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Advanced Emissions Solutions, Inc.
Form 10-Q
November 08, 2016

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 September 30, 2016

or
TRANSITION REPORT PURSUANT TO 13 OR 15(d) OF THE EXCHANGE ACT OF 1934

For the transition period from to
Commission File Number: 001-37822

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

Delaware 27-5472457
(State or other jurisdiction of (I.R.S. Employer
incorporation or organization) Identification No.)
9135 South Ridgeline Boulevard, Suite 200, Highlands Ranch CO, 80129
(Address of principal executive offices) (Zip Code)
(720) 598-3500
(Registrant's telephone number, including area code)
Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ 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. (Check one):

Large accelerated filer ☐ Accelerated filer ☒

Non-accelerated filer ☐ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act. (Check one): 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 November 1, 2016
Common stock, par value \$0.001 per share	22,002,235

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Part I. – FINANCIAL INFORMATION

Item 1. Consolidated Financial Statements

Advanced Emissions Solutions, Inc. and Subsidiaries

Condensed Consolidated Balance Sheets

(Unaudited)

	As of	
	September 30, 2016	December 31, 2015
(in thousands, except share data)		
ASSETS		
Current assets:		
Cash and cash equivalents	\$7,603	\$ 9,265
Receivables, net	12,008	8,361
Receivables, related parties, net	1,376	1,918
Restricted cash	4,019	728
Costs in excess of billings on uncompleted contracts	1,050	2,137
Prepaid expenses and other assets	1,548	2,306
Total current assets	27,604	24,715
Restricted cash, long-term	4,750	10,980
Property and equipment, net of accumulated depreciation of \$2,577 and \$4,557, respectively	1,062	2,040
Investment securities, restricted, long-term	—	336
Cost method investment	2,776	2,776
Equity method investments	3,091	17,232
Other assets	1,260	2,696
Total Assets	\$40,543	\$ 60,775
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$2,337	\$ 6,174
Accrued payroll and related liabilities	2,763	5,800
Current portion of notes payable, related parties	—	1,837
Billings in excess of costs on uncompleted contracts	4,726	9,708
Short-term borrowings, net of discount and deferred loan costs, related party	—	12,676
Legal settlements and accruals	12,448	6,502
Other current liabilities	6,703	7,395
Total current liabilities	28,977	50,092
Long-term portion of notes payable, related party	—	13,512
Legal settlements and accruals, long-term	9,305	13,797
Other long-term liabilities	2,552	8,352
Total Liabilities	40,834	85,753
Commitments and contingencies (Note 8)		
Stockholders' deficit:		
Preferred stock: par value of \$.001 and no par value per share, respectively, 50,000,000 shares authorized, none outstanding	—	—
Common stock: par value of \$.001 per share, 100,000,000 shares authorized, 22,271,525 and 21,943,872 shares issued, and 22,001,585 and 21,809,164 shares outstanding at September 30, 2016 and December 31, 2015, respectively	22	22
Additional paid-in capital	118,868	116,029
Accumulated deficit	(119,181)	(141,029)
Total stockholders' deficit	(291)	(24,978)
Total Liabilities and Stockholders' Deficit	\$40,543	\$ 60,775

See Notes to the Condensed Consolidated Financial Statements.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share data and percentages)	2016	2015	2016	2015
Revenues:				
Equipment sales	\$ 14,869	\$ 12,088	\$ 44,788	\$ 47,439
Chemicals	670	132	1,717	749
Consulting services and other	171	665	492	1,349
Total revenues	15,710	12,885	46,997	49,537
Operating expenses:				
Equipment sales cost of revenue, exclusive of depreciation and amortization	12,704	9,914	35,175	38,662
Chemicals cost of revenue, exclusive of depreciation and amortization	469	105	865	383
Consulting services cost of revenue, exclusive of depreciation and amortization	86	591	299	1,282
Payroll and benefits	2,809	4,445	10,567	19,102
Rent and occupancy	508	596	1,534	1,828
Legal and professional fees	1,615	3,424	6,581	11,545
General and administrative	818	1,249	2,920	4,635
Research and development, net	(524)	2,022	(667)	5,133
Depreciation and amortization	138	528	593	1,632
Total operating expenses	18,623	22,874	57,867	84,202
Operating loss	(2,913)	(9,989)	(10,870)	(34,665)
Other income (expense):				
Earnings (loss) from equity method investments	10,735	(41)	30,066	5,133
Royalties, related party	2,064	3,273	3,922	7,767
Interest income	149	2	267	20
Interest expense	(969)	(1,778)	(4,496)	(5,347)
Gain on sale of equity method investment	—	—	2,078	—
Gain on settlement of note payable and licensed technology	—	—	869	—
Other	1,129	(77)	746	10
Total other income	13,108	1,379	33,452	7,583
Income (loss) before income tax expense	10,195	(8,610)	22,582	(27,082)
Income tax expense	583	44	734	151
Net income (loss)	\$ 9,612	\$ (8,654)	\$ 21,848	\$ (27,233)
Earnings (loss) per common share (Note 1):				
Basic	\$ 0.44	\$ (0.40)	\$ 0.99	\$ (1.24)
Diluted	\$ 0.43	\$ (0.40)	\$ 0.97	\$ (1.24)
Weighted-average number of common shares outstanding:				
Basic	21,740	21,687	21,926	21,757
Diluted	22,098	21,687	22,209	21,757

See Notes to the Condensed Consolidated Financial Statements.

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

	Nine Months Ended September 30,	
(in thousands)	2016	2015
Cash flows from operating activities		
Net income (loss)	\$21,848	\$(27,233)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	593	1,632
Amortization of debt issuance costs	1,152	75
Impairment of property, equipment, inventory and intangibles	517	2,515
Interest costs added to principal balance of notes payable	—	946
Share-based compensation expense	2,238	6,096
Earnings from equity method investments	(30,066)	(5,133)
Gain on sale of equity method investment	(2,078)	—
Gain on settlement of note payable, licensed technology, and sales-type lease	(1,910)	—
Other non-cash items, net	61	770
Changes in operating assets and liabilities, net of effects of acquired businesses:		
Receivables	(3,677)	7,579
Related party receivables	541	(752)
Prepaid expenses and other assets	831	(1,134)
Costs incurred on uncompleted contracts	28,575	4,719
Restricted cash	3,488	1,690
Other long-term assets	961	144
Accounts payable	(3,837)	1,414
Accrued payroll and related liabilities	(2,245)	1,161
Other current liabilities	(2,094)	1,624
Billings on uncompleted contracts	(32,469)	(7,256)
Advance deposit, related party	(1,306)	(2,586)
Other long-term liabilities	(1,661)	98
Legal settlements and accruals	1,454	(2,528)
Distributions from equity method investees, return on investment	6,850	2,519
Net cash used in operating activities	(12,234)	(13,640)

	Nine Months Ended September 30,	
(in thousands)	2016	2015
Cash flows from investing activities		
Maturity of investment securities, restricted	336	—
Increase in restricted cash	(550)	(2,100)
Acquisition of property and equipment, net	(147)	(437)
Advance on note receivable	—	(500)
Acquisition of business	—	(2,124)
Purchase of and contributions to equity method investees	(223)	(1,083)
Proceeds from sale of equity method investment	1,773	—
Distributions from equity method investees in excess of cumulative earnings	24,650	4,730
Net cash provided by (used in) investing activities	25,839	(1,514)
Cash flows from financing activities		
Repayments on short-term borrowings, related party	(13,250)	—
Repayments on notes payable, related party	(1,246)	(1,166)
Short-term borrowing loan costs	(579)	—
Repurchase of shares to satisfy tax withholdings	(192)	(276)
Net cash used in financing activities	(15,267)	(1,442)
Decrease in Cash and Cash Equivalents	(1,662)	(16,596)
Cash and Cash Equivalents, beginning of period	9,265	25,181
Cash and Cash Equivalents, end of period	\$7,603	\$8,585
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$2,899	\$5,335
Cash paid for income taxes	\$46	\$186
Supplemental disclosure of non-cash investing and financing activities:		
Stock award reclassification (liability to equity)	\$899	\$—
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"), a Delaware corporation with its principal office located in Highlands Ranch, Colorado, is principally engaged in providing environmental and emissions control equipment, technologies and specialty chemicals to the coal-burning electric power generation industry. Although the Company has historically operated at a net loss, 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 Tinnuum Group, LLC, a Colorado limited liability company ("Tinnuum Group") (f/k/a Clean Coal Solutions, LLC). Such technologies allow Tinnuum Group to provide their customers with various solutions to enhance combustion and reduced emissions of nitrogen oxide ("NO_x") and mercury from coal burned to generate electrical power. The Company's sales occur principally throughout the United States. See Note 12 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 are presented on a consolidated basis comprising ADES and its direct and indirect, wholly-owned subsidiaries: ADA-ES, Inc. ("ADA"), a Colorado corporation; BCSI, LLC ("BCSI"), a Delaware limited liability company; Advanced Clean Energy Solutions, LLC ("ACES"), a Delaware limited liability company; ADEquity, LLC ("ADEquity"), a Delaware limited liability company; ADA Environmental Solutions, LLC ("ADA LLC"), a Colorado limited liability company; ADA Intellectual Property, LLC ("ADA IP"), a Colorado limited liability company; ADA-RCM6, LLC ("ADA-RCM6"), a Colorado limited liability company; ADA Analytics, LLC, a Delaware limited liability company and ADA Analytics Israel Ltd. (collectively with ADA Analytics, LLC, "ADA Analytics"), an Israel limited liability company. ADA LLC and ADA IP had no operations for the three and nine months ended September 30, 2016, nor during the year ended December 31, 2015.

Included within the unaudited Condensed Consolidated Financial Statements of ADES in this quarterly report are its investments, Tinnuum Group and Tinnuum Services, LLC ("Tinnuum Services") (f/k/a Clean Coal Solutions Services, LLC), which are accounted for using the equity method of accounting. As discussed in Note 4, the Company sold its equity investment in RMC6, LLC ("RMC6") in March 2016, which was also accounted for using the equity method prior to the sale.

During 2015, the Company elected to cease the operations of ADA Analytics. The Company anticipates that ADA Analytics will be legally dissolved during 2017. In addition, the Company terminated its manufacturing operations, conducted under BCSI, effective as of the end of 2015. The Company anticipates that BCSI will eventually be legally dissolved upon the winding down of its remaining manufacturing operations, commitments and obligations. The Company will continue to serve the Dry Sorbent Injection ("DSI") market, which BCSI previously served, through ADA.

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 as of and for the three and nine months ended September 30, 2016 and 2015.

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, 2015. Significant accounting policies disclosed therein have not changed.

Liquidity

During the three months ended September 30, 2016, the Company's cash and cash equivalents reversed the negative trends of prior quarters and increased by \$5.4 million, primarily due to a continued reduction in operating cost levels, coupled with (1) distributions from Tinnuum Group; (2) royalty payments related to Tinnuum Group's use of our M-45TM technologies; and (3) reimbursements received related to the close out of our last material Department of Energy ("DOE") research and development ("R&D") contract. Performance in this period also reflects the elimination of debt service and principal payments on the

previously existing short term loan, discussed in Note 8 (the "Credit Agreement"), as it was fully paid as of June 30, 2016, which was notable among a number of significant drivers of the Company's decreasing cash balances in prior quarters. The reduction in operating cost levels resulted in large part as a result of the Company completing the re-audit and restatement of prior financial statements (the "Restatement") and becoming current with its regulatory filings by June 30, 2016, as well as from the Company's continuing efforts to streamline its operations and reduce fixed and variable operating expenses.

As of September 30, 2016, the Company had negative working capital of \$1.4 million. During the three and nine months ended September 30, 2016, the Company's working capital increased by \$9.8 million and \$24.0 million, respectively, primarily due to: (1) net income, which was driven in large part by the performance from our Refined Coal ("RC") segment during this period; (2) distributions and royalty payments from Tinum Group and Tinum Services due in part to a reduction in operated retained RC facilities; (3) proceeds received in the first quarter of 2016 from the sale of our interest in RCM6 and the elimination of the related note payable; and (4) Settlement in the first quarter of 2016 of our note payable with the sole owner of companies from which BCSI acquired its assets (the "DSI Business Owner"). Net income during these periods also reflects substantial reductions in operating expenses due to a number of strategic cost saving initiatives. As of September 30, 2016, the majority of the historical factors that have contributed to a deterioration of our working capital in prior quarters have been abated, and the Company does not foresee at this point circumstances that would likely result in a future, substantial deterioration of its working capital that would not otherwise be mitigated by improving operating performance.

The Company's ability to continue to generate sufficient cash flow required to meet ongoing operational needs and to meet obligations depends upon several factors, including executing on the Company's contracts and initiatives, receiving royalty payments from Tinum Group and distributions from Tinum Group and Tinum Services, and its ability to maintain and grow its share of the market for emissions control ("EC") products, and, in particular, EC chemicals and services revenues. Increased distributions from Tinum Group will likely be dependent upon both preserving existing contractual relationships and the securing of additional tax equity investors for those Tinum Group facilities that are currently not operating.

The Company is also currently working to either replace its existing revolving credit facility or renegotiate the terms of its existing revolving credit facility ("Line of Credit") to enable the Company to have borrowing capacity to provide short-term liquidity for operating purposes. A key provision in negotiating terms of a credit facility is the ability to use facility to secure performance and other contractual settlement obligations, in lieu of pledging restricted cash. At September 30, 2016, the Company held \$8.8 million in restricted cash that could potentially be released to unrestricted cash through the securing of an appropriately structured credit facility. While such a facility would be desirable, if the Company is unable to obtain such a financing, the Company believes that its existing and forecasted liquidity from cash distributions and royalties as well as other expected operating results will be sufficient to fund its continuing operations.

Earnings (Loss) Per Share

The Company computes earnings (loss) per share in accordance with FASB ASC 260-10. Under this guidance, unvested restricted stock awards ("RSA's") that contain non-forfeitable rights to dividends or dividend equivalents are deemed to be participating securities and, therefore, are included in computing basic earnings per share pursuant to the two-class method. The two-class method determines earnings per share for each class of common stock and participating securities according to dividends or dividend equivalents and their respective participation rights in undistributed earnings (losses). The Company did not declare any cash dividends during the three and nine months ended September 30, 2016 or 2015.

Under the two-class method, net income (loss) for the period is allocated between common stockholders and the holders of the participating securities, in this case, the weighted-average number of unvested restricted stock awards outstanding during the period. The allocated, undistributed income (loss) for the period is then divided by the weighted-average number of common shares and participating securities outstanding during the period to arrive at basic earnings (loss) per common share or participating security for the period, respectively. Because the Company did not declare any dividends during the periods presented, and because the unvested RSA's possess substantially the

same rights to undistributed earnings as common shares outstanding, there is no difference between the calculated basic earnings (loss) 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 (loss) per share attributable to participating securities on its Condensed Consolidated Statements of Operations.

Diluted earnings (loss) per share takes into consideration shares of common stock and unvested RSA's outstanding (computed under basic earnings (loss) per share) and potentially dilutive shares of common stock. Potentially dilutive shares consist of vested, in-the-money outstanding options, Stock Appreciation Rights ("SAR's") and contingent Performance Share Units ("PSU's") (collectively, "Potential dilutive shares"). When there is a loss from continuing operations, all potentially dilutive shares become anti-dilutive and are thus excluded from the calculation of diluted loss per share.

Each PSU represents a contingent right to receive shares of the Company's common stock, which may range from zero to two times the number of PSU's granted on the award date, should the Company meet certain performance measures over the

requisite performance period. The number of potentially dilutive shares related to PSU's is based on the number of shares, if any, that would be issuable at the end of the respective reporting period, assuming that the end of the reporting period was the end of the contingency period applicable to such PSU's.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share amounts)	2016	2015	2016	2015
Net income (loss)	\$9,612	\$(8,654)	\$21,848	\$(27,233)
Less: Undistributed income (loss) allocated to participating securities	133	(87)	229	(274)
Income (loss) attributable to common stockholders	\$9,479	\$(8,567)	\$21,619	\$(26,959)
Basic weighted-average common shares outstanding	21,740	21,687	21,926	21,757
Add: dilutive effect of equity instruments	358	—	283	—
Diluted weighted average shares outstanding	22,098	21,687	22,209	21,757
Earnings (loss) per share - basic	\$0.44	\$(0.40)	\$0.99	\$(1.24)
Earnings (loss) per share - diluted	\$0.43	\$(0.40)	\$0.97	\$(1.24)

The table below shows the number of shares that were excluded from the calculation of diluted loss per share because their inclusion would have been anti-dilutive to the calculation:

	Three Months Ended September 30, 2016	Nine Months Ended September 30, 2015
(share data in thousands)		
Stock options	—6	—14
Restricted stock awards	—165	—171
Performance share units	—169	—186
Stock appreciation rights	—	—
Total shares excluded from diluted shares outstanding	—340	—371

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 Company's Annual Report on Form 10-K for the year ended December 31, 2015. 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 March 2016, the FASB issued ASU No. 2016-09, Compensation-Stock Compensation-Improvements to Employee Share-Based Payment Accounting (Topic 718), which involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Under the new standard, income tax benefits and deficiencies are to be recognized as income tax expense or benefit in the income statement and the tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity should also recognize excess tax benefits regardless of whether the benefit reduces taxes payable in the current period. Excess tax benefits should be classified along with other income tax cash flows as an operating activity. In regards to forfeitures, the entity may make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest or account for forfeitures when they occur. This ASU is effective for fiscal years beginning after December 15, 2016 including interim periods within that reporting period, however early adoption is permitted. The Company

adopted this standard effective as of January 1, 2016. There was no material impact to the Company's financial statements or disclosures from the adoption of this standard.

In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which (1) clarifies the principle for determining whether a good or service is "separately identifiable" from other promises in the contract and, therefore, should be accounted for separately; (2) clarifies that entities are not required to identify promised goods or services that are immaterial in the context of the contract; and (3) allows entities to elect to account for shipping and handling activities as a fulfillment cost rather than as an additional promised service. The new standard also provides guidance with respect to the classification of licensed intellectual property as either "functional" or "symbolic," which determines when revenues from licensed intellectual property are recognized. This ASU is effective for fiscal years, and interim reporting periods within those years, beginning after December 15, 2017. Early application is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company is currently evaluating the provisions of this guidance and assessing its impact on the Company's financial statements and disclosures.

In May 2016, the FASB issued ASU No. 2016-11, "Revenue Recognition and Derivatives and Hedging: Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements at the March 3, 2016 Emerging Issues Task Force Meeting ("EITF")," which rescinds SEC paragraphs pursuant to SEC staff announcements. These rescissions include changes to topics pertaining to accounting for shipping and handling fees and costs and accounting for consideration given by a vendor to a customer. This ASU is effective for fiscal years, and interim reporting periods within those years, beginning after December 15, 2017. Early application is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company is currently evaluating the provisions of this guidance and assessing its impact on the Company's financial statements and disclosures.

In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, which clarifies certain core recognition principles including collectability, sales tax presentation, noncash consideration, contract modifications and completed contracts at transition and disclosures no longer required if the full retrospective transition method is adopted. This ASU is effective for fiscal years, and interim reporting periods within those years, beginning after December 15, 2017. Early application is permitted for annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company is currently evaluating the provisions of this guidance and assessing its impact on the Company's financial statements and disclosures.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows: Classification of Certain Cash Receipts and

Cash Payments, which addresses the following eight specific cash flow issues: Debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies (COLIs) (including bank-owned life insurance policies (BOLIs)); distributions received from equity method investees; beneficial interests in securitization transactions; and separately identifiable cash flows and application of the predominance principle. This ASU is effective for fiscal years, and interim reporting periods within those years, beginning after December 15, 2017 on a retrospective basis, however, early adoption is permitted. The Company adopted this standard effective as of January 1, 2016. There was no material impact to the Company's financial statements or disclosures from the adoption of this standard.

Other than as disclosed above or in the 2015 Form 10-K, there are no other new accounting standards that would have a material effect on the Company's financial statements and disclosures that have been issued but not yet adopted by the Company as of September 30, 2016, and through the filing date of this report.

Note 2 - Restructuring

The Company recorded restructuring charges during the three and nine months ended September 30, 2016 and 2015 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.

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

(in thousands, except employee data)	Approximate Number of Employees	Pretax Charge		
		ReEmissions Control	All Other and Corporate	Total
Three Months Ended September 30, 2016				
Restructuring charges	17	\$—\$ 700	\$ 290	\$990
Changes in estimates		—	(276)	(276)
Total pretax charge, net of reversals		\$—\$ 700	\$ 14	\$714
Nine Months Ended September 30, 2016				
Restructuring charges	39	\$—\$ 1,169	\$ 889	\$2,058
Changes in estimates		—	(276)	(276)
Total pretax charge, net of reversals		\$—\$ 1,169	\$ 613	\$1,782
Three Months Ended September 30, 2015				
Restructuring charges	109	\$—\$ 2,617	\$ 116	\$2,733
Changes in estimates		—	—	—
Total pretax charge, net of reversals		\$—\$ 2,617	\$ 116	\$2,733
Nine Months Ended September 30, 2015				
Restructuring charges	154	\$—\$ 4,417	\$ 4,358	\$8,775
Changes in estimates		—(10)	(2)	(12)
Total pretax charge, net of reversals		\$—\$ 4,407	\$ 4,356	\$8,763

The following table summarizes the Company's change in restructuring accruals for the nine months ended September 30, 2016:

(in thousands)	Employee Severance	Facility Closures
Remaining accrual as of December 31, 2015	\$ 2,581	\$ 777
Expense provision (1)	2,058	—
Cash payments and other (1)	(3,149)	(320)
Change in estimates	(276)	(210)
Remaining accrual as of September 30, 2016	\$ 1,214	\$ 247

(1) Included within the Expense provision and Cash payments and other line items in the above table is equity based compensation of \$0.4 million for the nine months ended September 30, 2016, resulting from the accelerated vesting of modified equity-based compensation awards for certain terminated employees.

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

Note 3 - Acquisition

2015 Acquisition

In November 2014, the Company entered into an agreement with InSyst Ltd. and ClearView Monitoring Solutions Ltd. (collectively "ClearView"), both Israel based companies specializing in data analytics, to allow the Company the

exclusive option to purchase certain assets of ClearView. The Company paid \$0.2 million related to this option, which was included

within the Prepaid expenses and other assets line item within the Condensed Consolidated Balance Sheet as of December 31, 2014. In January 2015, the Company notified ClearView that it had elected to exercise its exclusive option to purchase certain assets of ClearView.

In March 2015, the Company acquired certain assets of ClearView for total cash payments of \$2.4 million, which is inclusive of VAT tax of \$0.4 million. The acquisition was accounted for under the acquisition method of accounting, which requires the total purchase consideration to be allocated to the assets acquired and liabilities assumed based on estimates of fair value. Operating results related to the acquired assets were consolidated into the Company's results of operations beginning March 6, 2015.

A summary of the 2015 purchase consideration and allocation of the purchase consideration is as follows:

(in thousands)

Purchase consideration:

Cash paid	\$2,360
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Fair value of liabilities assumed:

Accrued liabilities	10
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Contingent consideration	451
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Total fair value of liabilities assumed	461
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Total purchase consideration	\$2,821
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Allocation of purchase consideration

Receivables	\$360
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Property and equipment and other	82
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Intangibles - in process research and development	2,379
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Total	\$2,821
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The transaction called for a series of contingent payments based upon the achievement of sales and sales targets.

These contingent payments are classified as purchase consideration. As part of the purchase price, the Company recorded a \$0.5 million liability for the contingent consideration based upon the net present value of the Company's estimate of the future payments.

During August 2015, as part of a broader strategic restructuring of the Company's business to simplify its operating structure in a manner that creates increased customer focus, better supports sales and product delivery and also aligns the Company's cost structure as the emissions control market shifts towards compliance solutions for the Federal Mercury and Air Toxics Standards ("MATS"), the Company's management approved an action to wind down operations of ADA Analytics. As a result of these actions, the Company fully impaired the carrying value of the assets and reversed the liability for the contingent consideration, thereby recognizing net impairment expense in the amount of \$1.9 million during the third quarter of 2015.

Note 4 - Equity Method Investments

Tinum Group, LLC

The Company's ownership interest in Tinum Group was 42.5% as of September 30, 2016 and December 31, 2015.

Tinum Group supplies technology equipment and technical services to cyclone-fired, pulverized coal and other boiler users, but Tinum Group's primary purpose is to put into operation facilities that produce RC that qualify for tax credits available under Section 45 of the IRC ("Section 45 tax credits"). Tinum 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 the VIE's economic performance and has therefore accounted for the investment under the equity method of accounting. The Company determined the partners of Tinum Group with voting rights had identical voting interests, equity control interests and board control interests, and therefore, concluded that the power to direct the activities that most significantly impact the VIE's economic performance was shared.

The following tables summarize the results of operations of Tineum Group for the three and nine months ended September 30, 2016 and 2015, respectively:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Gross profit	\$22,645	\$25,035	\$70,325	\$80,869
Operating, selling, general and administrative expenses	4,996	5,369	15,464	17,872
Income from operations	17,649	19,666	54,861	62,997
Other expenses	(3,583)	(1,464)	(7,618)	(1,794)
Class B preferred return	(905)	(1,463)	(3,101)	(4,825)
Loss attributable to noncontrolling interest	8,881	3,698	14,788	6,811
Net income available to Class A members	\$22,042	\$20,437	\$58,930	\$63,189
ADES equity earnings	\$9,775	\$—	\$28,050	\$4,730

The difference between the Company's proportionate share of Tineum Group's net income and the Company's earnings from its Tineum Group equity method investment as reported on the Condensed Consolidated Statements of Operations relates to the Company receiving distributions in excess of the carrying value of the 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 Tineum Group had been reduced to zero throughout 2015, as cumulative cash distributions received from Tineum Group had exceeded the Company's pro-rata share of cumulative earnings in Tineum Group. The carrying value of the Company's investment in Tineum Group shall remain zero as long as the cumulative amount of distributions received from Tineum Group continues to exceed the Company's cumulative pro-rata share of Tineum Group's income. For quarterly periods during which the ending balance of the Company's investment in Tineum Group is zero, the Company only recognizes equity income from Tineum Group to the extent that cash distributions are received from Tineum Group during the period. For quarterly periods during which the ending balance of the Company's investment is greater than zero (e.g., when the cumulative earnings in Tineum Group exceeds cumulative cash distributions received), the Company recognizes its pro-rata share of Tineum 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. During the three and nine months ended September 30, 2016, the Company's cumulative amount of distributions received from Tineum Group exceeded the Company's cumulative pro-rata share of Tineum Group's income. As such, the Company recognized equity earnings from Tineum Group for the three and nine months ended September 30, 2016 of \$9.8 million and \$28.1 million, respectively. As of September 30, 2016, the Company's carrying value in Tineum Group has been reduced to zero, as cumulative cash distributions received from Tineum Group have exceeded the Company's pro-rata share of cumulative earnings in Tineum Group. If Tineum Group subsequently reports net income, the Company will not record its pro-rata share of such net income until the cumulative share of pro-rata income equals or exceeds the amount of its cumulative income recognized due to the receipt of cash distributions. Until such time, the Company will only report income from Tineum Group to the extent of cash distributions received during the period. Thus, the amount of equity income or loss reported on the Company's income statement 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 equity owners as shown on Tineum Group's income statement. Additionally, for periods during which the carrying value of the Company's investment in Tineum Group is greater than zero, distributions from Tineum 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 Tineum 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 table presents the Company's investment balance, equity earnings and cash distributions in excess of the investment balance, on a quarterly basis, for the three and nine months ended September 30, 2016 (in thousands):

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Description	Date(s)	ADES			Memorandum Account: Cash distributions and equity loss in (excess) of investment balance
		Investment balance	equity earnings (loss)	Cash distributions	
Beginning balance	12/31/15	\$ —	\$ —	\$ —	\$ (3,263)
ADES proportionate share of income from Tinuum 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 Tinuum 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	—
ADES proportionate share of income from Tinuum Group (1)	Second Quarter	6,758	6,758	—	—
Cash distributions from Tinuum Group	Second Quarter	(14,875)	—	14,875	—
Adjustment for current year cash distributions in excess of investment balance	Second Quarter	6,074	6,074	—	(6,074)
Total investment balance, equity earnings (loss) and cash distributions	6/30/2016	—	12,832	14,875	(6,074)
ADES proportionate share of income from Tinuum Group (1)	Third Quarter	9,300	9,300	—	—
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	Third Quarter	(6,074)	(6,074)	—	6,074
Cash distributions from Tinuum Group	Third Quarter	(9,775)	—	9,775	—
Adjustment for current year cash distributions in excess of investment balance	Third Quarter	6,549	6,549	—	(6,549)
Total investment balance, equity earnings (loss) and cash distributions	9/30/2016	—	9,775	9,775	(6,549)

The following table presents the Company's investment balance, equity earnings and cash distributions in excess of the investment balance, on a quarterly basis, for the three and nine months ended September 30, 2015 (in thousands):

Description	Date(s)	Investment balance	ADES equity earnings (loss)	Cash distributions	Memorandum Account: Cash distributions and equity loss in (excess) of investment balance
Beginning balance	12/31/2014	\$ —	\$ —	\$ —	—\$ (29,877)
ADES proportionate share of income from Tinium Group (1)	First Quarter	9,827	9,827	—	—
Recovery of cumulative distributions and equity losses in excess of investment balance	First Quarter	(9,827)	(9,827)	—	9,827
Cash distributions from Tinium Group	First Quarter	(100)	—	100	—
Adjustment for current year cash distributions in excess of investment balance	First Quarter	100	100	—	(100)
Total investment balance, equity earnings (loss) and cash distributions	3/31/2015	—	100	100	(20,150)
ADES proportionate share of income from Tinium Group (1)	Second Quarter	7,825	7,825	—	—
Recovery of cumulative distributions and equity losses in excess of investment balance	Second Quarter	(7,825)	(7,825)	—	7,825
Cash distributions from Tinium Group	Second Quarter	(4,630)	—	4,630	—
Adjustment for current year cash distributions in excess of investment balance	Second Quarter	4,630	4,630	—	(4,630)
Total investment balance, equity earnings (loss) and cash distributions	6/30/2015	—	4,630	4,630	(16,955)
ADES proportionate share of income from Tinium Group (1)	Third Quarter	8,127	8,127	—	—
Recovery of cumulative distributions and equity losses in excess of investment balance	Third Quarter	(8,127)	(8,127)	—	8,127
Cash distributions from Tinium Group	Third Quarter	—	—	—	—
Adjustment for current year cash distributions in excess of investment balance	Third Quarter	—	—	—	—
Total investment balance, equity earnings (loss) and cash distributions	9/30/2015	—	—	—	(8,828)

(1) The amounts of the Company's 42.5% proportionate share of net income as shown in the table above differ from mathematical calculations of the Company's 42.5% equity interest in Tinium Group multiplied by the amounts of Net Income available to Class A members as shown in the table above of Tinium Group results of operations due to adjustments related to the Redeemable Class B preferred return and the elimination of Tinium Group earnings attributable to RCM6, of which the Company owned 24.95% during the periods presented through March 6, 2016. As noted below, the Company sold its interest in RCM6 on March 3, 2016.

Tinium Services, LLC

On January 20, 2010, the Company, together with NexGen Refined Coal, Inc. ("NexGen"), formed Tinium Services, a Colorado limited liability company, for the purpose of operating the RC facilities leased or sold to third parties. The

Company has determined that Tinuum Services is not a VIE and has evaluated the consolidation analysis under the Voting Interest Model. The Company has a 50% voting and economic interest in Tinuum Services, which is equivalent to the voting and economic interest of NexGen. Therefore, as the Company does not own greater than 50% of the outstanding voting shares, either directly or indirectly, it has accounted for the investment under the equity method of accounting. The Company's investment in Tinuum Services as of September 30, 2016 and December 31, 2015 was \$3.1 million and \$4.0 million, respectively.

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

(in thousands)	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Gross loss	\$(15,848)	\$(11,616)	\$(42,946)	\$(31,511)
Operating, selling, general and administrative expenses	34,278	41,322	101,687	120,269
Loss from operations	(50,126)	(52,938)	(144,633)	(151,780)
Other income (expense)	27	(7)	(13)	(86)
Loss attributable to noncontrolling interest	52,019	55,661	149,792	158,926
Net income	\$1,920	\$2,716	\$5,146	\$7,060
ADES equity earnings	\$960	\$1,358	\$2,573	\$3,530

Included within the Consolidated Statements of Operations of Tinium Services for the three and nine months ended September 30, 2016 and 2015, respectively, were losses related to VIE's of Tinium Services. These losses do not impact the Company's equity earnings from Tinium Services as 100% of those losses are removed from the net income of Tinium Services as they are losses attributable to a noncontrolling interest.

RCM6, LLC

On February 10, 2014, the Company purchased a 24.95% membership interest in RCM6, which owned a single RC facility that produced RC that qualified for Section 45 tax credits, from Tinium Group through a combination of an up-front payment and note payable to Tinium Group. Due to the payment terms of the note purchase agreement, the note payable was periodically negatively amortizing. The balance of the note payable as of December 31, 2015 was \$14.2 million. In addition to the up-front and subsequent note payments, the Company was also subject to quarterly capital calls and variable payments based upon differences in originally forecasted RC production as of the purchase date and actual quarterly production. The following table presents the capital calls and variable payments made by the Company related to its investment in RCM6 during the three and nine months ended September 30, 2016 and 2015, respectively:

(in thousands)	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2016	2015	2016	2015
Capital calls and variable payments	\$ —	\$ 850	\$ 223	\$ 1,080

RCM6 was determined to be a VIE, however, during the periods presented, the Company did not have the power to direct the activities that most significantly impacted the VIE's economic performance and therefore accounted for the investment under the equity method of accounting.

As of December 31, 2015, the Company's ownership in RCM6 was 24.95%. The carrying value of the Company's investment in RCM6 as of December 31, 2015 was \$13.3 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 the outstanding note payable made by the Company in connection with its purchase of RCM6 membership interests from Tinium Group in February 2014. In doing so, the Company recognized a gain on the sale of \$2.1 million for the nine months ended September 30, 2016, which is included within the Gain on sale of equity method investment 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 Tinium Group based on the RCM6 RC facility lease payments made to Tinium 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 period from January 1 to March 3, 2016, and the three and nine months ended September 30, 2015:

	Three Months Ended September 30, 2016	January 1-March 3, 2016	Nine Months Ended September 30, 2015
(in thousands)			
Gross loss	\$ (2,896)	\$ (555)	\$ (4,876)
Operating, selling, general and administrative expenses	590	360	1,567
Loss from operations	(3,486)	(915)	(6,443)
Other expenses	(220)	(52)	(382)
Net loss	\$ (3,706)	\$ (967)	\$ (6,825)
ADES equity losses	\$ (1,399)	\$ (557)	\$ (3,127)

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

	Three Months Ended September 30, 2016	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
(in thousands)				
Earnings from Tinnium Group	\$9,775	\$—	\$28,050	\$4,730
Earnings from Tinnium Services	960	1,358	2,573	3,530
Loss from RCM6	—	(1,399)	(557)	(3,127)
Earnings (loss) from equity method investments	\$10,735	\$ (41)	\$30,066	\$5,133

The following table details the components of the cash distributions from the Company's respective equity method investments included within the Condensed Consolidated Statements of Cash Flows. Distributions from equity method investees are reported on the Condensed Consolidated Statements of Cash Flows as "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 in excess of cumulative earnings" within Investing cash flows.

	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
(in thousands)		
Distributions from equity method investees, return on investment		
Tinnium Group	\$3,400	\$—
Tinnium Services	3,450	2,519
	\$6,850	\$2,519
Distributions from equity method investees in excess of investment basis		
Tinnium Group	\$24,650	\$4,730
	\$24,650	\$4,730

Note 5 - Investments

The Company had investment securities related to certificates of deposit in the amount of \$0.3 million as of December 31, 2015. No unrealized gains or losses were recorded as of December 31, 2015 related to these investment securities. The Company did not have any investment securities related to certificates of deposit as of September 30, 2016.

In November 2014, the Company acquired an 8% ownership interest in the common stock of Highview Enterprises Limited ("Highview"), a London, England based developmental stage company specializing in power storage, for \$2.8 million in cash. The Company evaluated the investment and determined that it should account for the investment under the cost method. This 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 September 30, 2016 and December 31, 2015, no indicators of impairment were identified with respect to the cost method investment in Highview. When there are no indicators of impairment present, the Company estimates the fair value for the investment only if it is practical to do so. As of September 30, 2016, the Company estimated that the fair value of the cost method investment based upon an equity raise completed by Highview during the second quarter of 2016 at a price of £4.60 per share. As £4.60 per share exceeds the Company's cost per share of £4.25, there was no impairment as of September 30, 2016. As of December 31, 2015, the Company estimated that the fair value of the cost method investment approximated the November 2014 purchase price due to the proximity of the purchase date to December 31, 2015.

Note 6 - Borrowings

The following table summarizes the Company's borrowings and notes payable, all of which were with related parties:

(in thousands)	As of September 30, December 31, 2016 2015
Short-term borrowings	
Credit Agreement, net of discount and deferred loan costs	\$ —\$ 12,676
Total short-term borrowings	\$ —\$ 12,676
Current portion of notes payable	
RCM6 note payable, net of discount	\$ —\$ 1,207
DSI Business Owner note payable	— 630
Total current portion of short-term borrowings and notes payable	— 1,837
Long-term portion of notes payable	
RCM6 note payable, net of discount	— 13,023
DSI Business Owner note payable	— 489
Total long-term portion of notes payable	— 13,512
Total notes payable	\$ —\$ 15,349
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 (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. 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. As of December 31, 2015, the unamortized debt discount and issuance

costs were \$0.6 million. 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.

All obligations of the Company under the Credit Agreement were unconditionally guaranteed by each of the Company's wholly-owned domestic subsidiaries (other than 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.

Tinum Group - RCM6 Note Payable

The Company acquired membership interests 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%. Due to the difference between the stated rate and the effective rate, the RCM6 Note Payable was carried at a discount of \$7.6 million as of December 31, 2015. As discussed in Note 4, 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

As of December 31, 2014, the Company terminated the consulting portion of the agreements with the DSI Business Owner, as described in Note 9 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014. However, according to the terms of the remaining agreements, the Company was required to make all remaining payments structured as a note payable through the third quarter of 2017. In February 2016, the Company entered into an agreement with the DSI Business Owner and settled the remaining amounts owed as of the date of the agreement of approximately \$1.1 million for \$0.3 million, which was paid during the first quarter of 2016. The difference between the remaining amounts owed and the settlement amount has been included within the Gain on settlement of note payable and licensed technology line item in the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2016.

Note 7 - Fair Value Measurements

Fair value of financial instruments

The carrying amounts of financial instruments, including cash and cash equivalents, 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:

(in thousands)	As of September 30, 2016		As of December 31, 2015	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Financial Instruments:				
Investment securities:				
Cost method investment (1)	\$2,776	\$2,964	\$2,776	\$2,776
Investment securities, restricted, long-term	\$—	\$—	\$336	\$336
Notes Payable:				
Short-term borrowings, net of discount and deferred loan costs, related party	\$—	\$—	\$12,676	\$12,676
Current portion of notes payable, related party (2)	\$—	\$—	\$1,837	\$1,457
Long-term portion of notes payable, related party (2)	\$—	\$—	\$13,512	\$13,273
Highview technology license payable	\$218	\$218	\$519	\$519
Highview technology license payable, long-term	\$—	\$—	\$1,038	\$1,038
Stock appreciation rights, liability-classified equity award (3)	\$—	\$—	\$742	\$742

(1) Fair value is based on the investee's recently completed equity raise at £4.60 per share. Refer to Note 5 for further discussion of this investment. The fair value has been calculated using the historical rate as of the acquisition date.

(2) The fair value related to the DSI Business Owner note payable amounts as of December 31, 2015 was determined using the settlement agreement amount of \$0.3 million, as described in Note 6.

(3) Based upon the approval of amendments to the 2007 Equity Incentive Plan by stockholders during the second quarter of 2016, SAR's that were previously reported as liability classified equity awards became option awards and were reclassified to equity awards as the settlement of the award was within the control of the Company.

Concentration of credit risk

The Company's certificates of deposits and virtually all of the Company's restricted and unrestricted cash accounts are at two financial institutions. 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

The estimated fair values of investment securities are described below. Refer to Note 5 for additional information regarding the Company's investment securities.

Fair value is defined as the price that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The Company uses the hierarchy prescribed in the accounting guidance for fair value measurements based upon the available inputs to the valuation and the degree to which they are observable or not observable in the market. The three levels in the hierarchy are as follows:

Level 1 Inputs - Quoted prices (unadjusted) for identical assets or liabilities in active markets that are accessible as of the measurement date.

Level 2 Inputs - Inputs other than quoted prices within Level 1 that are observable either directly or indirectly, including, but not limited to, quoted prices in markets that are not active, quoted prices in active markets for similar assets or liabilities and observable inputs other than quoted prices such as interest rates or yield curves.

Level 3 Inputs - Unobservable inputs reflecting the Company's own assumptions about the assumptions that market participants would use in pricing the asset or liability, including assumptions about risk.

Financial instruments carried and measured at fair value on a recurring basis are presented in the table below according to the fair value hierarchy described above. There were no financial instruments carried and measured at fair value on a recurring basis as of September 30, 2016.

(in thousands)	As of December 31, 2015			Assets at Fair Value
	Level 1	Level 2	Level 3	

Assets:

Investment securities, restricted, long-term	\$—	\$336	\$—	\$ 336
Total assets at fair value	\$—	\$336	\$—	\$ 336

Liabilities:

Stock appreciation rights, liability-classified equity award	\$—	\$742	\$—	\$ 742
Total liabilities at fair value	\$—	\$742	\$—	\$ 742

The estimated fair value of investments securities consisting entirely of certificates of deposits was estimated to be equal to the deposit value of the investment due to the relative short term nature of the instrument.

Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

During December 2014 and March 2015, the Company loaned a total of \$1.0 million to an independent technology development company exploring energy storage to provide financing to pursue emissions technology projects, bearing annual interest of 8%. Interest and principal were payable at maturity in March 2018. Subsequent to the second loan disbursement, the Company became aware that the independent technology development company exploring energy storage was not awarded contracts that would have utilized their emissions technology. The Company also became aware that without these contracts, the ability of the independent third party to repay these loans was doubtful. As a result, the Company has recorded an allowance against the entire principal balance of the notes receivable, reversed accrued interest and put the note on non-accrual status.

During the fourth quarter of 2015, the Company recorded impairments totaling approximately \$0.3 million to reduce the carrying value of certain property and equipment that the Company intended to sell to its estimated sales value, less estimated costs to sell. The property and equipment were subsequently sold at auction. Proceeds from the sale of the impaired assets totaled approximately \$0.6 million. No gain or loss was recognized on the sale of the property and equipment.

Also during the fourth quarter of 2015, the Company sold certain property and equipment having a net book value of approximately \$0.1 million. Proceeds from the sale totaled approximately \$0.3 million, which resulted in the recognition of a gain on the sale of approximately \$0.2 million.

In June 2016, the Company sold certain inventory and property and equipment having a net book value of approximately \$0.5 million. The Company recorded an impairment charge of approximately \$0.5 million during the nine months ended September 30, 2016.

The fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market.

Note 8 - Commitments and Contingencies

Legal Proceedings

The Company is involved in certain legal actions, described below. The outcomes of these legal actions are not within the Company's complete control and may not be finalized for prolonged periods of time. In the described actions, the claimants seek monetary damages and other penalties. In accordance with U.S. GAAP, the Company records a liability in the Condensed Consolidated Financial Statements for loss contingencies when a loss is known or considered probable and the amount can be reasonably estimated. In the described lawsuits, the Company has entered into settlement agreements, both of which are pending court approval, with the claimants setting forth the specific or maximum amount of monetary damages required to settle each action. In the described government investigation, the

Company has reached agreement in principle with regard to the amount of monetary damages required to settle such action. Therefore, such amounts are probable and reasonably estimable. The Company cannot predict the timing of final resolution or the final outcome of any pending legal proceedings as described in the paragraphs below, nor can it provide any assurance that the ultimate resolution of any such matter will not have a material adverse effect on the Company's consolidated financial position, results of operations or cash flows.

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 is pending in the federal court in Denver, Colorado ("U.S. District Court"). This lawsuit and a companion case were originally filed in May 2014. On February 19, 2015, the U.S. District Court consolidated these cases and appointed the United Foods and Commercial Workers Union and Participating Food Industry Employers Tri-State Pension Fund as lead plaintiff and approved its selection of the law firms. The consolidated case is now captioned United Food and Commercial Workers Union v. Advanced Emissions Solutions, Inc., No. 14-cv-01243-CMA-KMT (U.S. District Court, D. Colo.) (the "Denver Securities Litigation").

The lead plaintiff filed "Lead Plaintiff's Consolidated Class Action Complaint" on April 20, 2015 (the "Consolidated Complaint"). The Consolidated Complaint names as defendants the Company and certain current and former Company officers.

Plaintiffs allege that ADES and other defendants ("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. The Consolidated Complaint alleges two claims for relief for: 1) alleged violations of Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5, and 2) control person liability under Section 20(a) of the Exchange Act.

The Consolidated Complaint seeks unspecified monetary damages together with costs and attorneys' fees incurred in prosecuting the class action, among other relief, and alleges a class period covering all purchasers or acquirers of the common stock of ADES or its predecessor-in-interest during the proposed class period from May 12, 2011 through January 29, 2015.

Defendants filed a motion to dismiss the Consolidated Complaint on June 19, 2015, contending the Consolidated Complaint: 1) fails to meet the strict pleading standards required for Section 10(b) claims; and 2) fails to establish the primary violation required for any claim of secondary (control person) liability. Plaintiffs filed a response in opposition to this motion on July 2, 2015 and Defendants filed their reply brief on July 16, 2015. On March 7, 2016, the parties filed a stipulated motion to stay the case while the parties mediated the matter. On March 8, 2016, the motion to stay was granted, and the Defendants' motion to dismiss was denied without prejudice with the option to refile should mediation fail. The case was stayed until further order of the U.S. District Court.

Following the mediation, which occurred in May of 2016, the parties came to an agreement in principle to settle the Denver Securities Litigation, and on June 30, 2016, the parties entered into a Stipulation and Agreement of Settlement (the "Denver Settlement") to resolve the action in its entirety. Under the terms of the Denver Settlement, a payment of \$4.0 million will be made in exchange for the release of claims against the defendants and other released parties by the lead plaintiff and all settlement class members, and for the dismissal of the action with prejudice. The Denver Settlement remains subject to the final approval of the U.S. District Court. Prior to any final U.S. District Court approval of the Denver Settlement, potential settlement class members (i.e., all persons and entities who purchased or otherwise acquired the Company's common stock during May 12, 2011 through January 29, 2015 ((both dates inclusive), with limited exclusions), will have an opportunity to exclude themselves from participating in the Denver Settlement or to raise objections with the U.S. District Court regarding the Denver Settlement or any part thereof. On June 30, 2016, the plaintiffs in the Denver Securities Litigation filed the Denver Settlement and related exhibits with the U.S. District Court and moved, among other things, for the U.S. District Court to preliminarily approve the Denver Settlement, to approve the contents and procedures for notice to potential settlement class members, to certify the Denver Securities Litigation as a class action for settlement purposes only, and to schedule a hearing for the U.S. District Court to consider final approval of the Denver Settlement (the "Motion for Preliminary Approval"). On October 13, 2016, the U.S. District Court issued an order granting the unopposed Motion for Preliminary Approval and set a hearing for the U.S. District Court to consider final approval of the Denver Settlement on February 10, 2017.

The Denver Settlement contains no admission of liability, and all of the Defendants in the Denver Securities Litigation have expressly denied, and continue to deny, all allegations of wrongdoing or improper conduct. If the Denver Settlement is approved by the U.S. District Court, the Company's insurance carriers will fund the \$4.0 million Denver Settlement. In the event the Denver Settlement is not approved by the U.S. District Court or otherwise does not become effective for any reason, the Denver Settlement will become null and void, all things of value will be returned to the party providing them, and the case will move forward. Under those circumstances, all of the Defendants intend to continue to defend themselves vigorously against the allegations in the Second Amended Complaint.

As of September 30, 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 Condensed Consolidated Balance Sheet. As of September 30, 2016, the Company also had a recorded receivable of \$4.0 million in connection with the Denver Settlement as the Company's insurance carriers will fund the full settlement.

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

Consolidated stockholder derivative claims against certain of the Company's current and former officers and directors, along with the Company as a "nominal defendant," are pending in the Colorado District Court for Douglas County, Colorado ("Douglas County District Court"), and are currently stayed.

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 ("Denver District Court"). By agreement of the parties, the case in the Denver District Court was transferred to the Douglas County District Court and the cases were consolidated.

In separate complaints, the plaintiffs allege breach of fiduciary duties, waste of corporate assets, and unjust enrichment against the defendants for their alleged use of improper accounting techniques and for failing to maintain effective internal controls that, together, resulted in materially inaccurate financial statements from which incentive compensation was derived and paid. Plaintiffs demand, on behalf of the Company, unspecified monetary damages, "appropriate equitable relief," and the costs and disbursements of the action, including attorneys', accountants' and expert's fees, costs, expenses, and restitution, as well as certain corporate governance changes (collectively the "Derivative Claims").

On August 28, 2014, the Colorado state court approved a Stipulation and proposed Order Consolidating Actions, Appointing Co-Lead Plaintiffs and Co-Lead Counsel, and Staying Consolidated Action.

Following a mediation, which occurred in May of 2016, the parties came to an agreement in principle to settle the Stockholder Derivative Action, and on September 30, 2016, the parties entered into a Stipulation and Agreement of Settlement (the "Stockholder Derivative Settlement") to resolve the action in its entirety. Under the terms of the Stockholder Derivative Settlement, the Company will incorporate specified governance changes, plaintiffs will be entitled to certain confirmatory discovery prior to the court's preliminary approval of the settlement, and the Company will not oppose Plaintiffs' request for up to \$0.6 million in attorneys' fees subject to court approval, in exchange for the release of claims against all defendants and for the dismissal of the action with prejudice. The required corporate governance changes under the Stockholder Derivative Settlement terms include revising the responsibilities of the Board, the Audit Committee, the Compensation Committee, and the Nominating and Governance Committee; ensuring expedited compliance with any new compensation clawback requirements; amending voting requirements for director elections; and implementing certain accounting reforms. The governance measures required by the settlement will remain in effect for at least four years following court approval of the Stockholder Derivative Settlement.

The Stockholder Derivative Settlement remains subject to the final approval of the Douglas County District Court. On October 14, 2016, the plaintiffs in the Stockholder Derivative Action filed the Stockholder Derivative Settlement and related exhibits with the Douglas County District Court and moved, among other things, for the Douglas County District Court to preliminarily approve the Stockholder Derivative Settlement, to approve the contents and procedures for notice to the Company's stockholders, and to schedule a hearing for the Douglas County District Court to consider final approval of the Stockholder Derivative Settlement (the "Motion for Preliminary Approval of Derivative Settlement"). On November 2, 2016, the Douglas County District Court issued an order granting the Motion for Preliminary Approval of Derivative Settlement and set a hearing for the Douglas County District Court to consider final approval of the Stockholder Derivative Settlement on January 13, 2017.

The Stockholder Derivative Settlement contains no admission of liability, and all of the defendants in the Stockholder Derivative Action have expressly denied, and continue to deny, all allegations of wrongdoing or improper conduct. If

the Stockholder Derivative Settlement is approved by the Douglas County District Court, the Company's insurance carriers will fund payment of plaintiffs' attorneys' fees approved by the court. If the Stockholder Derivative Settlement is not approved by the Douglas County District Court, or otherwise does not become effective for any reason, the Stockholder Derivative Settlement will become null and void, and the case will move forward. Under those circumstances, the defendants intend to continue to defend themselves vigorously against the plaintiffs' allegations.

As of September 30, 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 Condensed Consolidated Balance Sheet. As of September 30, 2016, the Company also had a recorded receivable in connection with the Derivative Settlement of \$0.6 million, which was originally recorded as of June 30, 2016, as the Company's insurance carriers will fund the fee award amount.

SEC Inquiry

On April 7, 2014, the staff of the SEC's Division of Enforcement ("SEC Staff") informed the Company that it had initiated an inquiry to determine if violations of the federal securities laws have occurred (the "SEC Inquiry"), and in September 2014 the SEC issued a formal order of investigation. The SEC Inquiry generally pertains to the restatement of the Company's financial statements and internal controls processes, as described in Note 2 to the Consolidated Financial Statements of the Company included in the Annual Report on Form 10-K for the fiscal year ended December 31, 2014. The Company cooperated with the SEC by providing information and documents to the SEC on an ongoing basis. In July 2016, the SEC Staff communicated to the Company that it would recommend to the SEC that it authorize a settlement with the Company on terms that include payment of a civil monetary penalty of \$0.5 million. The SEC must approve the SEC Staff recommendation and any final settlement or relief.

As a result of the communication from the SEC Staff, the Company recorded a liability as of June 30, 2016 for the payment of monetary penalties in connection with the SEC Inquiry in the amount of \$0.5 million as the losses in connection with this matter were both probable and reasonably estimable under U.S. GAAP. The recorded liability was based on an agreement in principle with SEC Staff subject to approval by the SEC. The liability was recorded in the Legal settlements and accruals line item on the Condensed Consolidated Balance Sheets. The expense recognized related to this accrual was included in the Other line item in the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2016. While the Company anticipates that the proposed settlement will likely be approved by the SEC, it is possible that the ultimate settlement terms, including the penalty amount, could change.

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. 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 letter of credit amounts as collateral for payments due to Norit, equal to 50% of the aggregate fair market value of such dividends. 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 letter of credit amounts as collateral by \$5.0 million for payments due to Norit. However, the maximum total letter of credit increase related to the combination of dividends or earnings is \$7.5 million.

As of September 30, 2016, and December 31, 2015, the Company carried the components of the Royalty Award in Legal settlements and accruals in the Condensed Consolidated Balance Sheets of \$7.4 million and \$6.5 million, respectively, and in Legal settlements and accruals, long-term of \$9.3 million and \$13.8 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:

(in thousands)	As of	
	September 30, 2016	December 31, 2015
Settlement and Royalty Indemnification	\$7,398	\$ 6,502
Legal settlements	5,050	—
Legal settlements and accruals	12,448	6,502
Settlement and Royalty Indemnification, long-term	9,305	13,797
Legal settlements and accruals, long-term	9,305	13,797
Total legal settlements and accruals	\$21,753	\$ 20,299

Tinuum Group

The Company also has certain limited obligations contingent upon future events in connection with the activities of Tinuum Group. The Company, NexGen and two entities affiliated with NexGen have provided an affiliate of Goldman Sachs 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.

Line of Credit

In September 2013, ADA, as borrower, and ADES, as guarantor, entered into a 2013 Loan and Security Agreement with a bank (the "Lender") for an aggregate principal amount of \$10 million (the "Line of Credit") that is secured by certain amounts due to the Company from certain Tinuum Group RC leases. During the third quarter of 2016, the Company entered into the Eighth Amendment and Ninth Waiver related to the Line of Credit. As amended, the Line of Credit is available until November 27, 2016.

Covenants in the Line of Credit include a borrowing base limitation that is based on a percentage of the net present value of ADA's portion of payments due to Tinuum Group from the RC leases. The Line of Credit also contains other affirmative and negative covenants and customary indemnification obligations of ADA to the lender and provides for the issuance of letters of credit provided that the aggregate amount of the letters of credit plus all advances then outstanding does not exceed the calculated borrowing base. The Company guaranteed 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%. There were no outstanding balances under the Line of Credit at September 30, 2016 and December 31, 2015, respectively, nor were any amounts drawn during the three and nine months ended September 30, 2016.

As a result of certain historical covenant violations, the Company had no borrowing availability under this facility as of September 30, 2016 or December 31, 2015. The Company is currently in discussions with the Lender regarding a possible renewal that would include the ability to utilize the Line of Credit.

Letters of Credit

The Company has letters of credit ("LOC") with two financial institutions related to equipment projects, the Royalty Award and certain other agreements. The following tables summarize the letters of credit outstanding and collateral, by asset type, reported on the Condensed Consolidated Balance Sheets:

(in thousands)	As of September 30, 2016			
	LOC Outstanding	Restricted cash	Restricted cash, long-term	Investment securities, restricted, long-term
Contract performance - equipment systems	\$2,063	\$ 2,069	\$ —	\$ —
Royalty Award	6,700	1,950	4,750	—

Total LOC outstanding	\$8,763	\$ 4,019	\$ 4,750	\$	—
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As of December 31, 2015

(in thousands)	LOC Outstanding	Restricted cash	Restricted cash, long-term	Investment securities, restricted, long-term
Contract performance - equipment systems	\$5,556	\$ 728	\$ 4,830	\$ —
Royalty Award	6,150	—	6,150	—
Other	328	—	—	336
Total LOC outstanding	\$12,034	\$ 728	\$ 10,980	\$ 336

Restricted balances may exceed the letters of credit outstanding due to interest income earned on the restricted assets.

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 third quarter of 2015, the Company began working to modify and correct two performance guarantee issues related to EC systems that were installed during 2015. No revenue is recognized on these two contracts until the performance guarantees are resolved and contract obligations are substantially complete. During the second quarter of 2016, significant progress was made on one performance guarantee issue, but substantial completion had not yet been reached as of June 30, 2016. During the third quarter of 2016, the Company passed performance testing on both systems and revenues on both systems were recognized. As a result of the resolution of the performance guarantees, the Company incurred approximately \$0.9 million on the ACI systems to pass the performance guarantees. Additional performance guarantee claims, if incurred, would be included within the Equipment sales cost of revenue line of the Condensed Consolidated Statements of Operations.

Note 9 - 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 and nine months ended September 30, 2016 and 2015 was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Restricted stock award expense	\$633	\$415	\$1,615	\$2,354
Stock option expense	(21)	46	118	616
PSU expense	83	157	399	2,590
SAR expense	—	19	106	536
Total stock-based compensation expense	\$695	\$637	\$2,238	\$6,096

The amount of unrecognized compensation cost as of September 30, 2016, and the expected weighted average period over which the cost will be recognized is as follows:

(in thousands)	As of September 30, 2016	
	Unrecognized Compensation Cost	Expected Weighted Average Period of Recognition (in years)
Restricted stock award expense	\$ 1,401	0.71
Stock option expense	63	0.41
PSU expense	194	0.69
Total unrecognized stock-based compensation expense	\$ 1,658	0.70

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 nine months ended September 30, 2016 is presented below:

	Shares	Weighted Average Grant Date Fair Value
Non-vested at January 1, 2016	134,708	\$ 8.49
Granted	313,758	7.33
Vested	(161,562)	12.40
Forfeited	(16,964)	16.78
Non-vested at September 30, 2016	269,940	7.83

During the nine months ended September 30, 2016, the Company accelerated the terms of equity awards, including both RSA's and PSU's, granted to employees as part of a reduction in workforce. The Company recorded incremental expense of \$0.2 million and \$0.4 million for the three and nine months ended September 30, 2016, respectively, and zero and \$3.1 million for the three and nine months ended September 30, 2015, respectively, in the Payroll and benefits line item in the Condensed Consolidated Statement of Operations.

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 nine months ended September 30, 2016 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, 2016	106,250	\$ 15.22		
Options granted (1)	268,198	\$ 13.19		
Options exercised	—	\$ —		
Options expired / forfeited	(20,000)	\$ 16.90		
Options outstanding, September 30, 2016	354,448	\$ 13.59	\$ —	3.68
Options exercisable as of September 30, 2016	147,780	\$ 12.92	\$ —	3.62

Included in options granted are 243,750 awards granted that were initially granted on a contingent basis and became exercisable as a result of the automatic expiration of the same number of Stock Appreciation Rights, as a (1) result of stockholder approval of Amendment No. 4 of the Company's Amended and Restated 2007 Equity Incentive Plan, as amended (the "2007 Plan"). See "Stock Appreciation Rights" section below for a discussion of the provisions of the exchange and incremental expense recognized.

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 nine months ended September 30, 2016.

In June 2016, the Company's stockholders approved Amendment No. 4 to the 2007 Plan, which triggered an automatic expiration of the Stock Appreciation Rights and an equal number of stock options being exercisable and no longer granted on a contingent basis. Upon approval, all existing SAR's expired under this provision. The Company recorded incremental expense of \$0.1 million to stock-based compensation related to the change in fair value of the SAR's prior to the reclassification date. Upon reclassification, the impact to Additional paid-in capital was \$0.9 million. The Company had no SAR's outstanding as of September 30, 2016.

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 nine months ended September 30, 2016.

A summary of PSU activity for the nine months ended September 30, 2016 is presented below:

	Units	Weighted Average Grant Date Fair Value
Non-vested at January 1, 2016	169,334	\$ 26.38
Granted	—	—
Vested / Settled (1)	(119,818)	(26.87)
Forfeited / Canceled	—	—
Non-vested at September 30, 2016	49,516	\$ 25.20

(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
Nine Months Ended September 30, 2016							
	2013	38,706	1,572	0.63	1.00	—	—
	2014	11,487	—	0.63	0.63	—	—
	2015	13,529	—	0.50	0.50	—	—
Nine Months Ended September 30, 2015							
	2013	8,768	3,954	1.75	1.75	2.00	2.00
	2014	2,506	1,145	0.63	0.75	—	0.75

Note 10 - Income Taxes

For the three and nine months ended September 30, 2016 and 2015, the Company's income tax expense and effective tax rates based on forecasted pretax income (losses) were:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
(in thousands, except for rate)				
Income tax expense	\$583	\$44	\$734	\$151
Effective tax rate	6	% (1)%	3	% (1)%

The effective tax rates for the three and nine months ended September 30, 2016 were different from the statutory rate primarily due to a release of the Company's valuation allowances against federal and state net operating losses and federal tax credits due to the utilization of a portion of the net operating losses and federal tax credits, which was partially offset by estimated state tax expense in those periods in 2016.

The effective tax rates for the three and nine months ended September 30, 2015 were different from the statutory rate primarily due to an increase in the Company's valuation allowances against federal and state net operating losses and federal tax credits and estimated state tax expense in those periods in 2015.

Consistent with December 31, 2015, the Company determined as of September 30, 2016 that it is more likely than not that it would not be able to realize the value of its federal and state net operating loss carryforwards, tax credits and other deferred tax assets and has recorded a full valuation allowance against the deferred tax assets. A significant piece of objective negative evidence evaluated was the cumulative loss incurred over the three-year period ended September 30, 2016. As such, the Company has concluded that a full valuation allowance continues to be necessary related to the deferred tax assets as of September 30, 2016 that may not be realized.

Note 11 - Supplemental Financial Information

Supplemental Balance Sheet Information

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

(in thousands)	As of	
	September 30, 2016	December 31, 2015
Other current assets:		
Prepaid expenses	\$831	\$ 2,117
Inventory	667	189
Other	50	—
	\$1,548	\$ 2,306
Other long-term assets:		
Deposits	\$264	\$ 414
Intangibles	673	1,941
Other long-term assets	323	341
	\$1,260	\$ 2,696

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

(in thousands)	As of	
	September 30, 2016	December 31, 2015
Other current liabilities:		
Accrued consultant incentives	\$—	\$ 369
Accrued interest	910	1,042
Accrued losses on equipment contracts	195	759
Taxes payable	995	521
Deferred revenue	277	682
Warranty liabilities	390	1,197
Advance deposit, related party	1,674	—
Asset retirement obligation	1,295	1,248
Other	967	1,577
	\$6,703	\$ 7,395
Other long-term liabilities:		
Deferred rent	552	767
Advance deposit, related party	—	2,981
Deferred revenue, related party	2,000	2,000
Other long-term liabilities	—	2,604
	\$2,552	\$ 8,352

The tables below summarize 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, 2015 through September 30, 2016, which do not include amounts for DSI systems as revenues are deferred until the end of the warranty period, are as follows:

(in thousands)	As of September 30, 2016
Balance, beginning of period	\$ 1,197
Warranties accrued, net	50
Warranty claims	(723)
Change in estimate related to previous warranties accrued	(134)
Balance, end of period	\$ 390

Included within Other current liabilities as of September 30, 2016 and Other long-term liabilities as of December 31, 2015 is the Company's asset retirement obligation. Changes in the Company's asset retirement obligations are as follows:

(in thousands)	As of September 30, 2016	As of December 31, 2015
Asset retirement obligation, beginning of period	\$1,248	\$ 1,188
Accretion	47	60
Asset retirement obligations, end of period	\$1,295	\$ 1,248

Long-term License Agreement

During 2014, the Company entered into an exclusive, ten-year agreement ("License Agreement") with Highview to utilize certain licensed technology. Pursuant to the License Agreement, the Company recorded a long-term licensed technology asset and related obligation. As of December 31, 2015, the Company's obligation under the long-term Licensing Agreement was approximately \$1.6 million.

On June 15, 2016, the Company entered into an agreement with Highview to terminate the License Agreement in exchange for a one-time payment by the Company of £0.2 million (approximately \$0.2 million). Per the agreement, payment of the termination fee, if any, will only be settled by relinquishing shares of Highview currently owned by the Company equal to £0.2 million. As a result of terminating the License Agreement, the Company wrote off the licensed technology asset, reduced the corresponding long-term liability as of June 30, 2016 to the amount of the one-time payment, and recognized a gain of approximately \$0.2 million. The gain on the settlement of the Highview licensed technology obligation is included in the Other income line on the Company's Condensed Consolidated Statement of Operations for the nine months ended September 30, 2016.

The following table presents the Company's account balances associated with related parties, exclusive of amounts owed to employees in the normal course of business, which are included within the Accounts payable line on the Condensed Consolidated Balance Sheets:

(in thousands)	As of September 30, 2016	As of December 31, 2015
Payable to related party	\$ 70	\$ 270

Supplemental Condensed Consolidated Statements of Operations Information

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
453A interest	\$889	\$1,136	\$2,034	\$3,408
Interest on RCM6 note payable, related party	—	628	263	1,842
Credit agreement interest	—	—	2,112	—
Other	80	14	87	97
Total interest expense	\$969	\$1,778	\$4,496	\$5,347

As of June 30, 2016, the Company recorded a net investment in a sales-type lease in the Prepaid expenses and other assets and Other assets line items of the Condensed Consolidated Balance Sheet. On September 30, 2016, the Company and the lessee terminated the sale-type lease and the Company recorded a lease termination fee of \$3.6 million, which is included in the Receivables, net line item of the Condensed Consolidated Balance Sheet, and which was in excess of the carrying value of the net investment in sales-type lease of \$2.7 million. As a result of the lease termination, during the three months ended September 30, 2016, the Company recognized a gain of \$0.9 million, which is included in the Other line item of the Condensed Consolidated Statements of Operations. In October 2016, the Company received cash of \$3.6 million for payment in full of the lease termination fee.

Note 12 - 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 September 30, 2016, the Company's CODM was the Company's CEO. The Company's operating and reportable segments are organized by products and services provided.

During the fourth quarter of 2015, the Company realigned its operating segments into two reportable segments: (1) Refined Coal; and (2) Emissions Control. Following the realignment, the Company retroactively adjusted all segment related disclosures included within the notes to the Condensed Consolidated Financial Statements. Segments have been reorganized from prior periods due to changes within the Company's management structure and the manner in which the Company is operating the business. All prior periods have been conformed to the current year presentation. 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 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 Tinum Group and income related to sales-type leases.

Segment operating income (loss) includes the Company's equity method earnings and losses from the Company's equity method investments, royalty earnings from Tinum 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 September 30, 2016 and December 31, 2015, 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 and nine months ended September 30, 2016 and 2015:

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	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Revenues:				
Refined Coal:				
Earnings (loss) in equity method investments	\$10,735	\$(41)	\$30,066	\$5,133
Consulting services	—	—	—	55
Royalties	2,064	3,273	3,922	7,767
	12,799	3,232	33,988	12,955
Emissions Control:				
Equipment sales	14,869	12,088	44,788	47,439
Chemicals	670	132	1,717	749
Consulting services	171	665	492	1,294
	15,710	12,885	46,997	49,482
Total segment reporting revenues	28,509	16,117	80,985	62,437
Adjustments to reconcile to reported revenues:				
Refined Coal:				
(Earnings) loss in equity method investments	(10,735)	41	(30,066)	(5,133)
Royalties	(2,064)	(3,273)	(3,922)	(7,767)
	(12,799)	(3,232)	(33,988)	(12,900)
Total reported revenues	\$15,710	\$12,885	\$46,997	\$49,537
Segment operating income (loss):				
Refined Coal (1)	\$11,913	\$1,390	\$33,974	\$7,350
Emissions Control (2)	2,956	(3,397)	9,656	(8,190)
Total segment operating income (loss)	\$14,869	\$(2,007)	\$43,630	\$(840)

(1) Included within the RC segment operating income for the nine months ended September 30, 2016 is a \$2.1 million gain on the sale of RCM6 and for the three and nine months ended September 30, 2016 and 2015, 453A interest expense of \$0.9 million, \$2.0 million, \$1.1 million and \$3.4 million, respectively, and interest expense related to the RCM6 note payable of zero, \$0.6 million, \$0.3 million and \$1.8 million, respectively.

(2) Included within the EC segment operating income for the three and nine months ended September 30, 2016 is a \$0.9 million gain related to the lease termination discussed in Note 11.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Segment income (loss)				
Total segment operating income (loss)	\$14,869	\$(2,007)	\$43,630	\$(840)
Adjustments to reconcile to net income (loss) attributable to ADES				
Corporate payroll and benefits	(2,034)	(2,367)	(7,946)	(11,992)
Corporate rent and occupancy	(306)	(202)	(807)	(503)
Corporate legal and professional fees	(1,606)	(3,150)	(6,515)	(10,514)
Corporate general and administrative	(818)	(740)	(2,965)	(2,731)
Corporate depreciation and amortization	(93)	(143)	(351)	(448)
Corporate interest (expense) income, net	(78)	2	(2,200)	(32)
Other income (expense), net	261	(3)	(264)	(22)
Income tax expense	(583)	(44)	(734)	(151)
Net income (loss)	\$9,612	\$(8,654)	\$21,848	\$(27,233)

Corporate 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:

	As of	
(in thousands)	September 30,	December 31,
	2016	2015
Refined Coal	\$4,879	\$ 19,507
Emissions Control	27,096	31,467
All Other and Corporate	8,568	9,801
Consolidated	\$40,543	\$ 60,775

Note 13 - Subsequent Events

Unless disclosed elsewhere within the notes to the Condensed Consolidated Financial Statements, the following are the matters that occurred subsequent to the balance sheet date.

On October 16, 2016, the Compensation Committee of the Board approved short-term bonus guidelines (the "2016 CEO Bonus Guidelines") for 2016 for the Company's Chief Executive Officer ("CEO"). The 2016 CEO Bonus Guidelines set a target cash bonus of 100% of the CEO's base salary subject to adjustment based on performance goals to be approved by the Board. On October 16, 2016, the Compensation Committee of the Board approved a grant of 50,000 restricted shares of the Company's common stock that vests 25% annually over four years based on the CEO's Continuous Service (as defined in the 2007 Plan) and the following grants of stock options ("CEO Options") to purchase shares of the Company's common stock, all of which will vest, if at all, based on the achievement of certain Company performance metrics and subject to the CEO's Continuous Service: (1) an option to purchase 92,666 shares of the Company's common stock at an exercise price of \$8.25 per share that expires on December 31, 2018; (2) an option to purchase 92,666 shares of the Company's common stock at an exercise price of \$9.00 per share that expires on December 31, 2019; and (3) an option to purchase 92,666 shares of the Company's common stock at an exercise price of \$10.00 per share that expires on December 31, 2020. The CEO Options were granted under the Company's 2007 Plan and are subject to its terms and conditions.

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 most recent Annual Report on Form 10-K for the year ended December 31, 2015.

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 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 emission control regulations.

Our major activities include:

Through Tinnuum Group LLC ("Tinnuum Group"), an unconsolidated entity, the reduction of mercury and nitrogen oxide ("NO_x") emissions at select coal-fired power generators through the production of refined coal ("RC"). The primary economic benefit of this activity is derived from the tax credits generated by the production of RC, which are either retained for our future use or transferred to a third party tax equity investor(s) from the sale or lease of such RC facilities. See the separately filed financial statements of Tinnuum Group and the other related RC entities within our Annual Report on Form 10-K for the year ended December 31, 2015;

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, consulting services, specialty chemicals 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.

Results of Operations

For the three and nine months ended September 30, 2016, we recognized net income of \$9.6 million and \$21.8 million, respectively, compared to a net loss of \$8.7 million and \$27.2 million for the three and nine months ended September 30, 2015, respectively.

Generally, this improved performance during the three and nine months ended September 30, 2016 as compared to the three and nine months ended September 30, 2015 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 Tinnuum Group and Tinnuum Services, LLC ("Tinnuum Services") joint ventures;

Across the board reductions in all categories of expenses in 2016 as compared to 2015, 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; and

Improved performance in our Emissions Control ("EC") business segment in both the three and nine months ended September 30, 2016 as compared to the three and nine months ended September 30, 2015.

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 September 30, 2016 and 2015

Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the three months ended September 30, 2016 and 2015 is as follows:

(in thousands, except percentages)	Three Months Ended September 30,				Change
	2016	2015	(\$)	(%)	
Revenues:					
Equipment sales	\$14,869	\$12,088	\$2,781	23	%
Chemicals	670	132	538	408	%
Consulting services and other	171	665	(494)	(74)	%
Total revenues	\$15,710	\$12,885	\$2,825	22	%
Operating expenses:					
Equipment sales cost of revenue, exclusive of depreciation and amortization	\$12,704	\$9,914	\$2,790	28	%
Chemicals cost of revenue, exclusive of depreciation and amortization	\$469	\$105	\$364	347	%
Consulting services cost of revenue, exclusive of depreciation and amortization	\$86	\$591	\$(505)	(85)	%

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

During the three months ended September 30, 2016 and 2015, we entered into zero and two 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 \$0.9 million and \$0.8 million, respectively. 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 September 30, 2016 and 2015, we completed two and seven ACI systems, recognizing revenues of \$6.6 million and \$8.5 million and cost of revenue of \$5.7 million and \$6.0 million, respectively.

During the three months ended September 30, 2016 and 2015, we did not enter into any long-term (six months or longer) fixed price contracts to supply Dry Sorbent Injection ("DSI") systems. However, during the three months ended September 30, 2016 and 2015, the aggregate contract values on existing, uncompleted contracts, net of change orders, were \$0.8 million and \$0.1 million, respectively. Total value per contract may change due to the relative sizes of DSI systems and the contracts related thereto. During the three months ended September 30, 2016 and 2015, we completed four and three DSI systems, recognizing revenues of \$8.0 million and \$3.3 million, respectively, and cost of revenue of \$6.9 million and \$3.8 million, respectively. Certain of the DSI system long-term fixed price contracts were expected to be completed with losses. During the three months ended September 30, 2016, we recorded a reduction of \$0.1 million in previously recognized loss provisions included in cost of revenue. During the three months ended September 30, 2015, we recorded \$1.2 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 September 30, 2016 compared to the three months ended September 30, 2015 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 September 30, 2016 and 2015, 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 September 30, 2016 compared to the same quarter in 2015. Due to coal-fired power plant requirements to be in compliance with applicable regulations in 2015 and beyond, we believe this will lead to an increase in the market for these products in the future.

Consulting services and Consulting services cost of revenue

We also provide consulting services related to emissions regulations. During the three months ended September 30, 2016 and 2015, 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 a certain customer within the legacy Emissions Control - Manufacturing segment.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the segment discussion below and in Note 12 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 September 30, 2016 and 2015 is as follows:

	Three Months Ended September 30,			
(in thousands, except percentages)	2016	2015	(\$)	(%)
Operating expenses:				
Payroll and benefits	\$2,809	\$4,445	\$(1,636)	(37)%
Rent and occupancy	508	596	(88)	(15)%
Legal and professional fees	1,615	3,424	(1,809)	(53)%
General and administrative	818	1,249	(431)	(35)%
Research and development, net	(524)	2,022	(2,546)	(126)%
Depreciation and amortization	138	528	(390)	(74)%
	\$5,364	\$12,264	\$(6,900)	(56)%

Payroll and benefits

Payroll and benefits expenses decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 primarily due to a decrease in restructuring expenses, including the modification and acceleration of equity awards in connection with certain executive officers and employees impacted by management's alignment of the business with strategic objectives. During the three months ended September 30, 2016 and September 30, 2015, we recorded net restructuring charges of \$0.7 million and \$2.7 million, respectively, including the modification of equity awards of \$0.2 million and zero, respectively. Additionally, we had a decrease in average headcount of approximately 80% quarter over quarter in connection with employees impacted by management's alignment of the business with strategic objectives. We may incur additional restructuring charges during the remainder of 2016 associated with management's further alignment of the business with strategic objectives, which could impact the EC and All Other and Corporate business segments.

Rent and occupancy

Rent and occupancy expense decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 primarily due to a decrease in rent expense, which was primarily related to the shutdown of our BCSI office and fabrication facilities in the fourth quarter of 2015. During the first quarter of 2016, we entered into an agreement to terminate various lease agreements covering approximately 207 thousand square feet of manufacturing, warehouse and office space located in Pennsylvania. As consideration for terminating the leases, we agreed to pay the lessor termination fees of \$0.3 million in April 2016 and the same amount in April 2017. During the first quarter of 2016, we recorded a gain of \$0.2 million related to the difference between the amount accrued as of the cease use date of December 31, 2015 and the settlement amount.

Legal and professional fees

Legal and professional fees expenses decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 as a result of a reduction in the professional resources deployed to address the Restatement of

our consolidated financial statements, including an inquiry to determine if violations of the federal securities laws had occurred (the "SEC Inquiry"), and related private litigation. Expenses related to the Restatement during the three months ended September 30, 2016 and 2015 were \$0.2 million and \$1.8 million respectively. The Restatement was substantially completed as of April 2016, and we expect that the SEC Inquiry will also be resolved by the end of 2016. These decreases were offset by increases in outsourced shared services costs during the three months ended September 30, 2016.

General and administrative

General and administrative expense decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 due to 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 September 30, 2016 compared to the same quarter in 2015 due to a decrease in research and development activities as we have concluded all material research and development ("R&D") activities. Additionally, we reduced R&D expense by \$0.5 million during the three months ended September 30, 2016 due to final billings made during this period to the Department of Energy ("DOE") for one R&D contract.

Depreciation and amortization

Depreciation and amortization expense decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 by approximately \$0.3 million due to the shutdown of our BCSI office and fabrication facility in the fourth quarter of 2015 and by approximately \$0.1 million due to the termination of the Highview technology license. See further discussion of the termination of the Highview technology license in Note 7 of the Condensed Consolidated Financial Statements.

Other Income (Expense), net

A summary of the components of our other income (expense), net for the three months ended September 30, 2016 and 2015 is as follows:

	Three Months Ended September 30,		Change	
(in thousands, except percentages)	2016	2015	(\$)	(%)
Other income (expense):				
Earnings (loss) from equity method investments	\$10,735	\$(41)	\$10,776	*
Royalties, related party	2,064	3,273	(1,209)	(37)%
Interest income	149	2	147	*
Interest expense	(969)	(1,778)	809	(46)%
Other	1,129	(77)	1,206	*
Total other income	\$13,108	\$1,379	\$11,729	*

* Calculation not meaningful

Earnings from equity method investments

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

	Three Months Ended September 30,	
(in thousands)	2016	2015
Earnings from Tinnuum Group	\$9,775	\$—
Earnings from Tinnuum Services	960	1,358
Loss from RCM6	—	(1,399)
Earnings (loss) from equity method investments	\$10,735	\$(41)

Earnings from equity method investments, and changes related thereto, are impacted by our equity method investees: Tinnuum Group, Tinnuum 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 September 30, 2016 compared to the same quarter in 2015 due to an increase in cash distributions in excess of our investment balance from Tinnuum Group.

During the three months ended September 30, 2016, we recognized \$9.8 million in equity income from Tinnuum Group compared to our proportionate share of Tinnuum Group's net income of \$9.3 million for the period. During the three months ended September 30, 2015, we recognized zero in equity earnings from Tinnuum Group compared to our proportionate share of Tinnuum Group's net income of \$8.1 million for the period. The difference between our pro-rata share of Tinnuum Group's net income and our earnings from our Tinnuum Group equity method investment as reported on the Condensed Consolidated Statements of Operations relates to us previously receiving distributions in excess of the carrying value of the investment, and therefore recognizing 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 Tinnuum Group was zero as of September 30, 2016, as cumulative cash distributions received from Tinnuum Group exceeded our pro-rata share of cumulative earnings in Tinnuum Group. The carrying value of our investment in Tinnuum Group will remain zero as long as the cumulative amount of distributions received from Tinnuum Group continues to exceed our cumulative pro-rata share of Tinnuum Group's net income. For quarterly periods during which the ending balance of our investment in Tinnuum Group is zero, we only recognize equity earnings from Tinnuum Group to the extent that cash distributions are received from Tinnuum 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 Tinnuum Group exceeds cumulative cash distributions received), we recognize our pro-rata share of Tinnuum 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 4 of the Condensed Consolidated Financial Statements.

As a result of cash flows from invested RC facilities, Tinnuum Group cash distributions to us during the three months ended September 30, 2016 of \$9.8 million exceeded our pro-rata share of Tinnuum Group net income, which resulted in cumulative cash distributions that exceeded our cumulative pro-rata share of Tinnuum Group's net income as of September 30, 2016.

As of September 30, 2016 and 2015, Tinnuum Group had 13 and 12 invested RC facilities, respectively, that were generating rental income. The number of retained RC facilities that were generating Internal Revenue Code Section 45 tax credits ("PTCs") and other tax benefits as of September 30, 2016 and 2015, were zero and five, respectively. The reduction in operated retained RC facilities during the three months ended September 30, 2016 compared to the same quarter in 2015 was due to suspending operations on retained facilities in order to reduce operating expenses.

Equity earnings from our interest in Tinnuum Services decreased by \$0.4 million during the three months ended September 30, 2016 compared to the three months ended September 30, 2015, primarily due to a decrease in the number of RC facilities being operated by Tinnuum Services. The weighted-average number of RC facilities for which Tinnuum Services had operating and maintenance agreements in place, based upon the number of months each facility was operated during the respective periods, decreased during the three months ended September 30, 2016 compared to the same quarter in 2015. As of September 30, 2016 and 2015, Tinnuum Services provided operating and maintenance services to 13 and 17 operating RC facilities, respectively. Tinnuum 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. The reduction in operated facilities during the three months ended September 30, 2016 compared to the same quarter in 2015 was due to suspending operations on retained facilities to reduce operating expenses.

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 September 30, 2016 compared to the three months ended September 30, 2015 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 its purchase of RCM6 membership interests from Tinnuum 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.

Although all of our deferred tax assets have a full valuation allowance recorded against them as of September 30, 2016 and 2015, respectively, we earned, through our ownership in Tinnuum Group, the following tax credits which may be available for future benefit related to the operation of retained RC facilities that were not invested:

	Three	
	Months	
	Ended	
	September	
	30,	
(in thousands)	2016	2015
Section 45 tax credits earned	\$93	\$12,113

The decrease in tax credits earned during the three months ended September 30, 2016 compared to the three months ended September 30, 2015 was due to suspending operations on retained facilities, as described above. Additional information related to our equity method investees is included in Note 4 of the Condensed Consolidated Financial Statements.

Royalties, related party

During the three months ended September 30, 2016 and 2015, there were 5.9 million tons and 7.0 million tons, respectively, of RC produced using M-45™ and M-45-PC™ technologies, which Tinnium Group licenses from us. The decrease was due to a decrease in the number of RC facilities producing RC with our technologies, specifically the suspension of operations at retained facilities, a decrease in tons of coal burned and a decrease in the per ton royalty earnings. We anticipate royalty income for the remainder of 2016 to be greater than the three months ended September 30, 2016 based on similar production results and an increase in the effective royalty per ton rate.

Interest expense

During the three months ended September 30, 2016, interest expense decreased compared to the three months ended September 30, 2015 due to a decrease 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 was deferred under the installment method, and the elimination of the RCM6 note payable. These decreases were \$0.2 million and \$0.6 million, respectively, for the three months ended September 30, 2016 compared to the three months ended September 30, 2015.

Other

As a result of the lease termination discussed in Note 11 of the Condensed Consolidated Financial Statements, during the three months ended September 30, 2016, we recognized a gain of \$0.9 million, which is included in the Other line item of the Condensed Consolidated Statements of Operations. In October 2016, we received cash of \$3.6 million for payment in full of the lease termination fee.

Income tax expense

We did not record any federal income tax expense during the three months ended September 30, 2016 due to the utilization of deferred tax assets to offset current tax expense. We did not record any federal income tax benefit during the three months ended September 30, 2015 as a result of recording a full valuation allowance against all of our net deferred tax assets in all jurisdictions. However, we recorded state income tax expense for the three months ended September 30, 2016 and 2015 of \$0.6 million and zero, respectively. Estimated state income tax expense increased quarter over quarter due to increases in state taxable income quarter over quarter and the absence of state net operating losses in certain state jurisdictions during 2016.

Comparison of the Nine Months Ended September 30, 2016 and 2015

Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the nine months ended September 30, 2016 and 2015 is as follows:

(in thousands, except per share data and percentages)	Nine Months Ended September 30,			
	2016	2015	Change (\$)	Change (%)
Revenues:				
Equipment sales	\$44,788	\$47,439	\$(2,651)	(6)%
Chemicals	1,717	749	968	129%
Consulting services and other	492	1,349	\$(857)	(64)%
Total revenues	\$46,997	\$49,537	\$(2,540)	(5)%
Operating expenses:				
Equipment sales cost of revenue, exclusive of depreciation and amortization	\$35,175	\$38,662	\$(3,487)	(9)%
Chemicals cost of revenue, exclusive of depreciation and amortization	\$865	\$383	\$482	126%
Consulting services cost of revenue, exclusive of depreciation and amortization	\$299	\$1,282	\$(983)	(77)%

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

During the nine months ended September 30, 2016 and 2015, we entered into five and four long-term (six months or longer) fixed price contracts to supply ACI systems, having aggregate contract values, net of changes orders, during those periods of \$2.9 million and \$5.0 million, respectively. Total value per contract may change due to the relative sizes of ACI systems and the contracts related thereto. During the nine months ended September 30, 2016 and 2015, we completed 15 and 28 ACI systems,

respectively, recognizing revenues of \$26.1 million and \$43.5 million and cost of revenue of \$19.8 million and \$32.5 million, respectively. During the nine months ended September 30, 2016 and 2015, we recognized \$0.5 million and zero, respectively, in loss provisions included within cost of revenue related to ACI systems contracts.

During the nine months ended September 30, 2016 and 2015, we entered into zero and one long-term (six months or longer) fixed price contracts to supply DSI systems and other material handling equipment. During the nine months ended September 30, 2016, change orders impacted existing, uncompleted contracts, which had a negative aggregate contract value of \$1.4 million. During the nine months ended September 30, 2015, the aggregate contract values, net of change orders were \$2.1 million. Total value per contract may change due to the relative sizes of DSI systems and the contracts related thereto. During the nine months ended September 30, 2016 and 2015, we completed 10 and three DSI systems, respectively, recognizing revenues of \$14.8 million and \$3.3 million and cost of revenue of \$13.9 million and \$5.7 million, respectively. Due to potential cost overruns related to certain DSI projects, we expect that the future relationship between revenues and costs may be dissimilar from prior results. Certain of the DSI long-term fixed price contracts were expected to be completed with losses. During the nine months ended September 30, 2016, we recorded a reduction of \$0.2 million in previously recognized loss provisions included in cost of revenue. During the nine months ended September 30, 2015, we recorded \$3.2 million in loss provisions included in cost of revenue related to DSI system contracts.

Additionally, in June 2016, we commenced sales-type lease agreements related to ACI and DSI systems, which resulted in us recognizing revenue of \$3.4 million and cost of revenue of \$1.2 million during the nine months ended September 30, 2016. On September 30, 2016, these sales-type lease agreements were terminated, and we recognized additional income of \$0.9 million for the nine months ended September 30, 2016.

The remaining changes to revenues and cost of revenue for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 were due to other equipment sales.

Demand for ACI and DSI system contracts have historically been driven by coal fired power plant utilities that need to comply with MATS and MACT standards. 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 nine months ended September 30, 2016 and 2015, revenues increased period over period primarily due to an increase in pounds sold related to sales of our M-Prove™ chemicals which are attributable to increases in our customer base. Due to coal-fired power plant requirements to be in compliance with applicable regulations in 2015 and beyond, we anticipate that this will lead to an increase in the market for these products in the future.

Consulting services and Consulting services cost of revenue

During the nine months ended September 30, 2016 and 2015, revenues decreased period over period due to a decrease in the number of consulting service engagements performed. The decrease in the number of consulting services engagements was due in part to us no longer performing consulting services related to a certain customer within the legacy Emissions Control - Manufacturing segment.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the segment discussion below and in Note 12 to the Condensed Consolidated Financial Statements.

Other Operating Expenses

A summary of the components of our other operating expenses, exclusive of cost of revenue items (presented above), for the nine months ended September 30, 2016 and 2015 is as follows:

	Nine Months Ended September 30,		Change	
(in thousands, except percentages)	2016	2015	(\$)	(%)
Operating expenses:				
Payroll and benefits	\$ 10,567	\$ 19,102	\$ (8,535)	(45)%
Rent and occupancy	1,534	1,828	(294)	(16)%
Legal and professional fees	6,581	11,545	(4,964)	(43)%
General and administrative	2,920	4,635	(1,715)	(37)%
Research and development, net	(667)	5,133	(5,800)	(113)%
Depreciation and amortization	593	1,632	(1,039)	(64)%
	\$ 21,528	\$ 43,875	\$ (22,347)	(51)%

Payroll and benefits

Payroll and benefits expenses decreased during the nine months ended September 30, 2016 compared to the same period in 2015 primarily due to a decrease in restructuring expenses, including the modification and acceleration of equity awards in connection with certain executive officers and employees impacted by management's alignment of the business with strategic objectives. During the nine months ended September 30, 2016 and September 30, 2015, we recorded net restructuring charges of \$1.8 million and \$8.8 million, respectively, including the modification and acceleration of equity awards of \$0.4 million and \$3.1 million, respectively. Additionally, we had a decrease in headcount of approximately 76% during the nine months ended September 30, 2016 compared to the same period in 2015 in connection with employees impacted by management's alignment of the business with strategic objectives.

Rent and occupancy

Rent and occupancy expenses decreased during the nine months ended September 30, 2016 compared to the same period in 2015 primarily due to the shutdown of our BCSI office and fabrication facilities in the fourth quarter of 2015. During the first quarter of 2016, we entered into an agreement to terminate various lease agreements covering approximately 207 thousand square feet of manufacturing, warehouse and office space located in Pennsylvania. As consideration for terminating the leases, we agreed to pay the lessor termination fees of \$0.3 million in April 2016 and the same amount in April 2017. During the first quarter of 2016, we recorded a gain of \$0.2 million related to the difference between the amount accrued as of the cease use date of December 31, 2015 and the settlement amount.

Legal and professional fees

Legal and professional fees expenses decreased during the nine months ended September 30, 2016 compared to the same period in 2015 as a result of a reduction in the professional resources deployed to address the Restatement of our consolidated financial statements, including the SEC Inquiry and related private litigation. Expenses related to the Restatement during the nine months ended September 30, 2016 and 2015 were \$1.9 million and \$7.1 million, respectively. These decreases were offset by an increase in outsourced shared services costs during the nine months ended September 30, 2016.

General and administrative

General and administrative expense decreased during the nine months ended September 30, 2016 compared to the same period in 2015 due to a \$0.5 million allowance recorded during 2015 against the entire principal balance of a note receivable. Additionally, during the nine months ended September 30, 2016, there was a decrease in expenses of \$0.5 million due to the shutdown of our BCSI office and fabrication facilities in the fourth quarter of 2015. Other decreases during the nine months ended September 30, 2016 were due to decreases in general operating expenses,

including travel and professional expenses. These decreases were partially offset by impairment charges recognized during the nine months ended September 30, 2016 on property and equipment and inventory of \$0.5 million, as projected future cash flows from operations related to such property and equipment and inventory did not support the carrying value of these assets.

Research and development, net

Research and development expense decreased during the nine months ended September 30, 2016 compared to the same period in 2015 due to a decrease in research and development activities as we have concluded all material R&D activities. Additionally, we reduced R&D expense by \$0.8 million during the nine months ended September 30, 2016 due to final billings made in the nine months ended September 30, 2016 to the DOE for one R&D contract.

Depreciation and amortization

Depreciation and amortization expense decreased during the nine months ended September 30, 2016 compared to the same period in 2015 by approximately \$0.8 million due to the shutdown of our BCSI office and fabrication facility in the fourth quarter of 2015 and by approximately \$0.2 million due to the termination of the Highview technology license. See further discussion of the termination of the Highview technology license in Note 7 of the Condensed Consolidated Financial Statements.

Other Income (Expense), net

A summary of the components of our other income (expense), net for the nine months ended September 30, 2016 and 2015 is as follows:

	Nine Months Ended September 30,		Change	
(in thousands, except percentages)	2016	2015	(\$)	(%)
Other income (expense):				
Earnings from equity method investments	\$30,066	\$5,133	\$24,933	486 %
Royalties, related party	3,922	7,767	(3,845)	(50)%
Interest income	267	20	247	*
Interest expense	(4,496)	(5,347)	851	(16)%
Gain on sale of equity method investment	2,078	—	2,078	*
Gain on settlement of note payable and licensed technology	869	—	869	*
Other	746	10	736	*
Total other income	\$33,452	\$7,583	\$25,869	341 %

* Calculation not meaningful

Earnings from equity method investments

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

	Nine Months Ended September 30,	
(in thousands)	2016	2015
Earnings from Tium Group	\$28,050	\$4,730
Earnings from Tium Services	2,573	3,530
Loss from RCM6	(557)	(3,127)
Earnings from equity method investments	\$30,066	\$5,133

Earnings from equity method investments, and changes related thereto, are impacted by our equity method investees: Tium Group, Tium 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 nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily as a result of an increase in cash distributions. See discussion below regarding the accounting of earnings from Tium Group.

During the nine months ended September 30, 2016, we recognized \$28.1 million in equity earnings from Tium Group compared to our proportionate share of Tium Group's net income of \$24.8 million for the period. During the nine months ended September 30, 2015, we recognized \$4.7 million in equity earnings from Tium Group compared to our proportionate share of Tium Group's net income of \$25.8 million for the period. The difference between our pro-rata share of Tium Group's net income and our earnings from our Tium Group equity method investment as

reported on the Condensed Consolidated Statements of Operations relates to us receiving distributions in excess of the carrying value of the investment, and therefore recognizing such excess distributions as equity method earnings in the period the distributions occur, as discussed in more detail below.

As a result of cash flows from invested RC facilities, Tinium Group distributions to us during the nine months ended September 30, 2016 were \$28.1 million, which exceeded our pro-rata share of Tinium Group's net income, resulting in us having cumulative cash distributions that exceeded our cumulative pro-rata share of Tinium Group's net income as of September 30, 2016.

Equity earnings from our interest in Tinnuum Services decreased by \$1.0 million during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 primarily due to a decrease in the number of RC facilities being operated by Tinnuum Services. The weighted-average number of RC facilities for which Tinnuum Services had operating and maintenance agreements in place, based upon the number of months each facility was operated during the respective years, decreased period over period. As of September 30, 2016 and 2015, Tinnuum Services provided operating and maintenance services to 13 and 17 operating RC facilities, respectively. Tinnuum 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. The reduction in operated facilities during the nine months ended September 30, 2016 compared to the same period in 2015 was due to suspending operations on retained facilities to reduce operating expenses.

During February 2014, we purchased a membership interest in RCM6 and recognized equity method losses in all subsequent reporting periods 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 nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 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 by the buyer of the outstanding note payable made by us in connection with its purchase of RCM6 membership interests from Tinnuum 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.

Although all of our deferred tax assets have full valuation allowances recorded against them as of September 30, 2016 and 2015, respectively, we earned the following tax credits which may be available for future benefit related to the operation of retained RC facilities that were not invested:

	Nine Months Ended September 30,	
(in thousands)	2016	2015
Section 45 tax credits earned	\$2,920	\$29,502

The decrease in tax credits earned during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 was due to the suspension of retained facilities, as described above. Additional information related to our equity method investees is included in Note 4 of the Condensed Consolidated Financial Statements.

Royalties, related party

During the nine months ended September 30, 2016 and 2015, there were 12.2 million tons and 16.1 million tons, respectively, of RC produced using M-45™ and M-45-PC™ technologies, which Tinnuum Group licenses from us. The decrease was due to a decrease in the number of RC facilities producing RC with our technologies, specifically the suspension of retained operations at facilities during the first quarter of 2016 to reduce operating expenses and a decrease in tons of coal produced. Additionally, as the royalties are earned on a percentage of the per-ton, pre-tax margin of RC produced with the M-45 License that produces a valid and verifiable Section 45 Tax Credit, net of certain allocable operating expenses, the increase in operating expenses of Tinnuum Group due to payments made to secure the location for an RC facility, while waiting to receive a tax equity investor, also decreased the royalty we earned. We anticipate royalty income for the remainder of 2016 to be greater than the three months ended September 30, 2016 based on similar production results and an increase in the effective royalty per ton rate.

Interest expense

During the nine months ended September 30, 2016 interest expense decreased compared to the nine months ended September 30, 2015 due to interest related to IRS section 453A and the elimination of the RCM6 note payable. These decreases were \$1.4 million and \$1.6 million, respectively, for the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015. These decreases were offset by an increase in interest expense of \$2.1 million during the nine months ended September 30, 2016 related to the credit agreement for a \$15.0 million

short-term loan (the "Credit Agreement"), which was entered into during the fourth quarter of 2015.

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 the note payable, which we entered into in connection with our purchase of RCM6 membership interests from Tinuum 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, which is included within the Gain on sale of equity method investment line item in the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2016.

Gain on settlement of note payable

As of December 31, 2014, we terminated the consulting portion of our agreements with the DSI Business Owner. Originally, we were required to make all remaining payments, structured as a note payable, through the third quarter of 2017. In February 2016, we entered into an agreement with the DSI Business Owner to settle the remaining amounts owed of approximately \$1.1 million for a one-time payment of \$0.3 million. The one-time payment was made during the first quarter of 2016, and we recognized a gain of approximately \$0.9 million, which is included in the Gain on settlement of note payable and license technology line item in the Condensed Consolidated Statements of Operation for the nine months ended September 30, 2016.

Gain on settlement of licensed technology obligation

On June 15, 2016, we entered into an agreement with Highview to terminate a license agreement in exchange for a one-time payment by us of £0.2 million (approximately \$0.2 million). According to the agreement, this payment will only be made upon the sale of our shares in Highview to satisfy the liability. As a result of terminating this license agreement, we have removed the licensed technology asset from our books, reduced the corresponding long-term liability as of June 30, 2016 to the amount of the one-time payment, and recognized a gain of approximately \$0.2 million, which is included in the Gain on settlement of note payable and licensed technology line item in the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2016.

Other

As a result of the communication from SEC Staff, we recorded an expense as of June 30, 2016 for the expected payment of monetary penalties in connection with the SEC Inquiry in the amount of \$0.5 million. For additional detail, see Note 8 of the Condensed Consolidated Financial Statements. Additionally, as a result of the lease termination discussed in Note 11 of the Condensed Consolidated Financial Statements, we recognized a gain of \$0.9 million, which is included in the Other line item of the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2016. In October 2016, we received cash of \$3.6 million for payment in full of the lease termination fee.

Income tax expense

We did not record any federal income tax expense during the nine months ended September 30, 2016 due to the utilization of deferred tax assets to offset current tax expense. We did not recognize any federal income tax benefit during the nine months ended September 30, 2015 as a result of recording full valuation allowances against all of our net deferred tax assets. However, we did recognize state income tax expense for the nine months ended September 30, 2016 and 2015 of \$0.7 million and \$0.2 million, respectively. Estimated state income tax expense increased period over period due to increases in state taxable income and the absence of state net operating losses in certain state jurisdictions during 2016.

Business Segments

As discussed in Note 12 of the Condensed Consolidated Financial Statements, during the fourth quarter of 2015, we realigned our operating segments into two reportable segments: (1) Refined Coal ("RC"); and (2) Emissions Control ("EC"). Following the realignment, we retroactively adjusted all segment related disclosures included within the notes to the Condensed Consolidated Financial Statements as well as within this Item. The business segment measurements 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 Tinnium 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 Tinnium 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:

- 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 Tinnium Group, Tinnium Services and RCM6 (until March 3, 2016). Segment revenues include our equity method earnings and losses from
1. our equity method investments and royalty earnings from Tinnium Group. These earnings are included within the Earnings (loss) 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 tonnage, royalty-bearing tonnage, and the number of operating 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. The fabrication of ACI systems is largely dependent upon third party manufacturers. We historically have fabricated DSI systems through our subsidiary, BCSI, however, we closed the fabrication facility during the fourth quarter of 2015 and future fabrication will occur through the use of third party manufacturers. 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 consolidated results of operations.

The following table presents our operating segment results for the three and nine months ended September 30, 2016 and 2015:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Revenues:				
Refined Coal:				
Earnings (loss) in equity method investments	\$10,735	\$(41)	\$30,066	\$5,133
Consulting services	—	—	—	55
Royalties	2,064	3,273	3,922	7,767
	12,799	3,232	33,988	12,955
Emissions Control:				
Equipment sales	14,869	12,088	44,788	47,439
Chemicals	670	132	1,717	749
Consulting services	171	665	492	1,294
	15,710	12,885	46,997	49,482
Total segment reporting revenues	28,509	16,117	80,985	62,437
Adjustments to reconcile to reported revenues:				
Refined Coal:				
(Earnings) loss in equity method investments	(10,735)	41	(30,066)	(5,133)
Royalties	(2,064)	(3,273)	(3,922)	(7,767)
	(12,799)	(3,232)	(33,988)	(12,900)
Total reported revenues	\$15,710	\$12,885	\$46,997	\$49,537
Segment operating income (loss):				
Refined Coal (1)	\$11,913	\$1,390	\$33,974	\$7,350

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Emissions Control (2)	2,956	(3,397)	9,656	(8,190)
Total segment operating income (loss)	\$14,869	\$(2,007)	\$43,630	\$(840)

(1) Included within the RC segment operating income for the nine months ended September 30, 2016 is a \$2.1 million gain on the sale of RCM6 and for the three and nine months ended September 30, 2016 and 2015, 453A interest expense of \$0.9 million, \$2.0 million, \$1.1 million and \$3.4 million, respectively, and interest expense related to the RCM6 note payable of zero, \$0.6 million, \$0.3 million and \$1.8 million, respectively.

(2) Included within the EC segment operating income for the three and nine months ended September 30, 2016 is a \$0.9 million gain related to the lease termination discussed in Note 11 in the Condensed Consolidated Financial Statements.

RC

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands)	2016	2015	2016	2015
Earnings from Tinuum Group	\$9,775	\$—	\$28,050	\$4,730
Earnings from Tinuum Services	960	1,358	2,573	3,530
Loss from RCM6	—	(1,399)	(557)	(3,127)
Earnings (loss) from equity method investments	\$10,735	\$(41)	\$30,066	\$5,133

For the three months ended September 30, 2016 and 2015

RC earnings increased primarily due to increased equity earnings in Tinuum Group during the three months ended September 30, 2016 compared to the same quarter in 2015, as presented above. For the three months ended September 30, 2016, Tinuum Group consolidated earnings increased \$1.6 million compared to the same quarter in 2015 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.

As discussed above and in Note 4 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 \$9.8 million during the three months ended September 30, 2016 compared to the same quarter in 2015 due to \$9.8 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 September 30, 2016 due to lower operating losses associated with our RCM6 equity method investment, which was sold during the first quarter of 2016.

RC earnings were negatively impacted during the three months ended September 30, 2016 by a decrease in earnings from Tinuum Services primarily due to a decrease during the three months ended September 30, 2016 in the number of RC facilities being operated by Tinuum Services as discussed in the consolidated results above.

RC earnings were also negatively impacted during the three months ended September 30, 2016 by a decrease in royalties related to Tinuum Group's use of our M-45™ and M-45-PC™ technologies ("M-45 License"). During the three months ended September 30, 2016 and 2015, there were 5.9 million tons and 7.0 million tons, respectively, of RC produced using the M-45 License. The decrease in tonnage was due to a decrease in the per facility tonnage and a decrease in the number of RC facilities producing RC with our technologies, as discussed in the consolidated results above.

RC segment operating income increased during the three months ended September 30, 2016 compared to the same quarter in 2015. In addition to the impacts of RC earnings discussed above, RC segment operating income was positively impacted during the three months ended September 30, 2016 by a decrease in 453A interest expense. 453A

interest expense decreased during the three months ended September 30, 2016 compared to the same quarter in 2015 due to a decrease in the tax liability that is expected to be deferred as of December 31, 2016.

For the nine months ended September 30, 2016 and 2015

RC earnings increased primarily due to increased equity earnings in Tinnium Group during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015, as presented above. For the nine months ended September 30, 2016, Tinnium Group consolidated earnings decreased \$4.3 million from the comparable September 30, 2015 period due to a decrease in lease revenues driven by the reduced impact of the amortization of deferred revenues and changes in lease rates, which was partially offset by a reduction 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.

As discussed above and in Note 4 of the Condensed Consolidated Financial Statements, our earnings in Tinium Group may not equal our pro-rata share due to the accounting related to our equity method investment. As such, our earnings in Tinium Group increased by \$23.3 million during the nine months ended September 30, 2016 compared to the nine months ended September 30, 2015 due to \$28.1 million of cash distributions received that were in excess of our pro-rata share of cumulative earnings in Tinium Group.

RC earnings were positively impacted during the nine months ended September 30, 2016 due to lower operating losses associated with our RCM6 equity method investment, which was sold during the first quarter of 2016.

RC earnings were negatively impacted during the nine months ended September 30, 2016 by a decrease in earnings from Tinium Services primarily due to a decrease during the nine months ended September 30, 2016 in the number of RC facilities being operated by Tinium Services, as discussed in the consolidated results above.

RC earnings were also negatively impacted during the nine months ended September 30, 2016 by a decrease in royalties related to Tinium Group's use of our M-45 License. During the nine months ended September 30, 2016 and 2015, there were 12.2 million tons and 16.1 million tons, respectively, of RC produced using the M-45 License. The decrease in tonnage was due to a decrease in the per facility tonnage and a decrease in the number of RC facilities producing RC with our technologies, as well as an increase in certain RC facility operating expenses, as discussed in the consolidated results above.

RC segment operating income increased during the nine months ended September 30, 2016 compared to the same period in 2015. In addition to the impacts of RC earnings discussed above, RC segment operating income was positively impacted by a decrease in 453A interest expense. 453A interest expense decreased during the nine months ended September 30, 2016 due to a decrease in the tax liability that is expected to be deferred as of December 31, 2016.

Additional discussion of our equity method investments is included above within our consolidated results and in Note 4 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 increased during the three months ended September 30, 2016 compared to the three months ended September 30, 2015 due to the earnings discussed within the consolidated results and decreases in operating expenses. Specifically, Payroll and benefits and Research and development expense, net decreased quarter over quarter by \$1.7 million and \$2.5 million, respectively. These decreases were due to decreased headcount largely due to management restructuring and the closure of our fabrication facility and limited research and development expenses in connection with our changing strategic objectives.

EC segment operating income increased during the nine months ended September 30, 2016 compared to the same period in 2015 due to the earnings discussed within the consolidated results and decreases in operating expenses. Specifically, Payroll and benefits and Research and development expense, net decreased period over period by \$5.4 million and \$5.8 million, respectively. Additionally, impacting the period over period change was an increase due to 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 nine months ended September 30, 2016. Offsetting these items was the allowance recorded during the nine months ended September 30, 2015 of \$0.5 million related to a note receivable.

Liquidity and Capital Resources

Overview of Factors Affecting Our Liquidity

During the nine months ended September 30, 2016, our cash and cash equivalents balance declined, primarily due to debt service payments on our Credit Agreement and notes payable, fees incurred to extend the maturity of our Credit Agreement, the payoff of our Credit Agreement on June 30, 2016, delivering on our existing contracts and customer commitments and 453A interest expense payments. In addition, we continued to incur professional fees related to our Restatement activities and to become current with our 2015 regulatory filings.

However, during the nine months ended September 30, 2016, our working capital position improved by \$24.0 million, primarily due to distributions from Tinum Group and Tinum Services, a reduction in the operation of retained RC facilities, proceeds received from the sale of our interest in RCM6 and the elimination of the related note payable, as well as the favorable settlement of our note payable to the former DSI Business Owner. Based upon the current status of our operations, we expect to see continued improvement in our working capital and cash balances.

Our principal sources of liquidity include:

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

Since April 2014, we have been unable to borrow on our bank line of credit ("Line of Credit") as a result of not being in compliance with certain covenants related to our loan agreement. No borrowings were outstanding as of September 30, 2016 or December 31, 2015. We are currently working to either replace the Line of Credit, or renegotiate its terms, to enable us to have borrowing capacity to provide short-term liquidity for operating purposes. A key provision in negotiating terms of a credit facility is the ability to use the facility to secure performance and other contractual and settlement obligations, in lieu of pledging restricted cash. At September 30, 2016, the Company held \$8.8 million in restricted cash that could potentially be released to unrestricted cash through the securing of an appropriately structured credit facility. While such a facility would be desirable, if we are unable to secure such a financing, we believe that our existing and forecasted liquidity from cash distributions and royalties as well as other expected operating results will result in cash flow and liquidity sufficient to fund our continuing operations.

Prior to June 2014, the Line of Credit was used primarily to provide collateral support for certain letters of credit that had been issued to customers related to certain contractual performance and payment guarantees, typically provided in lieu of surety bonds. Upon notification of covenant non-compliance related to the Line of Credit, we were required to secure such letters of credit with cash collateral. Additionally, we are required to provide collateral to other financial institutions that have issued letters of credit providing security for continuing royalty indemnification obligations related to the settlement of certain litigation. The collateral amounts are disclosed on the Condensed Consolidated Balance Sheets as Restricted cash, Restricted cash, long-term and Investment securities, restricted, long-term. As of September 30, 2016 and December 31, 2015, these collateral amounts totaled \$8.8 million and \$12.0 million, respectively.

The Line of Credit was renewed and extended through November 27, 2016. We had no borrowing capacity as of September 30, 2016 and no amounts were drawn on the Line of Credit during the nine months ended September 30, 2016 and 2015, respectively. Additionally, no amounts were drawn on the Line of Credit through the date of this filing. We are working to renegotiate the terms of the Line of Credit to enable us to support our letters of credit without providing cash collateral and to have borrowing capacity to provide short-term liquidity for operating purposes.

On March 3, 2016, we sold our entire ownership interest in RCM6. We received a cash payment of \$1.8 million related to the sale and have no future obligations related to previously recorded notes payable.

Our principal uses of liquidity during the nine months ended September 30, 2016 have included:

payoff of the Credit Agreement;
interest expense on the Credit Agreement, notes payable, and 453A interest;
completion of the Restatement activities related to prior year financial statements;
delivering on our existing contracts and customer commitments;
corporate restructuring and realignment of our businesses; and
royalty indemnification payments.

On June 30, 2016, we, 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 our prepayment of the total principal balance of the loans and advances made to or for the benefit of us, together with all accrued but unpaid interest, and the total amount of all fees, costs, expenses and other amounts owed by us 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. Upon termination of the Credit Agreement, all obligations of the parties to the Credit Agreement were automatically and irrevocably satisfied and discharged in full, except for indemnity obligations that survive termination and outstanding fees and expenses of the required lenders in connection with the termination of the Credit Agreement. The Payoff Letter grants us the authority to prepare and file the certain UCC termination statements and such other releases, discharges and related filings as may be necessary to terminate any security interests created under the Credit Agreement.

In February 2016, we entered into an agreement with the DSI Business Owner to settle the remaining amounts owed as of the date of the agreement of approximately \$1.1 million for \$0.3 million, which was paid in the first quarter of 2016.

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

The following table summarizes the cash flows of Tinnum Group, the entity from which cash distributions to us are most significant, for the nine months ended September 30, 2016 and 2015, respectively, which directly impact potential distributions to us:

	Nine Months Ended September 30,	
(in thousands)	2016	2015
Tinnum Group cash and cash equivalents, beginning of year	\$6,182	\$3,870
Cash provided by (used in):		
Operating activities	52,447	27,101
Investing activities	(2,473)	(21,531)
Financing activities	(47,590)	(3,685)
Net change in cash and cash equivalents	2,384	1,885
Tinnum Group cash and cash equivalents, end of period	\$8,566	\$5,755

Sources and Uses of Cash

Nine Months Ended September 30, 2016 vs. Nine Months Ended September 30, 2015

Cash and cash equivalents decreased from \$9.3 million as of December 31, 2015 to \$7.6 million as of September 30, 2016. The following table summarizes our cash flows for the nine months ended September 30, 2016 and 2015, respectively:

	Nine Months Ended September 30,		
(in thousands)	2016	2015	Change
Cash provided by (used in):			
Operating activities	\$(12,234)	\$(13,640)	\$1,406
Investing activities	25,839	(1,514)	27,353
Financing activities	(15,267)	(1,442)	(13,825)
Net change in cash and cash equivalents	\$(1,662)	\$(16,596)	\$14,934
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 nine months ended September 30, 2016 decreased from the comparable prior year period primarily due to a reduction in the professional resources deployed to address the Restatement, which decreased by \$3.7 million from the nine months ended September 30, 2015.

Deferred revenue and project costs resulted in a change in a source of operating cash flows on a net basis of \$1.4 million period over period due to billings and productions of ACI and DSI equipment systems. However, due to the completed contract revenue recognition method, these billings and related costs have not yet been recognized within revenues and cost of revenue, respectively.

We are required to provide collateral in the form of restricted cash for certain letters of credit for certain ACI and DSI equipment contracts, as discussed in Note 8 of the Condensed Consolidated Financial Statements. Cash is pledged as security for letters of credit in the same amount as the assets related to ACI and DSI equipment contracts as well as the Royalty Award discussed in Note 8 to the Condensed Consolidated Financial Statements. Restricted cash was released and provided cash inflows during the nine months ended September 30, 2016 and the nine months ended September 30, 2015 due to the completion of ACI and DSI equipment contracts.

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. During the nine months ended September 30, 2016, we received \$23.3 million more in total cash distributions from equity method investees than we did during the nine months ended September 30, 2015 due to the suspension of operations of retained RC facilities, a decrease in RC facility installations by Tinnium Group and an increase in invested facilities.

Cash flow from investing activities

Maturity of investments in securities, restricted and restricted cash

We are required to provide collateral in the form of restricted cash for certain letters of credit for future payments related to royalty indemnification obligations and other payments as discussed in Note 8 of the Condensed Consolidated Financial Statements. Cash is pledged as security for letters of credit in the same amount as the obligations. The restricted cash requirement increased during the nine months ended September 30, 2016 due to a contractual requirements related to the royalty indemnification obligation and performance against equipment contracts.

Acquisition and disposal of property and equipment, net

Acquisitions of property and equipment were \$0.1 million and \$0.4 million during the nine months ended September 30, 2016 and September 30, 2015, respectively.

Advance on note receivable

In December 2014, we loaned \$0.5 million to an independent third party to provide financing for the pursuit of emissions technology projects, bearing annual interest of 8%. Interest and principal were payable at maturity of the agreement in June 2015. In March 2015, we loaned an additional \$0.5 million to the third party, also bearing annual interest at 8%. All interest and principal payments were then deferred until March 2018. Subsequent to the second loan disbursement, it was determined that the independent third party was not awarded contracts that would have utilized their emissions technology. Without these contracts, we concluded that the ability of the independent third party to repay these loans was in doubt. Accordingly, we recorded an allowance against the entire principal balance of the note receivable outstanding, reversed accrued interest and put the two respective portions of the note on non-accrual status as of December 31, 2015 and June 30, 2015, respectively.

Acquisition of a business

During March 2015, we acquired Clearview, which operated as ADA Analytics, for \$2.4 million, as described in Note 3 of the Condensed Consolidated Financial Statements, \$2.1 million of which was paid in 2015. We acquired the in-process research and development in order to potentially commercialize and expand our analytics services available to our customers. However, in August 2015, as part of a broader strategic restructuring of our business to simplify our operating structure in a manner that creates increased customer focus, better supports sales and product delivery and also aligns our cost structure as the emissions control market shifts towards compliance solutions for the MATS, our management approved an action to wind down operations of ADA Analytics.

Equity method investment

On February 10, 2014, we purchased a 24.95% membership interest in RCM6, which owned a single RC facility that produced RC that qualified for Section 45 tax credits. As part of the purchase, we were subject to quarterly capital

calls and variable payments based upon differences in originally forecasted RC production as of the purchase date and actual quarterly production. During the nine months ended September 30, 2016 and 2015, we funded capital calls and made variable payments of \$0.2 million and \$1.1 million, respectively.

Proceeds from sale of equity method investment

As discussed in Note 4 of the Condensed Consolidated Financial Statements, we sold our investment in RCM6 in March 2016. 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.

As discussed within the Results of Operations and the operating cash flow activities above, our investing cash flow may also be significantly impacted by the classification of cash distributions from equity method investees as either a return on investment within operating cash flows or a return in excess of investment basis within investing cash flows.

Cash flow from financing activities

Short-term borrowings

On June 30, 2016, we, the required lenders under the Credit Agreement and the Administrative Agent agreed to terminate the Credit Agreement, and on June 30, 2016, we paid the Payoff Amount of \$9.9 million. Additionally, during the nine months ended September 30, 2016, we paid \$0.6 million in debt issuance costs related to the Second Amendment.

Notes payable activity

During the nine months ended September 30, 2016 and 2015 we used \$1.2 million and \$1.2 million cash, respectively, for repayments of principal on the RCM6 and the DSI Business Owner notes payable, as described in Note 6 of the Condensed Consolidated Financial Statements.

Equity award activity

During the nine months ended September 30, 2016 and 2015, we used \$0.2 million and \$0.3 million, respectively, for the repurchase of shares to satisfy minimum tax withholdings upon the vesting of equity based awards.

Contractual Obligations

During the three months ended September 30, 2016, there were no material changes to our contractual obligations outside of the ordinary course of business from those reported as of June 30, 2016.

Off-Balance Sheet Arrangements

During the nine months ended September 30, 2016, 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 Annual Report on Form 10-K for the year ended December 31, 2015, which included operating leases, letters of credit 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 the Annual Report on Form 10-K for the fiscal year ended December 31, 2015.

New Accounting Guidance

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 nine months ended September 30, 2016 and subsequent thereto through the date of this filing.

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, or the Exchange Act, that involve risks and uncertainties. In particular, such forward-looking statements are found in this Part I and under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operation" in Part II, Item 7 below. 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 Report to identify forward-looking statements, and such forward-looking statements include, but are not limited to, statements or expectations regarding:

- (a) expected growth in and potential size of our target markets;
- (b) expected supply and demand for our products and services;
- (c) the effectiveness of our technologies and the benefits they provide;
- (d) Tinnuum Group's ability to profitably sell and/or lease additional RC facilities or recognize the tax benefits from their operations;

- (e) probability of any loss occurring with respect to Tinnuum Group Party Guarantees;
 - (f) the timing of awards of, and work and related testing under, our contracts and agreements and their value; timing and amounts of, or changes in, future revenues, backlog, funding for our business and projects, margins,
 - (g) expenses, earnings, tax rate, cash flow, royalty payments, working capital, liquidity and other financial and accounting measures;
 - (h) ability to negotiate more favorable terms under the Line of Credit that remove the restrictions from cash currently pledged as collateral for letter of credit obligations; and
 - (i) the outcome of current and pending legal proceedings;
- 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 of RC to qualify for IRC 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 guaranties 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 in fact 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) Tinnuum Group will be able to sell or lease the remaining RC facilities to third party investors; and
- (n) we will be able to utilize our portion of the Section 45 tax credits generated by operation of RC facilities for the benefit of the members of Tinnuum Group.

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 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 coal that qualifies for tax credits; termination of, or amendments to, the contracts for RC facilities; decreases in the production of RC; inability to commercialize our technologies on favorable terms; 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; elevated spending on non-recurring cash expenses, which may last longer than expected or reductions in operating costs may be less than expected; 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 and in Item 1A of this Quarterly Report. Readers are cautioned not to place undue reliance on the forward-looking statements made in this Quarterly Report and to consult filings we have made and will make with the

SEC for additional discussion concerning risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Quarterly Report are presented as of the date hereof, and we disclaim any duty to update such statements unless required by law to do so.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

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 the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Foreign Currency Risk

There have been no material changes from those reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Commodity Price Risk

There have been no material changes from those reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company has evaluated, under the supervision of the Company's Chief Executive Officer and Principal Financial Officer, the effectiveness of disclosure controls and procedures as of September 30, 2016. This is done in order to ensure that information the Company is required to disclose in reports that are filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms.

Based on this evaluation, the Chief Executive Officer and Principal Financial Officer concluded that the Company's disclosure controls and procedures were not effective as of September 30, 2016, due to the material weaknesses described in "Item 9A. Controls and Procedures" of the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Notwithstanding the material weaknesses, management has concluded that the Condensed Consolidated Financial Statements included in this Quarterly Report on Form 10-Q present fairly, in all material respects, the Company's financial position, results of operations and cash flows for the periods presented in conformity with accounting principles generally accepted in the United States.

Changes in Internal Control Over Financial Reporting

Under the applicable SEC rules (Exchange Act Rules 13a-15(f) and 15d-15(f)), management is required to evaluate any changes in internal control over financial reporting that occurred during each fiscal quarter that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. As discussed in Item 9A of the Company's Annual Report on Form 10-K for the year ended December 31, 2015, we have undertaken a broad range of remedial procedures to address material weaknesses in our internal control over financial reporting. These remedial procedures continued throughout the three and nine months ended September 30, 2016 and will continue throughout the remainder of 2016. While we continue to implement remediation efforts and design enhancements to our internal control procedures, we believe these remedial procedures that were implemented to address material weaknesses in our internal control represent significant changes in the internal controls implemented during the three and nine months ended September 30, 2016 and the controls will be in place for a sufficient period of time to conclude on the effectiveness of the controls as of December 31, 2016.

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 the our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 (the "Annual Report") and Note 8 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 Annual Report on Form 10-K for the year ended December 31, 2015 and our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2016.

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

On July 1, 2016, grants of an aggregate of 12,424 restricted shares of our common stock for services to be rendered by two of our non-management directors to the Company for the 2016-2017 Board term pursuant to our Director Compensation Arrangement under the Amended and Restated 2007 Equity Incentive Plan, as amended (the "2007 Plan"), were made to their affiliated entities at such directors' requests.

All issuances of shares described in this Item 2 were exempt from registration under Section 4(a)(2) of the Securities Act of 1933, as amended, as sales of securities that do not involve a public offering or distribution. All recipients were accredited investors at the respective times of the sales of securities. No underwriters were involved, no sales commission or other remuneration was paid and we did not receive any cash proceeds in connection with these issuances.

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
10.1	Eight Amendment and Ninth Waiver Regarding 2013 Loan and Security Agreement	8-K	000-54992	10.1	September 1, 2016
10.2	In re Advanced Emissions Solutions, Inc. Stockholder Derivative Litigation Stipulation and Agreement of Settlement (including Exhibits)	8-K	000-54992	10.1	October 6, 2016
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)

November 8, 2016 By: /s/ L. Heath Sampson

L. Heath Sampson

President, Chief Executive Officer and Treasurer

(Principal Executive and Financial Officer)

November 8, 2016 By: /s/ Greg P. Marken

Greg P. Marken

Chief Accounting Officer and Secretary

(Principal Accounting Officer)