

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

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2017
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

(State or other jurisdiction of
incorporation or organization)

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

(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)

27-5472457

(I.R.S. Employer
Identification No.)

80129

(Zip Code)

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 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 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

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 May 1, 2017
Common stock, par value \$0.001 per share	22,294,573

INDEX

	PAGE
<u>PART I. - FINANCIAL INFORMATION</u>	
<u>Item 1.</u>	<u>Financial Statements (unaudited):</u>
	<u>Condensed Consolidated Balance Sheets as of March 31, 2017 and December 31, 2016</u> 1
	<u>Condensed Consolidated Statements of Operations for the Three Months ended March 31, 2017 and March 31, 2016</u> 2
	<u>Condensed Consolidated Statements of Cash Flows for the Three Months Ended March 31, 2017 and March 31, 2016</u> 3
	<u>Notes to Condensed Consolidated Financial Statements</u> 5
<u>Item 2.</u>	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u> 25
<u>Item 3.</u>	<u>Quantitative and Qualitative Disclosures About Market Risks</u> 36
<u>Item 4.</u>	<u>Controls and Procedures</u> 36
<u>PART II. - OTHER INFORMATION</u>	
<u>Item 1.</u>	<u>Legal Proceedings</u> 38
<u>Item 1a.</u>	<u>Risk Factors</u> 38
<u>Item 2.</u>	<u>Unregistered Sales of Equity Securities and Use of Proceeds</u> 38
<u>Item 3.</u>	<u>Defaults Upon Senior Securities</u> 38
<u>Item 4.</u>	<u>Mine Safety Disclosures</u> 38
<u>Item 5.</u>	<u>Other Information</u> 38
<u>Item 6.</u>	<u>Exhibits</u> 39
	<u>Signatures</u> 40

Part I. – FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements

Advanced Emissions Solutions, Inc. and Subsidiaries
Condensed Consolidated Balance Sheets
(Unaudited)

<i>(in thousands, except share data)</i>	As of	
	March 31, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 28,442	\$ 13,208
Restricted cash	8,536	13,736
Receivables, net	1,954	8,648
Receivables, related parties, net	1,755	1,934
Costs in excess of billings on uncompleted contracts	—	25
Prepaid expenses and other assets	1,736	1,357
Total current assets	<u>42,423</u>	<u>38,908</u>
Property and equipment, net of accumulated depreciation of \$1,476 and \$2,920, respectively	504	735
Cost method investment	1,016	1,016
Equity method investments	3,097	3,959
Deferred tax assets	56,010	61,396
Other long-term assets	1,725	1,282
Total Assets	<u>\$ 104,775</u>	<u>\$ 107,296</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,202	\$ 1,920
Accrued payroll and related liabilities	984	2,121
Billings in excess of costs on uncompleted contracts	4,200	4,947
Legal settlements and accruals	4,591	10,706
Other current liabilities	3,965	4,017
Total current liabilities	<u>14,942</u>	<u>23,711</u>
Legal settlements and accruals, long-term	2,371	5,382
Other long-term liabilities	2,181	2,038
Total Liabilities	<u>19,494</u>	<u>31,131</u>
Commitments and contingencies (Note 6)		
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, 22,478,711 and 22,322,022 shares issued, and 22,072,056 and 22,024,675 shares outstanding at March 31, 2017 and December 31, 2016, respectively	22	22
Additional paid-in capital	119,922	119,494
Accumulated deficit	(34,663)	(43,351)
Total stockholders' equity	<u>85,281</u>	<u>76,165</u>
Total Liabilities and Stockholders' Equity	<u>\$ 104,775</u>	<u>\$ 107,296</u>

See Notes to the Condensed Consolidated Financial Statements.

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

<i>(in thousands, except per share data)</i>	Three Months Ended March 31,	
	2017	2016
Revenues:		
Equipment sales	\$ 5,108	\$ 21,727
Chemicals	2,281	434
Consulting services and other	—	196
Total revenues	7,389	22,357
Operating expenses:		
Equipment sales cost of revenue, exclusive of depreciation and amortization	4,143	17,034
Chemicals cost of revenue, exclusive of depreciation and amortization	1,758	142
Consulting services cost of revenue, exclusive of depreciation and amortization	—	135
Payroll and benefits	2,182	3,802
Rent and occupancy	45	394
Legal and professional fees	1,035	2,983
General and administrative	1,263	745
Research and development, net	192	202
Depreciation and amortization	482	231
Total operating expenses	11,100	25,668
Operating loss	(3,711)	(3,311)
Other income (expense):		
Earnings from equity method investments	13,814	5,577
Royalties, related party	1,755	1,189
Interest expense	(693)	(1,964)
Revision in estimated royalty indemnity liability	2,900	—
Other income	9	2,938
Total other income	17,785	7,740
Income before income tax expense	14,074	4,429
Income tax expense	5,386	53
Net income	\$ 8,688	\$ 4,376
Earnings per common share (Note 1):		
Basic	\$ 0.39	\$ 0.20
Diluted	\$ 0.39	\$ 0.20
Weighted-average number of common shares outstanding:		
Basic	22,056	21,849
Diluted	22,243	22,176

See Notes to the Condensed Consolidated Financial Statements.

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

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Cash flows from operating activities		
Net income	\$ 8,688	\$ 4,376
Adjustments to reconcile net income to net cash used in operating activities:		
Depreciation and amortization	482	231
Stock-based compensation expense	607	636
Earnings from equity method investments	(13,814)	(5,577)
Gain on sale of equity method investment	—	(2,078)
Gain on settlement of note payable	—	(869)
Other non-cash items, net	455	550
Changes in operating assets and liabilities:		
Receivables	6,695	1,012
Related party receivables	179	1,124
Prepaid expenses and other assets	(415)	496
Costs incurred on uncompleted contracts	3,883	14,613
Deferred tax asset, net	5,386	—
Other long-term assets	(805)	(1,104)
Accounts payable	(717)	(250)
Accrued payroll and related liabilities	(1,137)	(444)
Other current liabilities	(219)	(1,071)
Billings on uncompleted contracts	(4,605)	(17,021)
Advance deposit, related party	—	(396)
Other long-term liabilities	143	242
Legal settlements and accruals	(9,126)	(1,228)
Distributions from equity method investees, return on investment	1,500	4,900
Net cash used in operating activities	(2,820)	(1,858)

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	13,175	—
Maturity of investment securities, restricted	—	336
Acquisition of property and equipment, net	(142)	(100)
Contributions to equity method investees	—	(223)
Proceeds from sale of equity method investment	—	1,773
Net cash provided by investing activities	13,033	1,786
Cash flows from financing activities		
Borrowings on Line of Credit	808	—
Repayments on Line of Credit	(808)	—
Repayments on short-term borrowings and notes payable, related party	—	(2,996)
Short-term borrowing loan costs	—	(579)
Repurchase of shares to satisfy tax withholdings	(179)	(84)
Net cash used in financing activities	(179)	(3,659)
Increase (decrease) in Cash and Cash Equivalents and Restricted Cash	10,034	(3,731)
Cash and Cash Equivalents and Restricted Cash, beginning of period	26,944	20,973
Cash and Cash Equivalents and Restricted Cash, end of period	\$ 36,978	\$ 17,242
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 191	\$ 1,029
Cash paid (refunded) for income taxes	\$ 100	\$ (89)
Supplemental disclosure of non-cash investing and financing activities:		
Settlement of RCM6 note payable	\$ —	\$ 13,234
Non-cash reduction of equity method investment	\$ —	\$ 11,156

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 providing environmental and emissions control equipment, technologies and specialty chemicals to the coal-burning electric power generation industry. The Company generates substantial earnings and tax credits under Section 45 of the Internal Revenue Code ("IRC") from its equity investments in certain entities and royalty payment streams related to technologies that are licensed to Tinuum Group, LLC, a Colorado limited liability company ("Tinuum Group"). Such technologies allow Tinuum Group to provide various solutions to reduce mercury and nitrogen oxide ("NO_x") emissions at select coal-fired power generators through the burning of Refined Coal ("RC") placed in service by Tinuum Group. The Company's sales occur principally throughout the United States. See Note 11 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 U.S. generally accepted accounting principles ("U.S. GAAP") and with Article 10 of Regulation S-X. 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 direct and indirect, wholly-owned subsidiaries. Also included within the unaudited Condensed Consolidated Financial Statements are the Company's investments, Tinuum Group and Tinuum Services, LLC ("Tinuum Services"), which are accounted for using the equity method of accounting. As discussed in Note 3, the Company sold its equity investment in RCM6, LLC ("RCM6") in March 2016, which was also accounted for using the equity method prior to the sale.

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, 2016 (the "2016 Form 10-K"). 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. The Company did not declare any cash dividends during the three months ended March 31, 2017 or 2016.

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. Because the Company did not declare any dividends during the periods presented, and because the participating, unvested RSA's possess substantially the same rights to undistributed earnings as common shares outstanding, there is no difference between the calculated basic earnings per share for common shares and participating securities. Accordingly, and 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 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 unvested RSA's, outstanding options to purchase

common stock and contingent performance stock units ("PSU's") (collectively, "Potential dilutive shares"), and their dilutive effect, if any, is computed using the treasury stock 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 8 for additional information related to PSU's.

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

<i>(in thousands, except per share amounts)</i>	Three Months Ended March 31,	
	2017	2016
Net income	\$ 8,688	\$ 4,376
Less: Undistributed income allocated to participating securities	100	32
Income attributable to common stockholders	<u>\$ 8,588</u>	<u>\$ 4,344</u>
Basic weighted-average common shares outstanding	22,056	21,849
Add: dilutive effect of equity instruments	187	327
Diluted weighted-average shares outstanding	<u>22,243</u>	<u>22,176</u>
Earnings per share - basic	\$ 0.39	\$ 0.20
Earnings per share - diluted	<u>\$ 0.39</u>	<u>\$ 0.20</u>

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make 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 2016 Form 10-K. Actual results could differ from these estimates.

Reclassifications

Certain balances have been reclassified from the prior year to conform to the current year presentation.

New Accounting Guidance

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"), which provides a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes current revenue recognition guidance, including industry-specific guidance. The core principle of ASU 2014-09 is that "an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 and its related amendments are effective for reporting periods (including interim periods) beginning after December 31, 2017. Early application is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption ("modified retrospective method"). The Company anticipates adopting the standard under the modified retrospective method effective January 1, 2018, which will be reflected in its financial statements as of and for the three months ended March 31, 2018. Based on the Company's preliminary assessment of the standard, the Company has determined that the timing of revenue recognition for equipment sales may be impacted, but that revenues generated from chemical sales and consulting services will likely not be materially impacted. The Company is continuing its assessment, which may change its initial assessments of the impacts to its revenue streams or may identify other impacts.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments (Subtopic 825-10) - Overall: Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"). This standard provides guidance on how entities measure certain equity investments and present changes in the fair value. This standard requires that entities measure certain equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize any changes in fair value in net income. ASU 2016-01 is effective for fiscal years beginning after December 31, 2017. 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.

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. The Company is currently evaluating the provisions of this guidance and assessing its 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.

In October 2016, the FASB issued ASU 2016-17, *Consolidation (Topic 810) Interests Held through Related Parties That Are under Common Control* ("ASU 2016-17"), which amends the consolidation guidance on how a reporting entity that is the single decision maker of a VIE should treat indirect interests in the entity held through related parties that are under common control with the reporting entity when determining whether it is the primary beneficiary of that VIE. Under the amendments, a single decision maker is not required to consider indirect interests held through related parties that are under common control with the single decision maker to be the equivalent of direct interests in their entirety. Instead, a single decision maker is required to include those interests on a proportionate basis consistent with indirect interests held through other related parties. ASU 2016-17 is effective for fiscal years, and interim reporting periods within those years, beginning after December 15, 2016 on a retrospective basis, however, early adoption is permitted. The Company adopted this standard effective as of January 1, 2017 and there was no material impact on the Company's financial statements or disclosures.

Note 2 - Restructuring

The Company recorded restructuring charges during the three months ended March 31, 2016 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. There were no material restructuring charges during the three months ended March 31, 2017.

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

<i>(in thousands, except employee data)</i>	Approximate Number of Employees	Pretax Charge			
		Refined Coal	Emissions Control	All Other and Corporate	Total
Three Months Ended March 31, 2016					
Restructuring charges	3	\$ —	\$ —	\$ 283	\$ 283
Changes in estimates		—	—	—	—
Total pretax charge, net of reversals		\$ —	\$ —	\$ 283	\$ 283

The following table summarizes the Company's change in restructuring accruals for the three months ended March 31, 2017 :

<i>(in thousands)</i>	Employee Severance	Facility Closures
Remaining accrual as of December 31, 2016	\$ 452	\$ 247
Expense provision	31	—
Cash payments and other	(232)	(250)
Change in estimates	(21)	3
Remaining accrual as of March 31, 2017	<u>\$ 230</u>	<u>\$ —</u>

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 3 - Equity Method Investments

Tinum Group, LLC

The Company's ownership interest in Tinuum Group was 42.5% as of March 31, 2017 and December 31, 2016 . Tinuum Group supplies technology equipment and technical services to cyclone-fired and other boiler users, but Tinuum Group's primary purpose is to put into operation facilities that produce and sell RC that lower emissions and therefore qualify for tax credits available under Section 45 of the IRC ("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:

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Gross profit	\$ 22,056	\$ 26,527
Operating, selling, general and administrative expenses	5,474	5,512
Income from operations	16,582	21,015
Other expenses	(589)	(1,015)
Class B preferred return	(637)	(1,143)
Loss attributable to noncontrolling interest	9,361	1,956
Net income available to Class A members	<u>\$ 24,717</u>	<u>\$ 20,813</u>
ADES equity earnings from Tinuum Group	<u>\$ 13,175</u>	<u>\$ 5,443</u>

As of March 31, 2017 and December 31, 2016 , the amount of Tinuum Group's temporary Class B preferred equity was \$14.2 million and \$18.3 million , respectively.

The difference between the Company's proportionate share of Tinuum Group's Net income available to Class A 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 months ended March 31, 2017 , 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 Class A 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 Tinum Group exceeds cumulative cash distributions received), the Company recognizes its pro-rata share of Tinum Group's Net income available to Class A 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 months ended March 31, 2017, the Company's cumulative amount of distributions received from Tinum Group exceeded the Company's cumulative pro-rata share of Tinum Group's Net income available to Class A members. As such, the Company recognized equity earnings from Tinum Group for the three months ended March 31, 2017 of \$13.2 million. During the three months ended March 31, 2016, the Company's cumulative share of pro-rata Tinum Group income exceeded the amount of its cumulative income recognized due to cash being distributed. As such, the Company recognized equity earnings from Tinum Group in the amount of \$5.4 million. As of March 31, 2017 and 2016, the Company's carrying value in Tinum Group was zero and \$2.0 million, 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 Class A members as shown on Tinum Group's statement of operations. Additionally, for periods during which the carrying value of the Company's investment in Tinum Group is greater than zero, distributions from Tinum 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 Tinum 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 presents the Company's investment balance, equity earnings and cash distributions in excess of the investment balance for the three months ended March 31, 2017 and 2016 (*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	12/31/2016	\$ —	\$ —	\$ —	\$ (9,894)
ADES proportionate share of income from Tinum 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 Tinum 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)

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	12/31/2015	\$ —	\$ —	\$ —	\$ (3,263)
ADES proportionate share of income from Tinum Group ⁽¹⁾	First Quarter	8,706	8,706	—	—
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	First Quarter	(3,263)	(3,263)	—	3,263
Cash distributions from Tinum Group	First Quarter	(3,400)	—	3,400	—
Total investment balance, equity earnings (loss) and cash distributions	3/31/2016	\$ 2,043	\$ 5,443	\$ 3,400	\$ —

(1) For both the three months ended March 31, 2017 and 2016, the amounts of the Company's 42.5% proportionate share of Net Income available to Class A members as shown in the table above differ from mathematical calculations of the Company's 42.5% equity interest in

Tinum Group multiplied by the amounts of Net Income available to Class A members as shown in the table above of Tinuum Group results of operations due to adjustments related to the Redeemable Class B preferred return and, for the three months ended March 31, 2016, the elimination of Tinuum Group earnings attributable to RCM6, of which the Company sold its 24.95% equity interest on March 3, 2016.

Tinum 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 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 Tinuum Services under the equity method of accounting. The Company's investment in Tinuum Services as of March 31, 2017 and December 31, 2016 was \$3.1 million and \$4.0 million, respectively.

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

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Gross loss	\$ (12,879)	\$ (12,625)
Operating, selling, general and administrative expenses	34,628	34,591
Loss from operations	(47,507)	(47,216)
Other expenses	(15)	(20)
Loss attributable to noncontrolling interest	48,799	48,619
Net income	\$ 1,277	\$ 1,383
ADES equity earnings from Tinuum Services	\$ 639	\$ 691

Included within the Consolidated Statements of Operations of Tinuum Services for the three months ended March 31, 2017 and 2016, 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 removed from the net income of Tinuum Services as they are losses attributable to a noncontrolling interest.

RCM6, LLC

During the three months ended March 31, 2016, the Company was subject to, and paid, a capital call of \$0.2 million.

On March 3, 2016, the Company sold its 24.95% membership interest in RCM6 for a cash payment of \$1.8 million and the assumption, by the buyer, of an outstanding note payable made by the Company in connection with its purchase of RCM6 membership interests from Tinuum Group. In doing so, the Company recognized a gain on the sale of \$2.1 million for the three months ended March 31, 2016, which is included within the Other line item in the Condensed Consolidated Statements of Operations. As a result of the sale of its ownership interest, the Company ceased to be a member of RCM6 and, as such, is no longer subject to any quarterly capital calls and variable payments to RCM6. In addition, the Company has no future obligations related to the previously recorded note payable. However, the Company will still receive its pro-rata share of income and cash distributions through its ownership in Tinuum Group based on the RCM6 lease payments made to Tinuum Group.

Prior to the sale of its ownership interest, the Company recognized equity losses related to its investment in RCM6 of \$0.6 million for the three months ended March 31, 2016. The following table summarizes the results of operations of RCM6 for the three months ended March 31, 2016:

<i>(in thousands)</i>	January 1 - March 3,	
	2016	
Gross loss	\$ (555)	
Operating, selling, general and administrative expenses	360	
Loss from operations	(915)	
Other expenses	(52)	
Net loss	\$ (967)	
ADES equity losses from RCM6	\$ (557)	

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 :

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Earnings from Tuum Group	\$ 13,175	\$ 5,443
Earnings from Tuum Services	639	691
Loss from RCM6	—	(557)
Earnings from equity method investments	<u>\$ 13,814</u>	<u>\$ 5,577</u>

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.

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Distributions from equity method investees, return on investment		
Tuum Group	\$ —	\$ 3,400
Tuum Services	1,500	1,500
	<u>\$ 1,500</u>	<u>\$ 4,900</u>
Distributions from equity method investees in excess of investment basis		
Tuum Group	\$ 13,175	\$ —
	<u>\$ 13,175</u>	<u>\$ —</u>

Note 4 - Cost Method Investment

In November 2014, the Company acquired 411,765 shares of common stock, representing approximately an 8% ownership interest, in Highview Enterprises Limited ("Highview"), a London, England based developmental stage company specializing in power storage, for \$2.8 million in cash (the "Highview Investment"). The Company evaluated the Highview Investment and determined that it should account for the investment under the cost method. 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. As of December 31, 2016, the Company recorded an impairment charge of \$1.8 million based on an estimated fair value of £2.00 per share, compared to the carrying value prior to the impairment charge of £4.25 per share. The estimated fair value as of December 31, 2016 was based on an equity raise that occurred during the first quarter of 2017 at a price of £2.00 per share. As of March 31, 2017, there were no indicators of impairment identified with respect to the Highview Investment.

Note 5 - Borrowings

Line of Credit

In September 2013, ADA-ES, Inc., a wholly-owned subsidiary of the Company ("ADA"), as borrower, and the Company, as guarantor, entered into the 2013 Loan and Security Agreement with a bank (the "Lender") for an aggregate principal amount of \$10 million that was secured by certain amounts due to the Company from certain Tuum Group RC leases (the "Line of Credit" or "LOC"). The Line of Credit was amended nine times from the period from December 2, 2013 through November 25, 2016, most notably to extend the maturity date with each amendment. In addition, during this period, the Lender also granted 10 waivers related to various transactions and obligations to provide financial information to the Lender. Covenants in the Line of Credit included a borrowing base limitation that was based on a percentage of the net present value of ADA's portion of payments due to Tuum Group from the RC leases. The Line of Credit also contained other affirmative and negative covenants and customary indemnification obligations of ADA to the Lender and provided for the issuance of letters of credit ("LC's") provided that the aggregate amount of the LC's plus all advances then outstanding did not exceed the calculated borrowing

base. The Company guarantees the obligations and agreements of ADA under the Line of Credit. Amounts outstanding under the Line of Credit bear interest payable monthly at a rate per annum equal to the higher of 5% or the "Prime Rate" (as defined in the Line of Credit) plus 1% . As a result of various covenant violations, the Company had no borrowing availability under the Line of Credit from inception through November 29, 2016.

On November 30, 2016, ADA, as borrower, the Company, as guarantor, and the Lender entered into the Tenth Amendment of 2013 Loan and Security Agreement (the "Tenth Amendment"). The Tenth Amendment increased the Line of Credit to \$15 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 LC's related to equipment projects, the Royalty Award and certain other agreements. Additionally, this amendment secured the Line of Credit with amounts due to the Company from an additional existing Refined Coal facility lease, which amounts also now factor into the borrowing base limitation, and amends certain financial covenants. Pursuant to the Tenth Amendment, the Company was required to, among other things, pay a new origination fee of \$0.1 million and associated legal preparation fees of the Lender, maintain a deposit account with the Lender with a minimum balance of \$6.0 million initially and \$3.0 million after certain conditions were met, and maintain minimum trailing twelve month EBITDA (earnings before interest, taxes, depreciation and amortization as defined in the Tenth Amendment) of \$24.0 million . As a result of certain conditions being met during the three months ended March 31, 2017 , the Company is now required to maintain a deposit balance of \$3.0 million , which is classified as Restricted Cash.

As of March 31, 2017 , there were no outstanding borrowings under the Line of Credit, however, LC's in the aggregate amount of \$11.2 million were secured under the Line of Credit, resulting in borrowing availability of \$3.8 million . In March 2017, pursuant to amendments contained in the Tenth Amendment, the Company provided two LC's ("Royalty Award Letters of Credit") of \$3.5 million and \$1.7 million , respectively, related to obligations due under the Royalty Award that were secured under the Line of Credit. The Royalty Award Letters of Credit replaced LC's in place at another financial institution ("Financial Institution") totaling \$7.2 million for obligations due under the Royalty Award, which were secured by restricted cash held at the Financial Institution. Although the Royalty Award Letters of Credit replaced the previous LC's in place at the other Financial Institution and was secured under the Line of Credit as of March 31, 2017, \$5.5 million continued to be held in restricted cash at the Financial Institution as of March 31, 2017, pending the release from the LC counterparty. In April 2017, \$5.5 million of restricted cash was released to the Company and transferred to the Company's bank account held at the Lender.

Letters of Credit

The Company has LC's with the Lender and the Financial Institution related to equipment projects, the Royalty Award and certain other agreements. 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. The Company subsequently repaid this amount to the Lender as of March 31, 2017 . The Company is contesting the draw on this LC and is pursuing actions to recover this amount from the customer. This amount is included in Other long-term assets on the Condensed Consolidated Balance Sheets .

The following tables summarize the LC's outstanding and collateral, by asset type, reported on the Condensed Consolidated Balance Sheets :

<i>(in thousands)</i>	As of March 31, 2017		
	LC Outstanding	Utilization of LOC Availability	Restricted Cash
Contract performance - equipment systems	\$ 1,047	\$ 1,047	\$ 86
Royalty Award	10,200	10,200	5,450
Total LC outstanding	\$ 11,247	\$ 11,247	\$ 5,536

<i>(in thousands)</i>	As of December 31, 2016		
	LC Outstanding	Utilization of LOC Availability	Restricted Cash
Contract performance - equipment systems	\$ 1,855	\$ 1,776	\$ 86
Royalty Award	7,150	—	7,150
Total LC outstanding	\$ 9,005	\$ 1,776	\$ 7,236

Credit Agreement

On October 22, 2015, the Company entered into a credit agreement for a \$15.0 million short-term loan (the "Credit Agreement") with Franklin Mutual Quest Fund and MFP Investors LLC, both related parties (the "Lenders"), and Wilmington Trust, National Association, as the administrative agent and collateral agent (the "Administrative Agent"), which was subsequently amended in 2016 as discussed below. All obligations of the Company under the Credit Agreement were

unconditionally guaranteed by each of the Company's wholly-owned domestic subsidiaries, except for ADA Analytics, LLC, and were secured by perfected security interests in substantially all of the assets of the Company and the guarantors, subject to certain agreed upon exceptions. The Lenders were beneficial owners of Common Stock in the Company. The Credit Agreement was approved by the Company's Board of Directors and by the Audit Committee as a related party transaction.

Under the original terms and conditions, the Credit Agreement was scheduled to mature on April 22, 2016, subject to a three -month extension at the Company's option to the extent certain conditions were met. The Credit Agreement's annual interest rate was equal to 10.5% and was subject to various prepayment and other premiums if certain events, including a change in control, occurred. The Company received net proceeds of \$13.5 million and recorded an initial debt discount and debt issuance costs totaling \$1.5 million . The debt discounts and debt issuance costs were amortized to interest expense using the effective interest method over the life of the Credit Agreement. The net proceeds were used to fund working capital needs and for general operating purposes of the Company and its subsidiaries.

On February 8, 2016, the Company entered into the first amendment to the Credit Agreement that extended the Company's filing date deadline related to its 2015 SEC filings to March 30, 2016. On March 30, 2016, the Company entered into the second amendment to the Credit Agreement ("Second Amendment"). The Second Amendment extended the maturity date to July 8, 2016, extended the Company's filing date deadline related to its 2015 SEC filings to April 20, 2016, increased the stated interest rate from 10.5% to 15.0% , increased the minimum cash balance requirement from \$3.0 million to \$3.5 million and adjusted the amortization payment schedule. The Company incurred \$0.6 million in fees related to the Second Amendment.

On June 30, 2016, the Company, the required Lenders under the Credit Agreement and the Administrative Agent agreed to terminate the Credit Agreement (the "Payoff Letter") prior to the maturity date of July 8, 2016, effective upon the Company's prepayment of the total principal balance of the loans and advances made to or for the benefit of the Company, together with all accrued but unpaid interest, and the total amount of all fees, costs, expenses and other amounts owed by the Company thereunder, including a prepayment premium (the "Payoff Amount"). The Payoff Amount was paid on June 30, 2016 (the "Payoff Date") and equaled \$9.9 million . The Payoff Letter included a waiver by the Lenders for a portion of the prepayment premium of 4% reflected in the Credit Agreement.

Tinum Group - RCM6 Note Payable

The Company acquired a 24.95% membership interest in RCM6 from Tinum Group in February 2014 through an up-front payment and a note payable (the "RCM6 Note Payable"). Due to the payment terms of the note purchase agreement, the RCM6 Note Payable periodically added interest to the outstanding principal balance. The stated rate associated with the RCM6 Note Payable was 1.65% and the effective rate of the RCM6 Note Payable at inception was 20% . As discussed in Note 3 , on March 3, 2016, the Company sold its 24.95% membership interest in RCM6 and, as a result, the Company has no future obligations related to the previously recorded RCM6 Note Payable.

DSI Business Owner

In February 2016, the Company entered into an agreement to settle an outstanding note payable of approximately \$1.1 million for \$0.3 million with the former owner of a business ("DSI Business Owner") acquired by the Company in 2012, which was paid during the first quarter of 2016. The Company recognized a gain related to the settlement of \$0.9 million , which is included in the Other line item in the Condensed Consolidated Statements of Operations for the three months ended March 31, 2016 .

Note 6 - 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. The Company's significant legal proceedings are discussed below.

Securities class action lawsuit: *United Food and Commercial Workers Union v. Advanced Emissions Solutions, Inc.* , No. 14-cv-01243-CMA-KMT (U.S. District Court, D. Colo.)

A class action lawsuit against ADES and certain of its current and former officers was filed in May 2014 in the federal court in Denver, Colorado alleging that ADES and other defendants misrepresented to the investing public the Company's financial condition and its financial controls to artificially inflate and maintain the market price of ADES's common stock. In May 2016, the parties reached an agreement in principle to settle this litigation, and on June 30, 2016, the parties entered into a Stipulation

and Agreement of Settlement to resolve the action in its entirety. On February 10, 2017, the Company received an order and final judgment that the lawsuit was settled, and the entire case has been dismissed with prejudice.

The settlement agreement for this case contained no admission of liability, and all of the defendants in this litigation have expressly denied, and continue to deny, all allegations of wrongdoing or improper conduct. The Company's insurance carriers funded the full settlement in November 2016. However, until the order and final judgment of the lawsuit having been settled was received, the funded settlement did not relieve the Company's recorded liability.

As of December 31, 2016, the Company had a recorded liability of \$4.0 million in connection with the Denver Settlement as the losses in connection with this matter were probable and reasonably estimable under U.S. GAAP. The liability was originally recorded as of June 30, 2016 in the Legal settlements and accruals line item of the Consolidated Balance Sheet. As of March 31, 2017, the Company no longer had any amounts impacting its consolidated financial statements recorded as the order and judgment related to the lawsuit was received during the first quarter of 2017.

Stockholder derivative lawsuits: *In Re Advanced Emissions Solutions, Inc. Shareholder Derivative Litigation*, No. 2014CV-30709 (District Court, Douglas County, Colorado) (consolidated actions).

In June and July 2014, stockholder derivative actions were filed in the Douglas County District Court and in the Colorado District Court for the City and County of Denver against certain of the Company's current and former officers and directors, along with the Company as a "nominal defendant." In May 2016, the parties reached an agreement in principle to settle this stockholder derivative action, and on September 30, 2016, the parties entered into a Stipulation and Agreement of Settlement to resolve the action in its entirety. The Stockholder Derivative Settlement was approved and the case was closed on January 4, 2017.

The settlement agreement for this case contained no admission of liability, and all of the defendants in this stockholder derivative action have expressly denied, and continue to deny, all allegations of wrongdoing or improper conduct. The Company's insurance carriers funded the full settlement in January 2017.

As of December 31, 2016, the Company had a recorded liability of \$0.6 million in connection with the Derivative Settlement as the losses in connection with this matter were probable and reasonably estimable under U.S. GAAP. The liability was originally recorded as of June 30, 2016 in the Legal settlements and accruals line item of the Consolidated Balance Sheet. As of March 31, 2017, the Company no longer had any amounts impacting its consolidated financial statements recorded as the order and judgment related to the lawsuit was received during the first quarter of 2017.

SEC Inquiry

On March 29, 2017, the Company and the Securities and Exchange Commission reached a settlement to resolve a previously disclosed investigation into certain accounting issues, as described in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014. Without admitting or denying the SEC's allegations, the Company agreed to the terms of the settlement and agreed to pay a civil monetary penalty of \$0.5 million. The Company had fully reserved for this penalty as of June 30, 2016. The penalty was paid in the first quarter of 2017.

Settlement and royalty indemnity

In August 2008, Norit International N.V. f/k/a Norit N.V. ("Norit") filed a lawsuit against the Company asserting claims for misappropriation of trade secrets and other claims related to the Company's ADA Carbon Solutions, LLC joint venture ("Carbon Solutions") that built an activated carbon manufacturing plant (the "Red River Plant"). In August 2011, the Company and Norit entered into a settlement agreement whereby the Company paid amounts related to the non-solicitation breach of contract claim, and ADA was also required to pay additional damages related to certain future revenues generated from the equity method investment through the second quarter of 2018 (the "Royalty Award"). Payments of amounts due under the Royalty Award for each quarter are payable three months after such quarter ends. In October 2011, an arbitration panel endorsed and confirmed the terms of the settlement agreement.

Additionally, during November 2011, the Company entered into an 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 to Carbon Solutions and amended the Intellectual Property License Agreement dated October 1, 2008 between the Company and Carbon Solutions. Under a provision of the Royalty Award, in the event that the Company declares or otherwise issues a dividend to any or all of its stockholders prior to January 1, 2018, other than repurchases of common stock under employee stock plans, the Company must increase its LC amounts as collateral for payments due to Norit, equal to 50% of the aggregate fair market value of such dividends (the "Dividends Provision"). Additionally, the first time that the Company achieves earnings in excess of \$20.0 million for a fiscal year ended prior to January 1, 2018, the Company must also increase its LC amounts as collateral by \$5.0 million for payments due to Norit (the "Earnings Provision"). Based on the Company's achievement of \$97.7 million of net income for the fiscal year ended December 31, 2016, in March 2017 and pursuant to the Earnings Provision, the Company provided an additional LC of \$5.0 million that is secured under the Line of Credit as of March 31, 2017. Future increases in LC requirements under the Dividends Provision are limited to an additional \$2.5 million.

During the fourth quarter of 2016, the Company revised its estimate for future Royalty Award payments based in part on an updated forecast 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 \$4.0 million reduction to its Royalty Award accrual as of December 31, 2016.

During the first quarter of 2017, the Company revised its estimate for future Royalty Award payments based in part on an updated forecast 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 its Royalty Award accrual as of March 31, 2017.

As of March 31, 2017, and December 31, 2016, the Company carried the components of the Royalty Award in Legal settlements and accruals in the Condensed Consolidated Balance Sheets of \$4.6 million and \$5.7 million, respectively, and in Legal settlements and accruals, long-term of \$2.4 million and \$5.4 million, respectively. Future amounts to be paid related to the Royalty Award may differ from current estimates due to future adjusted sales of activated carbon from the Red River Plant.

The following table summarizes the Company's legal settlements and accruals as described above, which are presented in the Condensed Consolidated Balance Sheets:

<i>(in thousands)</i>	As of	
	March 31, 2017	December 31, 2016
Settlement and Royalty Indemnification	\$ 4,591	\$ 5,656
Legal settlements	—	5,050
Legal settlements and accruals	4,591	10,706
Settlement and Royalty Indemnification, long-term	2,371	5,382
Legal settlements and accruals, long-term	2,371	5,382
Total legal settlements and accruals	\$ 6,962	\$ 16,088

Other Commitments and Contingencies

Tinum 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.

Performance Guarantee on Equipment Systems

In the normal course of business related to ACI and DSI systems, the Company may guarantee certain performance thresholds during a discrete performance testing period that do not extend beyond six months from the initial test date, the commencement of which is determined by the customer. Performance thresholds include such matters as the achievement of a certain level of mercury removal and other emissions based upon the injection of a specified quantity of a qualified activated carbon or other chemical at a specified rate given other plant operating conditions, and availability of equipment and electric power usage. In the event the equipment fails to perform as specified during the testing period, the Company may have an obligation to correct or replace the equipment. In the event the level of mercury removal is not achieved, the Company may have a "make right" obligation within the contract limits. During the three months ended March 31, 2017, the Company was not presented with any performance guarantees nor did it incur any additional claims. Additional performance guarantee claims, if incurred, are included within the Equipment sales cost of revenue line in the Condensed Consolidated Statements of Operations.

Note 7 - Fair Value Measurements

Fair value of financial instruments

The carrying amounts of financial instruments, including cash and cash equivalents, restricted cash, accounts receivable, accounts payable, deposits 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:

<i>(in thousands)</i>	As of March 31, 2017		As of December 31, 2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Financial Instruments:				
Cost method investment ⁽¹⁾	\$ 1,016	\$ 1,016	\$ 1,016	\$ 1,016
Highview technology license payable	\$ 210	\$ 210	\$ 207	\$ 207

(1) Fair value is based on the investee's recently completed equity raise at £2.00 per share. Refer to Note 4 for further discussion of this investment .

Concentration of credit risk

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents and restricted cash, which are held at two financial institutions as of March 31, 2017 and December 31, 2016 . If those institutions were to be unable to perform their obligations, the Company would be at risk regarding the amount of cash and investments in excess of the Federal Deposit Insurance Corporation limits (\$250 thousand) that would be returned to the Company.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

As of March 31, 2017 and December 31, 2016 , the Company had no financial instruments carried and measured at fair value on a recurring basis.

Note 8 - Stock-Based Compensation

The Company grants equity based awards to employees and non-employee directors. Equity based awards 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 months ended March 31, 2017 and 2016 was as follows:

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Restricted stock award expense	\$ 438	\$ 398
Stock option expense	135	36
PSU expense	34	191
SAR expense	—	11
Total stock-based compensation expense	\$ 607	\$ 636

The amount of unrecognized compensation cost as of March 31, 2017, and the expected weighted-average period over which the cost will be recognized is as follows:

<i>(in thousands)</i>	As of March 31, 2017	
	Unrecognized Compensation Cost	Expected Weighted-Average Period of Recognition (in years)
Restricted stock award expense	\$ 2,419	1.88
Stock option expense	764	1.39
PSU expense	103	0.76
Total unrecognized stock-based compensation expense	\$ 3,286	1.73

Restricted Stock Awards

Restricted stock is typically granted with vesting terms of three or five years. The fair value of restricted stock awards 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 restricted stock awards is recognized over the entire vesting period on a straight-line basis. A summary of restricted stock award activity under the Company's various stock compensation plans for the three months ended March 31, 2017 is presented below:

	Shares	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2017	297,347	\$ 8.03
Granted	159,092	9.58
Vested	(49,486)	9.26
Forfeited	(300)	7.30
Non-vested at March 31, 2017	406,653	8.49

Stock Options

Stock options generally vest over three years 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 option activity for the three months ended March 31, 2017 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, 2017	632,446	\$ 11.61		
Options granted	—	\$ —		
Options exercised	—	\$ —		
Options expired / forfeited	—	\$ —		
Options outstanding, March 31, 2017	632,446	\$ 11.61	\$ 246	2.92
Options exercisable as of March 31, 2017	247,780	\$ 13.30	\$ 77	3.11

Stock Appreciation Rights

SAR's generally vest over three years and have a contractual limit of five years from the date of grant to exercise. The fair value of SAR's 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 derived service period of the respective awards. The Company did not grant any SAR's during the three months ended March 31, 2017.

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 three months ended March 31, 2017.

A summary of PSU activity for the three months ended March 31, 2017 is presented below:

	Units	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2017	49,516	\$ 25.20
Granted	—	—
Vested / Settled ⁽¹⁾	(30,110)	(28.59)
Forfeited / Canceled	—	—
Non-vested at March 31, 2017	19,406	\$ 19.95

(1) The number of units shown in the table above are based on target performance. The final number of shares of common stock issued may vary depending on the achievement of market conditions established within the awards, which could result in the actual number of shares issued ranging from zero to a maximum of two times the number of units shown in the above table. 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
Three Months Ended March 31, 2017							
	2014	6,476	3,573	0.75	1.00	—	—
	2015	3,869	2,310	0.60	0.60	—	—
Three Months Ended March 31, 2016							
	2013	11,302	1,572	1.00	1.00	—	—

Note 9 - Income Taxes

For the three months ended March 31, 2017, the Company recorded income tax expense of \$5.4 million compared to income tax expense of \$0.1 million for three months ended March 31, 2016. The income tax expense recorded for the three months ended March 31, 2017 was comprised of estimated deferred federal income tax expense of \$5.2 million and estimated current state income tax expense of \$0.2 million. The income tax expense recorded for the three months ended March 31, 2016 related to estimated current state income tax expense.

For the three months ended March 31, 2017 and 2016, the Company's income tax expense and effective tax rates based on forecasted pretax income were:

<i>(in thousands, except for rate)</i>	Three Months Ended March 31,	
	2017	2016
Income tax expense	\$ 5,386	\$ 53
Effective tax rate	38%	1%

The effective tax rate for the three months ended March 31, 2017 was different from the federal statutory rate primarily due to state income tax expense, net of federal benefit.

The effective tax rate for the three months ended March 31, 2016 was different from the statutory rate primarily due to the utilization of federal operating losses and the Company's full valuation allowances against federal and state net operating losses and federal tax credits, offset by estimated state income tax expense.

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.

Note 10 - 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:

<i>(in thousands)</i>	As of	
	March 31, 2017	December 31, 2016
Prepaid expenses and other assets:		
Prepaid expenses	\$ 1,582	\$ 1,169
Other	154	188
	<u>\$ 1,736</u>	<u>\$ 1,357</u>
Other long-term assets:		
Deposits	\$ 261	\$ 263
Intangibles	735	696
Other	729	323
	<u>\$ 1,725</u>	<u>\$ 1,282</u>

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

<i>(in thousands)</i>	As of	
	March 31, 2017	December 31, 2016
Other current liabilities:		
Accrued interest	\$ 1,084	\$ 618
Accrued losses on equipment contracts	161	183
Taxes payable	574	244
Deferred revenue	34	76
Warranty liabilities	103	287
Deferred rent	—	369
Asset retirement obligation	1,328	1,312
Other	681	928
	<u>\$ 3,965</u>	<u>\$ 4,017</u>
Other long-term liabilities:		
Deferred rent	181	38
Deferred revenue, related party	2,000	2,000
	<u>\$ 2,181</u>	<u>\$ 2,038</u>

The tables below details the components of Other current liabilities and Other long-term liabilities as presented above:

The changes in the carrying amount of the Company's warranty obligations from December 31, 2016 through March 31, 2017, which do not include amounts for DSI systems as revenues are deferred until the end of the warranty period, are as follows:

<i>(in thousands)</i>	As of
	March 31, 2017
Balance, beginning of period	\$ 287
Warranties accrued, net	40
Consumption of warranty obligations accrued	(234)
Change in estimate related to previous warranties accrued	10
Balance, end of period	<u>\$ 103</u>

Included within Other current liabilities as of March 31, 2017 and Other long-term liabilities as of December 31, 2016 is the Company's asset retirement obligation. Changes in the Company's asset retirement obligations are as follows:

<i>(in thousands)</i>	<u>As of</u> <u>March 31,</u> <u>2017</u>
Asset retirement obligation, beginning of period	\$ 1,312
Accretion	16
Asset retirement obligations, end of period	<u>\$ 1,328</u>

Supplemental Condensed Consolidated Statements of Operations Information

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

<i>(in thousands)</i>	<u>Three Months Ended March 31,</u>	
	<u>2017</u>	<u>2016</u>
453A interest	\$ 466	\$ 791
Interest on RCM6 note payable, related party	—	263
Credit agreement interest	37	897
Other	190	13
	<u>\$ 693</u>	<u>\$ 1,964</u>

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

<i>(in thousands)</i>	<u>Three Months Ended</u>	
	<u>2017</u>	<u>2016</u>
Gain on sale of equity method investment	\$ —	\$ 2,078
Gain on settlement of note payable	—	869
Other	9	(9)
	<u>\$ 9</u>	<u>\$ 2,938</u>

Note 11 - 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 March 31, 2017, 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 March 31, 2017, 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 2016 Form 10-K, except as described below.
- Segment revenue includes the Company's equity method earnings and losses from the Company's equity method investments. Segment revenue also includes the Company's royalty earnings from Tinuum Group.
- Segment operating income (loss) includes the Company's equity method earnings and losses from the Company's equity method investments, royalty earnings from Tinuum Group (including depreciation and amortization expense) and gains related to sales of equity method investments. However, segment operating income (loss) excludes Payroll and benefits, Rent and occupancy, Legal and professional fees, and General and administrative ("Corporate general and administrative expenses") unless otherwise specifically included, as the Company does not allocate those amounts between segments.
- All items not included in operating income, except as noted below, are excluded from the RC and EC segments.

As of March 31, 2017 and December 31, 2016, substantially all of the Company's material assets are located in the U.S. and all significant customers are either U.S. companies or the U.S. Government. The following table presents the Company's operating segment results for the three months ended March 31, 2017 and 2016:

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Revenues:		
Refined Coal:		
Earnings in equity method investments	\$ 13,814	\$ 5,577
Royalties	1,755	1,189
	15,569	6,766
Emissions Control:		
Equipment sales	5,108	21,727
Chemicals	2,281	434
Consulting services	—	196
	7,389	22,357
Total segment reporting revenues	22,958	29,123
Adjustments to reconcile to reported revenues:		
Refined Coal:		
Earnings in equity method investments	(13,814)	(5,577)
Royalties	(1,755)	(1,189)
	(15,569)	(6,766)
Total reported revenues	\$ 7,389	\$ 22,357
Segment operating income:		
Refined Coal ⁽¹⁾	\$ 15,025	\$ 7,870
Emissions Control	273	4,631
Total segment operating income	\$ 15,298	\$ 12,501

(1) Included within the RC segment operating income for the three months ended March 31, 2016 is a \$2.1 million gain on the sale of RCM6 and for the three months ended March 31, 2017 and 2016, 453A interest expense of \$0.5 million and \$0.8 million, respectively, and interest expense related to the RCM6 note payable of zero and \$0.3 million, respectively.

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

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Segment operating income	\$ 15,298	\$ 12,501
Adjustments to reconcile to net income attributable to ADES		
Corporate payroll and benefits	(1,810)	(3,134)
Corporate rent and occupancy	(26)	(211)
Corporate legal and professional fees	(998)	(2,928)
Corporate general and administrative	(859)	(775)
Corporate depreciation and amortization	(207)	(116)
Corporate interest (expense) income, net	(224)	(910)
Other income (expense), net	2,900	2
Income tax expense	(5,386)	(53)
Net income	<u>\$ 8,688</u>	<u>\$ 4,376</u>

Corporate general and administrative expenses listed above 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.

Segment assets were as follows as of the dates presented:

<i>(in thousands)</i>	As of	
	March 31, 2017	December 31, 2016
Refined Coal	\$ 5,299	\$ 6,310
Emissions Control	33,227	24,551
All Other and Corporate	66,249	76,435
Consolidated	<u>\$ 104,775</u>	<u>\$ 107,296</u>

Note 12 - Subsequent Events

Unless disclosed elsewhere within the notes to the Condensed Consolidated Financial Statements, the following are the significant matters that occurred subsequent to March 31, 2017.

Rights Offering

On May 5, 2017, Board of Directors unanimously adopted a Tax Asset Protection Plan designed to protect the Company's ability to utilize its net operating losses and tax credits, which totaled approximately \$113 million as of December 31, 2016.

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.

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 and will expire on the earlier of (a) May 4, 2018, or (b) the date of the 2018 Annual Meeting of Stockholders. The Tax Asset Protection Plan will also expire at the beginning of a taxable year of the Company for which the Board of Directors determines that the Company has or will have no Tax Benefits (as defined in the Tax Asset Protection Plan). The Tax Asset Protection Plan may also be terminated earlier in accordance with the terms thereof.

Tender Offer

On May 8, 2017, the Company commenced a modified Dutch tender offer ("Tender Offer") to purchase for cash up to 925,000 shares of its 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. The Tender Offer is subject to the conditions set forth in the Company's Offer to Purchase, dated May 8, 2017 ("Offer to Purchase"). The Company expects the Tender Offer will expire on or about June 5, 2017 unless

extended or withdrawn and intends to fund the Tender Offer with cash on hand. The Tender Offer will allow all of the Company's stockholders to tender some or all of their shares of Common Stock at a price per share within a specific range as set in the Offer to Purchase, but the Company will select a single price per share to purchase up to 925,000 shares of Common Stock. All shares accepted in the Tender Offer will be purchased at the same price per share, and the Company reserves the right, pursuant to the Offer to Purchase, to purchase up to additional two percent of its outstanding shares of Common Stock. As of May 1, 2017, the Company had 22,294,573 shares of Common Stock outstanding.

The Company intends to designate the shares tendered in the Tender Offer ("Repurchased Shares") as "Treasury Stock" and record them at cost, and does expect to formally retire the Repurchased Shares.

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 on Form 10-Q and with the audited consolidated financial statements and the related notes of ADES included in our 2016 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 joint ventures, 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:

- Development and sale of technology to reduce emissions and improve operations of coal-fired boilers used for power generation and industrial processes; and
- Development and sale of equipment, specialty chemicals, consulting services and other products 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; and
- Through Tinum Group LLC ("Tinum Group"), an unconsolidated entity, the reduction of mercury and nitrogen oxide ("NO_x") emissions at select coal-fired power generators through the burning of refined coal ("RC") produced by RC facilities placed in service by Tinum Group. We benefit from Tinum Group's production and sale of RC, which lowers emissions and generates tax credits, as well as the revenue from selling or leasing RC facilities to tax equity investors. See the separately filed financial statements of Tinum Group and the other related RC entities within our 2016 Form 10-K.

Results of Operations

For the three months ended March 31, 2017, we recognized net income of \$8.7 million compared to net income of \$4.4 million for the three months ended March 31, 2016.

Generally, this improved performance during the three months ended March 31, 2017 as compared to the three months ended March 31, 2016 can be attributed to a combination of factors, including:

- Improved performance in our RC business segment, principally related to substantially higher distributions and equity earnings from our Tinum Group and Tinum Services, LLC ("Tinum Services") joint ventures;
- Across the board reductions in all categories of expenses, driven by restructuring activities in April and July 2016 and by a reduction in resources to complete the re-audit and restatement of prior financial statements (the "Restatement"), with such activities related to the Restatement being substantially completed by April 2016;

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.

Comparison of the Three Months Ended March 31, 2017 and 2016

Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the three months ended March 31, 2017 and 2016 is as follows:

<i>(in thousands, except percentages)</i>	Three Months Ended March 31,		Change	
	2017	2016	(\$)	(%)
Revenues:				
Equipment sales	\$ 5,108	\$ 21,727	\$ (16,619)	(76)%
Chemicals	2,281	434	1,847	426 %
Consulting services and other	—	196	(196)	(100)%
Total revenues	\$ 7,389	\$ 22,357	\$ (14,968)	(67)%
Operating expenses:				
Equipment sales cost of revenue, exclusive of depreciation and amortization	\$ 4,143	\$ 17,034	\$ (12,891)	(76)%
Chemicals cost of revenue, exclusive of depreciation and amortization	\$ 1,758	\$ 142	\$ 1,616	1,138 %
Consulting services cost of revenue, exclusive of depreciation and amortization	\$ —	\$ 135	\$ (135)	(100)%

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

During the three months ended March 31, 2017 and 2016, we entered into zero and four long-term (six months or longer) fixed price contracts to supply Activated Carbon Injection ("ACI") systems with aggregate contract values, net of change orders during the period, of zero and \$0.9 million, respectively. During the three months ended March 31, 2017, change orders negatively impacted contract revenue by \$0.1 million. The total value per contract may change due to the relative sizes of ACI systems and the contracts related thereto. During the three months ended March 31, 2017 and 2016, we completed three and ten ACI systems, recognizing revenues of \$2.9 million and \$14.6 million and cost of revenue of \$1.9 million and \$10.1 million, respectively.

During the three months ended March 31, 2017 and 2016, we did not enter into any long-term (six months or longer) fixed price contracts to supply Dry Sorbent Injection ("DSI") systems. During the three months ended March 31, 2016, change orders negatively impacted contract revenue by \$1.2 million. The aggregate contract values on existing contracts may change due to the relative sizes of DSI systems and the contracts related thereto. During the three months ended March 31, 2017 and 2016, we completed one and five DSI systems, recognizing revenues of \$2.1 million and \$7.0 million, respectively, and cost of revenue of \$2.2 million and \$6.8 million, respectively. Certain of the DSI system long-term fixed price contracts were expected to be completed with losses. During the three months ended March 31, 2016, we recorded \$0.4 million in loss provisions included in cost of revenue related to DSI system contracts.

The remaining changes to revenues and cost of revenue for the three months ended March 31, 2017 compared to the three months ended March 31, 2016 were due to other equipment sales.

Demand for ACI and DSI system contracts has historically been 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 expect a continued significant decline in the number of long-term fixed price contracts entered into going forward.

Chemicals and Chemicals cost of revenue

During the three months ended March 31, 2017 and 2016, revenues increased quarter over quarter primarily due to an overall increase in pounds of our chemicals sold, most significantly driven by higher sales of our M-Prove™ chemicals during the three months ended March 31, 2017 compared to the same quarter in 2016. Gross margins on sales of chemicals for the three months ended March 31, 2017 were lower than the comparable period in 2016 due to ongoing field testing with a large customer, which resulted in decreased margins during the testing period. We believe revenues will continue to increase in 2017 due to the full year financial impact of existing customers and a continued expansion of our customer base, but we believe that it is likely that gross margins on sales of chemicals for 2017 will be lower than in 2016 based on the nature of certain chemical sale contracts, which may include longer field testing time frames and may result in decreased margins, as we attempt to not only expand our customer base but also the volume size and duration of chemical sale arrangements. However, we believe longer term margins will be consistent with the full year 2016 performance.

Consulting services and Consulting services cost of revenue

We also provide consulting services related to emissions regulations. During the three months ended March 31, 2017 and 2016, revenues decreased quarter over quarter due to a decrease in the number of consulting service engagements performed. The decrease in the number of consulting services engagements was in part due to us no longer performing consulting services related to certain equipment systems previously installed. Due to diminishing market demand, we do not believe this revenue component will be material in the near term.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the segment discussion below and in Note 11 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 March 31, 2017 and 2016 is as follows:

<i>(in thousands, except percentages)</i>	Three Months Ended March 31,		Change	
	2017	2016	(\$)	(%)
Operating expenses:				
Payroll and benefits	\$ 2,182	\$ 3,802	\$ (1,620)	(43)%
Rent and occupancy	45	394	(349)	(89)%
Legal and professional fees	1,035	2,983	(1,948)	(65)%
General and administrative	1,263	745	518	70 %
Research and development, net	192	202	(10)	(5)%
Depreciation and amortization	482	231	251	109 %
	<u>\$ 5,199</u>	<u>\$ 8,357</u>	<u>\$ (3,158)</u>	<u>(38)%</u>

Payroll and benefits

Payroll and benefits expenses decreased during the three months ended March 31, 2017 compared to the same quarter in 2016 primarily due to a decrease in average headcount of approximately 64% quarter over quarter. Additionally, restructuring expenses decreased in connection with certain executive officers and employees impacted by management's alignment of the business with strategic objectives during 2016. During the three months ended March 31, 2017 and March 31, 2016, we recorded net restructuring charges of zero and \$0.3 million, respectively. In addition, bonuses decreased for the three months ended March 31, 2017 compared to the same quarter in 2016.

Rent and occupancy

Rent and occupancy expense decreased during the three months ended March 31, 2017 compared to the same quarter in 2016 primarily due to the acceleration of deferred rent and tenant improvement allowances in connection with the termination of the lease agreement of our former corporate office. Effective during the first quarter of 2017, we relocated our corporate office, which is expected to lower rent and occupancy expense for the remainder of 2017 compared to 2016.

Legal and professional fees

Legal and professional fees expenses decreased during the three months ended March 31, 2017 compared to the same quarter in 2016 as a result of the conclusion of the Restatement of our consolidated financial statements, which was substantially completed in April of 2016 and required significant professional resources. Expenses related to the Restatement during the three months ended March 31, 2017 and 2016 were zero and \$1.4 million respectively. Additional decreases for the three months ended March 31, 2017 were driven by a decrease in costs related to outsourced shared services costs, including accounting consultants, legal fees and audit fees.

General and administrative

General and administrative expense increased during the three months ended March 31, 2017 compared to the same quarter in 2016 primarily due to an increase in Board compensation for the 2016-2017 Board year, which was effective June 1, 2016, as well as an allowance recorded against a long-term receivable as of March 31, 2017. This increase is offset by a decrease in general operating expenses, including travel and professional expenses.

Research and development, net

Research and development expense decreased during the three months ended March 31, 2017 compared to the same quarter in 2016 due to a decrease in research and development activities as we have concluded all material research and development ("R&D") activities except for continued product development necessary for our ongoing business.

Depreciation and amortization

Depreciation and amortization expense increased during the three months ended March 31, 2017 compared to the same quarter in 2016 due to acceleration of depreciation related to certain assets, including leasehold improvements and office furniture, which were disposed of 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 three months ended March 31, 2017 and 2016 is as follows:

<i>(in thousands, except percentages)</i>	Three Months Ended March 31,		Change	
	2017	2016	(\$)	(%)
Other income (expense):				
Earnings from equity method investments	\$ 13,814	\$ 5,577	\$ 8,237	148 %
Royalties, related party	1,755	1,189	566	48 %
Interest expense	(693)	(1,964)	1,271	(65)%
Revision in estimated royalty indemnity liability	2,900	—	2,900	*
Other income	9	2,938	(2,929)	(100)%
Total other income	\$ 17,785	\$ 7,740	\$ 10,045	130 %

* 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 :

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Earnings from Tinium Group	\$ 13,175	\$ 5,443
Earnings from Tinium Services	639	691
Loss from RCM6	—	(557)
Earnings from equity method investments	\$ 13,814	\$ 5,577

Earnings from equity method investments, and changes related thereto, are impacted by our equity method investees: Tinium Group, Tinium Services and RCM6 (through the date of the sale of our interest in RCM6 on March 3, 2016). Earnings from equity method investments increased during the three months ended March 31, 2017 compared to the same quarter in 2016 due to an increase in cash distributions in excess of our investment balance from Tinium Group.

During the three months ended March 31, 2017, we recognized \$13.2 million in equity income from Tinium Group compared to our proportionate share of Tinium Group's net income of \$10.5 million for the period. During the three months ended March 31, 2016, we recognized \$5.4 million in equity earnings from Tinium Group compared to our proportionate share of Tinium Group's net income of \$8.7 million for the period. The difference between our pro-rata share of Tinium Group's net income and our earnings from our Tinium Group equity method investment as reported on the Condensed Consolidated Statements of Operations is the result of previously received distributions from Tinium 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 Tinum Group was zero as of March 31, 2017, as cumulative cash distributions received from Tinum Group exceeded our pro-rata share of cumulative earnings in Tinum Group. The carrying value of our investment in Tinum Group will remain zero as long as the cumulative amount of distributions received from Tinum Group continues to exceed our cumulative pro-rata share of Tinum Group's net income. For quarterly periods during which the ending balance of our investment in Tinum Group is zero, we only recognize equity earnings from Tinum Group to the extent that cash distributions are received from Tinum 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 Tinum Group exceeds cumulative cash distributions received), we recognize our pro-rata share of Tinum Group's earnings (losses) 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 March 31, 2017 and 2016, Tinum Group had 14 and 13 invested RC facilities, respectively, that were generating rental income. Tinum Group did not have any retained RC facilities that were generating operating income or losses, or Internal Revenue Code Section 45 tax credits ("PTCs") and other tax benefits as of March 31, 2017 and 2016.

Equity earnings from our interest in Tinum Services decreased by \$0.1 million during the three months ended March 31, 2017 compared to the three months ended March 31, 2016. Tinum Services provided operating and maintenance services to 14 and 13 operating RC facilities, respectively. Tinum 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.

During February 2014, we purchased a membership interest in RCM6 and recognized in all subsequent reporting periods equity method losses resulting from the operation of the RC facility owned by RCM6; although, RCM6 generated tax credits and tax benefits that are available to us. Equity losses from our interest in RCM6 decreased during the three months ended March 31, 2017 compared to the three months ended March 31, 2016 due to the sale of our 24.95% membership interest in RCM6 on March 3, 2016 for a cash payment of \$1.8 million and assumption of the outstanding note payable made by us in connection with our purchase of RCM6 membership interests from Tinum Group in February 2014. As a result of the sale, we are no longer a member of RCM6 and are no longer subject to any quarterly capital calls and variable payments to RCM6.

We earned the following tax credits that may be available for future benefit related to the production of RC from the operation of retained RC facilities:

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Section 45 tax credits earned	\$ 63	\$ 2,711

The decrease in tax credits earned during the three months ended March 31, 2017 compared to the three months ended March 31, 2016 was due to suspending operations on retained facilities, as well as the sale of RCM6 in March 2016. Tax credits earned during the three months ended March 31, 2017 relate to the temporary retained operation of an RC facility prior to its lease/sale to a tax equity investor. Additional information related to our equity method investees is included in Note 3 of the Condensed Consolidated Financial Statements.

Royalties, related party

During the three months ended March 31, 2017 and 2016, there were 3.4 million tons and 3.3 million tons, respectively, of RC produced using M-45™ and M-45-PC™ technologies, which Tinum Group licenses from us. The increase in royalty income was primarily driven by an increase in the effective rate per ton during the three months ended March 31, 2017 compared to the same quarter in 2016, which was primarily due to fixed lease payments from two facilities that temporarily suspended operations during the current quarter. We anticipate the effective royalty income per ton to decrease closer to historical levels during the remainder of 2017.

Interest expense

During the three months ended March 31, 2017, interest expense decreased \$1.3 million compared to the three months ended March 31, 2016 and was due to interest expense incurred during the three months ended March 31, 2016 related to a credit agreement for a \$15.0 million short-term loan with a related party (the "Credit Agreement"), which was entered into during the fourth quarter of 2015 and was paid off as of June 30, 2016. Additional decreases in interest expense related to Internal Revenue Code section 453A ("453A"), which requires taxpayers using the installment method for income tax purposes to pay an interest charge on the portion of the tax liability that is deferred under the installment method, and the elimination of the

RCM6 note payable in March 2016 . These decreases were \$0.3 million and \$0.3 million , respectively, for the three months ended March 31, 2017 compared to the three months ended March 31, 2016 .

Other

Gain on sale of equity method investment

On March 3, 2016, we sold our 24.95% membership interest in RCM6 for a cash payment of \$1.8 million and the assumption by the buyer of a note payable, which we entered into in connection with our purchase of RCM6 membership interests from Tinum Group in February 2014. The outstanding balance on the note payable at the time of the sale was \$13.2 million . With the sale of our membership interest in RCM6, we recognized a gain on the sale of \$2.1 million for the three months ended March 31, 2016 , which is included within the Other line item in the Condensed Consolidated Statements of Operations.

Gain on settlement of note payable

During the first quarter of 2016, we entered into an agreement to settle the remaining amounts owed to the DSI Business Owner, resulting in a gain of approximately \$0.9 million.

Income tax expense

For the three months ended March 31, 2017 , we recorded income tax expense of \$5.4 million compared to income tax expense of \$0.1 million for three months ended March 31, 2016 . The income tax expense recorded for the three months ended March 31, 2017 was comprised of estimated federal income tax expense of \$5.2 million and estimated state income tax expense of \$0.2 million .

For the three months ended March 31, 2016 , we did not record any federal income tax expense primarily due to the utilization of federal net operating losses and the Company's full valuation allowance against federal net operating losses and federal tax credits. Income tax expense for this quarter included only state income tax expense.

Business Segments

As of March 31, 2017, 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.
- Segment revenue includes our equity method earnings and losses from our equity method investments. Segment revenue also includes our royalty earnings from Tinum Group and income related to sales-type leases.
- Segment operating income (loss) includes our equity method earnings and losses from our equity method investments, royalty earnings from Tinum Group and gains related to sales of equity method investments. However, segment operating income (loss) excludes Payroll and benefits , Rent and occupancy , Legal and professional fees , and General and administrative ("Corporate general and administrative expenses") unless otherwise specifically included, as we do not allocate those amounts between segments.
- All items not included in operating income, except as noted below, 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 Tinum Group, Tinum Services and through March 3, 2016, RCM6. Segment revenues include our equity method earnings (losses) from our equity method investments and royalty earnings from Tinum Group. These earnings are included within the Earnings from equity method investments and Royalties, related party line items in the Condensed Consolidated Statements of Operations . Key drivers to 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 includes revenues and related expenses from the sale of ACI and DSI equipment systems, chemical sales, consulting services and other sales related to the reduction of emissions in the coal-fired electric generation process and the electric utility industry. These amounts are included within the respective revenue and cost of sales 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 months ended March 31, 2017 and 2016 :

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Revenues:		
Refined Coal:		
Earnings in equity method investments	\$ 13,814	\$ 5,577
Royalties	1,755	1,189
	<u>15,569</u>	<u>6,766</u>
Emissions Control:		
Equipment sales	5,108	21,727
Chemicals	2,281	434
Consulting services	—	196
	<u>7,389</u>	<u>22,357</u>
Total segment reporting revenues	<u>22,958</u>	<u>29,123</u>
Adjustments to reconcile to reported revenues:		
Refined Coal:		
Earnings in equity method investments	(13,814)	(5,577)
Royalties	(1,755)	(1,189)
	<u>(15,569)</u>	<u>(6,766)</u>
Total reported revenues	<u>\$ 7,389</u>	<u>\$ 22,357</u>
Segment operating income:		
Refined Coal ⁽¹⁾	\$ 15,025	\$ 7,870
Emissions Control	273	4,631
Total segment operating income	<u>\$ 15,298</u>	<u>\$ 12,501</u>

(1) Included within the RC segment operating income for the three months ended March 31, 2016 is a \$2.1 million gain on the sale of RCM6 and, for the three months ended March 31, 2017 and 2016 , 453A interest expense of \$0.5 million and \$0.8 million , respectively, and interest expense related to the RCM6 note payable of zero and \$0.3 million , respectively.

RC

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

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Earnings from Tium Group	\$ 13,175	\$ 5,443
Earnings from Tium Services	639	691
Loss from RCM6	—	(557)
Earnings from equity method investments	<u>\$ 13,814</u>	<u>\$ 5,577</u>

RC earnings increased primarily due to increased equity earnings in Tinuum Group during the three months ended March 31, 2017 compared to the same quarter in 2016, as presented above. For the three months ended March 31, 2017, Tinuum Group consolidated earnings increased \$3.9 million compared to the same quarter in 2016 due to a decrease in cost of sales related to chemicals and royalties as well as a decrease in operating expenses related to the suspension of operations of all retained RC facilities in 2016, offset by lower lease revenues. Distributions received from Tinuum Group for the three months ended March 31, 2017 were recorded directly to earnings, as our investment was in a memo account as discussed in Note 3. During the same quarter in 2016, a portion of the distributions offset the balance of the investment, resulting in lower amounts recorded to earnings.

As discussed above and in Note 3 of the Condensed Consolidated Financial Statements, our earnings in Tinuum Group may not equal our pro-rata share due to the accounting related to our equity method investment. As such, our earnings in Tinuum Group increased by \$7.7 million during the three months ended March 31, 2017 compared to the same quarter in 2016 due to \$13.2 million of cash distributions received that were in excess of our pro-rata share of cumulative earnings in Tinuum Group.

RC earnings were positively impacted during the three months ended March 31, 2017 due to lower operating losses associated with our RCM6 equity method investment, which was sold during the first quarter of 2016. Earnings from Tinuum Services remained consistent between the two periods.

RC earnings were positively impacted during the three months ended March 31, 2017 by a increase in royalties related to Tinuum Group's use of our M-45TM and M-45-PCTM technologies ("M-45 License"). During the three months ended March 31, 2017 and 2016, there were 3.4 million tons and 3.3 million tons, respectively, of RC produced using the M-45 License. The increase in Royalty revenue was driven by an increase in average royalty per ton, as well as fixed rent payments from two facilities that were not operational for a portion of the current quarter.

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.

EC segment operating income decreased during the three months ended March 31, 2017 compared to the three months ended March 31, 2016 primarily due to the decrease in revenue, as discussed above within the consolidated results. The decrease in EC operating income was offset by significant decreases in operating expenses quarter over quarter. Specifically, Payroll and benefits and Legal and professional fees decreased quarter over quarter by \$1.6 million and \$1.9 million, respectively. These decreases were due to decreased headcount quarter over quarter, which was largely due to management restructuring and the closure of our fabrication facility. Offsetting these expense decreases quarter over quarter was the settlement of the remaining amounts owed to the former DSI Business Owner, resulting in a reduction of segment expenses of \$0.9 million during the three months ended March 31, 2016.

Liquidity and Capital Resources

Overview of Factors Affecting Our Liquidity

During the three months ended March 31, 2017, 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" or "LOC").

Our principal sources of liquidity include:

- cash on hand;
- cash provided by our operations, including the release of restricted cash;
- distributions from Tinuum Group and Tinuum Services;
- royalty payments from Tinuum Group; and
- our Line of Credit

Our principal uses of liquidity during the three months ended March 31, 2017 included:

- our business operating expenses;
- repayments on our Line of Credit; and
- delivering on our existing contracts and customer commitments.

During the fourth quarter of 2016, we amended our Line of Credit ("Tenth Amendment") with the Lender, which included the following: (1) an increase from \$10 million to \$15 million; (2) an extension in the maturity date to September 30, 2017; (3) the ability to use the Line of Credit as collateral (in place of restricted cash) for letters of credit ("LC's") related to equipment projects, the Royalty Award and certain other agreements; (4) providing additional collateral for amounts due to the Company from an additional RC facility lease, which amounts also now factor into the borrowing base limitation; and (5) amendment of certain financial covenants. Financial covenants require the Company to maintain a deposit account with the Lender with a minimum balance of \$6.0 million initially and \$3.0 million after certain conditions are met, and to maintain minimum trailing twelve month EBITDA (earnings before interest, taxes, depreciation and amortization as defined in the Tenth Amendment) of \$24.0 million. As a result of certain conditions being met during the three months ended March 31, 2017, the Company is currently required to maintain a deposit balance of \$3.0 million.

As of March 31, 2017, there were no outstanding borrowings under the Line of Credit, however, LC's in the aggregate amount of \$11.2 million were secured under the Line of Credit, resulting in borrowing availability of \$3.8 million. In March 2017, pursuant to amendments contained in the Tenth Amendment, we provided two LC's ("Royalty Award Letters of Credit") of \$3.5 million and \$1.7 million, respectively, related to obligations due under the Royalty Award that were secured under the Line of Credit. The Royalty Award Letters of Credit replaced LC's in place at another financial institution ("Financial Institution") totaling \$7.2 million for obligations due under the Royalty Award, which were secured by restricted cash held at the Financial Institution. Although the Royalty Award Letters of Credit replaced the previous LC's in place at the other Financial Institution and was secured under the Line of Credit as of March 31, 2017, \$5.5 million continued to be held in restricted cash at the Financial Institution as of March 31, 2017, pending the release from the LC counterparty. In April 2017, \$5.5 million of restricted cash was released to us and transferred to our bank account held at the Lender.

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. We are contesting the draw on this LC and are pursuing actions to recover this amount from the customer.

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 Tinnuum Group and distributions from Tinnuum Group and Tinnuum Services, and increasing our share of the market for EC products, and, in particular EC chemicals revenues. Increased distributions from Tinnuum Group will likely be dependent upon both preserving existing contractual relationships and the securing of additional tax equity investors for those Tinnuum Group facilities that are currently not operating.

Sources and Uses of Cash

Three Months Ended March 31, 2017 vs. Three Months Ended March 31, 2016

Cash and cash equivalents increased from \$13.2 million as of December 31, 2016 to \$28.4 million as of March 31, 2017. The following table summarizes our cash flows for the three months ended March 31, 2017 and 2016, respectively:

<i>(in thousands)</i>	Three Months Ended March 31,		Change
	2017	2016	
Cash and cash equivalents and restricted cash provided by (used in):			
Operating activities	\$ (2,820)	\$ (1,858)	\$ (962)
Investing activities	13,033	1,786	11,247
Financing activities	(179)	(3,659)	3,480
Net change in cash and cash equivalents and restricted cash	\$ 10,034	\$ (3,731)	\$ 13,765

Additionally, the following table summarizes the cash flows of Tinum Group, whose cash distributions to us most significantly impact our consolidated cash flow results, for the three months ended March 31, 2017 and 2016, respectively:

<i>(in thousands)</i>	Three Months Ended March 31,	
	2017	2016
Tinum Group cash and cash equivalents, beginning of year	\$ 10,897	\$ 6,183
Cash provided by (used in):		
Operating activities	16,753	10,140
Investing activities	(1,796)	(2,029)
Financing activities	(15,140)	(4,405)
Net change in cash and cash equivalents	(183)	3,706
Tinum Group cash and cash equivalents, end of period	\$ 10,714	\$ 9,889

Cash flow from operating activities

Cash flows used in operating activities reflect operating losses as well as the timing of our working capital requirements, in addition to other items discussed herein.

Our cash spend for legal and professional fees for the three months ended March 31, 2017 decreased by \$4.1 million compared to the same quarter in 2016 as a result of the conclusion of the Restatement of our consolidated financial statements in April of 2016 as discussed above. Cash spend related to the Restatement decreased by \$1.4 million from the three months ended March 31, 2016.

Deferred revenue and project costs resulted in a change in a use of operating cash flows on a net basis of \$1.7 million due to production of ACI and DSI equipment systems.

Our operating cash flow may also be significantly impacted by distributions from our equity method investees, which are classified as either a return on investment within operating cash flows or a return in excess of investment basis within investing cash flows. For the three months ended March 31, 2017, we received \$9.8 million more in total cash distributions from equity method investees than we did for the three months ended March 31, 2016 due to the suspension of operations of retained RC facilities that began in 2016, a decrease in RC facility installations by Tinum Group that began in 2016 and an increase in invested facilities that commenced during the second half of 2016. Distributions received from our equity method investees reported as return on investment within operating cash flows decreased by \$3.4 million for the three months ended March 31, 2017 compared to the three months ended March 31, 2016 due to all distributions received from Tinum Group being reported under investing cash flows for the three months ended March 31, 2017. All distributions received from Tinum Services were reported as return on investment within operating cash flows for the three months ended March 31, 2017 and 2016.

Cash flow from investing activities

Distributions received from our equity method investees reported as return in excess of investment basis within investing cash flows increased by \$13.2 million for the three months ended March 31, 2017 compared to the three months ended March 31, 2016 due to an increase in distributions received from Tinum Group, all of which were reported under investing cash flows for the three months ended March 31, 2017.

Proceeds from sale of equity method investment

In March 2016, we sold our investment in RCM6. Proceeds from the sale included \$1.8 million in cash and the assumption by the buyer of all unpaid amounts outstanding under the original note payable.

Cash flow from financing activities

Short-term borrowings

During the three months ended March 31, 2016, we repaid \$1.8 million of borrowings under the Credit Agreement, and we paid \$0.6 million in debt issuance costs related to the Second Amendment of the Credit Agreement. Additionally, during the three months ended March 31, 2016, we used \$1.2 million of cash for repayments of principal on the RCM6 and the DSI Business Owner notes payable, as described in Note 5 of the Condensed Consolidated Financial Statements.

Equity award activity

During the three months ended March 31, 2017 and 2016, we used \$0.2 million and \$0.1 million, respectively, for the repurchase of shares to satisfy tax withholdings upon the vesting of equity based awards.

Contractual Obligations

During the three months ended March 31, 2017, there were no material changes to our contractual obligations outside of the ordinary course of business from those reported as of December 31, 2016, except for a reduction in the estimated obligations due under the Royalty Award, as described in Note 6 of the Condensed Consolidated Financial Statements.

Off-Balance Sheet Arrangements

During the three months ended March 31, 2017, we did not engage in any off-balance sheet arrangements except those discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2016 10-K, which included operating leases, LC's and future 453A interest obligations.

Critical Accounting Policies and Estimates

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 our 2016 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 three months ended March 31, 2017 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) expected dissolution and winding down of certain of our wholly-owned subsidiaries;
- (h) future level of research and development activities;
- (i) the effectiveness of our technologies and the benefits they provide;
- (j) Tinnium Group's ability to profitably sell and/or lease additional RC facilities and/or RC facilities that may be returned to Tinnium Group, or recognize the tax benefits from production and sale of RC on retained RC facilities;
- (k) probability of any loss occurring with respect to certain guarantees made by Tinnium Group;
- (l) the timing of awards of, and work and related testing under, our contracts and agreements and their value;
- (m) 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;
- (n) the outcome of current and pending legal proceedings;
- (o) awards of patents designed to protect our proprietary technologies both in the U.S. and other countries;
- (p) the materiality of any future adjustments to previously recorded reimbursements as a result of the DOE audits and the amount of contributions from the DOE and others towards planned project construction and demonstrations; and
- (q) 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.

Our expectations are based on certain assumptions, including without limitation, that:

- (a) coal will continue to be a major source of fuel for electrical generation in the United States;
- (b) the IRS will allow the production and sale of RC to qualify for Section 45 tax credits;
- (c) we will continue as a key supplier of equipment, chemicals and services to the coal-fired power generation industry as it seeks to implement reduction of mercury emissions;

- (d) current environmental laws and regulations requiring reduction of mercury from coal-fired boiler flue gases will not be materially weakened or repealed by courts or legislation in the future;
- (e) we will be able to meet any performance guarantees we make and continue to meet our other obligations under contracts;
- (f) we will be able to obtain adequate capital and personnel resources to meet our operating needs and to fund anticipated growth and our indemnity obligations;
- (g) we will be able to establish and retain key business relationships with other companies;
- (h) orders we anticipate receiving will be received;
- (i) governmental audits of our costs incurred under DOE contracts will not result in material adjustments to amounts we have previously received under those contracts;
- (j) we will be able to formulate new chemicals and blends that will be useful to, and accepted by, the coal-fired boiler power generation business;
- (k) we will be able to effectively compete against others;
- (l) we will be able to meet any technical requirements of projects we undertake;
- (m) Tinuum Group will be able to sell or lease the remaining RC facilities, including RC facilities that may be returned to Tinuum Group, to third party investors; and
- (n) we will be able to utilize our portion of the Section 45 tax credits generated by production and sale of RC from retained facilities.

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 US 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; 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 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 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

The Company is most significantly exposed to interest rate risk related to its obligations to pay 453A interest to the IRS. Additionally, the Company is currently exposed to interest rate risk related to cash equivalents and restricted cash subject to variable interest rates. There have been no material changes from those reported in our 2016 Form 10-K.

Foreign Currency Risk

There have been no material changes from those reported in our 2016 Form 10-K.

Commodity Price Risk

There have been no material changes from those reported in our 2016 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 March 31, 2017 .

Changes in Internal Control Over Financial Reporting

There has been no change 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 March 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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 except those matters reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and Note 6 in the Condensed Consolidated Financial Statements under Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors

There are no material updates to our risk factors as disclosed in our 2016 Form 10-K.

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

None.

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
31.1	Certification of Chief Executive Officer and 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 Chief 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.

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)

May 8, 2017

By: /s/ L. Heath Sampson
L. Heath Sampson
President, Chief Executive Officer and Treasurer
(Principal Executive and Financial Officer)

May 8, 2017

By: /s/ Greg P. Marken
Greg P. Marken
Chief Accounting Officer and Secretary
(Principal Accounting Officer)

Pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as Amended

I, L. Heath Sampson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Advanced Emissions Solutions, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 8, 2017

/s/ L. Heath Sampson

L. Heath Sampson

President, Chief Executive Officer and Treasurer

(Principal Executive and Financial Officer)

Certification

Pursuant to

18 U.S.C. Section 1350,

as Adopted Pursuant to

Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report on Form 10-Q of Advanced Emissions Solutions, Inc. (the "Company") for the quarterly period ended March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), L. Heath Sampson, as the Principal Executive and Financial Officer of the Company, hereby certifies, pursuant to and solely for the purpose of 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of his knowledge and belief, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ L. Heath Sampson

L. Heath Sampson

President, Chief Executive Officer and Treasurer

(Principal Executive and Financial Officer)

May 8, 2017