Advanced Emissions Solutions, Inc.
Form 10-Q
August 06, 2018

United States
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2018
or
¨TRANSITION REPORT PURSUANT TO 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number: 001-37822

Advanced Emissions Solutions, Inc.
(Exact name of registrant as specified in its charter)

Delaware	27-5472457
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

640 Plaza Drive, Suite 270, Highlands Ranch, CO	80129
(Address of principal executive offices)	(Zip Code)

(720) 598-3500
(Registrant's telephone number, including area code)
Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	o	Accelerated filer	x
Non-accelerated filer	o	Smaller reporting company	¨
		Emerging growth company	¨

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ¨ No x

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at August 1, 2018
Common stock, par value $0.001 per share	20,112,343

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Part I. – FINANCIAL INFORMATION
Item 1. Consolidated Financial Statements
Advanced Emissions Solutions, Inc. and Subsidiaries
Condensed Consolidated Balance Sheets
(Unaudited)

(in thousands, except share data)	As of June 30, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$32,179	$ 30,693
Receivables, net	1,087	1,113
Receivables, related parties, net	3,523	3,247
Prepaid expenses and other assets	2,211	1,835
Total current assets	39,000	36,888
Property and equipment, net of accumulated depreciation of $1,074 and $1,486, respectively	269	410
Equity method investments	5,043	4,351
Deferred tax assets	38,517	38,661
Other long-term assets	2,043	2,308
Total Assets	$84,872	$ 82,618
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$1,323	$ 1,000
Accrued payroll and related liabilities	1,536	1,384
Billings in excess of costs on uncompleted contracts	—	1,830
Other current liabilities	1,100	2,664
Total current liabilities	3,959	6,878
Other long-term liabilities	293	2,285
Total Liabilities	4,252	9,163
Commitments and contingencies (Note 5)		
Stockholders' equity:		
Preferred stock: par value of $.001 per share, 50,000,000 shares authorized, none outstanding	—	—
Common stock: par value of $.001 per share, 100,000,000 shares authorized, 22,627,635 and 22,465,821 shares issued, and 20,088,451 and 20,752,055 shares outstanding at June 30, 2018 and December 31, 2017, respectively	23	22
Treasury stock, at cost: 2,539,184 and 1,713,766 shares as of June 30, 2018 and December 31, 2017, respectively	(25,508)	(16,397)
Additional paid-in capital	95,680	105,308
Retained earnings (deficit)	10,425	(15,478)
Total stockholders' equity	80,620	73,455
Total Liabilities and Stockholders' Equity	$84,872	$ 82,618

See Notes to the Condensed Consolidated Financial Statements.

Advanced Emissions Solutions, Inc. and Subsidiaries
Condensed Consolidated Statements of Operations
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except per share data)	2018	2017	2018	2017
Revenues:				
Chemicals	$726	$846	$1,347	$3,127
License royalties, related party	3,523	1,866	6,753	3,621
Equipment sales	24	24,619	72	29,727
Total revenues	4,273	27,331	8,172	36,475
Operating expenses:				
Chemicals cost of revenue, exclusive of depreciation and amortization	902	645	1,613	2,403
Equipment sales cost of revenue, exclusive of depreciation and amortization	(198)	22,650	(346)	26,793
Payroll and benefits	2,759	2,033	4,973	4,215
Rent and occupancy	248	255	516	300
Legal and professional fees	1,213	1,219	2,761	2,254
General and administrative	846	395	1,748	1,850
Depreciation and amortization	72	118	188	600
Total operating expenses	5,842	27,315	11,453	38,415
Operating (loss) income	(1,569)	16	(3,281)	(1,940)
Other income (expense):				
Earnings from equity method investments	15,889	10,155	28,142	23,969
Interest expense	(412)	(628)	(748)	(1,321)
Other	34	507	60	3,416
Total other income	15,511	10,034	27,454	26,064
Income before income tax (benefit) expense	13,942	10,050	24,173	24,124
Income tax (benefit) expense	(1,349)	3,642	1,220	9,028
Net income	$15,291	$6,408	$22,953	$15,096
Earnings per common share (Note 1):				
Basic	$0.76	$0.29	$1.13	$0.68
Diluted	$0.75	$0.29	$1.12	$0.68
Weighted-average number of common shares outstanding:				
Basic	20,062	21,866	20,275	21,961
Diluted	20,195	21,880	20,386	21,981
Cash dividends declared per common share outstanding:	$0.25	$0.25	$0.50	$0.25

See Notes to the Condensed Consolidated Financial Statements.

Advanced Emissions Solutions, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Six Months Ended June 30,	
(in thousands)	2018	2017
Cash flows from operating activities		
Net income	$22,953	$15,096
Adjustments to reconcile net income to net cash used in operating activities:		
Deferred tax benefit from release of valuation allowance	(498)	—
Depreciation and amortization	188	600
Provision for bad debt expense	153	—
Stock-based compensation expense	1,010	1,173
Earnings from equity method investments	(28,142)	(23,969)
Other non-cash items, net	39	509
Changes in operating assets and liabilities:		
Receivables	(64)	6,758
Prepaid expenses and other assets	(375)	(453)
Costs incurred on uncompleted contracts	15,945	25,634
Deferred tax asset, net	(246)	8,106
Other long-term assets	—	(767)
Accounts payable	323	(303)
Accrued payroll and related liabilities	152	(987)
Other current liabilities	(1,505)	(1,227)
Billings on uncompleted contracts	(15,945)	(28,671)
Other long-term liabilities	(135)	164
Legal settlements and accruals	—	(10,685)
Distributions from equity method investees, return on investment	2,700	2,875
Net cash used in operating activities	(3,447)	(6,147)
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	25,500	22,313
Acquisition of property, equipment and intangibles, net	(131)	(247)
Contributions to equity method investees	(750)	—
Net cash provided by investing activities	24,619	22,066
Cash flows from financing activities		
Dividends paid	(10,216)	—
Repurchase of common shares	(9,111)	(12,973)
Repurchase of common shares to satisfy tax withholdings	(359)	(517)
Borrowings on Line of Credit	—	808
Repayments on Line of Credit	—	(808)
Net cash used in financing activities	(19,686)	(13,490)
Increase in Cash and Cash Equivalents and Restricted Cash	1,486	2,429
Cash and Cash Equivalents and Restricted Cash, beginning of period	30,693	26,944
Cash and Cash Equivalents and Restricted Cash, end of period	$32,179	$29,373
Supplemental disclosure of cash flow information:		
Cash paid for interest	$660	$1,791
Cash paid for income taxes	$2,349	$839
Supplemental disclosure of non-cash investing and financing activities:		
Dividends declared, not paid	$63	$5,268

See Notes to the Condensed Consolidated Financial Statements.

Advanced Emissions Solutions, Inc. and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)
Note 1 - Basis of Presentation
Nature of Operations
Advanced Emissions Solutions, Inc. ("ADES" or the "Company") is a Delaware corporation with its principal office located in Highlands Ranch, Colorado. The Company is principally engaged in emissions control ("EC") technologies and associated consumables, equipment and services. The Company's proprietary environmental technologies enable customers to reduce emissions of mercury and other pollutants, maximize utilization levels and improve operating efficiencies to meet the challenges of existing and pending EC regulations. The Company generates substantial earnings and tax credits under Section 45 ("Section 45 tax credits") of the Internal Revenue Code ("IRC") from its equity investments in certain entities and royalty payments related to technologies that are licensed to Tinuum Group, LLC, a Colorado limited liability company ("Tinuum Group"). Such technologies allow Tinuum Group to provide its customers with various solutions to enhance combustion and reduce emissions of nitrogen oxide ("NO_x") and mercury from coal burned to generate electrical power. The Company’s sales occur principally throughout the United States. See Note 10 for additional information regarding the Company's operating segments.
Basis of Presentation
The accompanying Condensed Consolidated Financial Statements of ADES are unaudited and have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") and with Article 10 of Regulation S-X of the Securities and Exchange Commission. In compliance with those instructions, certain information and footnote disclosures normally included in annual consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted.
The unaudited Condensed Consolidated Financial Statements of ADES in this quarterly report ("Quarterly Report") are presented on a consolidated basis and include ADES and its wholly-owned subsidiaries (collectively, the "Company"). Also included within the unaudited Condensed Consolidated Financial Statements are the Company's unconsolidated equity investments, Tinuum Group, Tinuum Services, LLC ("Tinuum Services"), and GWN Manager, LLC ("GWN Manager"), which are accounted for under the equity method of accounting, and Highview Enterprises Limited (the "Highview Investment"), which is accounted for in accordance with U.S. GAAP applicable to equity investments that do not qualify for the equity method of accounting.
Results of operations and cash flows for the interim periods are not necessarily indicative of the results that may be expected for the entire year. All significant intercompany transactions and accounts were eliminated for all periods presented in this Quarterly Report.
In the opinion of management, these Condensed Consolidated Financial Statements include all normal and recurring adjustments considered necessary for a fair presentation of the results of operations, financial position and cash flows for the interim periods presented. These Condensed Consolidated Financial Statements of ADES should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2017 (the "2017 Form 10-K"). Except for accounting for revenue from contracts with customers, which is discussed in Note 2, significant accounting policies disclosed therein have not changed.
Earnings Per Share
Basic earnings per share is computed using the two-class method, which is an earnings allocation formula that determines earnings per share for common stock and any participating securities according to dividend and participating rights in undistributed earnings. The Company's restricted stock awards ("RSA's") granted prior to December 31, 2016 contain non-forfeitable rights to dividends or dividend equivalents and are deemed to be participating securities. RSA's granted subsequent to December 31, 2016 do not contain non-forfeitable rights to dividends and are not deemed to be participating securities.
Under the two-class method, net income for the period is allocated between common stockholders and the holders of the participating securities based on the weighted-average number of common shares outstanding during the period, excluding participating, unvested RSA's ("common shares"), and the weighted-average number of participating unvested RSA's outstanding during the period, respectively. The allocated, undistributed income for the period is then

divided by the weighted-average number of common shares and participating, unvested RSA's outstanding during the period to arrive at basic earnings per common share and participating security for the period, respectively. Pursuant to U.S. GAAP, the Company has elected not to separately present basic or diluted earnings per share attributable to participating securities in the Condensed Consolidated Statements of Operations.

Diluted earnings per share is computed in a manner consistent with that of basic earnings per share, while considering other potentially dilutive securities. Potentially dilutive securities consist of both unvested, participating and non-participating RSA's, as well as outstanding options to purchase common stock ("Stock Options") and contingent performance stock units ("PSU's") (collectively, "Potential dilutive shares"). The dilutive effect, if any, for non-participating RSA's, Stock Options and PSU's is determined using the greater of dilution as calculated under the treasury stock method or the two-class method. Potential dilutive shares are excluded from diluted earnings per share when their effect is anti-dilutive. When there is a net loss for a period, all Potential dilutive shares are anti-dilutive and are excluded from the calculation of diluted loss per share for that period.

Each PSU represents a contingent right to receive shares of the Company's common stock, and the number of shares may range from zero to two times the number of PSU's granted on the award date depending upon the price performance of the Company's common stock as measured against a general index and a specific peer group index over requisite performance periods. The number of Potential dilutive shares related to PSU's is based on the number of shares of the Company's common stock, if any, that would be issuable at the end of the respective reporting period, assuming that the end of the reporting period is the end of the contingency period applicable to such PSU's. See Note 7 for additional information related to PSU's.

The following table sets forth the calculations of basic and diluted earnings per share:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except per share amounts)	2018	2017	2018	2017
Net income	$15,291	$6,408	$22,953	$15,096
Less: Dividends and undistributed income allocated to participating securities	51	45	77	140
Income attributable to common stockholders	$15,240	$6,363	$22,876	$14,956
Basic weighted-average common shares outstanding	20,062	21,866	20,275	21,961
Add: dilutive effect of equity instruments	133	14	111	20
Diluted weighted-average shares outstanding	20,195	21,880	20,386	21,981
Earnings per share - basic	$0.76	$0.29	$1.13	$0.68
Earnings per share - diluted	$0.75	$0.29	$1.12	$0.68

For the three and six months ended June 30, 2018 and 2017, RSA's and Stock Options convertible to 0.3 million and 0.2 million shares, respectively, and 0.4 million and 0.2 million shares, respectively, of common stock for each of the periods presented were outstanding but were not included in the computation of diluted net income per share because the effect would have been anti-dilutive. For the six months ended June 30, 2018, Stock Options to purchase 0.1 million shares were outstanding, but not included in the computation of diluted net income per share for a portion of the period because they were determined not to be contingently issuable. For the three and six months ended June 30, 2017, Stock Options to purchase 0.4 million and 0.4 million shares, respectively, of common stock, which vest based on the Company achieving specified performance targets, were outstanding, but not included in the computation of diluted net income per share because they were determined not to be contingently issuable.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to makes estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. There have been no changes in the Company's critical accounting estimates from those that were disclosed in the 2017 Form 10-K, except upon the adoption of ASC 606 - Revenue from Contracts with Customers ("ASC 606"), effective January 1, 2018, which affected revenue recognition and warranty estimates accruals related to the Company's extended equipment contracts as well as the estimate related to the Royalty Award are no longer considered significant estimates. Actual results could differ from these estimates.

Risks and Uncertainties

The Company's earnings are significantly affected by equity earnings it receives from Tinuum Group. As of June 30, 2018, Tinuum Group has 18 invested RC facilities of which 11 are leased to a single customer. A majority of these leases are periodically renewed and the loss of this customer by Tinuum Group would have a significant adverse impact on its financial position, results of operations and cash flows, which in turn would have material adverse impact on the Company’s financial position, results of operations and cash flows.

Reclassifications

Certain balances have been reclassified from the prior year to conform to the current year presentation. No reclassifications have any impact to income before income taxes or net income.

New Accounting Guidance

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842) ("ASU 2016-02"), which requires lessees to recognize a right of use asset and related lease liability for those leases classified as operating leases at the commencement date and have lease terms of more than 12 months. This topic retains the distinction between finance leases and operating leases. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, and interim periods within those years, and must be applied under a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842): Targeted Improvements ("ASU 2018-11"). The amendments in ASU 2018-11 provide entities with an additional (and optional) transition method to adopt the new lease requirements by allowing entities to initially apply the requirements by recognizing a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption. Consequently, an entity's reporting for the comparative periods presented in the financial statements in which the entity adopts the new lease requirements would continue to be in accordance with current GAAP (Topic 840). An entity electing this additional (and optional) transition method must provide the required Topic 840 disclosures for all periods that continue to be in accordance with Topic 840. The amendments do not change the existing disclosure requirements in Topic 840. The Company intends to adopt ASC 2016-02 effective January 1, 2019 using the additional (and optional) transition method provided under ASU 2018-11.

During the quarter ended June 30, 2018, the Company continued its assessment of ASC 2016-02 for the impact to the financial statements as of the adoption date, commenced a detailed review of individual customer contracts, commenced review of controls and procedures that may need to be revised or added from the adoption of the standard, developed a timeline for completion of the various phases of the Company's implementation plan for the standard, including documentation of the standard's financial statement impact at adoption, financial statement presentation and disclosure changes and reviews over potential changes to existing revenue recognition policies, controls and procedures. As a result of these actions, the Company does not believe ASC 2016-02 will have a material impact on the Company's financial statements and disclosures.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses (Topic 326) Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). The main objective of ASU 2016-13 is to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. To achieve this objective, the amendments in ASU 2016-13 replace the incurred loss impairment methodology in current U.S. GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. ASU 2016-13 is effective for fiscal years beginning after December 15, 2019, including interim periods within those years, and must be adopted under a modified retrospective method approach. Entities may adopt ASU 2016-13 earlier as of the fiscal years beginning after December 15, 2018, including interim periods within those years. The Company is currently evaluating the provisions of this guidance and assessing its impact on the Company's financial statements and disclosures. The Company does not believe this standard will have a material impact on the Company's financial statements and disclosures.

Note 2 - Revenues

Adoption of ASC 606

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method applied to those contracts that were not completed as of January 1, 2018. The Company recognized the cumulative effect of initially applying ASC 606 to the opening balance of the Accumulated deficit. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

The financial statement impact from the adoption of ASC 606 as of January 1, 2018 was primarily due to the following:

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The recognition of revenues and related cost of revenue from Equipment Sales for three uncompleted dry sorbent injection ("DSI") equipment systems (the "DSI Systems") as of December 31, 2017, which were accounted for under the guidance in ASC 605-35, Revenue Recognition - Construction-Type and Production-Type Contracts ("ASC 605-35"). Under ASC 605-35, the Company accounted for revenues and associated cost of revenue for equipment systems from inception of the contract under the completed contract method and recognized revenue and cost of revenue when the equipment systems were deemed substantially complete. As of December 31, 2017, none of the DSI Systems had met the revenue recognition criteria under the completed contract method. As of January 1, 2018, the Company has determined that the performance obligation associated with each DSI System has been satisfied under ASC 606 guidance.

- The recognition of revenues and related cost of revenue for a licensing arrangement (the "Licensing Arrangement") in which the Company satisfied its performance obligation under ASC 606 as of January 1, 2018.

As a result, the Company's deferred revenue and related deferred project costs on the three DSI Systems and the Licensing Arrangement, and the resultant income tax effects, were recognized through a cumulative effect adjustment to the Accumulated deficit as of January 1, 2018. In addition, the Company recorded a contract asset in the amount of $0.3 million related to one DSI System contract for which the Company has completed its performance obligations but is not contractually able to bill the customer until the end of the warranty period.

The cumulative effect of the change from the adoption of ASC 606 to the Consolidated Balance Sheet as of January 1, 2018 is shown in the table that follows:

(in thousands)	Balance as of December 31, 2017	Impact of Adoption	Balance as of January 1, 2018
Balance Sheet			
Receivables, net	$ 1,113	$ 339	$ 1,452
Deferred tax assets	$ 38,661	$ (889)	$ 37,772
Other long-term assets	$ 2,308	$ (322)	$ 1,986
Billings in excess of costs on uncompleted contracts	$ 1,830	$ (1,830)	$ —
Other current liabilities	$ 2,664	$ 9	$ 2,673
Other long-term liabilities	$ 2,285	$ (2,000)	$ 285
Accumulated deficit	$ (15,478)	$ 2,950	$ (12,528)

The following tables show the impact of the adoption of ASC 606 on the Condensed Consolidated Balance Sheet and Condensed Consolidated Statement of Operations as of and for the three and six months ended June 30, 2018, respectively:

(in thousands)	Balance as Reported June 30, 2018	Impact of Adoption	Balance as Adjusted June 30, 2018
Balance Sheet			
Receivables, net	$ 1,087	$ (159)	$ 928
Deferred tax assets	$ 38,517	$ 889	$ 39,406
Other long-term assets	$ 2,043	$ 322	$ 2,365
Billings in excess of costs on uncompleted contracts	$ —	$ 2,009	$ 2,009
Other current liabilities	$ 1,100	$ —	$ 1,100
Other long-term liabilities	$ 293	$ 2,000	$ 2,293
Retained earnings (deficit)	$ 10,425	$ (2,957)	$ 7,468

	For the three months ended		
(in thousands)	As Reported June 30, 2018	Impact of Adoption	As Adjusted June 30, 2018
Statement of Operations			
Revenues:			
Equipment sales	$24	$7,532	$7,556
License royalties, related party	$3,523	$(3,523)	$—
Total revenues	$4,273	$4,009	$8,282
Operating expenses:			
Equipment sales cost of revenue	$(198)	$7,525	$7,327
Total operating expenses	$5,842	$7,525	$13,367
Operating loss	$(1,569)	$(3,516)	$(5,085)
Other income (expense)			
Royalties, related party	$—	$3,523	$3,523
Total other income (expense)	$15,511	$3,523	$19,034
Income before income tax expense	$13,942	$7	$13,949

	For the six months ended		
(in thousands)	As Reported June 30, 2018	Impact of Adoption	As Adjusted June 30, 2018
Statement of Operations			
Revenues:			
Equipment sales	$72	$7,532	$7,604
License royalties, related party	$6,753	$(6,753)	$—
Total revenues	$8,172	$779	$8,951
Operating expenses:			
Equipment sales cost of revenue	$(346)	$7,525	$7,179
Total operating expenses	$11,453	$7,525	$18,978
Operating loss	$(3,281)	$(6,746)	$(10,027)
Other income (expense)			
Royalties, related party	$—	$6,753	$6,753
Total other income (expense)	$27,454	$6,753	$34,207
Income before income tax expense	$24,173	$7	$24,180

As of and for the three and six months ended June 30, 2018, the significant difference between the financial statement balances reported compared to the financial statement balances without the adoption of ASC 606 were as follows:
Equipment sales -As of adoption, the Company derecognized contract assets of $16.5 million and contract liabilities of $18.3 million and recorded a contract asset of $0.3 million related to the three DSI Systems contracts that met the revenue recognition requirements under ASC 606. After tax, the net adjustment for the three DSI Systems was $1.7 million. Under revenue recognition guidance in effect prior to the adoption of ASC 606, one DSI Systems contract would have met revenue recognition criteria as of June 30, 2018, and the Company would have recorded $7.5 million of Equipment sales and Equipment sales cost of revenue, respectively, for both the three and six months ended June 30, 2018. During the three months ended June 30, 2018, the Company billed the customer of a second DSI Systems contract $0.2 million, which under ASC 606 reduced the related contract asset by this amount. Under revenue recognition guidance in effect prior to the adoption of ASC 606, this customer billing would have increased billings in

excess of costs on uncompleted contracts by $0.2 million, with no impact to revenues recognized.

- Licensing Arrangement - As of adoption, the Company derecognized a contract liability of $2.0 million and a contract asset of $0.3 million related to the Licensing Arrangement, which met the revenue recognition requirements under ASC 606. After tax, the net adjustment for this contract was $1.3 million. Under revenue recognition guidance in effect prior to the adoption of ASC 606, this contract would not have met revenue recognition criteria as of June 30, 2018.
- Royalties, related party - As of adoption, and based on guidance provided in ASC 606 related to licensing arrangements where royalties are earned on a usage-based royalty arrangement, for the three and six months ended June 30, 2018, as well as the corresponding periods from the prior year, the Company has reported license royalties earned from Tinuum Group as revenues rather than as non-operating income under financial statement presentation guidance in effect prior to the adoption of ASC 606. This reclassification had no impact to the Company’s income before income tax expense or net income for all periods presented.

Revenue Recognition

The Company recognizes revenue from a contract with a customer when a performance obligation under the terms of a contract with a customer is satisfied, which is when the customer controls the promised goods or services that are transferred in satisfaction of the performance obligation. Revenue is measured as the amount of consideration that is expected to be received in exchange for transferring goods or providing services, and the transaction price is generally fixed and generally does not contain variable or noncash consideration. In addition, the Company’s contracts with customers generally do not contain customer refund or return provisions or other similar obligations. Transfer of control and satisfaction of performance obligations are further discussed in each of the revenue components listed below.

The Company uses estimates and judgments in determining the nature and timing of satisfaction of performance obligations, the standalone selling price (“SSP”) of performance obligations and the allocation of the transaction price to multiple performance obligations.

The Company’s principal revenue components are Chemical Sales and License Royalties.

Chemicals

The Company recognizes revenue for direct sales of proprietary chemicals and other ancillary items when the customer obtains control, which is generally at the point in time that delivery to and acceptance by the customer has occurred. Customer contracts for sales of chemicals are short duration and performance obligations generally do not extend beyond one year.

Certain chemical customer contracts are comprised of evaluation tests of the Company’s chemicals’ effectiveness and efficiency in reducing emissions. These contracts entail the delivery of chemicals to the customer and the Company's evaluation of results of emissions reduction over the term of the contract. Under these types of arrangements, which are generally for durations that are short term, the Company has determined that the customer is simultaneously receiving benefits of emissions reduction from the consumption of the chemicals over the testing period and this represents a single performance obligation that is satisfied over time. This determination may require significant judgment. The Company recognizes revenue over time using an input model that is generally based on the cost of chemicals consumed by the customer during the testing period. The use of an input model and the use of total costs as the measure of progress in the satisfaction of the performance obligations may require significant judgment. In addition, under these types of contracts, the Company has determined that the services performed and related costs incurred by the Company during the testing period represent costs to fulfill a contract.

License Royalties

The Company generates revenues from royalties (“M-45 Royalties”) earned under a licensing arrangement (“M-45 License”) of its M-45™ and M-45-PC™ emissions control technologies (“M-45 Technology”) between the Company and Tinuum Group. The Company recognizes M-45 Royalties at a point in time based on the use of the M-45 Technology at certain RC facilities or through Tinuum Group’s use of licensed technology for rates in excess of amounts allowed for RC application. The amount of M-45 Royalties recognized is generally based on a percentage of pre-tax margins (as defined in the M-45 License) of the RC facilities using the M-45 Technology.

Arrangements with Multiple Performance Obligations

Contracts with customers may include multiple performance obligations, which are comprised of the sale of chemicals, equipment and services performed as part of an emissions reduction arrangement. For such arrangements, the Company allocates revenue to each performance obligation based on its relative SSP. When a directly observable SSP for a performance obligation is not available, the Company primarily estimates SSPs based on the expected cost plus a margin method. These estimates as well as the timing of the satisfaction of performance obligations associated with the services component represent significant judgments made by the Company. These arrangements are generally short duration and performance obligations generally do not extend beyond one year.

Contract Assets and Liabilities

Contract assets are comprised of unbilled receivables and are included in Receivables, net in the Condensed Consolidated Balance Sheet. Unbilled receivables represent a conditional right to consideration in exchange for goods or services transferred to a customer.

Trade receivables represent an unconditional right to consideration in exchange for goods or services transferred to a customer. The Company invoices its customers in accordance with the terms of the contract. Credit terms are generally net 30 from the date of invoice. The timing between the satisfaction of performance obligations and when payment is due from the customer is generally not significant. The Company records allowances for doubtful trade receivables when it is probable that the balances will not be collected.

Contract liabilities are comprised of deferred revenue, which represents an obligation to transfer goods or services to a customer for which the Company has received consideration from the customer and, if deliverable within one year or less, is included in Other current liabilities in the Condensed Consolidated Balance Sheet and, if deliverable outside of one year, is included in Other long-term liabilities in the Condensed Consolidated Balance Sheet.

Disaggregation of Revenue

During the three and six months ended June 30, 2018, all performance obligations related to revenues recognized were satisfied at a point in time. The Company disaggregates its revenues by its major components as well as between its two operating segments, which are further discussed in Note 10 to the condensed consolidated financial statements.

The following tables disaggregate revenues by major source for the three and six months ended June 30, 2018 (in thousands):

	Three Months Ended June 30, 2018		
	Segment		
	EC	RC	Total
Revenue component			
Chemical sales	$726	$—	$726
License royalties, related party	—	3,523	3,523
Equipment sales	24	—	24
Revenues from customers	750	3,523	4,273
Earnings from equity method investments	—	15,889	15,889
Segment revenues	$750	$19,412	$20,162

	Six Months Ended June 30, 2018		
	Segment		
	EC	RC	Total
Revenue component			
Chemical sales	$1,347	$—	$1,347
License royalties, related party	—	6,753	6,753
Equipment sales	72	—	72
Revenues from customers	1,419	6,753	8,172
Earnings from equity method investments	—	28,142	28,142
Segment revenues	$1,419	$34,895	$36,314

Practical Expedients and Exemptions

The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Sales and other taxes that are collected concurrently with revenue-producing activities are excluded from revenue.

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The Company has also elected to account for freight costs as activities to fulfill the promise to transfer the goods, and therefore these activities are also not assessed as a separate service to customers.
The Company accounts for all shipping and handling activities that occur after control of the related good transfers as fulfillment activities. These activities are included in Cost of Revenue line items of the Condensed Consolidated Statement of Operations.
The Company generally expenses sales commissions when incurred because the amortization period of the asset that the Company would have recognized is one year or less. These costs are recorded within sales and marketing expenses within the General and administrative line item of the Condensed Consolidated Statement of Operations.
Note 3 - Equity Method Investments
Tinuum Group, LLC
The Company's ownership interest in Tinuum Group was 42.5% as of June 30, 2018 and December 31, 2017. Tinuum Group supplies technology equipment and technical services at select coal-fired generators, but its primary purpose is to put into operation facilities that produce and sell RC that lower emissions and therefore qualify for Section 45 tax credits. Tinuum Group has been determined to be a variable interest entity ("VIE"); however, the Company does not have the power to direct the activities that most significantly impact Tinuum Group's economic performance and has therefore accounted for the investment under the equity method of accounting. The Company determined that the voting partners of Tinuum Group have identical voting rights, equity control interests and board control interests, and therefore, concluded that the power to direct the activities that most significantly impact Tinuum Group's economic performance was shared.
The following table summarizes the results of operations of Tinuum Group:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Gross profit	$28,683	$25,027	$55,096	$47,083
Operating, selling, general and administrative expenses	5,491	4,327	11,498	9,801
Income from operations	23,192	20,700	43,598	37,282
Other expenses	(355)	(359)	(2,224)	(947)
Class B preferred return	—	(505)	(12)	(1,142)
Loss attributable to noncontrolling interest	10,244	7,926	21,019	17,287
Net income available to members	$33,081	$27,762	$62,381	$52,480
ADES equity earnings from Tinuum Group	$14,450	$9,138	$25,500	$22,313

As of June 30, 2018 and December 31, 2017, the amount of Tinuum Group's temporary Class B preferred equity was zero and $0.8 million, respectively.
The difference between the Company's proportionate share of Tinuum Group's net income available to members (at its equity interest of 42.5%) as presented in the table below and the Company's earnings from its Tinuum Group equity method investment as reported in the Condensed Consolidated Statements of Operations relates to the Company receiving distributions in excess of the carrying value of the equity investment, and therefore recognizing such excess distributions as equity method earnings in the period the distributions occur, as discussed below.
As shown in the tables below, the Company’s carrying value in Tinuum Group was reduced to zero for the three and six months ended June 30, 2018, as cumulative cash distributions received from Tinuum Group exceeded the Company's pro-rata share of cumulative earnings in Tinuum Group. The carrying value of the Company's investment in Tinuum Group shall remain zero as long as the cumulative amount of distributions received from Tinuum Group continues to exceed the Company's cumulative pro-rata share of Tinuum Group's net income available to its members. For periods during which the ending balance of the Company's investment in Tinuum Group is zero, the Company only recognizes equity earnings from Tinuum Group to the extent that cash distributions are received from Tinuum Group during the period. For periods during which the ending balance of the Company's investment is greater than zero (e.g., when the cumulative earnings in Tinuum Group exceeds cumulative cash distributions received), the Company recognizes its pro-rata share of Tinuum Group's net income available to its members for the period, less any amount necessary to recover the cumulative earnings short-fall balance as of the end of the immediately preceding

period. During the three and six months ended June 30, 2018, the Company's cumulative amount of distributions received from Tinuum Group exceeded the Company's cumulative pro-rata share of Tinuum Group's net income available to its members. As such, the Company recognized equity earnings from Tinuum Group for the three and six months ended June 30, 2018 of $14.5 million and $25.5 million, respectively. During the three and six months ended June 30, 2017, the Company recognized equity earnings from Tinuum Group in the amount of $9.1 million and $22.3 million, respectively. As of June 30, 2018 and 2017, the Company's carrying value in Tinuum Group was zero and zero, respectively.

Thus, the amount of equity earnings or loss reported on the Company's Condensed Consolidated Statement of Operations may differ from a mathematical calculation of net income or loss attributable to the equity interest based upon the factor of the equity interest and the net income or loss attributable to members as shown on Tinuum Group’s statement of operations. Additionally, for periods during which the carrying value of the Company's investment in Tinuum Group is greater than zero, distributions from Tinuum Group are reported on the Condensed Consolidated Statements of Cash Flows as "Distributions from equity method investees, return on investment" within Operating cash flows. For periods during which the carrying value of the Company's investment in Tinuum Group is zero, such cash distributions are reported on the Condensed Consolidated Statements of Cash Flows as "Distributions from equity method investees in excess of investment basis" within Investing cash flows.

The following tables present the Company's investment balance, equity earnings and cash distributions in excess of the investment balance for the three and six months ended June 30, 2018 and 2017 (in thousands):

Description	Date(s)	Investment balance	ADES equity earnings (loss)	Cash distributions	Memorandum Account: Cash distributions and equity earnings in (excess) of investment balance
Beginning balance	12/31/2017	$ —	$ —	$ —	$ (12,218)
ADES proportionate share of income from Tinuum Group [(1)]	First Quarter	12,458	12,458	—	—
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	First Quarter	(12,218)	(12,218)	—	12,218
Cash distributions from Tinuum Group	First Quarter	(11,050)	—	11,050	—
Adjustment for current year cash distributions in excess of investment balance	First Quarter	10,810	10,810	—	(10,810)
Total investment balance, equity earnings (loss) and cash distributions	3/31/2018	$ —	$ 11,050	$ 11,050	$ (10,810)
ADES proportionate share of income from Tinuum Group [(1)]	Second Quarter	$ 14,059	$ 14,059	$ —	$ —
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	Second Quarter	(10,810)	(10,810)	—	10,810
Cash distributions from Tinuum Group	Second Quarter	(14,450)	—	14,450	—
Adjustment for current year cash distributions in excess of investment balance	Second Quarter	11,201	11,201		(11,201)
Total investment balance, equity earnings (loss) and cash distributions	6/30/2018	$ —	$ 14,450	$ 14,450	$ (11,201)

Description	Date(s)	Investment balance	ADES equity earnings (loss)	Cash distributions	Memorandum Account: Cash distributions and equity earnings in (excess) of investment balance
Beginning balance	12/31/2016	$ —	$ —	$ —	$ (9,894)
ADES proportionate share of income from Tinuum Group [1]	First Quarter	10,457	10,457	—	—
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	First Quarter	(9,894)	(9,894)	—	9,894
Cash distributions from Tinuum Group	First Quarter	(13,175)	—	13,175	—
Adjustment for current year cash distributions in excess of investment balance	First Quarter	12,612	12,612	—	(12,612)
Total investment balance, equity earnings (loss) and cash distributions	3/31/2017	$ —	$ 13,175	$ 13,175	$ (12,612)
ADES proportionate share of income from Tinuum Group [1]	Second Quarter	$ 11,761	$ 11,761	$ —	$ —
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	Second Quarter	(11,761)	(11,761)	—	11,761
Cash distributions from Tinuum Group	Second Quarter	(9,138)	—	9,138	—
Adjustment for current year cash distributions in excess of investment balance	Second Quarter	9,138	9,138	—	(9,138)
Total investment balance, equity earnings (loss) and cash distributions	6/30/2017	$ —	$ 9,138	$ 9,138	$ (9,989)

(1) For the three and six months ended June 30, 2018 and 2017, the amounts of the Company's 42.5% proportionate share of net income available to members as shown in the table above differ from mathematical calculations of the Company’s 42.5% equity interest in Tinuum Group multiplied by the amounts of net income available to members as shown in the table above of Tinuum Group results of operations due to adjustments related to the Class B preferred return.

Tinuum Services, LLC

The Company has a 50% voting and economic interest in Tinuum Services, which is equivalent to the voting and economic interest of NexGen Refined Coal, LLC ("NexGen"). The Company has determined that Tinuum Services is not a VIE and has evaluated its consolidation analysis under the voting interest model. Because the Company does not own greater than 50% of the outstanding voting shares, either directly or indirectly, it has accounted for its investment in Tinuum Services under the equity method of accounting. The Company’s investment in Tinuum Services as of June 30, 2018 and December 31, 2017 was $5.0 million and $4.3 million, respectively. During the three months ended June 30, 2018, the Company funded a capital call of $0.8 million, which increased its investment balance in Tinuum Services.

The following table summarizes the results of operations of Tinuum Services:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Gross loss	$ (21,701)	$ (17,249)	$ (42,707)	$ (30,128)

Operating, selling, general and administrative expenses	43,133	37,325	83,837	71,953
Loss from operations	(64,834)	(54,574)	(126,544)	(102,081)
Other income	423	84	365	69
Loss attributable to noncontrolling interest	67,287	56,523	131,463	105,322
Net income	$2,876	$2,033	$5,284	$3,310
ADES equity earnings from Tinuum Services	$1,438	$1,017	$2,642	$1,656

Included within the Consolidated Statements of Operations of Tinuum Services for the three and six months ended June 30, 2018 and 2017, respectively, were losses related to VIE's of Tinuum Services. These losses do not impact the Company's equity earnings from Tinuum Services as 100% of those losses are attributable to a noncontrolling interest and eliminated in the calculations of Tinuum Services' net income attributable to the Company's interest.

Other

On July 27, 2017, the Company obtained a 50% membership interest in GWN Manager in exchange for a capital contribution of $0.1 million. GWN Manager subsequently purchased a 0.2% membership interest in a subsidiary of Tinuum Group, which owns a single RC facility that produces RC that qualifies for Section 45 tax credits. Tinuum Group sold 49.9% of the subsidiary that owns the RC facility to an unrelated third party and retained ownership of the remaining 49.9%. GWN Manager is subject to monthly capital calls based on estimated working capital needs.

The Company has determined that GWN Manager is not a VIE and has evaluated the consolidation analysis under the Voting Interest Model. Because the Company does not own greater than 50% of the outstanding voting shares, either directly or indirectly, it has accounted for its investment in GWN Manager under the equity method of accounting.

As of June 30, 2018, the Company's ownership in GWN Manager was 50%. The Company's investment in GWN Manager as of June 30, 2018, was $0.1 million.

The following table details the components of the Company's respective equity method investments included within the Earnings from equity method investments line item on the Condensed Consolidated Statements of Operations:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Earnings from Tinuum Group	$14,450	$9,138	$25,500	$22,313
Earnings from Tinuum Services	1,438	1,017	2,642	1,656
Earnings from other	1	—	—	—
Earnings from equity method investments	$15,889	$10,155	$28,142	$23,969

The following table details the components of the cash distributions from the Company's respective equity method investments included in the Condensed Consolidated Statements of Cash Flows. Distributions from equity method investees are reported on the Condensed Consolidated Statements of Cash Flows as "Distributions from equity method investees, return on investment" within Operating cash flows until such time as the carrying value in an equity method investee company is reduced to zero; thereafter, such distributions are reported as "Distributions from equity method investees in excess of cumulative earnings" within Investing cash flows.

	Six Months Ended June 30,	
(in thousands)	2018	2017
Distributions from equity method investees, return on investment		
Tinuum Services	2,700	2,875
	$2,700	$2,875
Distributions from equity method investees in excess of investment basis		
Tinuum Group	$25,500	$22,313
	$25,500	$22,313

Note 4 - Borrowings

Line of Credit

On November 30, 2016, ADA-ES, Inc., a wholly-owned subsidiary of the Company ("ADA"), as borrower, the Company, as guarantor, and a bank (the "Lender") entered into an amendment (the "Tenth Amendment") to the 2013 Loan and Security Agreement (the "Line of Credit"). The Tenth Amendment increased the Line of Credit to $15.0 million, extended the maturity date of the Line of Credit to September 30, 2017 and permitted the Line of Credit to be used as collateral (in place of restricted cash) for letters of credit ("LC's") related to equipment projects, the Royalty Award, as defined in Note 5, and certain other agreements. Additionally, this amendment secured the Line of Credit with amounts due to the Company from an additional existing Refined Coal ("RC") facility lease, which amounts also factor into the borrowing base limitation, and amended certain financial covenants. Pursuant to the Tenth Amendment, the Company was required to maintain a minimum deposit balance and maintain a minimum trailing twelve-month EBITDA (earnings before interest, taxes, depreciation and amortization as defined in the Tenth Amendment) of $24.0 million.

On September 30, 2017, ADA, as borrower, the Company, as guarantor, and the Lender entered into an amendment (the "Eleventh Amendment") to the Line of Credit. The Eleventh Amendment decreased the Line of Credit to $10.0 million due to decreased collateral requirements for the Company's outstanding letters of Credit ("LC's"), extended the maturity date of the Line of Credit to September 30, 2018, and permitted the Line of Credit to be used as collateral (in place of restricted cash) for LC's up to $8.0 million related to equipment projects and certain other agreements. Additionally, under the Eleventh Amendment there is no minimum balance requirement based on the Company meeting certain conditions and maintaining minimum trailing twelve-month EBITDA (earnings before interest, taxes, depreciation and amortization as defined in the Eleventh Amendment) of $24.0 million.

As of June 30, 2018, there were no outstanding borrowings under the Line of Credit and the outstanding LC as of December 31, 2017 was terminated by the Company and the other parties in January 2018.

Other

In March 2017, a customer drew on an LC related to an equipment system in the amount of $0.8 million, which was funded by borrowing availability under the Line of Credit. The Company subsequently repaid this amount to the Lender as of March 31, 2017. The Company is contesting the LC draw on this LC and is pursuing legal actions to recover the entire amount from the customer. The Company recorded an asset for the LC Draw net of an estimated allowance of $0.4 million. This amount is included in Other long-term assets on the Condensed Consolidated Balance Sheets.

The following table presents the LC's outstanding and collateral, by asset type, reported on the Condensed Consolidated Balance Sheets. There were no LC's outstanding or collateral as of June 30, 2018.

	As of December 31, 2017	
(in thousands)	LC Outstanding	Utilization of LOC Availability
Royalty Award	$3,500	$ 3,500
Total LC outstanding	$3,500	$ 3,500

Note 5 - Commitments and Contingencies

Legal Proceedings

The Company is from time to time subject to, and is presently involved in, various pending or threatened legal actions and proceedings, including those that arise in the ordinary course of its business. Such matters are subject to many uncertainties and to outcomes, the financial impacts of which are not predictable with assurance and that may not be known for extended periods of time. The Company records a liability in its consolidated financial statements for costs related to claims, settlements, and judgments where management has assessed that a loss is probable and an amount can be reasonably estimated.

Settlement and royalty indemnity

In 2011, the Company and Norit International B.V. ("Norit") entered into a settlement agreement (the "Norit Settlement Agreement") whereby the Company paid amounts related to a non-solicitation breach of contract claim ("Norit Litigation"), and was also required to pay additional damages (the "Royalty Award") related to certain future revenues generated from an activated carbon manufacturing plant (the "Red River Plant") that the Company owned through a joint venture with ADA Carbon Solutions, LLC ("Carbon Solutions"). Payments due under the Royalty Award were due quarterly in arrears through June 2018. Additionally, in 2011, the Company entered into the Settlement Agreement Regarding ADA-ES' Indemnity Obligations (the "Indemnity Settlement Agreement") whereby the Company agreed to settle certain indemnity obligations asserted against the Company related to the Norit Litigation and relinquished all of its equity interest in Carbon Solutions.

Under the Norit Settlement Agreement, the Company was required to pledge LC's as collateral for a portion of Royalty Award future payments due. In March 2017, the Company was required to increase its LC's under the Royalty Award based on a provision that required additional amounts be pledged because the Company had achieved annual earnings in excess of $20.0 million for the fiscal year ended December 31, 2016. Under this provision, the Company was required to provide an additional LC of $5.0 million, which was secured under the Line of Credit in March 2017. Under a separate provision of the Norit Settlement Agreement effective during 2017, the Company was required to increase the LC's, subject to the aggregate amount of estimated future payments due related to the Royalty Award, for any dividends issued by the Company prior to January 1, 2018 in amount equal to 50% of the aggregate fair market value of such dividends (the "Dividends Provision"). Based on the estimated remaining future payments due under the Royalty Award, the Dividends Provision did not impact the amount of LC's pledged during 2017.

During the three months ended March 31, 2017, the Company revised its estimate for future Royalty Award payments based in part on updated forecasts provided to the Company from Carbon Solutions. This forecast included a material reduction in estimated future revenues generated at the Red River Plant. Based primarily on the updated forecast, the Company recorded a $2.9 million reduction to the Royalty Award accrual as of March 31, 2017.

During the second quarter of 2017, the Company revised its estimate for future Royalty Award payments based in part on updated forecasts provided to the Company from Carbon Solutions. This forecast included a material reduction in estimated future revenues generated at the Red River Plant. Based primarily on the updated forecast, the Company recorded a $0.5 million reduction to the Royalty Award accrual as of June 30, 2017. The reductions in the Royalty award accrual were included within the Other line item in the Condensed Consolidated Statement of Operations during the three and six months ended June 30, 2017.

In December 2017, the Company, Carbon Solutions and the parent company of Carbon Solutions agreed to terminate certain provisions of the Indemnity Settlement Agreement (the "Indemnity Termination Agreement"). Pursuant to an agreement executed concurrently with the Indemnity Termination Agreement, the Company, Norit and an affiliate of Norit (collectively referred to as “Norit”) agreed to a final payment in the amount of $3.3 million (the "Settlement Payment") to settle all outstanding royalty obligations owed under the terms of the Norit Settlement Agreement. This amount was paid by the Company on December 29, 2017.

Under the Indemnity Termination Agreement, and upon payment of the Settlement Payment, the Company was relieved of certain financial and indemnity obligations required by the terms of the Norit Settlement Agreement, including the obligation to maintain LC's securing future royalty payment obligations. As of December 31, 2017, $3.5 million in LC's related to the Royalty Award were outstanding, but were canceled by all parties in January 2018, pursuant to the Indemnity Termination Agreement.

Advanced Emission Solutions, Inc. Profit Sharing Retirement Plan

The Advanced Emissions Solutions, Inc. Profit Sharing Retirement Plan (the “401(k) Plan”) is subject to the jurisdiction of the Internal Revenue Service ("IRS") and the Department of Labor ("DOL").

In 2016, the DOL opened an investigation into the 401(k) Plan, and the Company (in its role as Plan Sponsor) cooperated with that investigation. In February 2018, as part of ongoing discussions, the Company and the DOL came to an agreement whereby the Company would make a restorative payment to the 401(k) Plan in the amount of $1.0 million as an estimate of lost earnings for 401(k) Plan participants as of January 1, 2015. Thereafter, the DOL would close the investigation with no further action against the 401(k) Plan or its fiduciaries, including any further investigation. The Company determined this contingency to be both probable and reasonably estimable and accrued $1.0 million as of December 31, 2017. The liability was recorded in the Other current liabilities line item on the Consolidated Balance Sheet. The expense recognized related to this accrual was included in the Other line item in the Consolidated Statements of Operations for the year ended December 31, 2017. The Company made a payment of $1.0 million to the 401(k) Plan on June 1, 2018 and no liability existed as of June 30, 2018.

Other Commitments and Contingencies

Tinuum Group

The Company also has certain limited obligations contingent upon future events in connection with the activities of Tinuum Group. The Company, NexGen and two entities affiliated with NexGen have provided an affiliate of the Goldman Sachs Group, Inc. with limited guaranties (the "Tinuum Group Party Guaranties") related to certain losses it may suffer as a result of inaccuracies or breach of representations and covenants. The Company also is a party to a contribution agreement with NexGen under which any party called upon to pay on a Tinuum Group Party Guaranty is entitled to receive contributions from the other party equal to 50% of the amount paid. No liability or expense provision has been recorded by the Company related to this contingent obligation as the Company believes that it is not probable that a loss will occur with respect to Tinuum Group Party Guaranties.

Note 6 - Stockholders' Equity

Stock Repurchase Program

Under a stock repurchase program authorized by the Board in December 2017 (the "Stock Repurchase Program"), during the three and six months ended June 30, 2018, the Company purchased 676,201 and 825,418 shares, respectively, of its common stock for cash of $7.5 million and $9.1 million, respectively, inclusive of commissions and fees. Of these amounts, $2.2 million was purchased in a single block through a privately negotiated transaction. Under the Stock Repurchase Program, the Company is authorized to purchase up to $20.0 million of its outstanding common stock. According to the terms of the Stock Repurchase Program remained in effect until July 31, 2018.

On May 5, 2017, the Board authorized the commencement of a modified Dutch Auction tender offer ("Tender Offer") to purchase for cash up to 925,000 shares of the Company's common stock at a price per share of not less than $9.40 nor greater than $10.80, for a maximum aggregate purchase price of $10.0 million, with an option to purchase an additional 2% of the outstanding shares of common stock if the Tender Offer was oversubscribed. The Tender Offer expired on June 6, 2017 and a

total of 2,858,425 shares were validly tendered and not properly withdrawn at or below the final purchase price of $9.40 per share.
Because the Tender Offer was oversubscribed, the Company purchased a prorated portion of the shares properly tendered by each tendering stockholder (other than "odd lot" holders whose shares were purchased on a priority basis) at the final per share purchase price. Accordingly, the Company acquired 1,370,891 shares of its common stock ("Tendered Shares") at a price of $9.40 per share, for a total cost of approximately $12.9 million, excluding fees and other expenses related to the Tender Offer. The Tendered Shares represented approximately 6.2% of the Company's outstanding shares prior to the Tender Offer. The Tendered Shares include the 925,000 shares the Company initially offered to purchase and 445,891 additional shares that the Company elected to purchase pursuant to its right to purchase up to an additional 2% of its outstanding shares of common stock. The Company recorded the Tendered Shares at cost, which included fees and expenses related to the Tender Offer, and reported the Tendered Shares as Treasury Stock in the Condensed Consolidated Balance Sheet.

The Company’s Board and executive officers did not participate in the Tender Offer, except for one director of the Board, who is a manager of a financial institution and holds dispositive powers over the shares of the Company's common stock held by the financial institution, which tendered 70,178 of its shares of the Company's common stock.

Quarterly Cash Dividend

Dividends declared by the Board, and paid quarterly per share on all outstanding shares of comment stock during the three and six months ended June 30, 2018 and 2017 were as follows:

	2018		2017	
	Per share	Date paid	Per share	Date paid
Dividends declared during quarter ended:				
March 31	$0.25	March 8, 2018	$—	—
June 30	0.25	June 8, 2018	0.25	July 17, 2017
	$0.50		$0.25	

A portion of the dividends declared remain accrued subsequent to the payment dates and represent dividends accumulated on nonvested shares of common stock held by employees of the Company that contain forfeitable dividend rights that are not payable until the underlying shares of common stock vest. These amounts are included in both Other current liabilities and Other long-term liabilities on the Condensed Consolidated Balance Sheet as of June 30, 2018.

Tax Asset Protection Plan

United States federal income tax rules, and Section 382 of the Internal Revenue Code in particular, could substantially limit the use of net operating losses and other tax assets if ADES experiences an “ownership change” (as defined in the Internal Revenue Code). In general, an ownership change occurs if there is a cumulative change in the ownership of ADES by "5 percent stockholders" that exceeds 50 percentage points over a rolling three-year period.
On May 5, 2017, the Board approved the declaration of a dividend of rights to purchase Series B Junior Participating Preferred Stock for each outstanding share of common stock as part of a Tax Asset Protection Plan designed to protect the Company’s ability to utilize its net operating losses and tax credits. The Tax Asset Protection Plan is intended to act as a deterrent to any person acquiring beneficial ownership of 4.99% or more of the Company’s outstanding common stock
On April 6, 2018, the Board approved the First Amendment to the Tax Asset Protection Plan (the "Amendment") that amends the Tax Asset Protection Plan dated May 5, 2017 (the "TAPP"). The Amendment amends the definition of "Final Expiration Date" under the TAPP to extend the duration of the TAPP and makes associated changes in connection therewith. At the Company's 2018 annual meeting, the Company's stockholders approved the Amendment, thus the Final Expiration Date will be the close of business on December 31, 2019.

Note 7 - Stock-Based Compensation

The Company grants equity-based awards to employees and non-employee directors that may include RSA's, stock options, PSU's and stock appreciation rights ("SAR's"). Stock-based compensation expense related to employees is included within the Payroll and benefits line item in the Condensed Consolidated Statements of Operations. Stock-based compensation expense related to non-employee directors is included within the General and administrative line item in the Condensed Consolidated Statements of Operations.

Total stock-based compensation expense for the three and six months ended June 30, 2018 and 2017 was as follows:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
RSA expense	$675	$367	$952	$805
Stock option expense	—	165	58	300
PSU expense	—	34	—	68
Total stock-based compensation expense	$675	$566	$1,010	$1,173

The amount of unrecognized compensation cost as of June 30, 2018, and the expected weighted-average period over which the cost will be recognized is as follows:

(in thousands)	As of June 30, 2018	
	Unrecognized Compensation Cost	Expected Weighted-Average Period of Recognition (in years)
RSA expense	$ 2,756	2.19
Total unrecognized stock-based compensation expense	$ 2,756	2.19

Restricted Stock Awards

Restricted stock is typically granted with vesting terms of three years. The fair value of RSA's is determined based on the closing price of the Company’s common stock on the authorization date of the grant multiplied by the number of shares subject to the stock award. Compensation expense for RSA's is generally recognized on a straight-line basis over the entire vesting period. A summary of RSA activity under the Company's various stock compensation plans for the six months ended June 30, 2018 is presented below:

	Shares	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2018	276,607	$ 9.03
Granted	181,272	$ 10.95
Vested	(105,781)	$ 9.50
Forfeited	(1,135)	$ 10.44
Non-vested at June 30, 2018	350,963	$ 9.87

Stock Options

Stock options generally vest over three years or upon satisfaction of performance-based conditions and have a contractual limit of five years from the date of grant to exercise. The fair value of stock options granted is determined on the date of grant using the Black-Scholes option pricing model and the related expense is recognized on a straight-line basis over the entire vesting period.

A summary of stock option activity for the six months ended June 30, 2018 is presented below:

	Number of Options Outstanding and Exercisable	Weighted-Average Exercise Price	Aggregate Intrinsic Value	Weighted-Average Remaining Contractual Term (in years)
Options outstanding, January 1, 2018	622,446	$ 11.64		
Options granted	—	—		
Options exercised	—	—		
Options expired / forfeited	—	—		

Options outstanding, June 30, 2018	622,446	$ 11.64	$ 754	1.74
Options exercisable, June 30, 2018	622,446	$ 11.64	$ 754	1.74

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Performance Share Units

Compensation expense is recognized for PSU awards on a straight-line basis over the applicable service period, which is generally three years, based on the estimated fair value at the date of grant using a Monte Carlo simulation model. There were no PSU's granted during the six months ended June 30, 2018.

A summary of PSU activity for the six months ended June 30, 2018 is presented below:

	Units	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2018	19,406	$ 19.95
Granted	—	—
Vested / Settled (1)	(19,406)	$ 19.95
Forfeited / Canceled	—	—
Non-vested at June 30, 2018	—	$ —

(1) The number of units shown in the table above were based on target performance. The final number of shares of common stock issued was based on the achievement of market conditions established within the awards.

The following table shows the PSU's that were settled by issuing shares of the Company's common stock relative to a broad stock index and a peer group performance index.

	Year of Grant	Net Number of Issued Shares upon Vesting	Shares Withheld to Settle Tax Withholding Obligations	TSR Multiple Range		Russell 3000 Multiple	
				Low	High	Low	High
Six Months Ended June 30, 2018							
	2015	12,311	4,061	112.50	112.50	—	—
Six Months Ended June 30, 2017							
	2014	6,476	3,573	0.75	1.00	—	—
	2015	3,869	2,310	0.60	0.60	—	—

Note 8 - Supplemental Financial Information

Supplemental Balance Sheet Information

The following table summarizes the components of Prepaid expenses and other assets and Other long-term assets as presented in the Condensed Consolidated Balance Sheets:

(in thousands)	As of June 30, 2018	December 31, 2017
Prepaid expenses and other assets:		
Prepaid expenses	$568	$ 776
Inventory	61	74
Prepaid income taxes	1,582	902
Other	—	83
	$2,211	$ 1,835
Other long-term assets:		
Deposits	$222	$ 223
Intangibles, net	863	805
Highview Investment	552	552
Other	406	728
	$2,043	$ 2,308

Included within Other long-term assets is the Company's investment in ("Highview Investment") Highview Enterprises Limited's equity securities ("Highview"), a London, England based developmental stage company specializing in power storage. In 2014, the Company acquired an 8% ownership interest in the common stock of Highview for $2.8 million in cash. The Highview Investment is evaluated for impairment upon an indicator of impairment such as an event or change in circumstances that may have a significant adverse effect on the fair value of the investment. During the year ended December 31, 2017, the Company recorded an impairment charge of $0.5 million which is included in the Other line item in the Condensed Consolidated Statement of Operations based on an estimated fair value of £1.00 per share compared to the carrying value prior to the impairment charge of £2.00 per share. The estimated fair value as of December 31, 2017 was based on an equity raise that commenced during the third quarter of 2017 at a price of £1.00 per share.

The following table details the components of Other current liabilities and Other long-term liabilities as presented in the Condensed Consolidated Balance Sheets:

(in thousands)	As of June 30, 2018	December 31, 2017
Other current liabilities:		
Income taxes payable	$459	$ 207
Estimated restorative payment to the 401(k) Plan (1)	—	1,000
Dividends payable	58	45
Warranty liabilities	34	316
Other	549	1,096
	$1,100	$ 2,664
Other long-term liabilities:		
Deferred rent	$150	$ 192
Dividends payable	143	93
Deferred revenue, related party	—	2,000
	$293	$ 2,285

(1) See Note 5 for further discussion on the 401(k) Plan.

The tables below detail additional components of Other current liabilities as presented above:

The changes in the carrying amount of the Company’s warranty obligations from December 31, 2017 through June 30, 2018 were as follows:

(in thousands)	As of June 30, 2018
Balance, beginning of period	$ 316
Warranties accrued, net	9
Consumption of warranty obligations accrued	(329)
Change in estimate related to previous warranties accrued	38
Balance, end of period	$ 34

Supplemental Condensed Consolidated Statements of Operations Information

The following table details the components of Interest expense in the Condensed Consolidated Statements of Operations:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
453A interest	$404	$566	$740	$1,032

Other	8	62	8	289
	$412	$628	$748	$1,321

The following table details the components of the Other line item of the Condensed Consolidated Statements of Operations:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Revision in estimated royalty indemnity liability	$—	$500	$—	$3,400
Other	34	7	60	16
	$34	$507	$60	$3,416

Note 9 - Income Taxes

For the three and six months ended June 30, 2018 and 2017, the Company's income tax expense and effective tax rates based on forecasted pretax income were:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except for rate)	2018	2017	2018	2017
Income tax (benefit) expense	$(1,349)	$3,642	$1,220	$9,028
Effective tax rate	(10)%	36 %	5 %	37 %

The effective tax rates for the three and six months ended June 30, 2018 and 2017 were different from the federal statutory rate in effect during the respective periods due to state income tax expense, net of federal benefit. Additionally, during the three and six months ended June 30, 2018, the effective tax rate was impacted by a reduction in the valuation allowance against the Company's deferred tax assets.

The income tax (benefit) expense recorded for the three and six months ended June 30, 2018 was comprised of estimated federal income tax benefit of $1.7 million and federal income tax expense of $0.4 million, respectively, and estimated state income tax expense of $0.4 million and $0.8 million, respectively. The income tax expense recorded for the three and six months ended June 30, 2017 was comprised of estimated federal income tax expense of $3.5 million and $8.7 million, respectively, and estimated state income tax expense of $0.1 million and $0.3 million, respectively.

On December 22, 2017 (the "Enactment Date"), the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code and the key provision applicable to the Company for the three and six months ended June 30, 2018 was the reduction of the U.S. federal corporate tax rate from 35 percent to 21 percent.

Concurrent with the enactment of the Tax Act, in December 2017, the SEC staff issued Staff Accounting Bulletin 118 ("SAB 118"), which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Enactment Date for companies to complete the accounting under Accounting Standards Codification 740 - Income Taxes ("ASC 740"). In March 2018, the FASB codified SAB 118 into ASC 740. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that an entity's accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act. The Company's accounting for the income tax effects of the Tax Act affecting its consolidated financial statements was generally complete as of December 31, 2017 and there were no effects from the Tax Act on the condensed consolidated financial statements as of and for the three and six months ended June 30, 2018. The Company does not anticipate any other accounting impacts of the Tax Act during the period within one year from the Enactment Date; however, it will continue to assess any potential impact from the Tax Act through this period.

The Company assesses the valuation allowance recorded against deferred tax assets at each reporting date. The determination of whether a valuation allowance for deferred tax assets is appropriate requires the evaluation of positive and negative evidence that can be objectively verified. Consideration must be given to all sources of taxable income available to realize the deferred tax asset, including, as applicable, the future reversal of existing temporary differences, future taxable income forecasts exclusive of the reversal of temporary differences and carryforwards, taxable income in carryback years and tax planning strategies. In estimating income taxes, the Company assesses the relative merits and risks of the appropriate income tax treatment of transactions taking into account statutory, judicial, and regulatory guidance. As of June 30, 2018, the Company reduced the valuation allowance as a result of updating its forecasts of continued future taxable income, which was primarily driven by impacts of additional RC invested facilities during the second quarter of 2018.

Note 10 - Business Segment Information

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by a company's chief operating decision maker ("CODM"), or a decision-making group, in deciding how to allocate resources and in assessing financial performance. As of June 30, 2018, the Company's CODM was the Company's CEO. The Company's operating and reportable segments are organized by products and services provided.

As of June 30, 2018, the Company has two reportable segments: (1) Refined Coal ("RC"); and (2) Emissions Control ("EC").

The business segment measurements provided to and evaluated by the CODM are computed in accordance with the principles listed below:

- The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies in the 2017 Form 10-K, except as described below.
- RC segment revenues includes the Company's equity method earnings and losses from the Company's equity method investments and royalties earned from Tinuum Group.
- Segment operating income (loss) includes segment revenues and allocation of certain "Corporate general and administrative expenses," which include Payroll and benefits, Rent and occupancy, Legal and professional fees, General and administrative and Depreciation and amortization.
- RC segment operating income includes interest expense directly attributable to the RC segment.

As of June 30, 2018 and December 31, 2017, substantially all of the Company's material assets are located in the U.S. and all significant customers are U.S. companies. The following table presents the Company's operating segment results for the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Revenues:				
Refined Coal:				
Earnings in equity method investments	$15,889	$10,155	$28,142	$23,969
Royalties, related party	3,523	1,866	6,753	3,621
	19,412	12,021	34,895	27,590
Emissions Control:				
Chemicals	726	846	1,347	3,127
Equipment Sales	24	24,619	72	29,727
	750	25,465	1,419	32,854
Total segment reporting revenues	20,162	37,486	36,314	60,444
Adjustments to reconcile to reported revenues:				
Refined Coal:				
Earnings in equity method investments	(15,889)	(10,155)	(28,142)	(23,969)
Total reported revenues	$4,273	$27,331	$8,172	$36,475
Segment operating income (loss):				
Refined Coal (1)	$18,275	$11,133	$32,977	$26,158
Emissions Control	(1,387)	1,887	(2,325)	2,160
Total segment operating income	$16,888	$13,020	$30,652	$28,318

(1) Included within the RC segment operating income for the three and six months ended June 30, 2018 and 2017 is 453A interest expense of $0.4 million and $0.7 million and $0.6 million and $1.0 million, respectively.

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A reconciliation of reportable segment operating income to the Company's consolidated net income is as follows:

(in thousands)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Segment operating income	$16,888	$13,020	$30,652	$28,318
Adjustments to reconcile to net income attributable to the Company				
Corporate payroll and benefits	(950)	(1,343)	(2,097)	(3,153)
Corporate rent and occupancy	(134)	(91)	(279)	(117)
Corporate legal and professional fees	(1,140)	(1,129)	(2,588)	(2,127)
Corporate general and administrative	(750)	(797)	(1,546)	(1,656)
Corporate depreciation and amortization	(22)	(51)	(74)	(258)
Corporate interest (expense) income, net	(8)	(59)	(8)	(283)
Other income (expense), net	58	500	113	3,400
Income tax benefit (expense)	1,349	(3,642)	(1,220)	(9,028)
Net income	$15,291	$6,408	$22,953	$15,096

Corporate general and administrative expenses include certain costs that benefit the business as a whole but are not directly related to one of the Company's segments. Such costs include, but are not limited to, accounting and human resources staff, information systems costs, legal fees, facility costs, audit fees and corporate governance expenses.

A reconciliation of reportable segment assets to the Company's consolidated assets is as follows:

(in thousands)	As of June 30, 2018	December 31, 2017
Assets:		
Refined Coal[(1)]	$9,089	$ 8,092
Emissions Control	3,063	3,755
Total segment assets	12,152	11,847
All Other and Corporate[(2)]	72,720	70,771
Consolidated	$84,872	$ 82,618

(1) Includes $5.0 million and $4.4 million of investments in equity method investees, respectively.

(2) Included within All Other and Corporate are the Company's deferred tax assets.

Note 11 - Fair Value Measurements

Fair value of financial instruments

The carrying amounts of financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, approximate fair value due to the short maturity of these instruments. Accordingly, these instruments are not presented in the table below. The following table provides the estimated fair values of the remaining financial instruments:

(in thousands)	As of June 30, 2018 Carrying Value	As of June 30, 2018 Fair Value	As of December 31, 2017 Carrying Value	As of December 31, 2017 Fair Value
Financial Instruments:				
Highview Investment [(1)]	$552	$ 552	$ 552	$ 552
Highview technology license payable	$222	$ 222	$ 210	$ 210

(1) Fair value is based on the investee's equity raise at £1.00 per share that commenced during the three months ended September 30, 2017. The fair value measurement represents a Level 3 measurement as it is based on significant inputs not observable in the market.

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Concentration of credit risk

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents. The Company holds cash and cash equivalents at one financial institution as of June 30, 2018. If that institution was unable to perform its obligations, the Company would be at risk regarding the amount of cash and investments in excess of the Federal Deposit Insurance Corporation limits (currently $250 thousand) that would be returned to the Company.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

As of June 30, 2018 and December 31, 2017, the Company had no financial instruments carried and measured at fair value on a recurring basis.

Note 12 - Restructuring

The Company recorded restructuring charges during the three months ended June 30, 2018 in connection with a reduction in force, the departure of certain executive officers and management's further alignment of the business with strategic objectives. These charges related to severance arrangements with departing employees and executives, as well as non-cash charges related to the acceleration of vesting of certain stock awards. The Company expects to record restructuring charges during the second and third quarters of 2018, dependent upon termination dates of individuals impacted. There were no material restructuring charges during the three and six months ended June 30, 2017.

A summary of the net pretax charges, incurred by segment, excluding facility charges shown below, is as follows:

		Pretax Charge			
(in thousands, except employee data)	Approximate Number of Employees	Refined Coal (1)	Emissions Control	All Other and Corporate	Total
Three Months Ended June 30, 2018					
Restructuring charges	6	$280	$ 496	$ 123	$899
Changes in estimates		—	—	—	—
Total pretax charge, net of reversals		$280	$ 496	$ 123	$899
Six Months Ended June 30, 2018					
Restructuring charges	6	$280	$ 496	$ 123	$899
Changes in estimates		—	—	—	—
Total pretax charge, net of reversals		$280	$ 496	$ 123	$899

(1) Restructuring charges were allocated consistent with the allocations made in Note 10 - Business Segment Information.

The following table summarizes the Company's change in restructuring accruals for the six months ended June 30, 2018:

(in thousands)	Employee Severance
Remaining accrual as of December 31, 2017	$ —
Expense provision[1]	899
Cash payments and other[1]	(308)
Change in estimates	—
Remaining accrual as of June 30, 2018	$ 591

(1) Included within the Expense provision and Cash payments and other line items in the above table is equity based compensation of $0.3 million for the six months ended June 30, 2018, resulting from the accelerated vesting of modified equity-based compensation awards for certain terminated employees.

Restructuring accruals are included within the Accrued payroll and related liabilities line item in the Condensed Consolidated Balance Sheets. Restructuring expenses are included within the Payroll and benefits line item in the Condensed Consolidated Statements of Operations.

Note 13 - Subsequent Events

Unless disclosed elsewhere within the notes to the Condensed Consolidated Financial Statements, the following are the significant matters that occurred subsequent to June 30, 2018.

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Dividends

On August 6, 2018, the Company's Board declared a quarterly dividend of $0.25 per share of common stock, which is payable on September 6, 2018 to stockholders of record at the close of business on August 20, 2018.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of the financial condition and results of our operations should be read together with the unaudited Condensed Consolidated Financial Statements and notes of Advanced Emissions Solutions, Inc. ("ADES" or the "Company") included elsewhere in Item 1 of Part I of this Quarterly Report and with the audited consolidated financial statements and the related notes of ADES included in our 2017 Form 10-K.

Overview

ADES serves as the holding entity for a family of companies that provide emissions solutions to customers in the coal-fired power generation and industrial boiler industries. Through our subsidiaries and equity investments, we are a leader in emissions control ("EC") technologies and associated equipment, chemicals and services. Our proprietary environmental technologies enable our customers to reduce emissions of mercury and other pollutants, maximize utilization levels and improve operating efficiencies to meet the challenges of existing and pending EC regulations.

Our major activities include:

- Through Tinuum Group, LLC ("Tinuum Group"), an unconsolidated entity, reduction of mercury and nitrogen oxide ("NO_X") emissions at select coal-fired power generators through the production and sale of Refined Coal ("RC") that qualifies for tax credits under the Internal Revenue Code ("IRC") Section 45 - Production Tax Credit ("Section 45 tax credits"). We benefit from Tinuum Group's production and sale of RC, which generates tax credits, as well as the revenue from selling or leasing RC facilities to tax equity investors; and
- Development and sale of specialty chemicals and equipment designed to reduce emissions of mercury, acid gases, metals and other pollutants, and the providing of technology services in support of our customers' emissions compliance strategies.

Adoption of New Revenue Standard

On January 1, 2018, we adopted ASC 606 - Revenue from Contracts with Customers ("ASC 606") under the modified retrospective method. Under this method, we recorded an adjustment to the Accumulated deficit as of January 1, 2018 for the cumulative effect of the adoption of ASC 606 as of that date. The adoption of ASC 606 resulted in an adjustment as of January 1, 2018 that reduced our Accumulated deficit by $3.0 million from the recognition of revenues, costs of revenues and related income taxes. In addition, under ASC 606, license royalties earned from Tinuum Group are now presented under Revenues in the Condensed Consolidated Statements of Operations and the 2017 operating results have been recast to reflect this presentation change. See further discussion in Note 2 of the Condensed Consolidated Financial Statements.

Results of Operations

For the three and six months ended June 30, 2018, we recognized net income of $15.3 million and $23.0 million compared to net income of $6.4 million and $15.1 million for the three and six months ended June 30, 2017.

Generally, the operating results for the three and six months ended June 30, 2018 compared to the three and six months ended June 30, 2017 are attributable to a combination of factors, including:

- Continued performance in our RC business segment, principally related to distributions, equity earnings and royalties from our Tinuum Group and Tinuum Services, LLC ("Tinuum Services") equity investments;
- Decrease in revenue from our chemical offerings;
- Reduction in revenues and margin contribution for equipment systems in 2018 compared to 2017 due to the completion of the most significant portion of equipment systems occurring during prior periods;
- Restructuring charges in connection with a reduction in force, the departure of certain executive officers and management's further alignment of the business with strategic objectives; and
- A change in income tax (benefit) expense due to a reduction in the federal tax rate as well as a reduction in the valuation allowance against our deferred tax assets.

The following sections provide additional information regarding these comparative periods. For comparability purposes, the following tables set forth our results of operations for the periods presented in the Condensed Consolidated Financial Statements included in Item 1 of this Quarterly Report. The period-to-period comparison of financial results may not be indicative of financial results to be achieved in future periods.

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Comparison of the Three Months Ended June 30, 2018 and 2017

Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the three months ended June 30, 2018 and 2017 is as follows:

	Three Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Revenues:				
Chemicals	$726	$846	$(120)	(14)%
License royalties, related party	3,523	1,866	1,657	89 %
Equipment sales	24	24,619	(24,595)	(100)%
Total revenues	$4,273	$27,331	$(23,058)	(84)%
Operating expenses:				
Chemicals cost of revenue, exclusive of depreciation and amortization	$902	$645	$257	40 %
Equipment sales cost of revenue, exclusive of depreciation and amortization	$(198)	$22,650	$(22,848)	(101)%

Chemicals and Chemicals cost of revenue

Chemical revenues are comprised of direct sales of our proprietary products as well as evaluation tests of our proprietary chemicals' effectiveness and efficiency in reducing emissions ("Evaluation Tests"). Evaluation Tests entail the delivery of chemicals to a customer and our evaluation of the results of emissions reduction over the term of the evaluation period, which is generally a period of up to four weeks. During the three months ended June 30, 2018 and 2017, revenues from direct sales of chemicals decreased quarter over quarter primarily due to a significant decrease in sales to one customer, offset by increased sales to new customers in 2018. The total pounds of our chemicals sold increased slightly quarter over quarter and gross margins decreased quarter over quarter primarily due to ongoing price compression. During the three months ended June 30, 2018 and 2017, revenues from Evaluation Tests increased primarily from a significant customer contract that was completed during the three months ended June 30, 2018. However, we recognized negative gross margin on this contract, which was the primary impact on our overall negative gross margin in total chemical revenues for the three months ended June 30, 2018. Our chemical technologies and knowledge continue to be important to the future of refined coal; as such we will be strategic in our pursuit of the deployment of chemical revenues to cover a portion of our expenses and maintain the assets for other strategic alternatives.

License royalties, related party

During the three months ended June 30, 2018 and 2017, there were 8.2 million tons and 4.3 million tons, respectively, of RC produced using M-45™ and M-45-PC™ technologies ("M-45 Technology"), which Tinuum Group licenses from us ("M-45 License"). The increase in license royalties was primarily due to obtaining additional third-party investors for three new RC facilities during the second half of 2017 and one new RC facility during the first half of 2018, all of which use our M-45 License. The addition to these new invested RC facilities resulted in an increase in rent payments to Tinuum Group and the related tons subject to the M-45 License.

Equipment sales and Equipment sales cost of revenue, exclusive of items shown separately below

During the three months ended June 30, 2018 and 2017, we did not enter into any long-term (six months or longer) fixed price contracts to supply Activated Carbon Injection ("ACI") systems. During the three months ended June 30, 2017, we completed one ACI system, recognizing revenues of $0.5 million and cost of revenue of $0.4 million. All contracted ACI systems were completed during 2017.

During the three months ended June 30, 2018 and 2017, we did not enter into any long-term (six months or longer) fixed price contracts to supply Dry Sorbent Injection ("DSI") systems. As of January 1, 2018, all revenues and costs of revenues were recognized on the three DSI system uncompleted contracts as of December 31, 2017 upon the adoption of ASC 606. During the three months ended June 30, 2017, we completed four DSI systems, recognizing revenues of

$24.1 million and cost of revenue of $22.3 million.
Demand for ACI and DSI system contracts historically was driven by coal-fired power plant utilities that need to comply with Federal Mercury and Air Toxics Standards ("MATS") and Maximum Achievable Control Technology Standards ("MACT"). As the deadline for these standards has passed, we do not expect to enter into any future long-term fixed price contracts for ACI and DSI systems.

During three months ended June 30, 2018, Equipment sales cost of revenue, exclusive of depreciation and amortization was impacted by a change in estimate of a liability, in the amount of $0.2 million, related to historical equipment systems.
Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the Business Segments discussion and in Note 10 to the Condensed Consolidated Financial Statements.
Other Operating Expenses
A summary of the components of our operating expenses, exclusive of cost of revenue items (presented above), for the three months ended June 30, 2018 and 2017 is as follows:

	Three Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Operating expenses:				
Payroll and benefits	$2,759	$2,033	$726	36 %
Rent and occupancy	248	255	(7)	(3)%
Legal and professional fees	1,213	1,219	(6)	— %
General and administrative	846	395	451	114 %
Depreciation and amortization	72	118	(46)	(39)%
	$5,138	$4,020	$1,118	28 %

Payroll and benefits
Payroll and benefits expenses increased during the three months ended June 30, 2018 compared to the same quarter in 2017 primarily due to restructuring expenses incurred in June 2018 in connection with the termination of certain executive officers and employees as part of management's alignment of the business with strategic objectives. During the three months ended June 30, 2018, we recorded net restructuring charges of $0.9 million. This cost increase was partially offset by a decrease in stock compensation expense related to fewer equity awards outstanding.
General and administrative
General and administrative expenses increased during the three months ended June 30, 2018 compared to the same quarter in 2017 due to a decrease in our asset retirement obligation estimate during 2017 of $0.8 million, which was driven by a reduction in the scope of the obligation, during the three months ended June 30, 2017.
Depreciation and amortization
Depreciation and amortization expense decreased during the three months ended June 30, 2018 compared to the same quarter in 2017 primarily due to a reduction in certain assets, which were subject to depreciation and amortization.

Other Income (Expense), net
A summary of the components of our other income (expense), net for the three months ended June 30, 2018 and 2017 is as follows:

	Three Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Other income (expense):				
Earnings from equity method investments	$15,889	$10,155	$5,734	56 %
Interest expense	(412)	(628)	216	(34)%
Other	34	507	(473)	(93)%
Total other income	$15,511	$10,034	$5,477	55 %

Earnings from equity method investments

The following table details the components of our respective equity method investments included within the Earnings from equity method investments line item on the Condensed Consolidated Statements of Operations:

	Three Months Ended June 30,	
(in thousands)	2018	2017
Earnings from Tinuum Group	$14,450	$9,138
Earnings from Tinuum Services	1,438	1,017
Earnings from other	1	—
Earnings from equity method investments	$15,889	$10,155

Earnings from equity method investments, and changes related thereto, are impacted by our most significant equity method investees: Tinuum Group and Tinuum Services. Earnings from equity method investments increased during the three months ended June 30, 2018 compared to the same quarter in 2017 primarily due an increase in cash distributions in excess of our investment balance from Tinuum Group.

During the three months ended June 30, 2018, we recognized $14.5 million in equity earnings from Tinuum Group compared to our proportionate share of Tinuum Group's net income of $14.1 million for the quarter. During the three months ended June 30, 2017, we recognized $9.1 million in equity earnings from Tinuum Group compared to our proportionate share of Tinuum Group's net income of $11.8 million for the quarter. The difference between our pro-rata share of Tinuum Group's net income and our earnings from our Tinuum Group equity method investment as reported on the Condensed Consolidated Statements of Operations is the result of cumulative distributions received from Tinuum Group being in excess of the carrying value of the investment, and therefore we recognize such excess distributions as equity method earnings in the period the distributions occur, as discussed in more detail below.

The carrying value of our investment in Tinuum Group was zero as of June 30, 2018, as cumulative cash distributions received from Tinuum Group exceeded our pro-rata share of cumulative earnings in Tinuum Group. The carrying value of our investment in Tinuum Group will remain zero as long as the cumulative amount of distributions received from Tinuum Group continues to exceed our cumulative pro-rata share of Tinuum Group's net income. For quarterly periods during which the ending balance of our investment in Tinuum Group is zero, we only recognize equity earnings from Tinuum Group to the extent that cash distributions are received from Tinuum Group during the period. For quarterly periods during which the ending balance of our investment is greater than zero (e.g., when the cumulative earnings in Tinuum Group exceeds cumulative cash distributions received), we recognize our pro-rata share of Tinuum Group's net income for the period, less any amount necessary to recover the cumulative earnings short-fall balance as of the end of the immediately preceding quarter. See additional information related to our investment balance, equity earnings (losses) and cash distributions in Note 3 of the Condensed Consolidated Financial Statements.

As of June 30, 2018 and 2017, Tinuum Group had 18 and 14 invested RC facilities, respectively, that were generating revenues. There were no 100% retained RC facilities as of June 30, 2018 or December 31, 2017, except for temporary operations of a retained RC facility prior to its lease or sale or as discussed below related to GWN Manager, LLC ("GWN Manager").

Equity earnings from our interest in Tinuum Services increased by $0.4 million during the three months ended June 30, 2018 compared to the three months ended June 30, 2017, and for those quarters, Tinuum Services provided operating and maintenance services to 17 and 14 operating RC facilities, respectively. Tinuum Services derives earnings both from fixed-fee arrangements as well as fees that are based on actual RC production, depending upon the specific RC facility operating and maintenance agreement.

On July 27, 2017, we obtained a 50% membership interest in GWN Manager in exchange for a capital contribution of $0.1 million. GWN Manager subsequently purchased a 0.2% membership interest in a subsidiary of Tinuum Group, which owns a single RC facility that produces RC that qualifies for Section 45 tax credits. Tinuum Group sold 49.9%

of the subsidiary that owns the RC facility to an unrelated third party and retained ownership of the remaining 49.9%. We are subject to monthly capital calls to GWN Manager based on estimated working capital needs.
Our investment in GWN Manager as of June 30, 2018, was $0.1 million and equity earnings for the three months ended June 30, 2018 was not material.

We earned the following Section 45 tax credits related to the production of RC that may be available for future benefit:

	Three Months Ended June 30,	
(in thousands)	2018	2017
Section 45 tax credits earned	$1,888	$ 34

The increase in Section 45 tax credits earned during the three months ended June 30, 2018 compared to the three months ended June 30, 2017 was due to our membership interest in GWN Manager and Tinuum Group's ownership in the single RC facility that is generating tax credits.

Interest expense

During the three months ended June 30, 2018, interest expense decreased $0.2 million compared to the three months ended June 30, 2017 primarily due to a reduction in the deferred balance related to Internal Revenue Code section 453A ("453A"), which requires taxpayers to pay an interest charge on the portion of the tax liability that is deferred under the installment method for tax purposes. This decrease was partially offset by an increase in the interest rate from 4% to 5% for 2018.

Other

During the three months ended June 30, 2017, management revised its estimate for future Royalty Award payments based in part on an updated forecast provided to us by a former equity method investment. As discussed in Note 5 to the Condensed Consolidated Financial Statements, we were required to pay additional damages related to certain future revenues generated from the former equity method investment. This forecast included a material reduction in estimated future revenues generated at the specific activated carbon plant from which the royalties are generated. Based primarily on the updated forecast, management recorded a $0.5 million reduction to its Royalty Award accrual during the six months ended June 30, 2017.

Income tax expense

On December 22, 2017 (the "Enactment Date"), the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code, and the key provision applicable to us for the three and six months ended June 30, 2018 was the reduction of the U.S. federal corporate tax rate from 35 percent to 21 percent.

For the three months ended June 30, 2018, we recorded income tax benefit of $1.3 million compared to income tax expense of $3.6 million for three months ended June 30, 2017. The income tax benefit recorded for the three months ended June 30, 2018 was comprised of estimated federal income tax benefit of $1.7 million and estimated state income tax expense of $0.4 million. The change in income tax (benefit) expense for the three months ended June 30, 2018 compared to the three months ended June 30, 2017 was due to the decrease in the federal statutory tax rate from 35 percent to 21 percent due to the Tax Act. In addition, the change in income tax (benefit) expense quarter over quarter was also attributable to a reduction in the valuation allowance against our deferred tax assets. The reduction in the valuation allowance was a result of updating our forecasts of continued future taxable income, which was primarily driven by impacts of additional RC invested facilities during the second quarter of 2018.

Comparison of the Six Months Ended June 30, 2018 and 2017

Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the six months ended June 30, 2018 and 2017 is as follows:

	Six Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Revenues:				
Chemicals	$1,347	$3,127	$(1,780)	(57)%
License royalties, related party	6,753	3,621	3,132	86%
Equipment sales	72	29,727	(29,655)	(100)%
Total revenues	$8,172	$36,475	$(28,303)	(78)%
Operating expenses:				
Chemicals cost of revenue, exclusive of depreciation and amortization	$1,613	$2,403	$(790)	(33)%
Equipment sales cost of revenue, exclusive of depreciation and amortization	$(346)	$26,793	$(27,139)	(101)%

Chemicals and Chemicals cost of revenue

During the six months ended June 30, 2018 and 2017, revenues from direct sales of chemicals decreased period over period primarily due to a significant decrease in sales to two customers, partially offset by increased sales to new customers in 2018. The total pounds of our chemicals sold decreased period over period and gross margins decreased period over period primarily due to ongoing price compression. During the six months ended June 30, 2018 and 2017, revenues from Evaluation Tests increased primarily from a significant customer contract that was completed during the three months ended June 30, 2018. However, we recognized negative gross margin on this contract, which was the primary impact on our overall negative gross margin in total chemical revenues for the six months ended June 30, 2018.

License royalties, related party

During the six months ended June 30, 2018 and 2017, there were 15.9 million tons and 7.7 million tons, respectively, of RC produced using the M-45 Technology under the M-45 License. The increase in license royalties was primarily due to obtaining additional third-party investors for three new RC facilities during the second half of 2017 and one new RC facility during the first half of 2018, all of which use our M-45 License. The addition to these new invested RC facilities resulted in an increase in rent payments to Tinuum Group and the related tons subject to the M-45 License.

Equipment sales and Equipment sales cost of revenue, exclusive of items shown separately below

During the six months ended June 30, 2018 and 2017, we did not enter into any long-term (six months or longer) fixed price contracts to supply ACI systems. During the six months ended June 30, 2017, change orders on ACI systems negatively impacted contract revenue by $0.1 million. During the six months ended June 30, 2017, we completed four ACI systems, recognizing revenues of $3.4 million and cost of revenue of $2.3 million. All contracted ACI systems were completed during 2017.

During the six months ended June 30, 2018 and 2017, we did not enter into any long-term (six months or longer) fixed price contracts to supply DSI systems. As of January 1, 2018, all revenues and costs of revenues were recognized on the three DSI system uncompleted contracts as of December 31, 2017 upon the adoption of ASC 606. During the six months ended June 30, 2017, change orders on DSI systems negatively impacted contract revenue by $2.2 million. During the six months ended June 30, 2017, we completed four DSI systems recognizing revenues of $26.2 million and cost of revenue of $24.4 million.

Demand for ACI and DSI system contracts has historically been driven by coal fired power plant utilities that need to comply with Federal MATS and MACT. As the deadline for these standards has passed, we do not expect to enter into any future long-term fixed price contracts for ACI and DSI systems.

During the six months ended June 30, 2018, we settled a previously recorded commitment for additional work related to a contract with a customer. The result of such settlement was a reduction to Equipment sales cost of revenue, exclusive of depreciation and amortization of $0.3 million and additional General and administrative expense of $0.2 million, for a net impact to the Condensed Consolidated Statements of Operations of $0.1 million. We collected cash in the amount of $0.5 million related to this commitment during the three months ended June 30, 2018. Additionally, during the six months ended June 30, 2018, Equipment sales cost of revenue, exclusive of depreciation and amortization, was impacted by a change in estimate of a liability, in the amount of $0.2 million, related to historical equipment systems.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the segment discussion below and in Note 10 to the Condensed Consolidated Financial Statements.

Other Operating Expenses

A summary of the components of our operating expenses, exclusive of cost of revenue items (presented above), for the six months ended June 30, 2018 and 2017 is as follows:

	Six Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Operating expenses:				
Payroll and benefits	$4,973	$4,215	$758	18 %
Rent and occupancy	516	300	216	72 %
Legal and professional fees	2,761	2,254	507	22 %
General and administrative	1,748	1,850	(102)	(6)%
Depreciation and amortization	188	600	(412)	(69)%
	$10,186	$9,219	$967	10 %

Payroll and benefits

Payroll and benefits expenses increased during the six months ended June 30, 2018 compared to the same period in 2017 primarily due to restructuring expenses in connection with the termination of certain executive officers and employees as part of management's alignment of the business with strategic objectives. During the six months ended June 30, 2018, we recorded net restructuring charges of $0.9 million. This cost increase was partially offset by a decrease in stock compensation expense related to fewer equity awards outstanding.

Rent and occupancy

Rent and occupancy expense increased during the six months ended June 30, 2018 compared to the same period in 2017 primarily as a result of the relocation of our corporate headquarters in the first quarter of 2017 and the acceleration of deferred rent and tenant improvement allowances recorded in 2017 associated with the termination of the lease agreement of our former corporate headquarters.

Legal and professional fees

Legal and professional fees expenses increased during the six months ended June 30, 2018 compared to the same period in 2017 as a result of approximately $1.0 million incurred related to due diligence for potential mergers and acquisitions as well as $0.3 million in consulting fees related to ongoing clarification of federal income tax reform. Offsetting these costs was a reduction in costs related to outsourced shared service costs, including accounting consultants, legal fees and audit fees.

General and administrative

General and administrative expenses remained relatively flat during the six months ended June 30, 2018 compared to the same period in 2017 primarily due to a decrease in our asset retirement obligation estimate of $0.8 million, which was driven by a reduction in the scope of the obligation, during the three months ended June 30, 2017. This increase was offset by a $0.4 million reserve during the six months ended June 30, 2017 on an asset related to a letter of credit draw made by a former customer for which we are contesting and pursing legal actions.

Depreciation and amortization

Depreciation and amortization expense decreased during the six months ended June 30, 2018 compared to the same period in 2017 due a reduction in certain assets, including software, which was subject to acceleration of depreciation and disposed of in connection with implementing a new enterprise resource planning system. Additionally, we recorded lower depreciation during the six months ended June 30, 2018 as a result of accelerating depreciation and disposing of certain assets in connection with our office relocation in the first quarter of 2017.

Other Income (Expense), net

A summary of the components of our other income (expense), net for the six months ended June 30, 2018 and 2017 is as follows:

	Six Months Ended June 30,		Change	
(in thousands, except percentages)	2018	2017	($)	(%)
Other income (expense):				
Earnings from equity method investments	$28,142	$23,969	$4,173	17 %
Interest expense	(748)	(1,321)	573	(43)%
Other	60	3,416	(3,356)	(98)%
Total other income	$27,454	$26,064	$1,390	5 %

* Calculation not meaningful

Earnings from equity method investments

The following table details the components of our respective equity method investments included within the Earnings from equity method investments line item on the Condensed Consolidated Statements of Operations:

	Six Months Ended June 30,	
(in thousands)	2018	2017
Earnings from Tinuum Group	$25,500	$22,313
Earnings from Tinuum Services	2,642	1,656
Earnings from equity method investments	$28,142	$23,969

Earnings from equity method investments, and changes related thereto, are impacted by our most significant equity method investees: Tinuum Group and Tinuum Services. Earnings from equity method investments increased during the six months ended June 30, 2018 compared to the same period in 2017 primarily due to an increase in cash distributions from Tinuum Group in excess of our investment balance.

During the six months ended June 30, 2018, we recognized $25.5 million in equity earnings from Tinuum Group compared to our proportionate share of Tinuum Group's net income of $26.5 million for the period. During the six months ended June 30, 2017, we recognized $22.3 million in equity earnings from Tinuum Group compared to our proportionate share of Tinuum Group's net income of $22.3 million for the period. The difference between our pro-rata share of Tinuum Group's net income and our earnings from our Tinuum Group equity method investment as reported on the Condensed Consolidated Statements of Operations is the result of cumulative distributions received from Tinuum Group being in excess of the carrying value of the investment, and therefore we recognize such excess distributions as equity method earnings in the period the distributions occur.

Equity earnings from our interest in Tinuum Services increased during the six months ended June 30, 2018 compared to the six months ended June 30, 2017. Tinuum Services provided operating and maintenance services to 17 and 14 operating RC facilities, respectively. Tinuum Services derives earnings both from fixed-fee arrangements as well as fees that are based on actual RC production, depending upon the specific RC facility operating and maintenance agreement.

Our investment in GWN Manager as of June 30, 2018, was $0.1 million. Equity earnings from our interest in GWN Manager included our share of net income from inception to June 30, 2018.

We earned the following Section 45 tax credits related to the production of RC that may be available for future benefit:

Six Months
Ended June

	30,	
(in thousands)	2018	2017
Section 45 tax credits earned	$3,618	$ 97

The increase in Section 45 tax credits earned during the six months ended June 30, 2018 compared to the six months ended June 30, 2017 was due to our membership interest in GWN Manager and Tinuum Group's ownership in the single RC facility that is generating tax credits.

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Interest expense

During the six months ended June 30, 2018, interest expense decreased $0.6 million compared to the six months ended June 30, 2017 primarily due to a reduction in the deferred balance related to the Internal Revenue Code section 453A ("453A"), which requires taxpayers to pay an interest charge on the portion of the tax liability that is deferred under the installment method for tax purposes. This decrease was partially offset by an increase in the interest rate from 4% to 5% for 2018.

Other

During the six months ended June 30, 2017, management revised its estimate for future Royalty Award payments based in part on an updated forecast provided to us by a former equity method investment. As discussed in Note 5 to the Condensed Consolidated Financial Statements, we were required to pay additional damages related to certain future revenues generated from the former equity method investment. This forecast included a material reduction in estimated future revenues generated at the specific activated carbon plant from which the royalties are generated. Based primarily on the updated forecast, management recorded a $3.4 million reduction to its Royalty Award accrual during the six months ended June 30, 2017.

Income tax expense

For the six months ended June 30, 2018, we recorded income tax expense of $1.2 million compared to income tax expense of $9.0 million for six months ended June 30, 2017. The income tax expense recorded for the six months ended June 30, 2018 was comprised of estimated federal income tax expense of $0.4 million and estimated state income tax expense of $0.8 million.

The income tax expense recorded for the six months ended June 30, 2017 was comprised of estimated federal income tax expense of $8.7 million and estimated state income tax expense of $0.3 million. The change in income tax (benefit) expense for the six months ended June 30, 2018 compared to the six months ended June 30, 2017 was primarily due to the decrease in the federal statutory tax rate from 35 percent to 21 percent due to the Tax Act. In addition, the change in income tax (benefit) expense period over period was attributable to a reduction in the valuation allowance against our deferred tax assets. The reduction in the valuation allowance was a result of updating our forecasts of continued future taxable income, which was primarily driven by impacts of additional RC invested facilities during the second quarter of 2018.

Business Segments

As of June 30, 2018, we have two reportable segments: (1) RC and (2) EC. The business segment measurements provided to and evaluated by our chief operating decision maker are computed in accordance with the principles listed below:

- The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies except as described below.
- RC segment revenues includes our equity method earnings and losses from our equity method investments and royalty earnings from Tinuum Group.
- Segment operating income (loss) includes segment revenues and allocation of certain "Corporate general and administrative expenses," which include Payroll and benefits, Rent and occupancy, Legal and professional fees, General and administrative, and Depreciation and amortization.
- All items not included in operating income are excluded from the RC and EC segments.

The principal products and services of our segments are:

1. RC - Our RC segment derives its earnings from equity method investments as well as royalty payment streams and other revenues related to enhanced combustion of and reduced emissions of both NO_X and mercury from the burning of coals. Our equity method investments related to the RC segment include Tinuum Group, Tinuum Services and other immaterial equity method investments. Segment revenues include our equity method earnings (losses) from our equity method investments and royalty earnings from Tinuum Group. These earnings are included within the Earnings from equity method investments and License royalties, related party line items in the Condensed Consolidated Statements of Operations. Key drivers to the RC segment performance are operating and retained, produced and sold RC, royalty-bearing tonnage, and the number of operating (leased or sold) and retained RC facilities. These key drivers impact our earnings and cash distributions from equity method investments.
2. EC - Our EC segment currently includes revenues and related expenses from chemical sales related to the reduction of emissions in the coal-fired electric generation process and the electric utility industry. For 2017, our sales of equipment systems were also a significant component of our EC segment. These amounts are included within the respective revenues and cost of revenue line items in the Condensed Consolidated Statements of Operations.

Management uses segment operating income (loss) to measure profitability and performance at the segment level. Management believes segment operating income (loss) provides investors with a useful measure of our operating performance and underlying trends of the businesses. Segment operating income (loss) may not be indicative of our overall consolidated performance and therefore, should be read in conjunction with our Condensed Consolidated Statements of Operations.

The following table presents our operating segment results for the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Revenues:				
Refined Coal:				
Earnings in equity method investments	$15,889	$10,155	$28,142	$23,969
Royalties, related party	3,523	1,866	6,753	3,621
	19,412	12,021	34,895	27,590
Emissions Control:				
Chemicals	726	846	1,347	3,127
Equipment Sales	24	24,619	72	29,727
	750	25,465	1,419	32,854
Total segment reporting revenues	20,162	37,486	36,314	60,444
Adjustments to reconcile to reported revenues:				
Refined Coal:				
Earnings in equity method investments	(15,889)	(10,155)	(28,142)	(23,969)
Total reported revenues	$4,273	$27,331	$8,172	$36,475
Segment operating income (loss):				
Refined Coal (1)	$18,275	$11,133	$32,977	$26,158
Emissions Control	(1,387)	1,887	(2,325)	2,160
Total segment operating income	$16,888	$13,020	$30,652	$28,318

(1) Included within the RC segment operating income for the three and six months ended June 30, 2018 and 2017 is 453A interest expense of $0.4 million, $0.7 million, $0.6 million and $1.0 million, respectively.

RC

The following table details the segment revenues of our respective equity method investments:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2018	2017	2018	2017
Earnings from Tinuum Group	$14,450	$9,138	$25,500	$22,313
Earnings from Tinuum Services	1,438	1,017	2,642	1,656
Earnings from other	1	—	—	—
Earnings from equity method investments	$15,889	$10,155	$28,142	$23,969

For the three months ended June 30, 2018 and June 30, 2017

RC earnings increased primarily due to an increase in equity earnings in Tinuum Group during the three months ended June 30, 2018 compared to the same quarter in 2017, as presented above. Our equity earnings increased primarily due to an increase in cash distributions from Tinuum Group due to the addition of four invested facilities, three of which were materially invested by third parties, as discussed in the consolidated results above. For the three months ended June 30, 2018, our share of equity earnings from Tinuum Group increased $5.3 million from the comparable quarter in 2017 due to an increase in lease revenues driven by significant sales of facilities to third-party investors. Distributions received from Tinuum Group for the six months ended June 30, 2017 were recorded directly to earnings, as our investment was in a memorandum account as discussed in Note 3.

Earnings from Tinuum Services for the three months ended June 30, 2018 increased compared to the same quarter in 2017 primarily due to an increase in the number of operating RC facilities from 14 to 17 in which Tinuum Services provides operating and maintenance services.

RC earnings were positively impacted during the three months ended June 30, 2018 by an increase in royalties related to Tinuum Group's use of our M-45 License. During the three months ended June 30, 2018 and 2017, there were 8.2 million tons

and 4.3 million tons, respectively, of RC produced using the M-45 Technology. The increase in Royalty revenue was driven by an increase in rent payments to Tinuum Group and the related tons subject to the M-45 License.
Additional discussion of our equity method investments is included above within our consolidated results and in Note 3 of the Condensed Consolidated Financial Statements.

EC

Discussion of revenues derived from our EC segment and costs related thereto are included above within our consolidated results.

For the three months ended June 30, 2018 and June 30, 2017

EC segment operating income decreased during the three months ended June 30, 2018 compared to the three months ended June 30, 2017 primarily due to the decrease in revenues and related gross margins, as discussed above within the consolidated results.

RC

For the six months ended June 30, 2018 and June 30, 2017

RC earnings increased primarily due to an increase in equity earnings in Tinuum Group during the six months ended June 30, 2018 compared to the same quarter in 2017, as presented above. Our equity earnings increased primarily due to an increase in cash distributions from Tinuum Group due to the addition of four invested facilities, three of which were materially invested by third parties, as discussed in the consolidated results above. For the six months ended June 30, 2018, our share of equity earnings from Tinuum Group increased $3.2 million from the comparable period in 2017 due to an increase in lease revenues driven by significant sales of facilities to third-party investors. Distributions received from Tinuum Group for the six months ended June 30, 2017 were recorded directly to earnings, as our investment was in a memorandum account as discussed in Note 3.

Earnings from Tinuum Services for the six months ended June 30, 2018 increased compared to the same period in 2017 primarily due to an increase in the number of operating RC facilities from 14 to 17 in which Tinuum Services provides operating and maintenance services.

RC earnings were positively impacted during the six months ended June 30, 2018 by an increase in royalties related to Tinuum Group's use of our M-45 License. During the six months ended June 30, 2018 and 2017, there were 15.9 million tons and 7.7 million tons, respectively, of RC produced using the M-45 Technology. The increase in Royalty revenue was driven by an increase in rent payments to Tinuum Group and the related tons subject to the M-45 License.

Additional discussion of our equity method investments is included above within our consolidated results and in Note 3 of the Condensed Consolidated Financial Statements.

EC

Discussion of revenues derived from our EC segment and costs related thereto are included above within our consolidated results.

For the six months ended June 30, 2018 and June 30, 2017

EC segment operating income decreased during the six months ended June 30, 2018 compared to the six months ended June 30, 2017 primarily due to the decrease in revenue, as discussed above within the consolidated results.

Liquidity and Capital Resources

Overview of Factors Affecting Our Liquidity

During the six months ended June 30, 2018, our liquidity position was positively affected primarily due to distributions from Tinuum Group and Tinuum Services and borrowing availability under our bank ("Lender") line of credit ("Line of Credit").

Our principal sources of cash include:

- cash on hand;
- distributions from Tinuum Group and Tinuum Services;
- royalty payments from Tinuum Group; and

- our Line of Credit

Our principal uses of cash during the six months ended June 30, 2018 included:

- repurchases of shares of common stock pursuant to stock repurchase programs;
- payment of dividends;

- our business operating expenses, including federal and state tax payments; and
- delivering on our existing contracts and customer commitments

Dividends declared by the Board, and paid quarterly per share on all outstanding shares of comment stock during the three and six months ended June 30, 2018 were as follows:

	2018		2017	
	Per share	Date paid	Per share	Date paid
Dividends declared during quarter ended:				
March 31	$0.25	March 8, 2018	$—	—
June 30	0.25	June 8, 2018	0.25	July 17, 2017
	$0.50		$0.25	

A portion of this dividend as well as a portion of prior declared dividends remains accrued and represents dividends accumulated on nonvested shares of our common stock held by our employees and directors that contain dividend rights that are forfeitable and not payable until the underlying shares vest.

During the third quarter of 2017, we and a bank (the "Lender") executed an amendment (the "Eleventh Amendment") to the Line of Credit. The Eleventh Amendment decreased the Line of Credit to $10.0 million due to decreased collateral requirements for our outstanding letters of credit ("LC's"), extended the maturity date of the Line of Credit to September 30, 2018, and permitted the LOC to be used as collateral (in place of restricted cash) for LC's up to $8.0 million related to equipment projects, the Royalty Award and certain other agreements. Additionally, under the Eleventh Amendment there is no minimum balance requirement based on us meeting certain conditions and maintaining minimum trailing twelve-month EBITDA (earnings before interest, taxes, depreciation and amortization as defined in the Eleventh Amendment) of $24.0 million.

As of June 30, 2018, there were no outstanding borrowings under the Line of Credit and an outstanding LC as of December 31, 2017 was terminated by us and the other parties in January 2018.

Our ability to continue to generate sufficient cash flow required to meet ongoing operational needs and obligations, as well as future expected dividend payments and potential future share repurchases, depends upon several factors, including executing on our contracts and initiatives, receiving royalty payments from Tinuum Group and distributions from Tinuum Group and Tinuum Services, and increasing our share of the market for EC products, and, in particular EC chemicals sales. Increased distributions from Tinuum Group will likely be dependent upon both preserving existing contractual relationships and the securing of additional tax equity investors for those Tinuum Group facilities that are currently not operating.

Sources and Uses of Cash

Six Months Ended June 30, 2018 vs. Six Months Ended June 30, 2017

Cash and cash equivalents increased from $30.7 million as of December 31, 2017 to $32.2 million as of June 30, 2018. The following table summarizes our cash flows for the six months ended June 30, 2018 and 2017, respectively:

	Six Months Ended June 30,		
(in thousands)	2018	2017	Change
Cash and cash equivalents and restricted cash provided by (used in):			
Operating activities	$(3,447)	$(6,147)	$2,700
Investing activities	24,619	22,066	2,553
Financing activities	(19,686)	(13,490)	(6,196)
Net change in cash and cash equivalents and restricted cash	$1,486	$2,429	$(943)

Additionally, the following table summarizes the cash flows of Tinuum Group, whose cash distributions most significantly impact our consolidated cash flow results, for the six months ended June 30, 2018 and 2017, respectively:

	Six Months Ended June 30,	
(in thousands)	2018	2017
Tinuum Group cash, beginning of year	$13,309	$10,897
Cash provided by (used in):		
Operating activities	30,960	31,917
Investing activities [(1)]	(5,075)	(4,475)
Financing activities	(21,017)	(29,000)
Net change in cash	4,868	(1,558)
Tinuum Group cash, end of period	$18,177	$9,339

(1) During the six months ended June 30, 2018 and 2017, Tinuum Group's use of cash related to RC facilities in the installation phase.

Cash flow from operating activities

Cash flows used in operating activities for the six months ended June 30, 2018 were $3.4 million and changed by $2.7 million compared to the six months ended June 30, 2017. Cash flows from operating activities were positively impacted primarily by the following: (1) net income of $23.0 million, which was primarily due to earnings from equity method investees of $28.1 million and license royalties earned from Tinuum Group of $6.8 million; (2) distributions from equity method investees, return on investment of $2.7 million; and (3) stock-based compensation of $1.0 million. Offsetting these increases to operating cash flows was earnings from equity method investees of $28.1 million, an increase in deferred tax assets of $0.2 million, and a net increase in working capital of $1.5 million.

Cash flows used in operating activities for the six months ended June 30, 2017 were $6.1 million and were positively impacted primarily by the following: (1) net income of $15.1 million, which was primarily due to earnings from equity method investees of $24.0 million and license royalties earned from Tinuum Group of $3.6 million; (2) distributions from equity method investees, return on investment of $2.9 million; (3) a decrease in deferred tax assets of $8.1 million, primarily from the recognition of deferred income tax expense during the quarter; and (4) a net increase in working capital of $0.8 million, primarily from insurance recoveries received on various legal matters. Offsetting these increases to operating cash flows were primarily earnings from equity method investees of $24.0 million and a decrease in the Legal settlements and accrual of $10.7 million, primarily from the settlement of various legal matters and payments made under the "Norit Settlement" (as defined in Note 5).

Cash flow from investing activities

Distributions from equity method investees

Distributions received from our equity method investees reported as return in excess of investment basis within investing cash flows increased by $3.2 million for the six months ended June 30, 2018 compared to the six months ended June 30, 2017. The increase was driven primarily by an increase in cash distributions related to additional invested RC facilities in the second half of 2017 and first half of 2018. All of these cash distributions were received from Tinuum Group.

Contributions to equity method investees

During the three and six months ended June 30, 2018, we made a contribution to Tinuum Services of $0.8 million due to a capital call.

Cash flow from financing activities

Cash dividends paid

During the six months ended June 30, 2018 and 2017, we made payments of $10.2 million and zero, respectively, related to dividends declared on our common stock.

Repurchase of common stock

As described in Note 6 of the Condensed Consolidated Financial Statements, during the six months ended June 30, 2018 and under a stock repurchase program (the "Stock Repurchase Program") authorized by the Board, we purchased 825,418 shares of our common stock for cash of $9.1 million inclusive of commissions and fees. Of these amounts, $2.2 million was purchased in a single block through a privately negotiated transaction. Under the Stock Repurchase Program, we are authorized to purchase

up to $20.0 million of our outstanding common stock. Pursuant to its terms, the Stock Repurchase Program terminated on July 31, 2018.
During the six months ended June 30, 2017, and as described in Note 6 of the Condensed Consolidated Financial Statements, we purchased 1,370,891 shares of our common stock in the amount of $12.9 million pursuant to a Dutch Tender offer conducted in May of 2017.
Equity award activity
During the six months ended June 30, 2018 and 2017, we used $0.4 million and $0.5 million, respectively, for the repurchase of shares to satisfy tax withholdings upon the vesting of equity based awards.
Borrowings and repayments on Line of Credit
During March 2017, a customer drew on an LC related to an equipment system in the amount of $0.8 million, which was funded by borrowing availability under the Line of Credit. We subsequently repaid this amount to the Lender as of March 31, 2017.
Contractual Obligations
During the six months ended June 30, 2018, there were no material changes to our contractual obligations outside of the ordinary course of business from those reported as of December 31, 2017.
Off-Balance Sheet Arrangements
During the six months ended June 30, 2018, we did not engage in any off-balance sheet arrangements except those discussed in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2017 10-K, which included operating leases and future 453A interest obligations.
Critical Accounting Policies and Estimates
Except for the adoption of ASC 606 related to revenue recognition, our significant accounting policies and estimates have not changed from those reported in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the 2017 10-K.
Recently Issued Accounting Standards
Refer to Note 1 of the Condensed Consolidated Financial Statements, included in Item 1 of this Quarterly Report for new accounting guidance issued during the six months ended June 30, 2018 and subsequent thereto through the date of this Quarterly Report.
Forward-Looking Statements Found in this Report
This Quarterly Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that involve risks and uncertainties. In particular, such forward-looking statements are found in this Part I, Item 2 above. Words or phrases such as "anticipates," "believes," "expects," "intends," "plans," "estimates," "predicts," the negative expressions of such words, or similar expressions are used in this Quarterly Report to identify forward-looking statements, and such forward-looking statements include, but are not limited to, statements or expectations regarding:

(a) the scope and impact of mercury and other regulations or pollution control requirements, including the impact of the final MATS;
(b) the production and sale of RC by the RC facilities will qualify for Section 45 tax credits;
(c) expected growth or contraction in and potential size of our target markets;
(d) expected supply and demand for our products and services;
(e) increasing competition in the EC market;
(f) our ability to satisfy warranty and performance guarantee provisions;
(g) the effectiveness of our technologies and the benefits they provide;
(h) Tinuum Group’s ability to profitably sell and/or lease additional RC facilities and/or RC facilities that may be returned to Tinuum Group, or to recognize the tax benefits from production and sale of RC on retained RC facilities;
(i) probability of any loss occurring with respect to certain guarantees made by Tinuum Group ("Party Guarantees");
(j) the timing of awards of, and work and related testing under, our contracts and agreements and their value;
(k)

the timing and amounts of or changes in future revenues, royalties earned, backlog, funding for our business and projects, margins, expenses, earnings, tax rate, cash flow, royalty payment obligations, working capital, liquidity and other financial and accounting measures;

(l) the outcome of current and pending legal proceedings;

(m) awards of patents designed to protect our proprietary technologies both in the U.S. and other countries; and

(n) whether any legal challenges or EPA actions will have a material impact on the implementation of the MATS or other regulations and on our ongoing business.

The forward-looking statements included in this Quarterly Report involve risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to, timing of new and pending regulations and any legal challenges to or extensions of compliance dates of them; the U.S. government's failure to promulgate regulations or appropriate funds that benefit our business; changes in laws and regulations, accounting rules, prices, economic conditions and market demand; impact of competition; availability, cost of and demand for alternative energy sources and other technologies; technical, start up and operational difficulties; failure of the RC facilities to produce RC or such RC to qualify for Section 45 tax credits; termination of or amendments to the contracts for sale or lease of RC facilities; decreases in the production of RC; inability to commercialize our technologies on favorable terms; our inability to ramp up our operations to effectively address recent and expected growth in our business; loss of key personnel; potential claims from any terminated employees, customers or vendors; failure to satisfy performance guarantees; availability of materials and equipment for our businesses; intellectual property infringement claims from third parties; pending litigation; identification of additional material weaknesses or significant deficiencies; as well as other factors relating to our business, as described in our filings with the SEC, with particular emphasis on the risk factor disclosures contained in those filings. You are cautioned not to place undue reliance on the forward-looking statements made in this Quarterly Report and to consult filings we have made and will make with the SEC for additional discussion concerning risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Quarterly Report are presented as of the date hereof, and we disclaim any duty to update such statements unless required by law to do so.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are most significantly exposed to interest rate risk related to our obligations to pay 453A interest to the IRS. Additionally, we are currently exposed to interest rate risk related to cash equivalents that are subject to variable interest rates. There have been no material changes from those reported in our 2017 Form 10-K.

Foreign Currency Risk

There have been no material changes from those reported in our 2017 Form 10-K.

Commodity Price Risk

There have been no material changes from those reported in our 2017 Form 10-K.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a 15(b) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), we have evaluated, under the supervision of and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a 15(e) and 15d 15(e) under the Exchange Act) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Based upon this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of June 30, 2018.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rules 13a 15(f) and 15d 15(f) under the Exchange Act) during the fiscal quarter ended June 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we are involved in litigation, claims and other proceedings related to the conduct of our business. Litigation and other disputes are inherently unpredictable and subject to substantial uncertainties and unfavorable resolutions could occur. None of these matters, either individually or in the aggregate, currently is material to us.

Item 1A. Risk Factors

There are no material updates to our risk factors as disclosed in our 2017 Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

Period		(a) Total number of shares purchased	(b) Average price paid per share	(c) Total number of shares purchased as part of publicly announced programs (1)	(d) Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs (in thousands)
April 1 to April 30, 2018		259,302	$ 11.05	259,302	$ 12,118
May 1 to May 31, 2018		167,012	11.02	167,012	10,277
June 1 to June 30, 2018	(2)	249,887	11.05	249,887	7,515
Total		676,201	$ 11.05	676,201	$ 7,515

(1) During December 2017, our Board of Directors approved the repurchase of up to $10.0 million of our common stock under a stock repurchase program ("Stock Repurchase Program"). In March 2018, the Board of Directors further approved the repurchase of an additional $10.0 million of common stock under the Stock Repurchase Program. Pursuant to its terms, the Stock Repurchase Program terminated on July 31, 2018. A portion of these repurchases were made pursuant to a formal trading plan pursuant to Rule 10b5-1 under the Exchange Act implemented by the Company in March 2018.

(2) Included within this month, 200,000 shares at a total price of $2.2 million were purchased in a single block through a privately negotiated transaction as part of the Stock Repurchase Program.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
4.1	First Amendment to Tax Asset Protection Plan	8-K	001-37822	4.2	April 11, 2018
10.1	Form of Amendment No. 2 to Employment Agreement of Greg Marken and Theodore Sanders*				
10.2	Advisor Services Agreement dated as of July 11, 2018, between the Company and Sharon Sjostrom*,**				
31.1	Certification of Principal Executive Officer of Advanced Emissions Solutions, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*				
31.2	Certification of Principal Financial Officer of Advanced Emissions Solutions, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*				
32.1	Certification of Principal Executive Officer and Principal Financial Officer of Advanced Emissions Solutions, Inc. Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				
101. INS	XBRL Instance Document				
101.SCH	XBRL Schema Document				
101.CAL	XBRL Calculation Linkbase Document				
101.LAB	XBRL Label Linkbase Document				
101.PRE	XBRL Presentation Linkbase Document				
101.DEF	Taxonomy Extension Definition Linkbase Document				

Notes:
* – Filed herewith.
** – Portions of this exhibit have been omitted pursuant to a request for confidential treatment. The non-public information has been separately filed with the Securities and Exchange Commission

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Advanced Emissions Solutions, Inc.
(Registrant)

August 6, 2018 By: /s/ L. Heath Sampson
L. Heath Sampson
Chief Executive Officer
(Principal Executive Officer)

August 6, 2018 By: /s/ Greg P. Marken
Greg P. Marken
Chief Financial Officer
(Principal Financial and Accounting Officer)