.2 billion, though there are outstanding potential costs related to illnesses manifested in workers involved in the actual cleanup process. In total the volume of waste released was more than 100 times larger than the 1989 Exxon Valdez oil spill, at the time considered the largest environmental disaster in U.S. history. The spill drew intense scrutiny into the containment methods employed at the facility. The U.S. Environmental Protection Agency (EPA) concluded that the 84-acre above ground ash fill was unlined and within proximity of a nearby major waterway (74 feet), the Emory River. Additionally, the dredge cell containing the residual dry fly ash product was surrounded by 60-foot earthen walls which had twice before developed leaks since 2002.



Duke Energy: In February 2014, over five years after the initial agency work began on CCR legislation, up to 39,000 tons of coal ash spilled into the Dan River from an Eden, North Carolina facility owned by Duke when a drainage pipe burst at a coal ash containment pond. The utility subsequently pleaded guilty to nine misdemeanor violations and more than \$102 million in fines and restitution. While the spill was officially concluded to be a product of a single pipe failure, it again highlighted the risks posed by open ash ponds and landfills with poor structural containment procedures. The estimated cost to cleanup, which involved excavation and transport offsite to a new landfill: \$260 million.

The Federal Coal Combustion Residuals Rule

Following the TVA spill, the EPA formally began a process of drafting regulations to address the treatment and disposal of CCRs and in June 2010 initially proposed a set of federal standards to establish minimum national criteria for the management and disposal of CCRs. Perhaps motivated in part by the Duke Energy pond breach in 2014, but most likely responding to a suit filed by Earthjustice on behalf of a number of environmental groups, such as the Environmental Integrity Project and the Sierra Club, the Agency published the final CCR Rule in April 2015 under the authority of Subtitle D of the Resource Conservation and Recovery Act (RCRA), a non-hazardous waste program, to be effective October 2015.

It might be noted that in June 2010, the EPA had originally proposed regulations that classified coal ash as either a “hazardous waste” under Subtitle C of RCRA, or a “special waste” under Subtitle D. While CCR is mostly composed of aluminum, calcium and silica oxides, there was evidence that the TVA spill generated elevated levels of various heavy metals including arsenic, copper, barium, cadmium, chromium, lead, mercury, nickel and thallium, but the Agency concluded that the record supported a Subtitle D regulation designation. That determination was a relief to the utility industry as management under Subtitle C could have cost upwards to three times what it will cost to dispose of CCR in a Subtitle D landfill and, perhaps more importantly, severely limited or even eliminated CCR as a beneficial reuse additive to construction materials. Needless to say, environmental groups have continued to voice their opposition to this EPA decision, but in actuality, there is not sufficient existing Subtitle C landfill disposal capacity to accommodate all the CCR that needs to be cleaned up.

Additionally, the CCR rule does not regulate coal ash impoundments closed before 2015 – most environmental advocacy groups maintain that virtually all coal ash sites have some level of groundwater contamination, therefore it is possible that the EPA may address such sites in the future.

The enactment of the first ever federal regulations regarding the disposal of CCRs, along with the effluent limitations guideline (the ELG Rule) for steam electric power plants, has significantly affected the coal-fired power generation industry. While the CCR rule establishes design requirements, location restrictions and groundwater protection standards for the disposal of the aforementioned materials (on page 2), the ELG Rule regulates individual wastewater streams from power plants, including a prohibition on the discharge of waters associated with ash transport. The combined effect of both these regulations has driven coal-fired utilities away from management and disposal of CCR in surface impoundments to interning the CCR in existing or new landfills as well as to more beneficial reuse applications of the ash. The American Coal Ash Association currently estimates that reuse reached 56% last year out of the total ash generated (primarily added as an ingredient to concrete and synthetic gypsum).

In December 2016, Congress passed the Water Infrastructure Improvements for the Nation Act (WIIN). This Act gave the EPA the authority to implement a federal permit program, or to review and approve state permit programs to regulate CCRs, provided the state rules are as protective or more stringent than the federal rule. While many states have solid waste programs to address CCRs, these operate in addition to the federal CCR Rule. Once a state permit program is approved, it will operate in lieu of federal regulations. To date, only Oklahoma has a program that has been approved by the U.S. EPA, but Alabama, Georgia and Kansas have applied for approval.

MARKET REPORT: COAL ASH

In September 2017, the EPA agreed to reconsider certain aspects of the CCR Rule in two phases, earmarked to be completed by June and December of 2019:

1. Phase 1 dealt with a several issues that were finalized in part in July 2018. Of the various issues, most dealt with groundwater migration from a CCR impoundment, such as allowing states to suspend monitoring when zero discharge to the groundwater is demonstrated. Suffice it to say, this reflects the current Administration's favorable disposition toward coal usage for power generation, and more flexibility was granted for meeting performance standards, such as extending closure deadlines to allow time for permanent solutions to be developed. The consequence was an estimated \$100 million in savings in compliance costs for the utility industry. It should be added however, that while such savings for the utility industry, at least from a public relations point of view, are not insignificant, its impact should not be particularly material in the overall scheme of the CCR cleanup, if the projections to follow are anything close to correct.
2. Phase 2 determinations have yet to be published, but will likely be delayed as the EPA deals with establishing a closure deadline for unlined surface impoundments – the D.C. Circuit Court of Appeals ruled in 2018 that the EPA had to strengthen the CCR Rule as all unlined ponds must be closed regardless of any groundwater contamination, and those impoundments that are clay lined can no longer be considered lined (use of 2 feet of clay as the barrier to prevent groundwater contamination). Currently, when the EPA determines a CCR disposal site is either located too close to an aquifer or is actually leaking, and therefore is subject to a cease-to- operate order, the site must close within 18 months up to October 2020. For unlined surface impoundments, the EPA is currently determining a deadline to cease receipt of CCR and initiate closure.

Impact of the CCR Rule

In general terms, the purpose of the CCR Rule is to address risks from the structure failure at surface impoundments and the potential groundwater impact from such impoundments and landfills. This is achieved through minimum criteria including site location requirements, design and structural integrity standards, and groundwater monitoring and response to releases. The key points are as follows:

1. While the rule itself is self-implementing and enforcement is via citizens' lawsuits, therefore no federal oversight, the subsequent WIIN Act gave the U.S. EPA the authority to enforce the CCR Rule (though currently unfunded).
2. The rule requires posting of specified compliance or publicly accessible via the internet.
3. There are several "closure for cause" scenarios, which if triggered, require surface impoundments to cease receiving CCR within six months and initiate closure.
4. The EPA estimates that the rule will affect more than 700 surface impoundments and 310 active landfills at more than 450 coal-fired power plants.

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Including a closure-in-place solution, entailing dewatering the CCR, stabilizing and capping the impoundment as well as a closure removal solution, also including dewatering of the CCR, but excavation and transportation to a landfill, the EPA estimates the projected cost to comply with the CCR Rule could range from **\$7.3 to \$23.2 billion**. The Utility Solid Waste Activities Group, an informal consortium of approximately 80 utility operating companies, the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association estimates the cost to comply with the CCR Rule could range from **\$22.8 to \$34.7 billion**. However, when reflecting last year's DC Court of Appeals ruling that all surface impoundments must close, an additional **\$39 billion** could be added to the overall cost of the CCR cleanup.

Although work has already been initiated at several sites by a number of utilities, it is projected that the total cleanup effort may take upwards of 20 years or more to be completed. It is estimated there is currently 3.4 billion tons of CCR to be addressed, or some 2.3 billion in onsite landfills and 1.1 billion in surface impoundments.

Finally, notwithstanding the current Administration's efforts to encourage more coal usage in the U.S., power plant retirements and declining utilization rates are continuing to impact coal usage by the power generating industry, which currently accounts for 93% of total coal consumption. Additionally, cheaper natural gas and the trend towards renewable energy sources are also contributing to coal's eroding power generation market share.

Yet, even reduced coal power generation in the future will still be a source of new CCRs generation for some time to come. In 2018, the U.S. Energy Information Administration estimated that 691 million tons of coal was used for power generation but with recent plant closures, the amount of coal usage for power generation will decrease to 635 million tons this year and further decline to 597 million tons in 2020. Approximately 10% of the coal tonnage burned becomes a CCR residual waste.

Please contact Cronus Partners for your investment banking needs in any aspect of the coal ash marketplace:

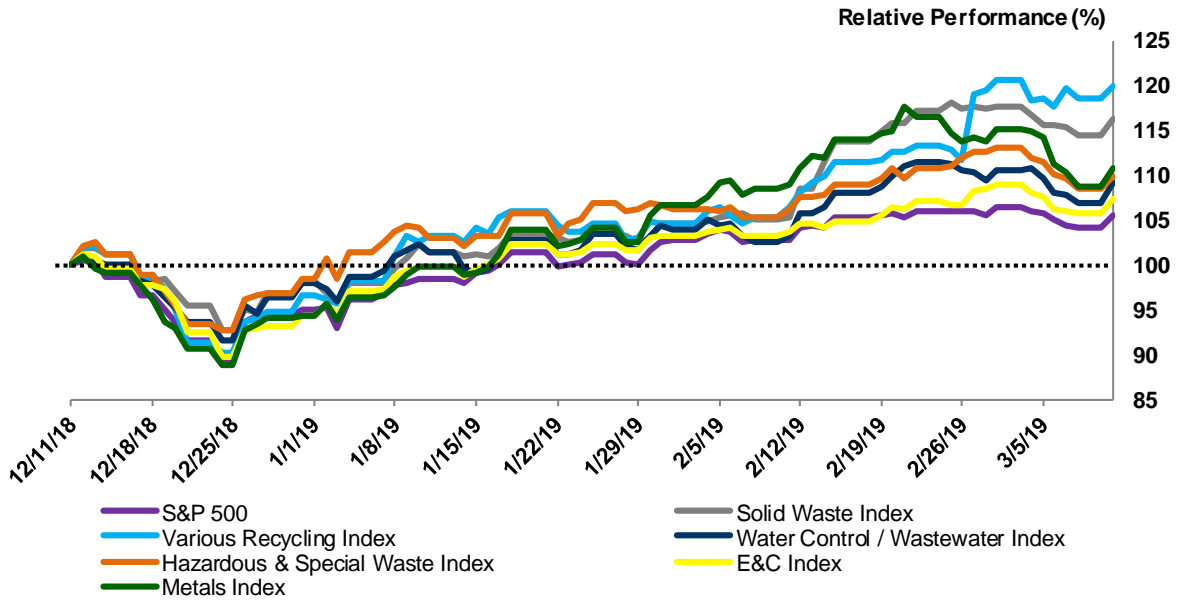
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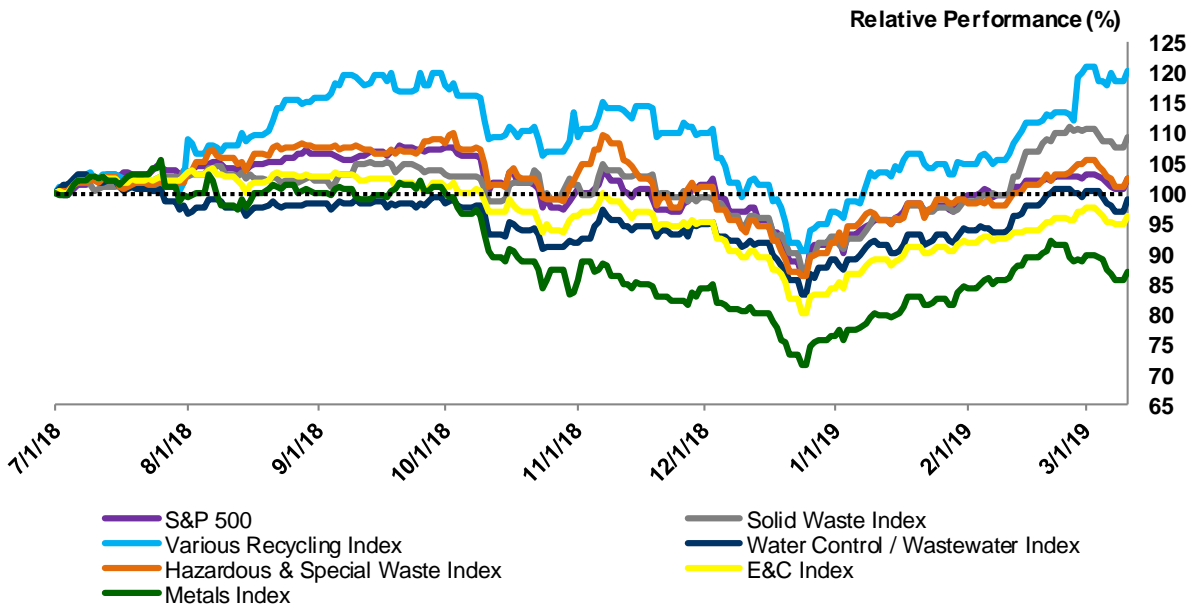
Paul Nowak 203.774.9644 pnowak@cronuspartners.com

ENVIRONMENTAL SERVICES INDUSTRY: TRADING STATISTICS

Previous Quarter Market Performance



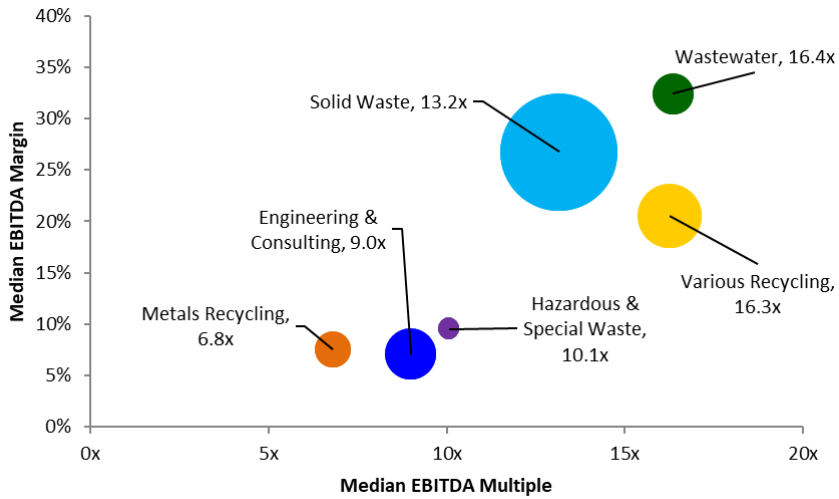
LTM Market Performance



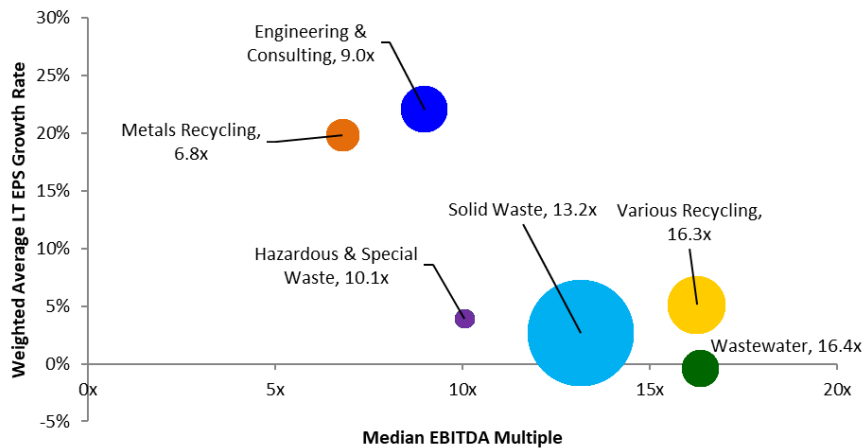
Source: FactSet Research Systems Inc. as of 3/14/2019
 Note disclaimer on page 1 of this report.

ENVIRONMENTAL SERVICES INDUSTRY: VALUATION FACTORS

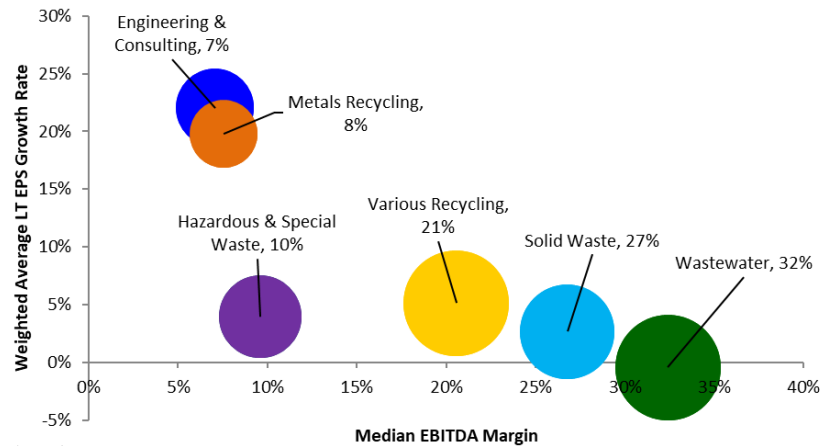
EBITDA Margin vs. EBITDA Multiple (1)



EPS Growth vs. EBITDA Multiple (1)



EPS Growth vs. EBITDA Margin (2)



(1) Balloon size represents Total Enterprise Value

(2) Balloon size corresponds to Median EBITDA Multiple

Source: FactSet Research Systems Inc. as of 3/14/2019; Note disclaimer on page 1 of this report.

Environmental Services Public Company Valuations

Company	Ticker	Share Price	Market Cap	Enterprise Value (EV)	LTM		2019 Expected	
					EV/ Revenue	EV/ EBITDA	EV/ Revenue	EV/ EBITDA
Solid Waste								
Waste Management, Inc.	WM-US	\$101.16	\$42,870	\$52,836	3.5 x	12.3 x	3.4 x	11.9 x
Republic Services, Inc.	RSG-US	78.93	25,385	33,655	3.4	11.7	3.2	11.4
Waste Connections, Inc.	WCN-CA	84.88	22,347	25,876	5.3	17.1	4.9	15.1
Advanced Disposal Services, Inc.	ADSW-US	26.88	2,384	4,280	2.7	11.0	2.6	9.3
Covanta Holding Corp.	CVA-US	17.08	2,239	4,636	2.5	14.0	2.5	10.4
Casella Waste Systems, Inc.	CWST-US	34.21	1,591	2,131	3.2	15.5	2.8	13.1
Median					3.3 x	13.2 x	3.0 x	11.7 x
Various Recycling								
Trex Co Inc	TREX-US	\$70.07	\$4,125	\$4,019	5.9 x	20.8 x	5.2 x	18.0 x
Darling Ingredients Inc	DAR-US	21.20	3,491	5,121	1.5	11.7	1.4	10.3
Median					3.7 x	16.3 x	3.3 x	14.1 x
Water Control / Wastewater								
American Water Works Co., Inc.	AWK-US	\$104.99	\$18,977	\$27,430	8.0 x	16.5 x	7.8 x	15.2 x
Pentair Plc	PNR-US	42.56	7,293	8,046	2.7	14.3	2.6	12.3
Aqua America, Inc.	WTR-US	35.47	6,319	8,883	10.6	18.9	9.8	15.4
Ashland Global Holdings, Inc.	ASH-US	78.77	4,932	7,257	1.9	10.4	2.3	10.4
American States Water Co.	AWR-US	70.70	2,600	3,010	6.9	21.3	6.6	19.6
California Water Service Group	CWT-US	53.69	2,581	3,413	4.9	15.9	4.9	15.7
SJW Group	SJW-US	61.53	1,749	1,860	4.7	12.4	NA	NA
Evoqua Water Technologies Corp.	AQUA-US	13.14	1,500	2,411	1.8	14.7	1.6	10.1
Lindsay Corp.	LNN-US	91.82	990	970	1.8	16.2	NA	NA
Middlesex Water Co.	MSEX-US	58.38	959	1,165	8.4	22.0	NA	NA
Connecticut Water Service, Inc.	CTWS-US	67.09	809	1,122	9.6	20.0	9.4	19.2
AquaVenture Holdings Ltd.	WAAS-US	19.85	535	798	5.5	24.7	NA	NA
York Water Co.	YORW-US	33.79	437	532	11.0	18.0	NA	NA
Artesian Resources Corp.	ARTNA-US	40.00	370	499	6.2	14.6	NA	NA
PICO Holdings, Inc.	PICO-US	10.20	217	196	15.3	NM	NA	NA
Median					6.2 x	16.4 x	5.8 x	15.3 x
Hazardous & Special Waste								
Veolia Environnement SA	VIE-FR	\$22.65	\$12,813	\$26,423	0.9 x	7.3 x	0.8 x	6.1 x
Stericycle, Inc.	SRCL-US	49.20	4,463	7,221	2.1	9.6	2.0	10.2
Clean Harbors, Inc.	CLH-US	69.29	3,870	5,163	1.6	10.5	1.5	9.7
US Ecology, Inc.	ECOL-US	56.37	1,244	1,576	2.8	13.1	2.6	11.1
Heritage-Crystal Clean, Inc.	HCCI-US	24.34	563	549	1.3	14.0	NA	NA
Charah Solutions, Inc.	CHRA-US	7.18	209	446	0.6	7.6	0.6	4.5
Newalta Corp.	NAL-CA	0.98	114	363	1.9	9.6	0.7	6.2
Sharps Compliance Corp.	SMED-US	3.68	59	55	1.3	NM	NA	NA
Vertex Energy, Inc.	VTNR-US	1.40	56	97	0.5	13.0	NA	NA
Perma-Fix Environmental Services, Inc.	PESI-US	3.50	42	44	0.9	NM	NA	NA
Median					1.3 x	10.1 x	1.1 x	8.0 x

NM = Not Material

Source: FactSet Research Systems Inc. as of 3/14/2019

Note disclaimer on page 1 of this report.

Environmental Services Public Company Valuations

Company	Ticker	Share Price	Market Cap	Enterprise Value (EV)	LTM		2019 Expected	
					EV/ Revenue	EV/ EBITDA	EV/ Revenue	EV/ EBITDA
Engineering and Consulting								
Jacobs Engineering Group, Inc.	JEC-US	\$73.08	\$10,196	\$12,069	0.7 x	12.9 x	0.9 x	11.4 x
Fluor Corp.	FLR-US	37.58	5,245	5,109	0.3	6.9	0.2	6.0
ITT, Inc.	ITT-US	57.07	4,988	4,616	1.7	9.9	1.6	8.5
AECOM	ACM-US	30.32	4,733	7,987	0.4	9.9	0.3	7.1
EMCOR Group, Inc.	EME-US	72.17	4,041	3,972	0.5	8.1	NA	NA
MasTec, Inc.	MTZ-US	47.21	3,589	4,968	0.7	7.1	0.6	5.9
Tetra Tech, Inc.	TTEK-US	58.65	3,238	3,429	1.2	13.9	1.5	12.6
Exponent, Inc.	EXPO-US	57.12	2,942	2,733	7.2	NM	7.1	NM
KBR, Inc.	KBR-US	18.91	2,667	3,223	0.7	9.1	0.5	6.6
Stantec, Inc.	STN-CA	23.58	2,637	3,186	1.0	11.2	1.2	9.8
Arcadis NV	ARCAY-US	16.40	1,460	1,839	0.5	8.8	0.5	7.0
McDermott International, Inc.	MDR-US	7.94	1,436	4,341	0.6	10.0	0.4	4.2
Aegion Corp.	AEGN-US	16.91	537	771	0.6	7.7	0.6	6.6
Willdan Group, Inc.	WLDN-US	36.68	404	461	1.7	NM	NA	NA
IES Holdings, Inc.	IESC-US	18.32	387	400	0.4	9.6	NA	NA
VSE Corp.	VSEC-US	32.34	353	534	0.8	6.8	NA	NA
Hill International, Inc.	HIL-US	2.98	166	187	0.4	NM	NA	NA
Orion Group Holdings, Inc.	ORN-US	3.79	110	205	0.4	5.8	NA	NA
Goldfield Corp.	GV-US	2.64	65	83	0.6	5.2	NA	NA
Ecology & Environment, Inc.	EEL-US	11.25	49	34	0.3	6.2	NA	NA
Median					0.6 x	8.8 x	0.6 x	7.0 x
Metals Recycling								
Steel Dynamics, Inc.	STLD-US	\$35.12	\$7,871	\$9,142	0.8 x	4.5 x	0.8 x	5.2 x
Commercial Metals Co.	CMC-US	15.79	1,858	2,394	0.5	6.8	0.5	6.0
Sims Metal Management Ltd.	SGM-AU	7.59	1,539	1,431	0.3	7.2	0.3	5.3
Schnitzer Steel Industries, Inc.	SCHN-US	23.81	643	805	0.3	4.2	0.3	5.3
TimkenSteel Corp.	TMST-US	10.90	486	654	0.4	8.2	0.3	4.6
Median					0.4 x	6.8 x	0.3 x	5.3 x

Source: FactSet Research Systems Inc. as of 3/14/2019. Amounts in millions USD, except share price. Note disclaimer on Page 1 of this report.

Select Environmental Services Mergers & Acquisitions Activity

Date	Target	Acquirer	Location	Target Business Description
Mar-19	Miller Environmental Group	GenNx360 Capital Partners	New York	Miller Environmental Group provides emergency response, waste transportation and disposal, remediation, industrial and marine services.
Mar-19	Nu-Life Environmental	Clearwell Group	Florida	Nu-Life is a manufacturer of waste-management containers and equipment.
Mar-19	Petro Waste Environmental LP	WM Energy Services Holdings LLC	Texas	Petro Waste Environmental LP provides waste management solutions. It specializes in disposal and water processing.
Mar-19	Suntree Technologies, Inc.	Oldcastle, Inc.; Oldcastle Infrastructure, Inc.	Florida	Suntree Technologies, Inc. provides storm water management solutions.
Mar-19	Sable Polymer Solutions LLC	Kal-Polymers, Inc.	Arkansas	Sable Polymer Solutions LLC provides recycling and reclamation of resin materials.
Mar-19	Coastal Ladies Carting, Inc.	Waste Industries USA LLC; GFL Environmental, Inc.	North Carolina	Coastal Ladies Carting, Inc. provides recycling and trash collection services.
Mar-19	D & D Sanitation, Inc.	WCA Waste Corp.	Kentucky	D & D Sanitation, Inc. provides waste collection, recycling and disposal services.
Mar-19	Outreach Disposal	WCA Waste Corp.	Texas	Outreach Disposal provides waste collection, recycling and disposal services.
Feb-19	Tri-State Utilities Co.	Hoffman Southwest Corp.; Orix Capital Partners LLC	Virginia	Tri-State Utilities Co. provides technical services to support maintenance needs for sewers.
Feb-19	Amrep, Inc. /California/	Wastequip LLC; H.I.G. Capital LLC; Dyal Capital Partners	California	Amrep, Inc. provides waste hauling services.
Feb-19	Jessup Enterprises of Avon, Inc.	Driessen Water, Inc.	Indiana	Jessup Enterprises of Avon, Inc. provides water softeners, treatments and filter systems.
Feb-19	Aaron Oil Co., Inc.	TRADEBE Environmental Services LLC	Alabama	Aaron Oil Co., Inc. engages in the provision of petroleum reclamation and used oil recycling services.
Feb-19	US Water Services, Inc.	Kurita Water Industries Ltd.	Minnesota	U.S. Water Services, Inc. provides integrated water management solutions.
Feb-19	BC2 ENVIRONMENTAL CORP	CVF Capital Partners, Inc.	California	BC2 Environmental LLC provides environmental drilling and field services.
Feb-19	Tunnel Hill Partners LP	Macquarie Infrastructure Partners, Inc.	New York	Tunnel Hill Partners LP provides non-hazardous solid waste handling services.
Feb-19	United Pacific Waste	CR&R, Inc.	California	United Pacific Waste provides residential and commercial waste management and recycling services.
Jan-19	Lawn-Corps Recycling	Organic Resource Management, Inc.	Missouri	Lawn-Corps Recycling provides recycling and renewable services.
Jan-19	Neptune Research LLC	Wind Point Advisors LLC	Florida	Neptune Research LLC provides infrastructure engineering and repair services.
Jan-19	PetroChem Recovery Services, Inc.	Gryphon Investors, Inc.; HEPACO, Inc.	Virginia	PetroChem Recovery Services, Inc. provides environmental and ecological services.
Jan-19	Stephens Sanitation Ltd.	Waste Management, Inc.	Wisconsin	Stephens Sanitation Ltd. provides waste collection and management services.
Jan-19	Pro-Vac LLC	RJ Equity Partners LLC	Washington	Pro-Vac LLC engages in the provision of storm and sewer maintenance and environmental services.
Jan-19	Aquion, Inc.	Pentair Plc	Illinois	Aquion, Inc. manufactures and markets water treatment equipment
Jan-19	Enviro Water Solutions LLC	Pentair Plc	Florida	Enviro Water Solutions LLC designs and sells water purification products.
Jan-19	Alabama Waste Disposal Solutions LLC	Advanced Disposal Services, Inc.	Texas	Alabama Waste Disposal Solutions LLC owns and operates a municipal solid waste landfill
Dec-18	NGL Energy LP /South Pecos Water Disposal Assets	WaterBridge Resources LLC	Texas	NGL operates saltwater disposal facilities
Dec-18	Blower Application Co., Inc.	Gen Cap America, Inc.	Wisconsin	Blower Application engages in the design and manufacture of scrap and waste handling systems.

Source: FactSet Research Systems Inc. as of 3/14/2019; Note disclaimer on page 1 of this report.

Select Environmental Services Mergers & Acquisitions Activity

Date	Target	Acquirer	Location	Target Business Description
Dec-18	Environmental Management Specialists, Inc.	Gryphon Investors, Inc.; HEPACO, Inc.	Ohio	Environmental Management Specialists, Inc. operates as an environmental contractor.
Dec-18	O'Brien & Gere Ltd.	Rambøll Gruppen A/S	New York	O'Brien & Gere Ltd. engages in the provision of engineering and environmental solutions.
Dec-18	Hess Corp. /Bakken Water Bus	Global Infrastructure Management LLC	North Dakota	Hess Corp provides water treatment services
Dec-18	Bluegrass Water LLC	Expedition Water Solutions Colorado LLC	Colorado	Bluegrass Water LLC operates as water midstream company.
Dec-18	Tyler's Sanitation, Inc.	Waste Management, Inc.	South Carolina	Tyler's Sanitation, Inc. provides residential and commercial waste services.
Dec-18	Apple Valley Waste Services, Inc.	Kinderhook Industries LLC; Gold Medal Services LLC; BioHiTech	West Virginia	Apple Valley Waste Services, Inc. provides waste refuse and recycling services.
Nov-18	Hays Utility South Corp.	H2O Innovation, Inc.	Texas	Hays Utility South Corp. provides water and wastewater asset management services.
Nov-18	Hydrologic Solutions, Inc.	NDS, Inc.	Virginia	Hydrologic Solutions, Inc. provides storm water solutions.
Nov-18	S&S Star Water Solutions LLC	Bison Oilfield Services LLC	Oklahoma	S&S Star Water Solutions LLC engages in the provision of saltwater disposal services.
Nov-18	Apex Cos. LLC	Sentinel Capital Partners LLC; Yukon Partners Mgt; Apex Cos.	Maryland	Apex Cos. LLC provides turnkey environmental services.
Nov-18	Duke Recycling LLC	Foss Recycling, Inc.	Illinois	Duke Recycling LLC engages in the provision of recycling materials.
Nov-18	Lonza Group AG /Water Care Business/	Platinum Equity Advisors LLC	Georgia	Lonza Group provides water care services.
Nov-18	AUC Acquisitions Holdings LLC	AquaVenture Holdings Ltd.	Texas	AUC Acquisitions Holdings provides wastewater treatment and water reuse solutions
Nov-18	Oceanside Rubbish, Inc.	Casella Waste Systems, Inc.	Maine	Oceanside Rubbish, Inc. provides waste recycling services.
Oct-18	LJP Enterprises, Inc.	Aperion Management LLC; LJP Enterprises, Inc.	Minnesota	LJP Enterprises, Inc. provides waste collection and recycling services.
Oct-18	Waste Industries USA LLC	BC Partners Ltd.; Ontario Teachers' Prvt Cap; GFL Env.	North Carolina	Waste Industries USA, Inc. engages in waste collection, transfer, disposal and recycling services.
Oct-18	Clearwater Solutions LLC	Nuverra Environmental Solutions, Inc.	Washington	Clearwater Solutions LLC specializes in stream restoration, fish passageway, culvert replacement, excavation, pile driving and marine construction and repair.
Oct-18	WeCare Waste & Recycling LLC	Casella Waste Systems, Inc.	New York	WeCare Waste & Recycling LLC provides residential and commercial waste management solutions.
Oct-18	Wheelabrator Technologies, Inc.	Macquarie Infrastructure & Real Assets, Inc.	New Hampshire	Wheelabrator Technologies, Inc. provides waste management services.
Sep-18	5 Star OFS LLC	Five Point Capital Partners LLC; EVX Eagle Ford Partners LLC	Texas	5 Star OFS provides saltwater disposal and oilfield waste processing plants.
Sep-18	Sunshine Recycling, Inc. /Solid Waste Ops/	WCA Waste Corp.	Florida	Sunshine Recycling provides solid waste management and related services
Sep-18	Disposal And Recycling Technologies, Inc.	Clean Earth, Inc.; Compass Group Management LLC	Michigan	Disposal and Recycling Technologies provides waste management solutions.
Sep-18	Global Waste Services LLC	WCA Waste Corp.	Texas	Global Waste Services LLC provides trash and recycling services for industrial, commercial, and residential customers
Sep-18	Silvarole Transfer, Inc.	Casella Waste Systems, Inc.	New York	Silvarole Transfer, Inc. provides waste disposal services.
Sep-18	Ecology Recycling Services LLC	LKQ Corp.; American Iron & Metal LP; Ecology Recycling	California	Ecology Recycling Services LLC provides logistics and trucking services for waste management.
Sep-18	TWH Water Treatment Industries, Inc.	The Jordan Co. LP; Riverside Partners LLC; DuBois Chemicals	Delaware	TWH Water Treatment Industries, Inc. provides water treatment chemical supplies and services.

Source: FactSet Research Systems Inc. as of 3/14/2019; Note disclaimer on page 1 of this report.

Advising on mergers, acquisitions, divestitures, sales, and private placement financings, Cronus is an independent investment banking firm that provides financial advisory and other investment banking services. Winner of the New York Association for Corporate Growth’s Boutique Investment Bank of the Year Award, the firm has significant experience in advising both public and private companies that can benefit from middle-market transactions. Cronus serves industrial-based sectors including environmental services, specialty manufacturing, and business-to-business services.

Environmental Services Industry Coverage

Solid Waste and Construction and Demolition Waste; Hazardous and Industrial Waste; Recycling; Waste Transportation; Alternative Energy; Water; Air



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In 2018, Babcock Power Environmental, a subsidiary of Babcock Power Inc., announced the acquisition of substantially all of the assets of Geo-Synthetics, LLC. Cronus acted as financial advisor to Babcock in the transaction, identifying the target company, initiating contact, intermediating discussions, and advising our client on key terms including valuation.

Target Profile

Geo-Synthetics is a distributor, fabricator, and installer of geosynthetic materials for a broad range of erosion control and containment applications.

Acquirer Profile

Babcock provides fully integrated environmental solutions for utility power plants, waste-to-energy facilities, and large industrial applications worldwide.

Transaction Rationale

Geo-Synthetics is a long-established independent geo-synthetic lining installer. Babcock Power intends to leverage its relationships in the power generation sector to provide additional services to its current utility customer base, particularly providing additional services regarding the management of coal combustion residuals, a significant issue for coal burning utilities in the wake of recent changes to environmental regulations.